CHAPTER XX.

AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§ 1. Introductory.

Preceding issues of the Official Year Book contain a brief reference to the attempts at cultivation by the first settlers in New South Wales, and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813, and west of the Blue Mountains thereafter. (*See* No. 22, p. 670.)

§ 2. Progress of Agriculture.

1. **Early Records.**—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797," Governor Hunter gives the acreage under crop as follows :—Wheat, 3,361 acres ; maize, 1,527 acres ; barley, 26 acres ; potatoes, 11 acres ; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops :—Wheat, 6,874 acres ; maize, 3,389 acres ; barley, 544 acres ; oats, 92 acres ; peas and beans, 100 acres ; potatoes, 301 acres ; turnips, 13 acres ; orchards, 546 acres ; and flax and hemp, 37 acres.

By the year 1850 the area under crop had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area under crop declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania 229,000 acres, and New South Wales 223,000 acres.

2. **Progress of Cultivation.**—The following table shows the area under crop in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the last six seasons :—

AREA UNDER CROP.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860–1	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870–1	385,151	692,840	52,210	801,571	54,527	157,410	..	..	2,143,709
1880–1	606,277	1,548,809	113,978	2,087,237	63,902	140,788	..	..	4,560,991
1890–1	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900–1	2,446,767	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,813,666
1910–11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1920–21	4,465,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1929–30	5,500,946	5,579,258	1,046,235	4,966,916	4,566,001	265,317	609	4,439	21,929,721
1930–31	6,811,247	6,715,660	1,144,216	5,426,075	4,792,017	267,632	1,550	5,419	25,163,816
1931–32	5,108,554	5,407,109	1,216,402	5,219,870	3,961,459	247,353	1,030	5,123	21,166,900
1932–33	6,332,716	5,115,745	1,245,638	5,166,656	4,261,047	279,117	1,045	6,525	22,408,489
1933–34	6,283,951	5,266,913	1,313,438	5,078,558	4,215,360	288,390	1,250	6,467	22,454,327
1934–35	5,687,988	4,677,683	1,296,619	4,629,303	3,838,618	292,000	1,132	5,456	20,428,799

The progress of agriculture was uninterrupted from 1860 until 1915–16, when, as the result of a special war effort to produce wheat, Australia cultivated 18,528,234 acres. This effort, however, was not maintained and four years later the area under crop was down to 13,296,407 acres. When shipping tonnage again became available after the

war, and it was possible to dispose of the accumulated stocks of wheat the area under crop steadily rose to over 25 million acres in 1930–31, which is the largest area yet planted in Australia. The increase in acreage was almost entirely due to wheat. Coincident with the commencement of the economic depression the area planted with all crops dropped to 21.2 million acres in 1931–32, a decrease of 4 million acres, or 16 per cent. on the previous year. During the next two years, however, the area remained constant at 22.4 million acres but in 1934–35 a further decline of 2 million acres was recorded. Wheat is by far the most extensively grown crop in Australia, representing 65 per cent. of the total area under crop in 1934–35. Consequently changes in the area sown to wheat dominate the changes in the total area planted.

3. **Artificially-sown Grasses.**—In all the States there are considerable areas under artificially-grown grasses mainly sown on uncultivated land after burning off the scrub, and not included in "area under crops." These areas are, however, liable to revert to their natural state, and the information respecting them is too uncertain for formal record.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Federal Minister for Commerce, the Federal Minister in charge of Development and the corresponding State Ministers, with power to co-opt the services of other Federal and State Ministers as required. The principal functions of the Council are (i) the promotion of the welfare and development of agricultural industries generally; (ii) the improvement of the quality of agricultural products and the maintenance of high grade standards; (iii) to ensure, as far as possible, balance between production and available markets; and (iv) organized marketing, etc.

In addition a permanent technical committee known as the Standing Committee on Agriculture was formed to act in an advisory capacity to the Council and to undertake the following duties:—(i) to secure co-operation and co-ordination in agricultural research throughout Australia; (ii) to advise the Commonwealth and State Governments, either directly or through the Council, on matters pertaining to the initiation and development of research on agricultural problems; and (iii) to secure co-operation between the Commonwealth and States and between the States themselves, with respect to quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments with respect thereto. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Council for Scientific and Industrial Research, the Secretary, Department of Commerce, and the Director-General of Health.

§ 3. Distribution, Production and Value of Crops.

1. **Distribution of Crops.**—The following table gives the areas in the several States under each of the principal crops for the season 1934–35:—

DISTRIBUTION OF CROPS, 1934–35.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	3,892,768	2,458,583	221,729	3,188,225	2,764,373	16,656	..	1,844	12,544,178
Oats	237,405	506,638	4,566	367,192	408,810	36,611	..	331	1,561,553
Maize ..	115,570	18,727	160,607	30	34	..	..	13	294,981
Barley—									
Malting ..	4,725	70,962	6,600	286,594	21,204	5,158	..	..	395,243
Other ..	4,755	16,637	3,004	30,213	5,385	621	..	63	60,678
Beans and Peas	4	9,386	58	8,320	2,979	30,691	..	..	51,438
Rye ..	4,605	1,325	75	1,083	380	138	..	..	7,606
Other Cereals ..	21,738	..	..	..	180	309	..	..	22,227
Hay ..	757,414	1,261,552	86,477	561,071	413,138	96,019	..	2,502	3,178,173
Green Forage ..	477,060	115,037	338,312	91,783	186,233	24,941	..	548	1,233,914
Grass and other Seeds ..	..	5,840	3,823	3,400	..	1,587	..	..	14,650
Orchards and other Fruit Gardens ..	87,035	76,254	30,646	29,167	20,811	33,779	..	70	277,762

DISTRIBUTION OF CROPS 1934-35—*continued.*

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
Vines—	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Productive ..	14,169	37,592	1,517	51,220	4,817	..	..	..	109,315
Unproductive	974	3,588	409	2,141	920	..	..	..	8,032
Market Gardens	6,696	20,728	801	1,994	3,024	869	..	13	34,125
Sugar Cane—									
Productive ..	7,572	..	218,426	..	..	..	..	..	225,998
Unproductive	10,959	..	85,500	..	..	..	..	..	96,459
Potatoes ..	19,904	54,214	13,937	4,664	4,056	36,358	..	15	133,148
Onions ..	114	5,928	557	397	92	9	..	4	7,101
Other Root Crops	1,615	4,217	1,232	578	230	7,087	..	12	14,971
Tobacco ..	560	4,765	2,585	151	313	55	..	..	8,429
Broom Millet ..	2,614	955	399	..	..	..	..	18	3,986
Pumpkins and Melons ..	3,713	1,109	12,461	308	707	11	..	6	18,405
Hops ..	..	112	..	1	11	854	..	..	978
Cotton—									
Productive ..	..	..	43,397	..	..	..	..	..	43,397
Unproductive	..	..	34,350	..	..	..	..	..	34,350
All other Crops	16,019	3,444	25,151	771	921	247	1,132	17	47,702
Total Area ..	5,687,988	4,677,683	1,296,619	4,629,303	3,838,618	292,000	1,132	5,456	20,428,799

2. **Relative Areas of Crops in States and Territories.**—Taking the principal crops, i.e., those cultivated to the extent of over 100,000 acres, the proportion of each in the various States and Territories on the total area under crop for the season 1934-35 is shown in the next table. In four of the States, viz., New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive whilst hay is second in extent. In Victoria, South Australia and Western Australia the oat crop occupies third position, while green forage ranks third in New South Wales. In Queensland the most extensive crops are sugar cane, green forage, wheat and maize and in Tasmania hay, potatoes, orchards and fruit gardens, and oats occupy the greatest area.

As pointed out previously wheat is the main crop in Australia, the area thereunder for grain and hay representing 65 per cent. of the total area under cultivation in 1934-35.

RELATIVE AREAS UNDER CROP, 1934-35.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
Wheat ..	68.44	52.56	17.11	68.87	72.01	5.70	..	33.80	61.40
Hay ..	13.32	26.97	6.67	12.11	10.76	32.88	..	45.86	15.56
Oats ..	4.17	10.83	0.35	7.93	10.65	12.54	..	6.07	7.64
Green Forage..	7.86	2.46	26.10	1.98	4.85	8.54	..	10.04	6.04
Maize ..	2.03	0.40	12.39	..	..	..	..	0.24	1.44
Barley ..	0.17	1.87	0.74	6.87	0.69	1.98	..	1.15	2.23
Orchards and Fruit Gardens	1.53	1.63	2.36	0.63	0.54	11.57	..	1.28	1.36
Sugar Cane	0.33	..	23.45	..	..	..	..	..	1.58
Potatoes ..	0.35	1.16	1.08	0.10	0.10	12.45	..	0.27	0.65
Vineyards	0.26	0.99	0.15	1.15	0.15	..	..	..	0.57
All other..	1.54	1.13	9.60	0.36	0.25	14.34	100.0	1.29	1.53
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3. **Area under Chief Crops, Australia.**—The area under the chief crops during each of the last six seasons, together with the average for the decennial period 1915–25 is shown hereunder :—

AREA UNDER CHIEF CROPS.—AUSTRALIA.

Crop.	Average, 1915–25.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35
	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.	1,000 acres.
Barley (*a*)	195	389	328	299	400	410	395
Maize	319	298	293	269	228	304	295
Oats	894	1,516	1,082	1,085	1,027	1,374	1,562
Rice	..	19.8	19.9	19.6	22	20	22
Wheat	9,712	14,977	18,165	14,741	15,766	14,901	12,544
Green Forage	655	977	845	980	1,087	1,121	1,234
Hay	3,030	2,659	3,323	2,635	2,727	3,081	3,178
Beans and Peas	39	50	42	42	52	71	51
Onions	7	8.9	7.4	6	9	8	7
Potatoes (*b*)	133	124	142	145	147	140	131
Sugar Beet	1	2.5	3	3	3	3	3
Vineyards	85	115	113	113	114	116	117
Hops	1.5	1.4	1.2	1	1	1	1
Sugar Cane	196	307	312	326	307	329	322
Cotton	20	28	36	50	56	87	78
Tobacco	2	2.5	3.4	18	26	16	8
Market Gardens (*c*)	43	52	54	51	46	51	53
Orchards	269	278	276	273	274	282	278
All Other Crops	106	126	118	110	116	139	150
Total	15,707	21,930	25,164	21,167	22,408	22,454	20,429

(*a*) Malting only. (*b*) Not including Sweet Potatoes. (*c*) Including Pumpkins and Melons.

4. **Total and Average Production, Chief Crops, Australia.**—The following table shows the production of the chief crops for the six years ended 1934–35 and for the decennium 1915–1925 :—

TOTAL AND AVERAGE PRODUCTION, CHIEF CROPS.—AUSTRALIA.

Crop.	Unit of Quantity.	Average, 1915–25.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35
Barley (*a*)	1,000 bushels	3,757	6,439	5,674	5,547	7,837	7,014	6,991
Maize	" "	8,087	7,946	8,026	7,062	5,066	7,494	8,101
Oats	" "	14,629	14,424	16,658	15,195	16,160	16,922	16,906
Rice	" "	..	1,829	1,428	1,350	1,901	2,172	1,888
Wheat	" "	124,180	126,884	213,594	190,612	213,927	177,338	133,393
Hay	" tons	3,860	2,725	4,150	3,167	3,571	3,583	3,811
Beans and Peas	" bushels	662	813	737	497	1,000	1,057	721
Onions	" tons	36	50	47	24	49	52	42
Potatoes (*b*)	" "	346	343	365	397	384	328	286
Sugar (Beet)	" "	1.9	3.5	5.0	5.4	5.7	5.3	5.0
Grapes	" "	158	386	284	324	410	362	361
Wine	" gallons	9,317	16,069	13,078	14,191	16,418	13,996	16,265
Raisins and Currants	" cwt.	466	1,469	1,016	1,207	1,540	1,370	1,335
Hops	" lb.	2,139	2,340	1,973	1,810	1,669	1,953	2,065
Sugar (Cane)	" tons	256	538	536	604	533	666	641
Cotton, Unginned	" lb.	3,432	8,024	17,023	15,245	6,270	17,718	26,924
Tobacco	" "	1,618	1,702	1,594	10,160	9,723	4,348	3,113
Pumpkins and Melons	" tons	49	45	59	58	38	54	54

(*a*) Malting only. (*b*) Not including Sweet Potatoes.

5. **Average Yield per Acre, Chief Crops, Australia.**—Details of the average yield per acre for Australia of the principal crops are shown hereunder for the periods indicated :—

AVERAGE YIELD PER ACRE, CHIEF CROPS.—AUSTRALIA.

Crop.	Unit of Quantity.	Average, 1915–25.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
Barley (*a*)	bushel	19.31	16.56	17.30	18.55	19.60	17.09	17.69
Maize	,,	25.38	26.71	27.34	26.21	22.20	24.67	27.46
Oats	,,	16.35	9.52	15.39	14.00	15.73	12.32	10.83
Rice	,,	..	92.44	71.88	68.91	86.30	107.36	88.84
Wheat	,,	12.79	8.47	11.76	12.93	13.57	11.90	10.63
Hay	ton	1.27	1.03	1.25	1.20	1.31	1.16	1.20
Beans and Peas ..	bushel	16.82	16.16	17.45	11.96	19.14	14.97	14.02
Onions	ton	5.02	5.57	6.29	3.67	5.53	6.35	5.97
Potatoes (*b*)	,,	2.00	2.76	2.57	2.74	2.61	2.35	2.19
Sugar (Beet)	,,	1.38	1.39	1.67	1.70	1.80	1.64	1.63
Grapes (*c*)	,,	2.43	3.61	2.67	3.02	3.78	3.31	3.30
Wine (*c*)	gallon	274	345	281	299	341	296	342
Raisins and Currants (*c*)	cwt.	19.16	27.77	19.17	22.88	29.02	25.00	24.52
Hops (*c*)	lb.	1,472	1,708	1,689	1,747	1,753	2,001	2,173
Sugar (Cane) (*c*) ..	ton.	2.15	2.41	2.33	2.50	2.50	2.80	2.83
Cotton, Unginned (*c*) ..	lb.	332	535	752	679	209	260	620
Tobacco	,,	778	689	475	572	426	291	393
Pumpkins and Melons ..	ton	3.55	2.76	2.96	3.13	2.54	2.84	2.91

(*a*) Malting only. (*b*) Not including Sweet Potatoes. (*c*) Per acre of productive crops.

6. **Gross Value of Agricultural Production, Australia.**—The following table shows the gross value of recorded agricultural production at the principal markets in each State for the years 1927–28 to 1934–35 :—

GROSS VALUE OF AGRICULTURAL PRODUCTION.—AUSTRALIA.

Crops.	1927–28.	1928–29.	1929–30.	1930–31.	1931–32	1932–33.	1933–34.	1934–35.
	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000
Barley (*a*)	1,006	1,096	1,059	685	829	911	884	984
Maize	2,799	1,665	2,085	1,617	1,193	1,234	1,277	1,298
Oats	2,321	2,137	2,097	1,437	1,448	1,550	1,853	1,940
Rice	198	234	335	295	297	352	392	383
Wheat	31,895	38,303	27,299	25,047	33,728	33,316	27,897	24,738
Green Forage	2,731	2,680	3,167	2,385	2,642	3,046	2,540	2,435
Hay	15,120	14,137	12,721	14,397	8,145	9,520	10,265	10,587
Beans and Peas ..	333	256	257	199	220	302	234	194
Onions	319	314	193	139	253	218	230	311
Potatoes (*b*)	2,327	3,424	2,375	1,690	2,073	1,791	1,905	2,491
Sugar Beet	54	33	58	82	86	73	91	76
Grapes	3,786	4,022	4,145	3,496	3,495	3,918	3,674	3,562
Hops	258	189	132	157	144	128	142	151
Sugar Cane	7,469	7,444	7,476	7,340	7,649	7,098	7,601	7,310
Tobacco	108	97	92	187	1,115	961	340	257
Cotton, Unginned ..	145	214	186	355	308	125	283	397
Market Gardens (*c*) ..	2,374	2,384	2,640	2,259	2,152	1,965	2,029	2,136
Orchards	9,109	8,807	8,469	7,086	7,030	7,414	7,082	7,343
Other Crops	1,976	2,004	2,323	1,647	1,682	1,640	2,013	1,994
Total, Gross Value	84,328	89,440	77,109	70,500	74,489	75,562	70,732	68,587

(*a*) Malting only. (*b*) Not including Sweet Potatoes. (*c*) Including Pumpkins and Melons.

7. **Value of Production—Gross and Net.**—In previous issues of the Official Year Book to No. 27 the gross, local and net values of agricultural production were shown for each of the years 1926–27 to 1932–33, computed in accordance with resolutions of the several Conferences of Australian Statisticians. It was apparent, however, that the methods adopted in each State were not in complete harmony and at the Conference held in March, 1935, attention was directed to the elimination of any existing differences in computation. The success achieved at that conference makes it possible to present the value of agricultural production for 1934–35 on a basis of uniformity not hitherto attained. Sufficient time has not elapsed to enable the State Statisticians to carry this revision back to 1925–26 as is intended and consequently it is possible to publish results for one year only. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXVIII., § 9.

Attention is directed to the fact that in computing the net value of production no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm machinery. Consequently the figure stated is greater than it should be.

GROSS, FARM AND NET VALUE OF AGRICULTURAL PRODUCTION.—AUSTRALIA, 1934–35.

(AS ESTIMATED BY STATE STATISTICIANS IN ACCORDANCE WITH CONFERENCE RESOLUTIONS.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)	Depreciation.
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in process of production.		
	£	£	£	£	£	£	£
New South Wales ..	19,439,000	4,278,000	15,161,000	1,746,000	628,000	12,787,000	861,000
Victoria	15,793,092	2,771,340	13,021,752	3,158,126	1,127,850	8,735,776	824,000
Queensland ..	11,905,806	1,190,858	10,714,948	878,344	818,417	9,018,187	526,286
South Australia ..	9,082,418	1,448,455	8,533,963	1,341,084	817,341	6,375,538	593,460
Western Australia ..	8,167,869	1,516,988	6,650,881	1,441,323	941,011	4,268,547	638,087
Tasmania ..	3,151,500	636,770	2,514,730	438,940	124,640	1,951,150	54,790
Total ..	68,439,685	11,842,411	56,597,274	9,003,817	4,457,259	43,136,198	3,497,623

(a) No deduction has been made for depreciation and maintenance.

§ 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat growing industry, the third, that of baking, the fourth, the flour milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

Reference to the financial assistance to the wheat industry will be found in § 18, Bounties hereafter.

2. Progress of Wheat-growing.—(i) *Area and Production.* (*a*) *Seasons* 1930–31 *to* 1935–36. Wheat is the principal crop raised in Australia, and its development since 1860 has been almost continuous, the exceptions being the period of the Great War and of the economic depression of 1929–30 and subsequent years. As previously mentioned, any change in the area sown to this cereal dominates the changes in the total area under crop. The area and yield of wheat for grain are given below for each State for the five years ended 1934–35 and are shown from the year 1860 onwards in the graphs hereinafter. The figures in the table include an estimate for the 1935–36 crop, and the averages for the past decennium have also been inserted :—

WHEAT.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31 ..	5,134,960	4,600,200	272,316	4,180,513	3,955,763	19,107	2,061	18,164,920
1931–32 ..	3,682,945	3,565,872	248,783	4,071,370	3,158,888	11,722	1,733	14,741,313
1932–33 ..	4,803,943	3,230,955	250,049	4,066,782	3,389,352	20,985	3,438	15,765,504
1933–34 ..	4,584,092	3,052,931	232,053	3,821,795	3,183,216	24,097	3,087	14,901,271
1934–35 ..	3,892,768	2,458,583	221,729	3,188,225	2,764,373	16,656	1,844	12,544,178
1935–36 (*a*) ..	3,776,190	2,323,753	283,041	2,989,490	2,538,930	10,600	1,619	11,923,623
Average for ten seasons 1925–35 ..	3,946,985	3,268,656	208,527	3,459,542	3,104,509	20,368	1,628	14,010,215
PRODUCTION.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31 ..	65,877,000	53,814,369	5,107,561	34,871,526	53,504,149	391,490	28,296	213,594,391
1931–32 ..	54,966,000	41,955,856	3,863,894	48,093,102	41,521,245	182,913	29,178	190,612,188
1932–33 ..	78,870,000	47,843,129	2,493,902	42,429,614	41,791,866	433,031	65,439	213,926,981
1933–34 ..	57,057,000	42,613,106	4,361,614	35,373,466	37,305,100	560,665	66,852	177,337,803
1934–35 ..	48,678,000	25,850,528	4,076,181	27,455,600	26,985,000	307,525	40,398	133,393,232
1935–36 (*a*) ..	47,265,000	37,552,062	2,632,111	31,615,744	23,289,904	212,000	36,516	142,603,337
Average for ten seasons 1925–35	49,732,833	38,661,078	3,279,029	32,662,232	36,084,160	441,155	28,883	160,889,370

(*a*) Subject to revision.

The acreage under wheat for grain increased steadily until 1915–16, when, largely as the result of a special war effort, 12,484,512 acres were sown. After that year, however, there was a serious decline, brought about by war conditions and unfavourable seasons, and the area in 1919–20 fell to 6,419,160 acres, or only half that of 1915–16.

From 1920–21 onwards there was a rapid extension of the area under wheat until in response to the urge of Commonwealth and State Governments the maximum area of 18 million acres was sown in 1930–31. The acreage declined to 14¾ million acres in the following year, and after expanding by more than one million acres in 1932–33 declined heavily in the next three years to slightly under 12 million acres.

The season 1934–35 was not a satisfactory one due to unfavourable weather conditions and a plague of grasshoppers during the growing season. Compared with the average of the ten years ended 1934–35 the total yield and the yield per acre were less in each of the four principal producing States. New South Wales was least affected, but in Victoria the output was nearly 13 million bushels less, and the yield per acre declined by 1.32 bushels. The total production of grain for the year amounted to 133.4 million bushels compared with 177.3 million bushels, the production of the previous year, and with 213.9 million bushels, the record harvest of 1932–33. The average yield per acre for Australia in 1934–35 amounted to 10.63 bushels, compared with 11.90 bushels for the previous year and 11.48 bushels, the average for the decennium ending 1934–35.

The annual production of wheat over the fifteen seasons ending with 1934–35 has exceeded 100 million bushels. It is the opinion of agricultural experts that, notwithstanding the vagaries of the weather, the improved methods of agriculture—seed selection, bare fallowing, application of fertilizers, etc.—will assure the wheat crop of Australia against total failure in the future.

Although final figures are not yet available for all States, the data to hand for the year 1935–36 indicate the area sown to wheat for grain in Australia to be about 11,924,000 acres, a decrease of approximately 620,000 acres or 5 per cent. on that of the previous year. Production is estimated to amount to 142.6 million bushels, or 11.96 bushels per acre, compared with 133 million bushels or 10.63 bushels per acre for the previous year. The decline in acreage in 1935–36 represents the third recorded in successive years and indicates the seriousness of the conditions affecting the wheat industry in Australia. The main reason for the decrease is of course unremunerative prices which, as will be seen in paragraph 3 below, have had the effect of reducing the number of farms growing wheat by more than 7,700 since 1930–31.

(*b*) *Area, Production and Prices, 1861–70 to 1921–30.* The following table gives average area, production and yield per acre for decennial periods since 1861, together with the average wholesale price since 1871. The price quoted represents the average at Melbourne (Williamstown), and may be accepted as fairly representative for Australia.

WHEAT.—AVERAGE AREA, PRODUCTION AND WHOLESALE PRICE, AUSTRALIA.

Period.	Area.	Production.	Yield per Acre.	Average Wholesale Price.
	Acres.	Bushels.	Bushels.	*s. d.*
1861–70	831,457	10,621,697	12.77	(*a*)
1871–80	1,646,383	17,711,312	10.76	5 1
1881–90	3,257,709	26,992,020	8.29	4 7
1891–1900.. ..	4,086,701	29,933,993	7.32	3 8
1901–10	5,711,230	56,058,070	9.82	3 10
1911–20	8,927,974	95,479,866	10.69	5 0
1921–30	11,290,543	135,399,860	11.99	5 8

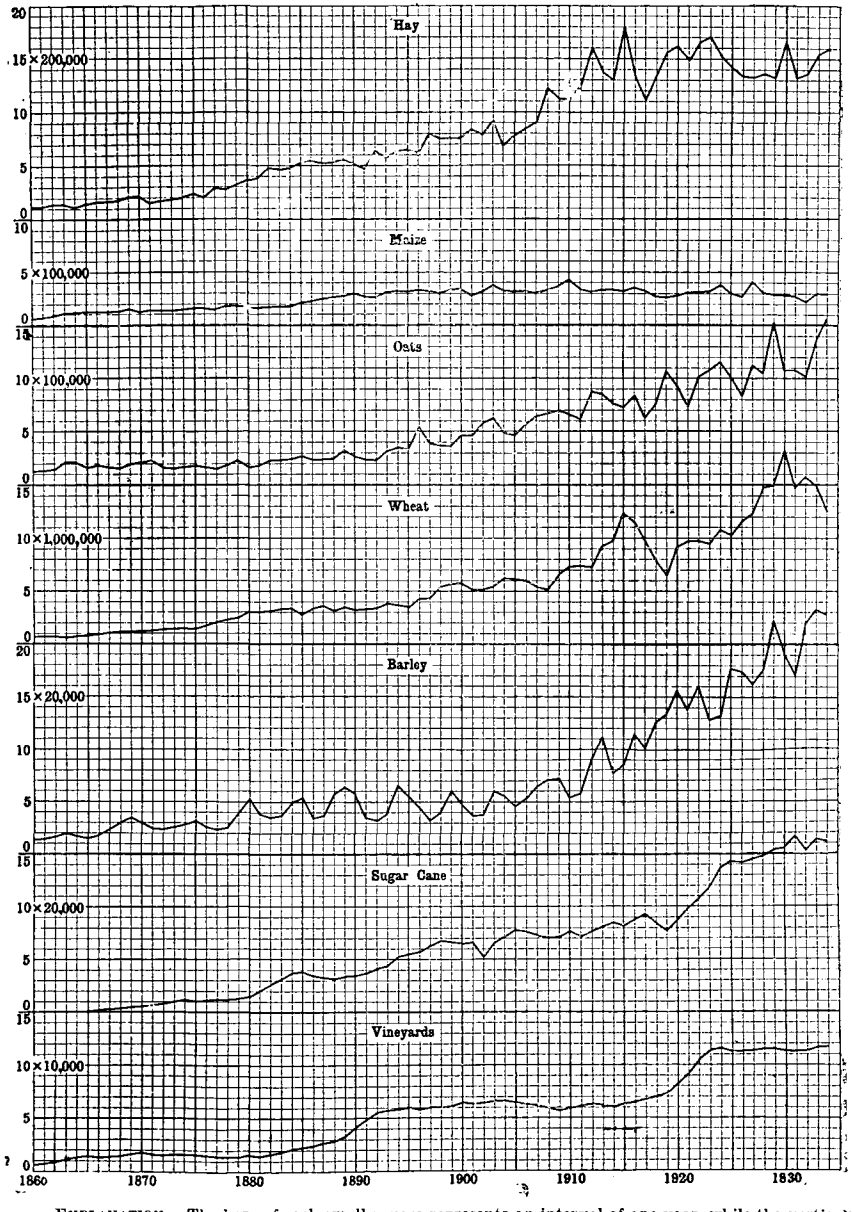
(*a*) Not available.

(ii) *Average Yield.* In the next table will be found the average yield of wheat per acre in each of the last five seasons, and for the decennium 1925–35 :—

WHEAT.—YIELD PER ACRE.

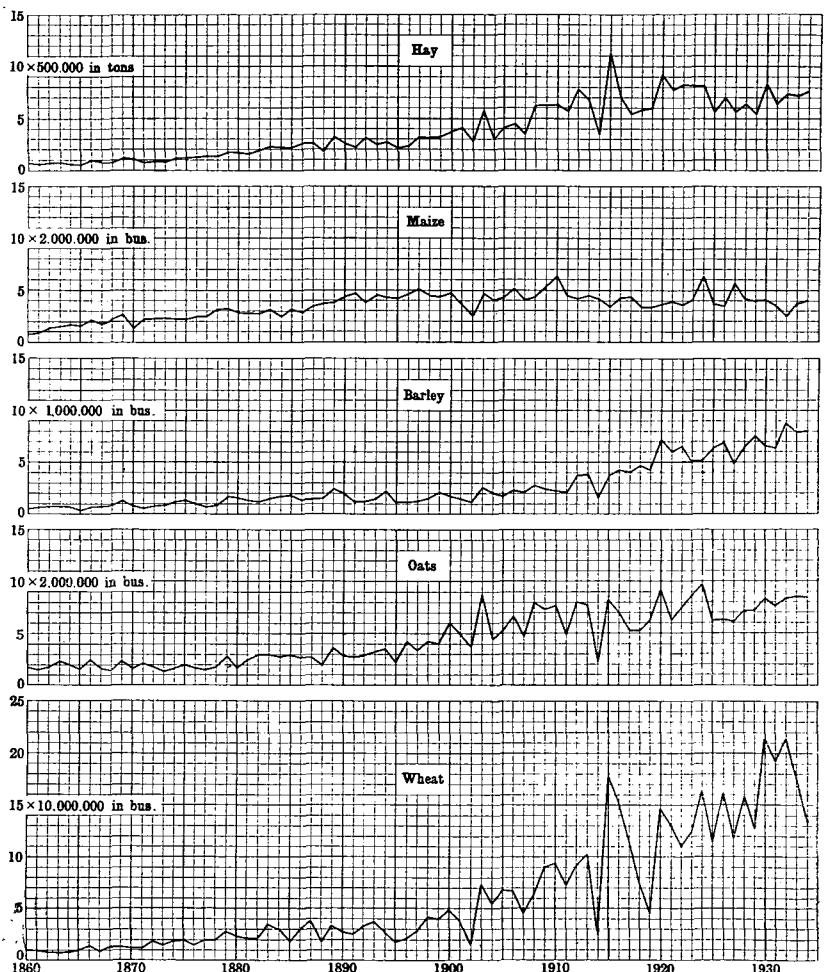
Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31 ..	12.83	11.70	18.76	8.34	13.53	20.49	13.73	11.76
1931–32 ..	14.92	11.77	15.53	11.81	13.14	15.61	16.84	12.93
1932–33 ..	16.42	14.81	9.97	10.43	12.33	20.64	19.03	13.57
1933–34 ..	12.45	13.96	18.80	9.26	11.72	23.27	21.66	11.90
1934–35 ..	12.50	10.51	18.38	8.61	9.76	18.46	21.91	10.63
Average 10 seasons, 1925–35	12.60	11.83	15.72	9.44	11.62	21.66	17.74	11.48

AREA UNDER PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1934-35.



EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents a number of acres, varying with the nature of the crop in accordance with the scale given on the left of the graph. The height of each curve above its base line denotes, for the crop to which it relates, the total area under cultivation in Australia during the successive seasons.

PRODUCTION OF PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1934-35.



EXPLANATION.—A separate base line is provided for each of the crops dealt with. In each instance the base of a small square represents an interval of one year, the vertical height of such square representing in the case of wheat, 10,000,000 bushels; oats, 2,000,000 bushels; barley, 1,000,000 bushels; maize, 2,000,000 bushels; and hay, 500,000 tons. The height of each curve above its base line denotes the aggregate yield in Australia of the particular crop during the successive seasons.

Variations in the average yields are chiefly due to the vagaries of the seasons. The best average yields for single seasons were obtained in 1924–25, 15.20 bushels; in 1920–21, 16.08 bushels; and in 1866, 16.35 bushels. In the last mentioned year less than 1,000,000 acres of relatively fertile land were sown. Annual averages for the past three decennia were 10.22, 12.79 and 11.48 bushels per acre.

(iii) *Relation to Population.* The main wheat producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production closely approaches local demands, but Tasmania imports from the mainland to satisfy its needs though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to three-quarters of the crop is exported overseas. During recent years Australia has ranked third on the list of exporting countries, as compared with sixth in the pre-war period 1909–13. For the later years its exports are exceeded by those of Canada and Argentine Republic. The quantity exported was approximately 18¼ per cent. of the total quantity shipped by exporting countries during the five years ended 1934.

3. **Wheat Farms.** Particulars of the number of farms growing wheat for grain on 20 acres and upwards during the past five years are shown in the following table. It should be remembered that a farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING WHEAT FOR GRAIN ON 20 ACRES AND UPWARDS.—AUSTRALIA.

State.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	No.	No.	No.	No.	No.
New South Wales ..	16,140	15,192	17,040	16,312	15,099
Victoria	17,215	14,846	15,299	14,319	12,582
Queensland	(a) 2,719	(a) 2,251	1,655	2,188	1,957
South Australia ..	13,186	13,456	13,434	13,133	13,053
Western Australia ..	9,703	9,808	9,532	9,632	9,161
Tasmania	(a) 922	195	378	413	275
Total	59,885	55,748	57,338	55,997	52,127

(a) Total number of farms growing wheat for grain.

4. **Australian and Foreign Wheat Yields.**—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world, ranging from a maximum in Denmark of 43 bushels per acre to a minimum in Tunis of nearly 7 bushels per acre:—

WHEAT.—YIELD PER ACRE, VARIOUS COUNTRIES.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1931–1933.	1934.		Average, 1931–1933.	1934.
Denmark ..	42.60	45.79	Yugoslavia ..	16.32	13.68
Netherlands ..	42.23	49.22	Argentine Republic	14.40	13.98
Belgium ..	38.84	43.57	Manchuria ..	14.15	11.45
United Kingdom ..	33.16	37.47	United States of America ..	13.60	11.75
Germany ..	32.62	30.63	Spain	13.57	16.36
Sweden ..	32.45	39.55	Rumania ..	13.27	10.11
Switzerland ..	31.65	35.39	Canada	13.20	11.45
New Zealand ..	31.11	26.32	**Australia** ..	**12.81**	**10.63**
Egypt	28.65	25.87			

WHEAT—YIELD PER ACRE, VARIOUS COUNTRIES—*continued.*

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average 1931–1933.	1934.		Average, 1931–1933.	1934.
Japan	26.47	30.04	Portugal ..	12.53	18.44
Czechoslovakia ..	26.30	21.71	Greece	12.04	13.09
Finland ..	25.95	26.32	Korea	11.07	11.60
Norway	24.77	26.00	Peru	10.55	6.69
France	24.14	25.28	India	10 48	9.81
Austria	23.72	23 20	Syria	10.41	11.90
Italy	22.37	19 03	French Morocco ..	10 24	13.09
Hungary ..	19 90	17.10	Mexico	10.06	8 92
Latvia	19 78	22 90	Uruguay ..	9 75	9 67
Bulgaria ..	18.06	12.79	Soviet Union ..	9.73	12.79
Lithuania ..	17.46	20.37	Cyprus	8.50	13.68
Brazil	(*b*) 16.90	(*a*)12 94	Union of South Africa ..	8 05	10.86
Chile	16 76	14.28	Algeria	7 64	10.71
China	16.59	17.10	Tunis	6.63	7.14
Poland	16.42	17 70			
Estonia ..	16.40	19.33			

(*a*) Year 1928. (*b*) Average 1924–28.

(ii) *Total Production.* The latest available official statistics of the production of wheat in various countries are given in the following table :—

WHEAT.—TOTAL PRODUCTION, VARIOUS COUNTRIES.

Country.	Yield in Bushels (,000 omitted).		Country.	Yield in Bushels (,000 omitted).	
	Average, 1931–1933.	1934.		Average, 1931–33.	1934.
Soviet Union ..	838,697	1,117,501	Sweden	23,465	28,376
China	819,082	825,286	Greece	18,894	25,679
United States of America ..	735,103	496,937	Portugal ..	17,360	24,690
Canada	348,765	275,854	Belgium ..	14,753	16,134
India	345,769	351,456	Tunis	13,534	13,779
France	319,994	338,516	Mexico	12,669	10,950
Italy	273,298	233,036	Austria	12,606	13,306
Argentine Republic	248,904	240,671	Syria	12,512	16,279
Australia ..	**193,959**	**133,393**	Union of South Africa ..	11,944	15,343
Germany ..	181,767	160,542	Netherlands ..	11,638	18,042
Spain	152,291	186,837	Denmark ..	10,865	12,847
Rumania ..	103,304	76,554	Uruguay ..	10,447	10,672
Yugoslavia ..	82,939	68,329	New Zealand ..	8,891	5,933
Hungary ..	77,790	64,825	Korea	8,859	9,268
Poland	70,859	76,441	Lithuania ..	8,650	10,476
Czechoslovakia ..	55,955	50,014	Brazil	5,693	5,464
Bulgaria ..	55,804	39,595	Latvia	5,135	8,051
Manchuria ..	50,746	23,463	Switzerland ..	4,334	5,824
United Kingdom	47,948	69,776	Peru	3,092	1,759
Egypt	46,204	37,277	Estonia	2,091	3,107
Japan	35,161	47,661	Finland ..	1,688	3,280
Algeria	28,962	43,529	Cyprus	1,499	2,197
French Morocco ..	28,885	39,586	Norway ..	699	1,204
Chile	28,413	30,130			

NOTE.—The harvests reported above for 1934 relate to the year 1934 for the Northern, and 1934–35 or the Southern Hemisphere.

A complete statement of the world's production of wheat is not possible owing to the failure of certain countries to supply the necessary information. The International Institute of Agriculture, Rome, has, however, compiled figures obtained from the countries reporting with the following results :—

WHEAT.—WORLD'S PRODUCTION.(*a*)

Year.	Area.	Production.	Yield per acre.
	Acres.	Bushels.	Bushels.
Average 1909–1913 ..	270,266,000	3,779,479,000	13.98
1930	344,630,470	4,882,135,000	14.17
1931	347,620,280	4,623,460,000	13.30
1932	345,396,380	4,586,716,000	13.27
1933	331,608,200	4,817,834,000	14.53
1934	328,643,000	4,587,084,000	13.96
Average, 1930–1934 ..	339,579,666	4,699,445,800	13.84

(*a*) From countries reporting including the Soviet Union.

The chief countries excluded from the above table are China and Manchuria. For the year 1934 the former produced 825 million bushels of wheat from an area of 48.3 million acres or an average yield of 17.10 bushels per acre while Manchuria produced 23.5 million bushels from 2.0 million acres or an average of 11.49 bushels per acre. It is stated by the International Institute, however, that these figures for China are largely conjectural and can be accepted only as approximate estimates. In addition they do not include all of the Territories embraced in the Chinese Republic. By the addition of the production of these two countries the world's total production for the year 1934 would exceed 5,436 million bushels.

The total area harvested in 1934 shows a further reduction in the area which commenced to decline in 1932. This decrease was due principally to the heavy decline in the United States and the contraction of areas in Canada, Australia and the Argentine Republic. Importing European countries also reduced their acreages. An increase in the area under wheat was recorded in the Soviet Union and in India but these were more than offset by the decreases already mentioned. In comparison with the average for the period 1926–30, areas sown to wheat throughout the world have increased considerably, the Soviet Union and European countries being the chief contributors.

The world's acreage under wheat in 1931 was the highest ever recorded, but the production was somewhat lower than that for the record year of 1930. A succession of bountiful years commencing in 1928 led to very heavy accumulations of stocks, particularly in North America. These stocks reached their maximum about the year 1932 but they have now been reduced to about normal dimensions owing to reductions in world production during 1934 and 1935.

The Australian contribution to the world's production during the last five years was not quite 4 per cent.

5. **Price of Wheat.**—The collapse in the price of wheat which occurred between 1928 and 1931 was chiefly due to the accumulation of stocks in exporting countries. Additional factors were the reduced import demand in European countries consequent upon increased production and the raising of trade barriers. The weighted average price of wheat (shippers' limits Sydney, Melbourne and Adelaide) fell from 5s. 1¼d. in 1928 to 2s. 4¾d. in 1931, a decline of 53 per cent. In 1932 the price increased to 3s. 0½d. but dropped to 2s. 9¾d. in 1933 and to 2s. 7½d. in 1934. In 1935, however, it rose to 3s. 1¾d. and in August, 1936, was 4s. 7¼d. The table hereunder shows prices of Australian wheat during each of the last six years :—

PRICE OF WHEAT.—AUSTRALIA.

(WEIGHTED AVERAGE OF SHIPPERS' LIMITS FOR GROWERS' BAGGED LOTS, SYDNEY MELBOURNE AND ADELAIDE.

Item.	1930.	1931.	1932.	1933.	1934.	1935.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Price per bushel	3 9¾	2 4¾	3 0½	2 9¾	2 7½	3 1¾

6. **Exports of Wheat and Flour.**—(i) *Quantities.* The table appended shows the exports and net exports of wheat and flour from 1931–32 to 1935–36. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. There have been two occasions since the beginning of the century when it has been necessary to import wheat and flour to tide over lean seasons. For the season 1902–3 the wheat harvested was as low as 12,378,000 bushels and wheat and flour representing 12,468,000 bushels of wheat were imported. For the season 1914–15 slightly less than 25,000,000 bushels was produced, with the result that an equivalent of 7,279,000 bushels of wheat was imported. During the last five years exports in terms of wheat ranged between 87,635,144 bushels in 1933–34 and 156,722,189 bushels in 1931–32, the net exports for the period averaging 122,057,414 bushels :—

WHEAT AND FLOUR.—EXPORTS, AUSTRALIA.

Year.	Exports.			Net Exports.
	Wheat.	Flour.	Total.	
	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.
1931–32 ..	127,401,005	29,321,184	156,722,189	156,720,746
1932–33 ..	119,555,938	30,310,032	149,865,970	149,862,751
1933–34 ..	61,598,528	26,039,616	87,638,144	87,635,144
1934–35 ..	75,959,690	33,502,608	109,462,298	109,457,913
1935–36 (b) ..	76,993,133	29,619,888	106,613,021	106,610,518

(a) Equivalent in bushels of wheat. (b) Subject to revision.

(ii) *Destination.* The following table gives the exports of wheat to various countries for each of the six years ended 1934–35, together with averages for the pre-war period 1909–13 :—

EXPORTS OF WHEAT.—AUSTRALIA.

Country to which Exported.	Average, 1909–13.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom ..	30,305,384	21,488,415	39,995,488	49,219,354	50,939,947	45,531,315	41,198,165
Italy	581,309	3,261,455	12,697,635	8,195,049	3,656,230	699,225	18,838
Japan	330,131	2,811,142	17,676,232	21,464,248	17,896,367	7,720,102	15,530,035
France	1,681,918	186,682	350,638	163,495	..	..	..
Union of South Africa	2,992,355	1,540,482	956,317	461,706	19,730	39,472	21,027
Belgium	1,218,131	408,990	2,016,602	1,892,016	826,517	37,180	253,920
Egypt	135,377	1,178,230	3,143,433	1,640,116	1,019,218	203,760	1,605,768
Germany ..	286,822	..	193,935	204,084	46,125	..	..
Netherlands ..	(a)	490,358	2,158,470	2,073,363	527,462	63,353	7,507
Other Countries ..	4,465,847	9,024,953	40,034,540	42,087,574	44,624,342	7,304,121	17,324,430b
Total ..	41,997,274	40,390,707	119,223,290	127,401,005	119,555,938	61,598,528	75,959,690

(a) Included with other Countries. (b) Includes China 13,663,893 bushels.

Exports of flour from Australia for the periods mentioned are given in the next table :—

EXPORTS OF FLOUR.—AUSTRALIA.

Country to which Exported.	Average, 1909–13.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Egypt	(a)	125,963	145,694	106,526	28,589	27,766	26,864
United Kingdom ..	27,699	85,364	134,547	191,963	121,995	136,677	99,332
Netherlands East Indies	26,099	82,595	74,765	85,570	73,179	80,623	82,127
Malaya (British) ..	15,492	51,160	41,841	43,664	43,965	50,834	61,926
Union of South Africa	30,714	18,256	9,051	1,230	228	436	371
Ceylon	3,389	21,252	21,630	19,441	19,239	18,893	18,821
New Zealand ..	3,221	3,823	5,168	4,833	2,716	1,246	648
Philippine Islands ..	13,680	8,707	8,949	11,762	11,484	10.998	27,437
Hong Kong ..	2,672	2,933	5,947	53,557	50,874	27,663	50,616
Mauritius ..	2,221	5,988	4,896	13,231	10,905	14,277	10,966
Portuguese East Africa	13,462	5,410	5,747	6,199	5,896	7,432	6,186
Other Countries ..	28,463	54,282	66,008	72,882	b262,389	b165,647	c312,677
Total ..	167,112	465,733	524,243	610,858	631,459	542,492	697,971

(a) Included with other Countries. (b) Includes China 160,062 tons in 1932–33 and 79,261 tons in 1933–34. (c) Includes Manchuria (including Kwantung Peninsula) 240,181 tons.

7. **Exports—Principal Countries.**—The following table shows the net quantities of wheat exported from the chief exporting countries for each of the years 1930 to 1934, the average for that period and the average for the period 1909–13. The figures are based mainly on information supplied by the International Institute of Agriculture. Comparison between the periods 1930–34 and 1909–13 shows that the world's supply of wheat in the later years has been principally obtained from North America, Canada supplying 33 per cent., and the United States 10 per cent., as compared with 14 and 15 per cent. respectively for the pre-war period. Russia's exports, which amounted to about 24 per cent. of the total for the period 1909–13 fell to 7 per cent. for the years 1930–34. While Australian production was less than 4 per cent. of the world's total, the exports accounted for 18.4 per cent. of the quantities exported in the years 1930–34 :—

WHEAT.(a)—NET EXPORTS, PRINCIPAL COUNTRIES.

Country.	Average, 1909–13.		1930.	1931.
	Bushels.	Per cent.	Bushels.	Bushels.
Soviet Union (b) ..	157,109,000	23.71	93,500,338	93,294,187
Canada	89,919,000	13.57	240,076,983	219,380,719
United States of America	100,864,000	15.22	127,484,281	109,348,836
Argentine Republic ..	95,041,000	14.34	86,434,936	137,917,662
British India	50,886,000	7.68	4,376,075	..
Australia	**49,417,000**	**7.46**	**75,115,330**	**156,306,844**
All other Countries ..	119,351,000	18.02	78,525,402	102,588,781
Total	662,587,000	100.00	705,513,345	818,837,029
World's Production ..	3,779,479,000		4,882,135,000	4,623,460,000
Percentage of Australian Net Exports on Total Net Exports ..	7.46		10.65	19.09
Percentage of Australian Production on World's Production ..	2.39		4.43	4.12

WHEAT.(a)—NET EXPORTS, PRINCIPAL COUNTRIES—*continued.*

Country.	1932.	1933.	1934.	Average, 1930–34.	
	Bushels.	Bushels.	Bushels.	Bushels.	Per cent.
Soviet Union (b)	16,934,885	28,781,201	8,671,263	48,236,375	7.17
Canada ..	250,412,350	216,329,250	189,146,845	223,069,229	33.14
United States of America ..	74,044,725	17,580,145	19,120,466	69,515,691	10.32
Argentine Republic	129,306,246	149,221,042	181,549,089	136,885,795	20.34
British India ..	2,297,172	..	1,924,705	1,719,590	0 26
Australia ..	**151,065,123**	**142,424,357**	**93,299,658**	**123,642,262**	**18 37**
All other Countries	58,523,540	49,656,946	60,761,430	70,011,220	10.40
Total ..	682,584,041	603,992,941	554,473,456	673,080,162	100.00
World's Production	4,586,716,000	4,817,834,000	4,587,084,000	4,699,445,800	
Percentage of Australian Net Exports on Total Net Exports ..	22.13	23.58	16.83	18.37	
Percentage of Australian Production on World's Production ..	4.66	3.68	2.91	3.95	

(a) Including flour expressed in terms of wheat. (b) The average for 1909–13 is not strictly comparable with the later years, owing to changes of frontiers under the Peace Treaty.

8. **Imports—Principal Countries.**—The quantities of wheat and flour (expressed in terms of wheat) imported into the principal countries for the periods indicated are shown in the following table. The United Kingdom is easily the leading importing country. Under the terms of the Agreement at the Imperial Economic Conference at Ottawa in August, 1932, the Government of the United Kingdom undertook to provide a duty of 3d. per bushel on foreign wheat imported, and the concession has proved of considerable benefit to Canada and Australia. During recent years the imports of wheat by China and Japan have grown considerably, and a large share in this trade has been supplied by Australia :—

WHEAT.(a)—IMPORTS, PRINCIPAL COUNTRIES.(b)

Country Importing.	Average, 1909–13.		1930.	1931.
	Bushels.	Per cent.	Bushels.	Bushels.
United Kingdom ..	219,365,265	30.42	224,768,113	249,661,162
Germany	89,731,507	12.44	45,076,168	29,833,110
Netherlands	76,340,387	10.59	33,835,929	34,050,390
Belgium	73,962,974	10.26	44,876,382	54,100,075
Italy	57,156,174	7.93	71,429,187	55,192,480
France	38,681,717	5.36	39,317,137	87,744,709
Brazil	20,774,307	2.88	39,271,111	32,247,550
Egypt	7,914,626	1.10	10,228,090	8,867,739
Union of South Africa ..	6,519,097	0.90	2,798,084	3,408,764
China (c)	5,525,863	0.77	21,501,395	65,067,217
Japan	3,713,840	0.52	18,756,906	26,846,094
All other Countries ..	121,409,356	16.83	215,629,206	239,617,214
Total	721,095,113	100.00	767,487,708	886,636,504

WHEAT.(a)—IMPORTS, PRINCIPAL COUNTRIES.(b)—*continued.*

Country Importing.	1932.	1933.	1934.	Average, 1930–34.	
	Bushels.	Bushels.	Bushels.	Bushels.	Per cent.
United Kingdom..	218,416,777	234,263,567	215,078,609	228,437,645	30.15
Germany ..	37,934,262	28,466,425	23,893,524	33,040,698	4.36
Netherlands ..	29,407,321	29,251,108	20,057,030	29,320,356	3.87
Belgium ..	46,925,317	44,048,528	48,190,674	47,628,195	6.28
Italy	39,449,749	17,943,158	17,654,190	40,333,753	5.32
France	78,789,358	32,349,616	29,034,434	53,447,051	7.05
Brazil	28,625,653	33,615,404	34,589,803	33,669,904	4.44
Egypt	4,230,872	271,848	845,046	4,888,719	0.65
Union of South Africa ..	1,095,763	80,024	913,018	1,659,131	0.22
China (c) ..	65,270,480	73,759,763	45,628,514	54,245,474	7.16
Japan	28,158,858	19,538,407	18,100,248	22,280,102	2 94
All other Countries	218,005,056	192,953,085	178,116,781	208,864,268	27.56
Total ..	796,309,466	706,540,933	632,101,871	757,815,296	100.00

(a) Including flour expressed in terms of wheat. (b) In some instances, the average 1909–13 is not strictly comparable with the other years shown, owing to changes of frontiers. (c) Including Manchurian ports.

9. **Consumption of Wheat.**—(i) *Australia.* The estimated consumption of wheat for food and the quantity used for seed in Australia during the last five years are shown hereunder :—

AVERAGE HUMAN CONSUMPTION, 1930-31 TO 1934-35.

Flour Milled		1,273,304 tons
Less Net exports of flour	601,347 tons	
Less Net exports of flour in Biscuits	932 ,,	
		602,279 ,,
Net quantity available for home consumption ..		671,025 ,,
Equivalent in terms of wheat		32,209,200 bushels
Net quantity available per head of population—		
As flour		203 lb.
As wheat		4.878 bushels

AVERAGE USED FOR SEED, 1930-31 TO 1934-35.

Average area sown for grain, hay and green forage ..	16,263,987 acres
Average quantity of seed used	16,005,490 bushels
Average quantity of seed used per acre	59 lb.
Average quantity per head of population	2.424 bushels

In addition to the above, allowance must be made for wheat fed to poultry and other live stock. Hitherto the quantity so used has been estimated to range from one half to one bushel per head of population per annum. This amount is now considered to be too low. The revised figures give a total annual consumption of 8.6 million bushels, or 1.30 bushels per head of population. Almost the whole of this quantity is used in the form of grain as feed for poultry, principally fowls, which numbered 15.2 million

during the year 1933–34. The average quantity of flour consumed per annum for the five years under consideration was 203 lb. per head of population, which, expressed in terms of wheat, represents 4.878 bushels. The estimates of quantity of grain used for seed in Victoria, South Australia and Western Australia are based on data collected from growers. In the other States estimates supplied by the Agricultural Departments have been used. The average annual quantity used for the purposes indicated during the last five years was 2.424 bushels per head of population, or 59 lb. per acre sown. The consumption of wheat in Australia for all purposes during the period dealt with averaged, therefore, 56,814,000 bushels, or 8.60 bushels per head of population.

(ii) *Other Countries.* The following table gives the consumption of wheat in some of the principal countries of the world. The figures, which were obtained partly from the Food Research Institute of California, represent the *per capita* consumption of wheat exclusive of the quantity used for seed purposes :—

PER CAPITA CONSUMPTION OF WHEAT, EXCLUDING SEED, FOR PERIOD 1922–1929.

Country.	Used for human consumption.	Fed to Stock.	Total.
	Bushels.	Bushels.	Bushels.
Argentine Republic (*a*) ..	5.4	0.2	5.6
Australia (*a*)	**4.9**	**1.3**	**6.2**
Canada	4.5	3.3	7.8
New Zealand (*b*)	4.2	1.1	5.3
United Kingdom	4.8	1.0	5.8
United States	4.2	0.6	4.8

(*a*) Average for five years ended 1934–35. (*b*) Average for five years ended 1934.

10. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the season 1934–35 is shown below. The values shown are inclusive of financial assistance granted by the Commonwealth Government which amounted to £4,040,608 for the year 1934–35. Particulars for this and previous years are shown in § 18, Bounties, below.

WHEAT.—VALUE OF CROP(*a*), 1934–35.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	8,569,360	5,104,638	776,689	5,158,887	5,061,500	59,900	6,619	24,737,593
Value per acre ..	£2/4/0	£2/0/2	£3/10/1	£1/12/4	£1/16/7	£3/11/11	£3/11/9	£1/19/5

(*a*) Gross value of total crop, including seed used on farm, valued at metropolitan prices but exclusive of value of straw.

11. **Varieties of Wheat Sown.**—Particulars of the varieties of wheat sown and the area thereunder are collected from time to time. The following table shows particulars of the nine principal varieties sown in the four main producing States and the percentage each bears to the total area sown for the year 1934–35.

PRINCIPAL VARIETIES OF WHEAT SOWN—STATES, 1934-35.

New South Wales.		Victoria.		South Australia.		Western Australia.	
Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.
	%		%		%		%
Nabawa ..	27.5	Free Gallipoli ..	41.1	Nabawa ..	19.7	Bencubbin ..	22.5
Ford	12.4	Ranee ..	21.6	Ranee ..	14.3	Gluyas Early ..	13.2
Bobin	10.9	Ghurka ..	15.5	Gallipoli ..	8.6	Nabawa ..	11.4
Waratah ..	8.8	Sepoy ..	4.5	Sword ..	8.0	Gluclub ..	11.0
Free Gallipoli ..	4.9	Nabawa ..	3.0	Waratah ..	7.0	Merredin ..	10.8
Yandilla King ..	4.9	Rajah ..	2.0	Gluyas ..	6.3	Noongaar ..	5.8
Ranee	4.0	Major	1.6	Ford	6.2	Waratah ..	4.2
Dundee ..	2.7	Federation ..	1.5	Late Gluyas ..	3.6	Bena	3.4
Penny ..	2.0	Nizam ..	1.3	Ghurka ..	2.0	Geeralying ..	2.2
All Others ..	21.9	All Others ..	7.9	All Others ..	24.3	All Others ..	15.5
Total ..	100.0	Total ..	100.0	Total ..	100.0	Total ..	100.0

It is interesting to note the changes that have taken place in the leading varieties during recent years. In New South Wales and South Australia Nabawa occupied a very minor place on the list in 1929, but by 1933-34 it had risen to the leading position which it still retains. On the other hand this variety, while still one of the leading wheats grown in Western Australia, declined from 47 per cent. of the total area in 1929 to 11 per cent. in 1934-35 in which year it receded to third place. Free Gallipoli, the leading variety in Victoria, increased its lead from 22 per cent. in 1929 to 49 per cent. in 1933-34, but in 1934-35, while still retaining its leading position, declined to 41 per cent. More than 1,000 different varieties of Australian wheat have been catalogued by the Council for Scientific and Industrial Research.

12. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November, 1935, and the total held in Australia on the same date for the previous four years will be found in the following table. The figures have been compiled from information collected from millers, merchants, the Railway Departments and other sources, but are exclusive in certain instances of stocks held by farmers :—

STOCKS OF WHEAT AND FLOUR.—AUSTRALIA, 30TH NOVEMBER, 1935.

State.	Wheat.	Flour.	Total in terms of wheat.(a)
	Bushels.	Tons.	Bushels.
New South Wales	4,216,005	36,742	5,979,621
Victoria	5,840,992	26,117	7,094,629
Queensland	533,092	1,830	620,932
South Australia	1,004,834	10,315	1,499,954
Western Australia	443,422	12,651	1,050,670
Tasmania	171,963	1,982	267,099
Total, 30th November, 1935 ..	12,210,308	89,637	16,512,905
,, ,, 1934 ..	34,708,963	112,385	40,103,463
,, ,, 1933 ..	14,375,614	86,638	18,534,212
,, ,, 1932 ..	6,647,325	85,658	10,758,925
,, ,, 1931 ..	12,708,848	77,066	13,805,879

(a) One ton of flour treated as equivalent to 48 bushels of wheat.

13. **Voluntary Wheat Pools.**—(i) *General.* Voluntary wheat pools operated in the States of Victoria, South Australia and Western Australia during the season 1935–36. In New South Wales the pool was inactive during the year. The system adopted in these States is somewhat similar, and is a co-operative one controlled by trustees, or committees appointed by the growers, the whole of the proceeds, less administrative expenses, being distributed amongst contributors of wheat to the pool. The trading names of these organizations in the various States are as follows :—

New South Wales.—The Wheat Growers' Pooling and Marketing Co. Ltd.
Victoria.—Victorian Wheat-growers' Corporation Ltd.
South Australia.—South Australian Co-operative Wheat Pools Ltd.
Western Australia.—The Trustees of the Wheat Pool of Western Australia.

The marketing of wheat in Queensland is conducted on a compulsory basis by the State Wheat Board, consisting of four elected representatives and one member nominated by the Minister for Agriculture who represents the Queensland Government. The present Board was elected on 1st August, 1935, and holds office for three years from that date.

(ii) *Delivery of Wheat to Pools, Costs, etc.* The quantities of wheat received and the estimated average costs per bushel of rail freight and of administrative and other expenses are given hereunder. As the season's operations are not yet complete, the costs shown are subject to revision.

WHEAT RECEIVED BY VOLUNTARY POOLS, 1935-36.

Particulars.	Unit.	Victoria.	Queensland. (a)	South Australia.	Western Australia.
Wheat received	Bushel	b1,500,000	2,389,444	1,012,599	3,354,403
Percentage on Total Marketable Wheat	%	5.0	90.8	3.5	18.0
Estimated average cost of rail freight to seaboard, per bushel	*d.*	4.6	4.75	3.30	4.57
Estimated average cost per bushel of Administration and other expenses ..	*d.*	3.50	(*b*) 3.00	(*b*) 3.50	2.75

(*a*) Compulsory Pool. (*b*) Approximate.

(iii) *Finance.* The requisite financial accommodation in Victoria and South Australia was furnished by the Commonwealth Bank. In Western Australia funds were made available by financial houses in London. Initial advances made available to growers on the delivery of their wheat at country stations are shown, together with subsequent payments, in the following table :—

WHEAT POOLS ADVANCES(*a*) PER BUSHEL MADE TO SEPTEMBER, 1936.

Particulars.	Victoria.	South Australia.	Western Australia.
	s. d.	*s. d.*	*s. d.*
1st Payment	3 0	2 5	2 4
2nd Payment		0 4	0 8
3rd Payment		0 3	0 4
4th Payment		0 3	..
Estimated Final Payment		(*b*)	(*b*)

(*a*) Less Rail Freight. (*b*) Not yet available.

In Queensland the Commonwealth Bank provides the financial assistance necessary to make advances on wheat delivered, the State Government guaranteeing the Wheat Board's accounts with the bank. All wheat not required for consumption on the farm is delivered to the Board, which is the sole marketing agency. The crop in 1935–36 amounted to 2,632,111 bushels, of which 2,389,444 bushels, or 90.8 per cent., was delivered into the pool. Net advances made to growers on No. 1 quality wheat totalled 3s. 9d. per bushel; other grades bear the dockages ranging from ½d. to 4½d. per bushel assessed at the time of delivery according to quality. The dockages being a deduction from the first advance, subsequent advances are uniform on all grades.

§ 5. Oats.

1. **Progress of Cultivation.**—(i) *Area and Production.* Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain accounted for 61.40 per cent., oats represented only 7.64 per cent. of the area under crop in 1934–35. The acreage and production of oats for the last five years are shown in the table hereunder, and more fully in the graphs herein :—

OATS.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31.. ..	176,659	371,024	5,132	218,416	274,874	35,919	77	1,082,101
1931–32.. ..	151,600	439,626	1,364	206,470	267,894	18,412	123	1,085,489
1932–33.. ..	163,809	368,846	3,733	174,244	285,850	30,652	128	1,027,262
1933–34.. ..	203,693	525,976	5,207	265,074	342,642	31,199	130	1,373,921
1934–35.. ..	237,405	506,638	4,566	367,192	408,810	36,611	331	1,561,553
Average 10 seasons, 1925–35 ..	156,135	445,988	2,670	222,385	303,967	35,751	256	1,167,152
PRODUCTION.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31.. ..	3,241,980	6,893,827	94,452	2,080,311	3,292,560	1,052,768	2,160	16,658,058
1931–32.. ..	2,526,450	6,450,281	20,352	2,287,844	3,549,636	356,847	3,270	15,194,680
1932–33.. ..	3,513,780	6,363,853	58,729	1,788,712	3,603,447	828,239	2,868	16,159,628
1933–34.. ..	3,178,470	6,778,754	69,534	2,087,772	3,949,905	854,239	3,357	16,922,031
1934–35.. ..	3,856,680	5,248,787	82,198	2,412,117	4,244,322	1,054,256	7,662	16,906,022
Average 10 seasons, 1925–35 ..	2,618,268	5,696,135	43,750	1,886,178	3,483,132	992,505	4,073	14,724,041

The oat crop showed considerable variation during the past decennium, ranging from 12,084,265 bushels in 1927–28 to 16,922,031 bushels in 1933–34, with an average for the period of 14,972,813 bushels. The demand for the grain for oatmeal varies from 1½ million bushels to 2 million bushels annually. The cereal is mainly used as feed grain, and its value, particularly in good seasons, does not warrant an extension of area.

The principal oat-growing State is Victoria, which produces on the average more than one-third of the total quantity grown in Australia. South Australia, Western Australia and Tasmania also produce considerable quantities in excess of local requirements. Western Australia disposes of its surplus to the East, principally to Malaya (British), whilst the other States export chiefly to New South Wales and Queensland. For Australia as a whole the record yield of oats was obtained during 1924–25, when 19,393,737 bushels were harvested.

(*ii*) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Averages for each of the last five seasons, and for the decennium 1925 to 1935 are given in the table below :—

OATS.—AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31	18.35	18.58	18.40	9.52	11.98	29.31	28.05	15.39
1931–32	16.67	14.67	14.92	11.08	13.25	19.38	26.59	14.00
1932–33	21.45	17.25	15.73	10.27	12.61	27.02	22.41	15.73
1933–34	15.60	12.89	13.35	7.88	11.53	27.38	25.82	12.32
1934–35	16.25	10.36	18.00	6.57	10.38	28.80	23.14	10.83
Average for 10 seasons 1925–35	16.77	12.77	16.39	8.48	11.46	27.76	15.75	12.62

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914–15, viz., 5.60 bushels, while the largest in the last ten years was that of the season 1924–25, amounting to 16.65 bushels per acre.

2. **World's Production.**—The world's production of oats for the year 1934, as computed by the International Institute of Agriculture, amounted to 3,213 million bushels. This quantity was harvested from 137 million acres, and represents an average yield of 23.64 bushels per acre. The following table shows the world's production and average yield for the last five years, together with the average for the quinquennium 1924–1928 :—

OATS.—WORLD'S PRODUCTION.

Year.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1924–28	145	3,677	25.36
1930	148	3,788	25.59
1931	146	3,262	22.30
1932	141	3,552	25.20
1933	139	3,361	24.09
1934	137	3,213	23.64

3. **Prices of Oats.**—The average wholesale prices in the Metropolitan markets for the year 1934–35 are given in the following table :—

OATS.—AVERAGE WHOLESALE PRICES, 1934–35.

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	2 5½	3 1½	3 7½	2 1	1 9½	2 4½

4. **Imports and Exports.**—The production of oats in Australia has not yet reached sufficient proportions to admit of a regular export trade. During the year 1927–28 there

was a net import of 460,581 bushels. The quantities and values of oats imported into and exported from Australia during the years 1930–31 to 1934–35 are given hereunder :—

OATS.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1930–31(a) ..	3,293	1,090	171,825	23,957	168,532	22,867
1931–32(a) ..	5,470	1,435	245,700	30,394	240,230	28,959
1932–33(a) ..	4,443	981	245,178	26,311	240,735	25,330
1933–34(a) ..	3,542	772	87,275	12,789	83,733	12,017
1934–35(a) ..	7,302	1,728	576,062	61,581	568,760	59,853

(a) Australian currency values.

Imports have been obtained chiefly from New Zealand, while the principal countries to which oats were exported during the years quoted were New Zealand, Malaya (British), Ceylon, India and Mauritius. In 1934–35, however, 457,015 bushels, valued at £45,372, were shipped to the United Kingdom.

5. **Oatmeal, etc.**—The production of oatmeal in Australia during 1934–35 amounted to 272,127 cwt., practically the whole of which is consumed locally, the quantity of oats used for oatmeal being 1,489,092 bushels, or about 9 per cent. of the total production. Oversea trade in this and similar products is small ; the imports of oatmeal, wheatmeal and rolled oats during 1934–35 amounted to 95 cwt., and exports to 15,983 cwt.

6. **Value of Oat Crop.**—The estimated value of the oat crop for the season 1934–35 was as follows :—

OATS.—VALUE OF CROP,(a) 1934–35.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value	454,780	601,424	14,214	281,570	462,808	124,300	904	1,940,000
Value per acre	£1/18/4	£1/3/9	£3/1/11	£0/15/4	£1/2/8	£3/7/11	£2/14/7	£1/4/10

(a) Exclusive of the value of straw.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in New South Wales and Queensland, the area so cropped in these States during the season 1934–35 being 276,177 acres, or 94 per cent. of the total for Australia. Of the balance, Victoria contributed 18,727 acres, Western Australia, 34 acres, South Australia, 30 acres and the Federal Capital Territory, 13 acres. The climate of Tasmania is unsuitable for the growing of maize for grain. In the States mentioned the crop is grown to a greater or less extent for green forage, particularly in connexion with the dairying industry.

2. **Progress of Cultivation.**—(i) *Area and Production.* Notwithstanding its pre-eminence as the world's most extensively grown cereal, the cultivation of maize has decreased in Australia during the past decennium. Compared with the previous year, the area in 1934–35 decreased by nearly 9,000 acres. The greatest area grown was in 1910–11 when it amounted to 414,914 acres. The average for the decennium 1925–35 was 299,000 acres.

The area and production of maize for grain in each State for the last five years and the average for the decennium 1925–35 are given in the following table. The fluctuations from year to year are shown more fully on the graph herein :—

MAIZE.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Nor. Ter.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31	105,024	16,227	172,176	..	10	..	13	293,450
1931–32	106,047	15,714	147,669	7	11	..	..	269,448
1932–33	113,333	16,425	98,487	5	8	..	2	228,260
1933–34	117,231	19,538	166,948	18	14	..	12	303,761
1934–35	115,570	18,727	160,607	30	34	..	13	294,981
Average 10 seasons 1925–35 ..	117,053	17,995	163,548	6	26	6	6	298,640
PRODUCTION.								
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels
1930–31	2,766,660	692,896	4,565,850	..	87	..	126	8,025,619
1931–32	2,669,580	611,902	3,780,597	217	87	..	..	7,062,383
1932–33	2,935,140	477,145	1,653,853	135	42	..	6	5,066,321
1933–34	3,133,890	644,033	3,715,764	150	183	..	60	7,494,080
1934–35	3,238,590	719,360	4,142,079	450	216	..	132	8,100,827
Average 10 seasons 1925–35 ..	3,112,051	657,081	4,011,675	110	345	..	53	7,781,315

The greatest production of maize in Australia was recorded in 1910–11, when it amounted to over 13,000,000 bushels. This figure was considerably in excess of the yields for recent years, except in 1924, when a bountiful harvest in Queensland increased the Australian total to 12,400,000 bushels. The production in 1934–35 amounted to 8,100,827 bushels, and the average for the last decennium was 7,781,315 bushels.

(ii) *Average Yield.* The following table gives particulars of the average yield per acre of the maize crops of the States for the seasons 1930–31 to 1934–35 and for the decennium 1925–1935 :—

MAIZE.—AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31	26.34	42.70	26.52	..	8.70	..	9.69	27.34
1931–32	25.17	38.94	25.60	31.00	7.91	..	..	26.21
1932–33	25.90	29.05	16.79	27.00	5.25	..	3.00	22.20
1933–34	26.73	32.96	22.26	8.33	13.07	..	5.00	24.67
1934–35	28.02	38.41	25.79	15.00	6.35	..	10.15	27.46
Average for 10 seasons 1925–35	26.59	36.51	24.53	17.22	13.07	7.00	9.43	26.06

The average for Victoria is generally amongst the highest in the world. The area however, is comparatively small and is situated in specially favourable districts. The average for New South Wales is generally higher than for Queensland.

(iii) *Production per Acre—Various Countries.* The average for Australia for the past 10 years was 26.1 bushels per acre. During the period 1925–29 the United States of America averaged 26.9 bushels, Argentina 31.9 bushels, Rumania 16.9 bushels, and the Soviet Union 16.3 bushels per acre.

3. **World's Production.**—The following table furnishes particulars of the world's acreage, production and average yield per acre of maize according to the data compiled by the International Institute of Agriculture :—

MAIZE.—WORLD'S PRODUCTION.

Year.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1924–28	194	4,362	22.48
1930	203	4,027	19.84
1931	211	4,606	21.83
1932	214	4,901	22.93
1933	210	4,295	20.50
1934	198	3,559	17.96

The United States is the most important maize-producing country in the world. Approximately 100,000,000 acres are planted there annually, and more than 2,500 million bushels are reaped, representing nearly 60 per cent. of the world's production. About 85 per cent. of the total is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction—less than one per cent., is exported.

4. **Price of Maize.**—The average wholesale price of maize in the Sydney market for each of the last five years is given in the following table :—

MAIZE.—AVERAGE PRICE, SYDNEY.

Particulars.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	4 1	3 9	4 11	3 6¾	3 5

5. **Overseas Imports and Exports.**—The import of maize into Australia has diminished in the last five years to a negligible quantity, averaging less than 2,000 bushels compared with nearly 600,000 bushels during the five years ended 1929–30. Details of imports and exports for the years 1930–31 to 1934–35 are as follows :—

MAIZE.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1930–31(*a*) ..	3,945	769	1,498	377	2,447	392
1931–32(*a*) ..	229	307	2,586	554	— 2,357	— 247
1932–33(*a*) ..	5,064	878	1,370	377	3,694	501
1933–34(*a*) ..	23	26	3,120	731	— 3,097	— 705
1934–35(*a*) ..	7	16	3,430	851	— 3,423	— 835

NOTE.—The minus sign (—) denotes net exports. (*a*) Australian currency values.

6. **Maize Products.**—A small quantity of corn-flour is imported annually into Australia, the principal countries of supply being the United Kingdom, Union of South Africa, and the United States of America. During the year 1929–30 the imports

amounted to 702,062 lb., and represented a value of £7,956, but since then they were negligible. Exports from Australia are small, and in 1934-35 amounted to 7,837 lb., valued at £206.

7. **Value of Crop.**—The value of the crop for the season 1934-35 was as follows :—

MAIZE.—VALUE OF CROP, 1934-35.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	F.C.T.	Australia.
	£	£	£	£	£	£	£
Aggregate value	580,260	155,861	562,095	130	75	24	1,298,445
Value per acre	£5/0/5	£8/6/6	£3/10/0	£4/6/6	£2/4/1	£1/17/0	£4/8/0

§ 7. Barley.

1. **Progress of Cultivation.**—(i) *Area and Production.* The area under barley has fluctuated considerably, but with a marked upward tendency during the past ten years. The average annual area sown for the decennium 1925-1935 amounted to 396,301 acres, as compared with an average of 262,169 acres for the previous ten years. Victoria was originally the principal barley-growing State, but since 1913-14 South Australia has been the chief producing State, accounting for 69 per cent. of the Australian acreage in 1934-35. Victoria was next in importance with 19 per cent., leaving a small balance of about 12 per cent. distributed among the other States. The figures here given relate to the areas harvested for grain; small areas only are sown for hay, while more considerable quantities are cut for green forage. These, however, are not included in this section. The area and production of barley for grain in the several States for the last five years and the average for the decennium 1925-35 are shown in the following table, while the progress since 1860 is illustrated in the graphs herein :—

BARLEY.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
			AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930-31.. ..	11,526	87,518	8,434	251,957	17,236	6,192	(a) 382,887
1931-32.. ..	8,349	66,381	2,223	242,339	14,533	8,377	(b) 342,396
1932-33.. ..	7,736	93,555	4,790	314,286	13,772	8,595	(c) 442,833
1933-34.. ..	10,006	106,339	8,765	307,423	24,534	7,840	(d) 464,959
1934-35.. ..	9,480	87,599	9,604	316,807	26,589	5,779	(e) 455,921
Average 10 seasons 1925-35 ..	7,791	88,358	6,184	270,084	17,401	6,432	(f) 396,301
			PRODUCTION.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930-31.. ..	188,610	1,983,130	173,563	3,960,929	185,301	168,625	(a) 6,660,911
1931-32.. ..	137,430	1,256,678	36,397	4,572,941	164,580	119,725	(b) 6,290,672
1932-33.. ..	154,530	1,995,446	101,033	6,070,161	135,243	211,570	(c) 8,670,077
1933-34.. ..	165,120	1,888,981	152,480	5,254,280	324,846	172,267	(d) 7,959,018
1934-35.. ..	168,990	1,609,518	156,604	5,682,923	237,765	175,503	(e) 8,032,455
Average 10 seasons 1925-35 ..	128,066	1,772,099	110,007	4,654,749	191,244	149,559	(f) 7,006,660

(a) Including Federal Capital Territory, 24 acres, 753 bushels.
(b) ,, ,, ,, ,, 194 acres, 2,921 bushels.
(c) ,, ,, ,, ,, 99 acres, 2,094 bushels.
(d) ,, ,, ,, ,, 52 acres, 1,044 bushels.
(e) ,, ,, ,, ,, 63 acres, 1,152 bushels.
(f) ,, ,, ,, ,, 51 acres, 936 bushels.

The States in which the annual production of barley averaged over 1,000,000 bushels for the past decade were South Australia and Victoria, the yields being respectively 4,654,749 and 1,772,099 bushels, the higher return per acre in the latter State tending to diminish the advantage held by South Australia in regard to acreage.

(ii) *Malting and Other Barley.* (*a*) *Year* 1934-35. Particulars for the season 1934-35 are as follows :—

BARLEY, MALTING AND OTHER.—AREA AND PRODUCTION, 1934-35.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting Barley..	4,725	70,962	6,600	286,594	21,204	5,158	395,243
Other Barley ..	4,755	16,637	3,004	30,213	5,385	621	(*a*)60,678
Total ..	9,480	87,599	9,604	316,807	26,589	5,779	(*a*)455,921
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley..	94,710	1,275,037	111,588	5,160,141	191,904	157,376	6,990,756
Other barley ..	74,280	334,481	45,016	522,782	45,861	18,127	*a*1,041,699
Total ..	168,990	1,609,518	156,604	5,682,923	237,765	175,503	*a*8,032,455

(*a*) Including Federal Capital Territory, 63 acres, 1,152 bushels.

Taking Australia as a whole, about 87 per cent. of the area under barley in 1934-35 was sown with malting or English barley while the remainder consisted of Cape and other varieties. The proportion, however, varied largely in the several States. The disposal of barley during the season 1934-35 was as follows: malt works, 2,416,280 bushels; distilleries, 76,243 bushels; exports, 2,901,708 bushels; leaving a balance of approximately 2,600,000 bushels for feed, pearling and seed.

(*b*) *Progress of Cultivation.* The following table sets out the acreage and production of malting and other barley in Australia during the last five seasons :—

BARLEY, MALTING AND OTHER.—AREA AND PRODUCTION, AUSTRALIA.

Season.	Acres.			Bushels.			Average Yield per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
1930-31 ..	328,059	54,828	382,887	5,673,940	986,921	6,660,861	17.30	18.00	17.40
1931-32 ..	299,074	43,322	342,396	5,547,141	743,531	6,290,672	18.55	17.16	18.37
1932 33 ..	399,731	43,102	442,833	7,837,111	832,966	8,670,077	19.60	19.33	19.58
1933-34 ..	410,478	54,481	464,959	7,013,769	945,249	7,959,018	17.09	17.35	17.12
1934-35 ..	395,243	60,678	455,921	6,990,756	1,041,699	8,032,455	17.69	17.17	17.62
Average 10 seasons 1925-35..	344,536	51,765	396,301	6,050,785	955,875	7,006,660	17.56	18.47	17.68

During the past ten seasons the area and production of malting barley have represented almost six times the corresponding figures for other barley. The average yield per acre differs very little in respect of the two classes, the results for the last ten-yearly period being slightly in favour of the Cape variety.

(iii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Tasmania and Victoria, and lowest in Western Australia. Details for each State during the last five seasons, and for the decennium 1925–35, are given in the following table :—

BARLEY.—YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1930–31	16.36	22.66	20.58	15.72	10.75	27.23	17.40
1931–32	16.46	18.93	16.37	18.87	11.32	14.29	18.37
1932–33	19.98	21.33	21.09	19.31	9.82	24.62	19.58
1933–34	16.50	17.76	17.40	17.09	13.34	21.97	17.12
1934–35	17.83	18.37	16.31	17.94	8.94	30.37	17.62
Average for 10 seasons 1925–35	16.44	20.06	17.80	17.23	10.99	23.25	17.68

2. **Comparison with Other Countries.**—In comparison with the barley production of other countries, that of Australia appears extremely small. Particulars for some of the leading countries during 1934 are as follows :—China, 354 million bushels ; Soviet Union, 301 million bushels ; Germany, 141 million bushels ; United States, 114 million bushels ; India, 106 million bushels ; and Canada, 61 million bushels.

3. **World's Production.**—The following table shows the world's acreage under barley, the production and average yield per acre according to the results compiled by the International Institute of Agriculture :—

BARLEY.—WORLD'S PRODUCTION.

Period.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1924–28	83.8	1,602	19.12
1930	93.4	1,894	20.29
1931	89.0	1,616	18.16
1932	90.4	1,802	19.91
1933	87.4	1,780	20.37
1934	88.9	1,685	18.95

4. **Prices.**—The average price in the Melbourne market during each of the last five years is given in the following table :—

BARLEY.—AVERAGE MELBOURNE PRICE PER BUSHEL.

Particulars.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Malting barley	2 11	2 11½	2 9	2 8	2 11
Cape barley	2 2	2 3	2 4	2 3¾	2 5

5. **Imports and Exports.**—Australian exports of barley during the last five years averaged 3,059,703 bushels. The grain was consigned mainly to the United Kingdom and Belgium, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the last five years are contained in the following table :—

BARLEY.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1930–31(*a*) ..	110	59	3,328,652	403,919	3,328,542	403,860
1931–32(*a*) ..	44	16	3,315,110	450,477	3,315,066	450,461
1932–33(*a*) ..	1,396	470	3,051,138	352,152	3,049,742	351,682
1933–34(*a*) ..	134	59	2,701,908	305,359	2,701,774	305,300
1934–35(*a*) ..	12	5	2,901,708	394,466	2,901,696	394,461

(*a*) Australian currency values.

In some years there is an export of Australian pearl and Scotch barley, the total for 1934–35 reaching 90,046 lb., valued at £472, consigned mainly to the Pacific Islands.

6. **Imports and Exports of Malt.**—In pre-war times the imports of malt into Australia were fairly extensive, the supply being obtained principally from the United Kingdom. Since 1914, however, imports have practically ceased, and in 1917–18 and 1920–21 fairly large quantities were exported to the Union of South Africa and Japan. Details of imports and exports for the five years ended 1934–35 are given in the next table :—

MALT.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1930–31(*a*) ..	38	64	4,253	1,730	4,215	1,666
1931–32(*a*) ..	5	2	3,805	1,392	3,800	1,390
1932–33(*a*) ..	..	..	9,950	3,358	9,950	3,358
1933–34(*a*) ..	178	197	24,472	8,259	24,294	8,062
1934–35(*a*) ..	152	74	55,990	17,209	55,838	17,135

(*a*) Australian currency values.

7. **Value of Barley Crop.**—The estimated value of the barley crop for the season 1934–35 and the value per acre are shown in the following table :—

BARLEY.—VALUE OF CROP(*a*), 1934–35.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total ..	26,310	223,703	25,754	776,717	36,607	28,100	163	1,117,354
Per acre ..	£2/15/6	£2/11/1	£2/13/8	£2/9/0	£1/7/6	£4/17/3	£2/11/9	£2/9/0

(*a*) Exclusive of the value of straw.

§ 8. Rice.

Experimental rice cultivation was carried on at the Yanco Experimental Farm for a number of years, but it was not until 1924–25 that an attempt was made to grow the crop on a commercial basis. In that year production amounted to 16,240 bushels from 153 acres, or an average of 106 bushels per acre. Favoured by tariff protection and high average yields the development of rice culture in the Murrumbidgee Irrigation Area made rapid progress, and the production now exceeds the annual requirements of Australia. During the past five years an annual average of 380,000 bushels of cleaned and uncleaned rice has been exported from Australia, mainly to the United Kingdom, New Zealand, Canada and the Pacific Islands.

Figures relating to area, production, etc., since 1930–31 will be found in the following table :—

RICE.—AREA, PRODUCTION, ETC., AUSTRALIA.

Year.	Area.	Production Paddy Rice.	Average Yield.	Imports.	Exports.	Retail Price.
	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Pence per lb.
1930–31 ..	19,860	1,427,524	71.88	117,624	200,760	3.58
1931–32 ..	19,589	1,349,869	68.91	96,101	292,453	3.48
1932–33 ..	22,034	1,901,476	86.30	104,846	260,245	3.24
1933–34 ..	20,226	2,171,544	107.36	98,495	516,437	3.24
1934–35 ..	21,746	1,888,445	88.84	89,981	629,738	3.22

The production from several small experimental plots in States other than New South Wales is included in the above figures, but the quantity is negligible.

§ 9. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the principal other grain and pulse crops grown in Australia are beans, peas and rye. The total area under the two first mentioned crops for the season 1934–35 was 51,438 acres, giving a yield of 720,929 bushels, or an average of 14.02 bushels per acre, which was less than the average yield for the decennium ended 1934–35, viz., 14.82 bushels per acre. Beans and peas are grown chiefly in Tasmania, South Australia and Victoria. Peas are exported in considerable quantities to the United Kingdom, the chief exporting State being Tasmania. The total area under rye in Australia during the season 1934–35 was 7,606 acres, yielding 85,540 bushels, or an average of 11.25 bushels per acre, as compared with the average of 16 10 bushels for the last ten seasons. Nearly 72 per cent. of the rye grown during the season was produced in New South Wales, 17 per cent. in Victoria, and 7 per cent. in South Australia.

§ 10. Potatoes.

1. **Progress of Cultivation.**—(i) *Area and Production.* Victoria possesses peculiar advantages for the growth of potatoes, as the rainfall is generally satisfactory, and the climate is unfavourable to the spread of Irish blight; consequently the crop is grown in nearly every district except in the wheat belt. Tasmania comes next in order of importance, followed by New South Wales.

The area and production of potatoes in each State during the last five years and the average for the decennium 1925–35 are given hereunder :—

POTATOES.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31 ..	15,304	67,590	10,277	4,998	6,306	37,229	12	141,716
1931–32 ..	17,522	69,929	10,374	5,996	4,892	36,390	8	145,111
1932–33 ..	20,739	69,783	9,743	6,454	4,971	35,769	11	*a*147,485
1933–34 ..	20,089	60,856	11,936	5,824	4,462	36,518	7	139,692
1934–35 ..	19,662	54,214	11,666	4,664	4,050	36,358	15	130,629
Average 10 seasons 1925–35..	18,714	65,678	9,942	4,774	5,021	36,482	14	*b*140,628
PRODUCTION.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31 ..	32,283	173,341	18,489	18,991	26,318	95,289	13	364,724
1931–32 ..	33,709	206,489	17,189	24,062	20,253	95,389	11	397,102
1932–33 ..	42,403	182,471	14,017	24,814	22,309	98,232	25	384,271
1933–34 ..	43,532	142,132	20,123	19,501	21,204	81,274	9	327,775
1934–35 ..	46,033	109,329	21,627	19,377	19,162	70,018	17	285,563
Average 10 seasons 1925–35..	39,191	167,965	15,840	17,948	20,612	92,684	25	354,265

(*a*) Includes Northern Territory, 15 acres.
(*b*) „ „ „ 3 acres.

The acreages grown during the last ten years were fairly uniform, except in 1927–28, when the area was increased to 163,231, chiefly owing to larger plantings in Victoria and Tasmania. The production in 1934–35 amounted to 285,563 tons, as compared with an average of 354,265 tons for the last ten years and 346,091 tons for the previous decennial period. The record production of 507,153 tons was obtained in 1906–7.

(ii) *Average Production.* Particulars for each State for the five seasons ended 1934–35 and for the last decennium are given hereunder :—

POTATOES.—PRODUCTION YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31	2.11	2.56	1.80	3.80	4.17	2.56	1.08	2.57
1931–32	1.92	2.95	1.66	4.01	4.14	2.62	1.37	2.74
1932–33	2.04	2.61	1.44	3.84	4.49	2.77	2.27	2.61
1933–34	2.17	2.34	1.69	3.35	4.75	2.23	1.29	2.35
1934–35	2.34	2.02	1.82	4.15	4.73	1.92	1.13	2.19
Average for 10 seasons 1925–35..	2.09	2.56	1.59	3.76	4.11	2.54	1.83	2.52

The comparatively low yield per acre compared with that of many other countries is due in large measure to the neglect of rotation, and the insufficient use of manures. The production in New Zealand, for example. in 1934–35 averaged 4.74 tons per acre from an area of 23,001 acres, as compared with 2.19 tons per acre from 130,629 acres in Australia.

(iii) *Relation to Population.* The average annual production of potatoes per head of the population of Australia for the last five seasons was approximately 119 lb. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906-7 was nearly a ton, while for the last five seasons it has averaged 7¾ cwt. Details for each State for the five seasons ended 1934-35 are as follows :—

POTATOES.—PRODUCTION PER 1,000 OF POPULATION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930-31 ..	13	97	20	33	63	432	2	56
1931-32 ..	13	115	18	41	48	427	1	61
1932-33 ..	16	101	15	43	51	431	3	58
1933-34 ..	17	78	21	34	48	355	1	49
1934-35 ..	17	59	23	33	43	306	2	43

(iv) *Consumption.* Oversea trade in potatoes is comparatively small, and the consumption in Australia during the last five years averaged about 53 tons per 1,000 of population, or about 119 lb. per head. From the figures shown above, therefore, it is apparent that New South Wales, Queensland and South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

2. **Imports and Exports.**—Under normal conditions small quantities of potatoes are exported, principally to the Pacific Islands and Papua. In case of a shortage in Australia, supplies are usually obtained from New Zealand. Figures showing the trade for the last five years are given in the following table :—

POTATOES.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1930-31(*a*)	7	144	1,917	13,948	1,910	13,804
1931-32(*a*)	33	418	1,612	13,662	1,579	13,244
1932-33(*a*)	47	753	1,859	12,484	1,812	11,731
1933-34(*a*)	29	348	1,940	12,639	1,911	12,291
1934-35(*a*)	..	18	1,665	12,510	1,665	12,492

(*a*) Australian currency values.

3. **Value of Potato Crop.**—The estimated value of the potato crop of each State for the season 1934-35 is given in the following table :—

POTATOES.—VALUE OF CROP, 1934-35.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total	397,230	956,629	180,225	143,417	195,632	617,900	147	2,491,180
Per acre ..	£20/4/0	£17/12/11	£15/9/0	£30/15/0	£48/6/1	£16/19/11	£9/13/4	£19/1/5

§ 11. Other Root and Tuber Crops.

1. **General.**—Root crops, other than potatoes, are not extensively grown in Australia, the total area under such crops for the season 1934-35 being only 24,591 acres. The most important were onions, mangolds, sugar beet, turnips and sweet potatoes. Of these, onions, sugar beet and mangolds are most largely grown in Victoria, turnips in Tasmania, and sweet potatoes in Queensland. The total area under onions in Australia during the season 1934-35 was 7,101 acres, giving a yield of 42,434 tons, and averaging

5.97 tons per acre. The area in 1934-35 under root crops other than potatoes and onions was 17,490 acres, from which a production of 140,701 tons was obtained, or an average of 8.04 tons per acre. The areas and yields here given are exclusive of the production of "market gardens," reference to which is made in § 17, 2.

2. **Imports and Exports.**—The only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia is that of onions. During the last five years 4,801 tons, valued at £28,176, were imported, principally from Japan, the United States of America and New Zealand, while during the same period the exports, which amounted to 15,499 tons, valued at £91,959, were shipped mainly to New Zealand, the Pacific Islands, the Philippine Islands and Canada.

§ 12. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance is hay, which for the season 1934-35 averaged nearly 16 per cent. of the total area cropped. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of wheat, oats and lucerne. The area under hay of all kinds in the several States during the last five years is given hereunder. The progress from 1860 onwards may be traced from the graph accompanying this chapter.

HAY.—AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	Fed. Cap. Ter.	Australia.
				AREA.					
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930-31 ..	890,770	1,277,398	52,228	612,935	398,411	83,268	..	2,453	3,323,463
1931-32 ..	612,150	955,839	59,601	539,076	381,447	84,307	..	2,260	2,634,680
1932-33 ..	645,609	1,044,523	64,076	461,332	417,435	92,668	..	1,765	2,727,408
1933-34 ..	724,538	1,196,259	92,943	507,248	479,768	77,625	..	2,299	3,080,680
1934-35 ..	757,414	1,261,552	86,477	561,071	413,138	96,019	..	2,502	3,178,173
Average 10 seasons 1925-35..	707,314	1,060,906	63,295	526,953	403,046	87,088	..	1,957	2,850,559
				PRODUCTION.					
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930-31 ..	1,191,696	1,605,900	87,146	641,273	491,595	128,957	..	3,094	4,149,661
1931-32 ..	811,243	1,069,276	91,275	647,058	453,353	92,595	..	2,659	3,167,459
1932-33 ..	908,931	1,386,028	82,104	565,589	485,368	141,138	..	1,889	3,571,047
1933-34 ..	920,480	1,353,796	144,250	539,846	512,439	109,307	..	2,540	3,582,748
1934-35 ..	1,004,761	1,464,264	154,157	571,133	462,947	150,083	..	3,363	3,810,708
Average 10 seasons 1925-35..	881,071	1,242,808	96,664	557,388	445,135	125,244	..	2,326	3,350,636

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area under hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915-16, 3,597,771 acres, was the largest on record, whilst the average during the last decennium amounted to 2,850,559 acres.

(ii) *Average Production.* During the last ten years Tasmania and Queensland show the highest average production per acre, although the area sown in these States is the smallest. For the same period the lowest yield for Australia as a whole was that

of 21 cwt. per acre in 1929–30, while the highest was that of 26 cwt. in 1932–33. The average for the decennium was nearly 24 cwt. Particulars for the several States for the seasons 1930–31 to 1934–35 and the average for the last ten years are given hereunder :—

HAY.—PRODUCTION PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31	1.33	1.26	1.67	1.05	1.23	1.55	..	1.26	1.25
1931–32	1.33	1.12	1.53	1.20	1.19	1.10	..	1.18	1.20
1932–33	1.41	1.33	1.28	1.23	1.16	1.52	..	1.07	1.31
1933–34	1.27	1.13	1.55	1.06	1.07	1.41	..	0.92	1.16
1934–35[3]	1.33	1.16	1.78	1.02	1.12	1.56	..	1.34	1.20
Average for 10 seasons 1925–35.. ..	1.25	1.17	1.53	1.06	1.10	1.44	..	1.19	1.18

(iii) *Varieties Grown.* Information in regard to the crops cut for hay is available for all States excepting Tasmania. It is known, however, that oaten hay constitutes the most important variety grown in the island State.

Details for the last five seasons are given in the following table :—

HAY.—VARIETIES GROWN.

Varieties.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
NEW SOUTH WALES—	Acres.	Acres.	Acres.	Acres.	Acres.
Wheaten	520,993	292,234	290,556	324,129	271,272
Oaten	278,865	222,212	248,222	275,493	349,174
Barley	1,081	740	955	933	1,354
Lucerne	95,181	96,396	105,246	123,280	134,703
Other	650	568	630	703	911
Total	896,770	612,150	645,609	724,538	757,414
VICTORIA—					
Wheaten	188,360	139,683	89,549	155,688	117,436
Oaten	1,049,019	781,932	860,854	945,855	1,016,205
Lucerne, etc.	40,019	34,224	94,120	94,716	127,911
Total	1,277,398	955,839	1,044,523	1,196,259	1,261,552
QUEENSLAND—					
Wheaten	10,645	5,282	5,498	6,058	3,472
Oaten	4,280	1,617	2,724	4,280	3,426
Lucerne	34,845	47,547	52,925	77,473	75,538
Other	2,458	5,155	2,929	5,132	4,041
Total	52,228	59,601	64,076	92,943	86,477
SOUTH AUSTRALIA—					
Wheaten	321,295	250,285	205,372	246,999	264,373
Oaten	275,526	273,375	243,015	247,879	280,710
Lucerne	6,390	5,660	3,704	3,572	4,444
Other	9,724	9,756	9,241	8,798	11,544
Total	612,935	539,076	461,332	507,248	561,071
WESTERN AUSTRALIA—					
Wheaten	192,345	197,982	173,327	216,688	138,989
Oaten	192,243	167,326	224,006	238,718	251,288
Lucerne	234	190	106	179	238
Other	13,589	15,949	19,996	24,183	22,623
Total	398,411	381,447	417,435	479,768	413,138

Wheat is most largely used for hay in New South Wales and South Australia, oats in Victoria, Western Australia and Tasmania, and lucerne in Queensland. For all States the proportions of the principal kinds of hay produced average about 58.5 per cent. for oaten, 24.9 per cent. for wheaten, 11.4 per cent. for lucerne, and 5.2 per cent. for other hay.

2. **Comparison with Other Countries.**—As already noted, the hay crops of most European countries consist of grasses of various kinds, amongst which clover, lucerne, sainfoin and rye grass occupy prominent places. The statistics of hay production in these countries are not prepared on a uniform basis, consequently any attempt to furnish extensive comparisons would be misleading. It may be noted, however, that in Great Britain the production of hay from clover, sainfoin, etc., for the year 1934 amounted to 2,229,000 tons from 1,683,000 acres, while from permanent grasses a yield of 4,424,000 tons of hay was obtained from 5,003,000 acres, giving a total of 6,653,000 tons from 6,686,000 acres, or an average of about 20 cwt. per acre.

3. **Imports and Exports.**—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not in such circumstances figure largely amongst the imports and exports of Australia. During 1934–35, 606 tons were imported, while the exports amounted to 2,495 tons, valued at £13,954, the principal purchases being made by Malaya (British), India, Ceylon and Hong Kong.

4. **Value of Hay Crop.**—The following table shows the value, and the value per acre, of the hay crop of the several States for the season 1934–35 :—

HAY.—VALUE OF CROP, 1934–35.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total Value ..	3,954,740	3,361,260	614,010	1,225,913	982,165	435,200	13,626	10,586,914
Value per acre ..	£5/4/5	£2/13/3	£7/2/1	£2/3/8	£2/7/7	£4/10/8	£5/8/11	£3/6/8

§ 13. Green Forage.

1. **Nature and Extent.**—A considerable area is devoted to the production of green forage, mainly in connexion with the dairying industry. The total area so cropped is considerably swollen in adverse seasons by the inclusion of wheat or other cereal crops deemed unsuitable for the production of either grain or hay. Under normal conditions, the principal crops cut for green forage are maize, wheat, sorghum, oats, barley, rye, rape and lucerne, while small quantities of sugar-cane also are so used. Particulars concerning the area under green forage in the several States during each of the last five years are given in the following table :—

GREEN FORAGE.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31	310,341	126,347	217,282	59,956	107,384	23,438	662	845,410
1931–32	367,346	119,006	309,957	58,604	101,370	23,024	724	980,031
1932–33	405,206	107,732	392,762	46,232	115,785	18,522	953	1,087,192
1933–34	444,946	121,737	311,462	70,147	146,402	25,689	699	1,121,082
1934–35	477,060	115,037	338,312	91,783	186,233	24,941	548	1,233,914

2. **Value of Green Forage Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1934–35 may be taken approximately as £2,435,261, or about £1 19s. 6d. per acre.

§ 14. Sugar-cane and Sugar-beet.

1. **Sugar-cane.**—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter State. Thus, of a total area of 322,457 acres under sugar-cane in Australia for the season 1934–35, there were 303,926 acres, or about 94 per cent., in Queensland. Sugar-cane growing appears to have been started in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862–63. In the following season the New South Wales returns show an area of 2 acres under this crop. The area under cane in New South Wales reached its maximum in 1895–96 with a total of 32,927 acres. Thenceforward, with slight variations, it gradually fell to 10,490 acres in 1918–19, but from that year it expanded until 1924–25, when about 20,000 acres were planted. Later, however, the area declined, and in 1934–35 only 18,531 acres were under cultivation. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, the acreage under cane for the season 1933–34 being the highest on record, viz., 311,910 acres. The area under sugar-cane in Australia from 1930–31 and the average for the past decennium are given in the following table, and particulars for earlier years may be seen from the accompanying graphs :—

SUGAR-CANE.—AREA.

Season.	New South Wales.		Queensland.		Australia.		
	Productive.	Unproductive.	Productive.	Unproductive.	Productive.	Unproductive.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31	7,617	8,007	222,044	74,026	229,661	82,033	311,694
1931–32	8,272	7,647	233,304	76,514	241,576	84,161	325,737
1932–33	7,796	8,349	205,046	86,090	212,842	94,439	307,281
1933–34	10,015	6,914	228,154	83,756	238,169	90,670	328,839
1934–35	7,572	10,959	218,426	85,500	225,998	96,459	322,457
Average 10 seasons 1925–35 ..	8,339	8,515	212,026	77,860	220,365	86,375	306,740

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table do not include the small acreage cut for green forage. The whole area was not necessarily cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane, as well as a small quantity required for plants. The season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing, as was evidenced in 1933–34, when, although the total acreage was greater, the area cut was less than in the year 1931–32.

(iii) *Production of Cane and Sugar.* For Queensland, statistics of the production of sugar-cane are not available prior to the season 1897–98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 4,898,040 tons in 1933–34 and 4,498,804 tons in 1934–35. The average production of cane during the decennium ended 1934–35 was 4,068,342 tons. On three occasions the yield of sugar has exceeded 600,000 tons, viz., 1933–34, 1934–35 and 1931–32, when the production

amounted to 666,145 tons, 640,589 tons and 603,735 tons respectively. The decennial average was 548,879 tons of sugar. Particulars relative to the total production of cane and sugar for the last five years are as follows. The averages for the past ten seasons are also included for comparison :—

SUGAR-CANE.—PRODUCTION OF CANE AND SUGAR.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31	160,209	18,841	3,528,660	516,783	3,688,869	535,624
1931–32	179,153	22,459	4,034,300	581,276	4,213,453	603,735
1932–33	156,818	18,567	3,546,370	514,027	3,703,188	532,594
1933–34	230,918	27,586	4,667,122	638,559	4,898,040	666,145
1934–35	227,424	29,428	4,271,380	611,161	4,498,804	640,589
Average 10 seasons 1925–35	204,357	23,574	3,863,985	525,305	4,068,342	548,879

The production of raw sugar in Australia in 1934–35 amounted to 640,589 tons manufactured from 4,498,804 tons of cane, and was only slightly below the record production of 1933–34 which amounted to 666,145 tons. In 1924–25 the area cultivated in Queensland was 253,519 acres and the number of farms growing cane was 7,062, whereas in 1934–35, 303,926 acres were under cultivation and the number of growers had risen to 7,426, or an increase of 364 farms in ten years. Official data are not available regarding the total number engaged in the sugar industry in Queensland, other than the number of persons employed in sugar mills which in 1934–35 totalled 4,715. In the report of the Sugar Inquiry Committee, 1931, however, it was stated that the number of persons employed in all branches of the industry was 28,737. In addition, there is the employment afforded in New South Wales, particulars of which are not available, but the number is probably in the vicinity of 2,000.

Final figures for the 1935–36 season are not yet complete, but it is estimated that the production of raw sugar will amount to 638,851 tons from 4,411,665 tons of cane crushed. Early indications point to a record crop in 1936–37, and it is anticipated that the production will amount to about 688,000 tons of raw sugar.

(iv) *Average Production of Cane and Sugar.* Owing to climatic variation, comparison between the average yield of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales between 20 and 24 months are required for the crop to mature, but in Queensland 12 to 14 months is sufficient. After making due allowance on this score, therefore, the average annual yield of cane per productive acre for the decennium ending 1934-35 was for New South Wales, 13.37 tons, and 16.82 tons for Queensland. Similarly, the production of sugar per acre for the same period is estimated at 1.54 tons and 2.29 tons respectively. Leaving aside the consideration mentioned above, the yield of cane and sugar per acre crushed for Australia for the ten years ended 1934-35 was *18.46 tons and 2.49 tons respectively*, as compared with 17.48 tons and 2.15 tons for the decennium ended 1924-25.

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season, and for the decennium ended 1934-35 averaged 7.41 tons, the average production of sugar being 13.49 per cent. of the weight of cane crushed. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased in recent years, and in 1930-31 only 6.83 tons of cane were required to produce one ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world. During the ten years ended 1924-25 it required on the average 8.15 tons of cane to produce one ton of sugar in Australia, whereas the average figure for the last decennium was reduced to 7.41 tons.

SUGAR-CANE AND SUGAR.—YIELD PER ACRE.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31	21.03	2.47	8.50	15.89	2.33	6.83	16.06	2.33	6.89
1931–32	21.66	2.72	7.98	17.29	2.49	6.94	17.44	2.50	6.98
1932–33	20.12	2.38	8.45	17.30	2.51	6.90	17.40	2.50	6.95
1933–34	23.06	2.75	8.37	20.46	2.80	7.31	20.57	2.80	7.35
1934–35	30.03	3.89	7.73	19.56	2.80	6.99	19.91	2.83	7.02
Average 10 seasons 1925–35 ..	24.51	2.83	8.68	18.22	2.48	7.38	18.46	2.49	7.41

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation, the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(vi) *Relation to Population.* The yield of raw sugar in Australia during the last five years was more than sufficient to supply local requirements, the average production during the period amounting to 197 lb. per head of population. Details for the period 1930–31 to 1934–35 are as follows :—

RAW SUGAR.—PRODUCTION PER HEAD OF POPULATION.

State.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	lb.	lb.	lb.	lb.	lb.
New South Wales ..	19	20	16	24	25
Queensland	1,221	1,351	1,221	1,505	1,425
Australia	185	207	181	224	214

(vii) *Consumption.* The average annual consumption of raw sugar during the four years ended 1934–35 was estimated at 337,550 tons, equal to 114 lb. of raw sugar or 109 lb. of refined sugar per head of population. Sugar contained in jam, preserved fruit, milk, etc., exported during the period has been excluded in arriving at the figures quoted. The quantity of sugar used during the last five years in factories is shown in the following table, the figures including, where necessary, estimates of consumption based on the sugar contents of the finished product. Particulars of sugar used in establishments not classified as factories are not available, and consequently the quantities shown below are deficient to that extent.

SUGAR.—CONSUMPTION IN FACTORIES, AUSTRALIA.

Factories.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	Tons.	Tons.	Tons.	Tons.	Tons.
Aerated Waters and Cordials	6,316	5,665	5,639	5,779	6,490
Bacon Factories	102	96	50	60	66
Bakeries—including Cakes and Pastry	7,267	5,920	5,789	8,110	9,032
Biscuits	4,359	4,207	5,158	5,710	6,339
Breweries	10,939	9,170	9,117	10,023	11,208
Condensed and Concentrated Milk	6,133	6,731	6,796	6,620	7,501
Confectionery	16,940	16,277	18,101	17,685	20,356
Jams, Jellies and Preserved Fruit	22,786	26,329	28,667	26,108	28,022
Jelly Crystals	896	556	541	649	699
Total	75,738	74,951	79,858	80,744	89,713

2. **Sugar-beet.**—(i) *Area and Production.* Victoria is the only State at present growing beets for sugar, and particulars in regard to acreage and production for the last four years and for the decennium 1914–24 are incorporated in the table below :—

SUGAR-BEET.—AREA AND PRODUCTION, VICTORIA.

Particulars.		Average 10 seasons 1914–24.	1931–32.	1932–33.	1933–34.	1934–35.
Area harvested ..	acres	1,282	3,173	3,155	3,234	3,062
Production ..	tons	14,247	43,209	36,740	50,625	40,788
Average per acre ..	,,	11.11	13.62	11.65	15.65	13.32
Sugar produced ..	,,	1,714	5,428	5,701	5,303	4,998

Seasonal conditions were not so favourable during 1934–35 and consequently reduced yields were recorded ; the production from 3,062 acres amounted to 40,788 tons of beet which yielded 4,998 tons of sugar. The quantity of beet required to produce one ton of sugar was 8.16 tons as compared with 9.55 tons for the previous year. The average production of beets per acre was 13.32 tons, and the average for the ten years ended 1934–35 was 11.59 tons.

(ii) *Encouragement of Beet-growing.* The irrigation scheme on the Macalister River has provided an assured water supply for the district and thereby enabled the industry to expand. A fine grade of white sugar is manufactured at Maffra, and considerable quantities of beet pulp and molasses are distributed for stock feed.

3. **Sugar Bounties.**—An account of the various Acts in connexion with sugar bounties and sugar excise tariffs will be found on pages 394 to 396 of Year Book No. 6. In 1912 the Sugar Excise Repeal Act and the Sugar Bounty Abolition Act were passed by the Federal Parliament, conditionally on the Queensland Parliament approving of legislation prohibiting the employment of coloured labour in connexion with the industry. The State Sugar Cultivation Act, the Sugar Growers Act, and the Sugar Growers' Employees Act of 1913 having been approved, the 1912 Commonwealth Acts, which repeal all previous enactments in regard to excise on sugar and bounty on cane, came into force by proclamation in July, 1913.

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter were alluded to in previous issues of the Official Year Book. (*See* No. 18, p. 720.)

5. **Sugar Agreement—Embargo on Imports, etc.**—By agreement between the Commonwealth and Queensland Governments in 1925, the embargo on the importation of foreign sugar, which was first introduced in September, 1915, was extended for three years from 1st September, 1925. The price of raw sugar needed for home consumption was fixed at £27 per ton, £1 of which was to defray administrative and general expenses of the Sugar Board and to provide special concessions to certain consumers of sugar. The embargo was later extended for a further period of three years until 1st August, 1931, on practically the same terms as previously. In response to representations, the Commonwealth Government appointed a Committee of Inquiry on the 23rd August, 1930, to report on the industry. The Committee consisted of eight members, representing the various interests concerned. The reports of the Committee were made available in March, 1931, and the renewal of the sugar agreement with certain modifications was recommended. The terms of the new agreement followed largely on those previously in force, particularly as regards the embargo on imports and fixation of prices. The assistance to the fruit industry was increased from an average of £180,000 per annum to £315,000 by way of grant from the sugar industry. The agreement was signed on 1st June, 1931, and was to remain in force for a period of five years from 1st September, 1931. In 1932, however, conferences arranged between the Commonwealth Government and representatives of the industry agreed to a reduction of ½d. per lb. in the retail price of

sugar from 1st January, 1933, until the end of the period of the agreement (31st August, 1936). It was also decided to reduce the amount of the assistance to the fruit industry to £200,000. A renewal of the agreement for a period of five years commencing 1st September, 1936, was negotiated between the Commonwealth and Queensland Governments in July, 1935. No alteration was made in the wholesale or retail price of sugar, but an increase to £216,000 per annum was granted to the fruit industry.

6. **Net Return for Sugar Crop.**—Final calculations by the Sugar Board regarding the disposal of the crop, net value of exports and the average price for the crop will be found in the following table :—

SUGAR.—NET RETURN, ETC., FOR CROP, AUSTRALIA.

Year.	Percentage Exported. (a)	Net Value of Exports per Ton. (a)	Average Price per Ton for Whole Crop. (a)	Estimated Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£
1930–31	39.23	8 5 0	19 12 11	10,458,998
1931–32	49.84	9 7 0	18 2 11	11,909,407
1932–33	36.80	8 5 9	18 17 9	10,394,925
1933–34	47.89	8 0 6	16 6 3	10,640,318
1934–35	50.56	7 11 3	15 13 9	10,791,092
1935–36	47.97	7 18 9	16 5 11	(b)

(a) As supplied by the Queensland Sugar Board. (b) Not yet available.

The estimated value of the raw sugar produced has been taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas less refining costs, freight, administrative charges, etc., and export charges, but not deducting concessions to the fruit industry and other rebates. The value thus obtained represents the net market value of all raw sugar sold, and since 1933 is divided between the growers and millers in the following approximate proportions, viz., 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

7. **Imports and Exports of Sugar.**—Owing to the embargo and the increased production of sugar in Australia the imports have practically ceased. Particulars concerning the imports and exports of cane sugar for the last five years are as follows :—

SUGAR.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1930–31(a) ..	..	1	199,161	1,805,897	199,161	1,805,896
1931–32(a) ..	..	6	287,920	2,514,724	287,920	2,514,718
1932–33(a) ..	13	265	187,061	1,490,036	187,048	1,489,771
1933–34(a) ..	3	48	307,980	2,295,203	307,977	2,295,155
1934–35(a) ..	1	38	306,497	2,195,893	306,496	2,195,855

(a) Australian currency values.

The export value quoted in the above table represents the value f.o.b. at which the sugar is sold overseas.

8. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantity produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXIV. —Manufacturing. A distillation plant erected at the Plane Creek Central Sugar Mill, Mackay, was opened during 1927 and produces power alcohol of excellent quality.

A material known as " megass board " can be made from the residuum of crushed fibre after the removal of the sugar content from the sugar cane, and the possibility of the manufacture of artificial silk from the same material has also been considered. Up to the present, however, there is no record of commercial production of these commodities, but the production of a fibre board suitable for insulation and lining is contemplated.

9. **Sugar Prices.**—The prices of sugar in Australia from 1915 to 1941 are shown in the following table. During recent years the prices were fixed in accordance with the agreements referred to on page 685.

SUGAR.—PRICES FOR CONSUMPTION IN AUSTRALIA.

Date of Determination.	Raw Sugar.			Refined Sugar.			
	Price to Grower and Miller per Ton.			Wholesale Price per Ton.			Retail Price per lb.
	£	s.	d.	£	s.	d.	d.
19.7.15 to 15.1.16	18	0	0	25	10	0	3
16.1.16 to 30.6.17	18	0	0	29	5	0	3½
1.7.17 to 24.3.20	21	0	0	29	5	0	3½
25.3.20 to 30.6.20	21	0	0	49	0	0	6
1.7.20 to 31.10.22	30	6	8	49	0	0	6
1.11.22 to 30.6.23	30	6	8	42	0	0	5
1.7.23 to 21.10.23	27	0	0	42	0	0	5
22.10.23 to 31.8.25	26	0	0	37	11	4	4½
1.9.25 to 31.8.31	(*a*)26	10	0	37	6	8	4½
1.9.31 to 4.1.33	26	0	0	37	6	8	4½
5.1.33 to 31.8.36	24	0	0	33	4	0	4
1.9.36 to 31.8.41	24	0	0	33	4	0	4

(*a*) The price of raw sugar for the years 1925 to 1936 was estimated at from £24 to £26 10s. per ton, but as the result of the values received for the surpluses exported, the actual price obtained in 1925–26 was £19 10s. 7d.; in 1926–27. £24 10s. 10d.; in 1927–28. £22 0s. 4d.; in 1928–29, £20 17s. 11d.; in 1929–30, £20 8s. 2d.; in 1930–31, £19 12s. 11d.; in 1931–32, £18 2s. 11d.; in 1932–33, £18 17s. 9d.; in 1933–34, £16 6s. 3d.; in 1934–35, £15 13s. 9d. and in 1935–36, £16 5s. 11d.

§ 15. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area under vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped the mother State in the area under this crop. In Queensland and Western Australia also, vine growing has been carried on for many years, but little progress has been made. In Tasmania the climate is not favourable to the growth of grapes. The purposes for which grapes are grown in Australia are three in number, viz. :—(*a*) for wine-making, (*b*) for table use, and (*c*) for drying. The total area under vines in the several States

during each of the last five years and the average for the past decennium are given in the following table, while particulars from 1860 onwards may be gathered from the graph accompanying this chapter :—

VINEYARDS.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31.. ..	15,363	38,720	1,687	52,234	4,966	There are no vineyards in Tasmania.	112,970
1931–32.. ..	15,360	38,215	1,749	52,498	5,139		112,961
1932–33.. ..	15,444	39,144	1,868	52,479	5,511		114,446
1933–34.. ..	15,243	40,485	1,963	52,880	5,700		116,271
1934–35.. ..	15,143	41,180	1,926	53,361	5,737		117,347
Average 10 seasons 1925–35 ..	15,097	40,222	1,783	51,911	5,246		114,259

The total area under vines in Australia has shown a substantial expansion since 1860. This development has been interrupted from time to time, decreases occurring in 1896, the years between 1904 and 1910, and in 1914. Since the last named year the area increased without interruption from about 61,000 acres to more than 114,000 acres in 1924–25, due largely to the planting of varieties suitable for drying. Subsequently the area fluctuated somewhat but increased again during the past three years to the record area of 117,347 acres in 1934–35.

(ii) *Report on the Wine Industry.* An investigation into conditions in the wine industry was undertaken by the Commonwealth Director of Development and the Senior Inspector of Excise, Department of Trade and Customs, and a comprehensive report was presented to Parliament on the 17th July, 1931.

(iii) *Wine Production, Bounties, etc.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant, owing chiefly to two causes. In the first place Australians are not a wine-drinking people. It is estimated that they consume approximately 5 million gallons or 0.8 gallons per head per annum and consequently the local market is restricted. Secondly, the comparatively new and unknown wines of Australia must compete in the markets of the old world with the well-known and long-established brands from other countries. Continued efforts are made to bring the Australian wines under notice, and with the assistance of a Commonwealth bounty on the export of fortified wine of specified strength, the industry has been greatly stimulated. Particulars of the Wine Export Bounty are shown in § 18 hereafter. The Wine Export Bounty Act 1930 which provided for payment at the rate of 1s. 9d. per gallon was replaced by a new Act in 1934 which fixed the rate at 1s. 3d. per gallon for the two years ending 28th February, 1937, and thereafter at a reduction of 1d. per gallon for each succeeding year until 1940 when it will be 1s. per gallon.

At the Imperial Economic Conference at Ottawa in 1932, the margin of preference granted by the Government of the United Kingdom was 2s. per gallon on Australian wines not exceeding 27 degrees of proof spirit. Hitherto the duties imposed were as follows :—Empire wines not exceeding 27 degrees, 2s. per gallon, foreign wines not exceeding 25 degrees, 3s. per gallon, a margin of preference of 1s. per gallon. The margin of 2 degrees in the strength of Empire wines is also considered a measure of preference. The bulk of the wine exported from Australia contains more than 27 degrees of proof spirit, and, under the duties in force in the United Kingdom in 1932, Australian wines of a strength exceeding 27 but under 42 degrees enjoy a preference of 4s. per gallon. New or additional preferences are also hoped for from certain Crown Colonies and Protectorates.

The quantity of wine produced in the several States during the last five seasons together with the average for the past decennium is given in the table hereunder :—

WINE.—PRODUCTION.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	No production of wine in Tasmania.	Gallons.
1930–31 ..	1,335,882	1,254,615	48,899	10,131,034	307,788		13,078,218
1931–32 ..	1,589,707	1,530,061	41,456	10,664,546	364,752		14,190,522
1932–33 ..	2,075,737	1,610,649	35,301	12,260,971	435,003		16,417,661
1933–34 ..	1,813,034	1,691,391	31,796	10,032,012	427,458		13,995,691
1934–35 ..	1,539,274	1,276,176	38,050	12,914,905	496,252		16,264,657
Average 10 seasons 1925–35	1,693,062	1,639,231	39,182	12,529,365	359,781		16,260,621

2. **Imports and Exports of Wine.**—(i) *Imports.* The principal countries of origin of wine imported into Australia are France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The imports for the last five years are given hereunder :—

WINE.—IMPORTS, AUSTRALIA.

Year.	Quantity.			Value.(a)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1930–31 ..	2,314	13,166	15,480	6,095	7,068	13,163
1931–32 ..	325	8,098	8,423	1,026	5,224	6,250
1932–33 ..	2,402	12,411	14,813	8,042	12,015	20,057
1933–34 ..	5,469	18,772	24,241	16,612	16,137	32,749
1934–35 ..	7,936	20,367	28,303	26,577	17,422	43,999

(a) Australian currency values.

(ii) *Exports.* Practically all of the wine exported from Australia is sent to the United Kingdom; less than 200,000 gallons are sent to other countries. New Zealand absorbs the major portion of this quantity although exports to Canada have increased under the Canadian–Australian Trade Treaty; the former took 81,750 gallons valued at £34,914 while the latter imported 69,881 gallons valued at £27,897 during 1934–35. The amendment to the liquor laws of the United States enabled Australia to export 61,917 gallons valued at £18,529 to that country in 1933–34 and 31,032 gallons valued at £7,684 in 1934–35. Exports for the last five years are given in the following table :—

WINE.—EXPORTS, AUSTRALIA.

Year.	Quantity.			Value.(a)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1930–31 ..	2,224	2,205,983	2,208.207	3,684	506,368	510,052
1931–32 ..	4,123	3,471,462	3,475,585	6,705	901,837	908,542
1932–33 ..	1,656	3,096,114	3,097,770	2,392	788,409	790,801
1933–34 ..	5,289	3,063,449	3,068,738	6,683	796,705	803,388
1934–35 ..	4,111	3,392,570	3,396,681	5,854	806,334	812,188

(a) Australian currency values.

3. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the greatest development in the industry has

taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes grown during the last five seasons are as follows :—

TABLE GRAPES.—PRODUCTION.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31	3,680	3,799	2,067	891	2,835	13,272
1931–32	3,542	3,807	1,961	670	3,053	13,033
1932–33	5,401	4,008	2,165	957	2,679	15,210
1933–34	4,469	3,837	2,050	695	2,602	13,653
1934–35	3,638	3,113	1,900	646	3,214	12,511

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the last five seasons are given in the following table :—

RAISINS(*a*) AND CURRANTS.—PRODUCTION.

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
1930–31 ..	2,364	425	22,377	7,834	7,825	7,588	651	1,738	33,217	17,585
1931–32 ..	3,043	497	29,702	7,832	9,234	7,820	797	1,428	42,776	17,577
1932–33 ..	4,909	670	42,568	7,814	12,434	6,390	704	1,536	60,615	16,410
1933–34 ..	3,922	721	33,962	7,476	12,480	8,018	595	1,323	50,959	17,538
1934–35 ..	3,381	755	29,637	8,801	12,234	9,259	646	2,037	45,898	20,852
Average 10 seasons 1925–35	2,955	509	30,656	7,478	9,174	6,748	638	1,362	43,423	16,097

(*a*) Sultanas and Lexias.

4. **Imports and Exports of Raisins and Currants.**—The following table gives the oversea imports and exports of raisins and currants during each of the last five years :—

RAISINS AND CURRANTS.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	RAISINS.					
	tons.	£	tons.	£	tons.	£
1930–31(*b*) ..	(*a*)	24	39,803	1,606,735	39,803	1,606,711
1931–32(*b*) ..	(*a*)	80	29,454	1,353,987	29,454	1,353,907
1932–33(*b*) ..	2	276	35,439	1,728,581	35,437	1,728,305
1933–34(*b*) ..	5	570	46,825	1,867,134	46,820	1,866,564
1934–35(*b*) ..	(*c*)104	(*c*)5,988	40,041	1,447,686	39,937	1,441,698
	CURRANTS.					
1930–31(*b*) ..	(*a*)	1	14,381	578,037	14,381	578,036
1931–32(*b*) ..	(*a*)	30	13,505	597,698	13,505	597,668
1932–33(*b*) ..	(*a*)	35	11,134	450,502	11,134	450,467
1933–34(*b*) ..	..	..	15,659	632,978	15,659	632,978
1934–35(*b*) ..	(*a*)	15	14,562	583,422	14,562	583,407

(*a*) Quantity negligible. (*b*) Australian currency values. (*c*) Re-imports.

Since 1912 Australia has not only produced sufficient raisins and currants for home consumption, but has been able to maintain a large export trade. The average annual production for the decennium ended 1934–35 exceeded 59,500 tons, of which 13,500 tons satisfied local requirements, leaving a surplus averaging 46,000 tons available for export. The production has nearly reached 78,000 tons and under favourable conditions may exceed 80,000 tons from the existing acreages. The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, which took 64 per cent., 28 per cent. and 6 per cent. respectively of the average quantity exported during 1934–35. Exports to Canada have increased from 4,600 tons in 1928–29 to 15,400 tons in 1934–35. Under the terms of the agreement reached at the Imperial Economic Conference at Ottawa in 1932, the tariff in the United Kingdom on dried fruits imported from foreign countries was increased from 7s. per cwt. to 10s. 6d. per cwt. As already stated, the United Kingdom absorbs 64 per cent. of Australia's exports, and the preference given will therefore prove of considerable benefit to the Australian grower. The existence of the Anglo-Grecian Trade Treaty, however, precludes any immediate prospect of an advance in the present rate of preference—2s. per cwt.—being secured on Australian currants imported into Great Britain.

5. **Prices of Australian Sultanas and Currants.**—The average prices of Australian sultanas and currants both locally and in Great Britain during the last five years will be found in the following table. Those for Great Britain are shown in British and Australian currency values and represent average prices realized on sales recorded each year by the London agency of the Commonwealth Dried Fruits Control Board :—

SULTANAS AND CURRANTS.—PRICES.

Year.	Average Wholesale Price per lb.—Australia.		Average Price per lb.—Great Britain.			
			In British Currency.		In Australian Currency.	
	Sultanas.	Currants.	Sultanas.	Currants.	Sultanas.	Currants.
	d.	*d.*	*d.*	*d.*	*d.*	*d.*
1930–31 ..	7	7	6½	4½	7	5
1931–32 ..	7½	7	5½	4	7	5
1932–33 ..	8¼	7¼	3¾	3¾	4½	4½
1933–34 ..	8¼	7	4	3¾	5	4½
1934–35 ..	8¼	7⅛	4	3 9/16	5	4 7/16

§ 16. Orchards and Fruit Gardens.

1. **Progress of Cultivation.** — The greatest area under orchards and fruit gardens was attained in 1933–34 when 281,989 acres were planted, but in 1934–35 it declined to 277,762 acres owing to the reduction in areas under citrus fruits and bananas. Since 1921–22, when the next highest figure of 281,149 acres was recorded,

the area has fluctuated with the changing demand for fruit. The total area under orchards and fruit gardens in the several States is given in the following table :—

ORCHARDS AND FRUIT GARDENS.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31 ..	78,176	79,490	37,102	29,630	19,333	32,561	55	276,347
1931–32 ..	79,890	76,834	34,974	29,077	19,530	32,403	48	272,756
1932–33 ..	83,909	77,173	30,578	29,109	20,026	32,774	58	273,627
1933–34 ..	90,227	76,945	31,511	28,899	20,658	33,679	70	281,989
1934–35 ..	87,035	76,254	30,646	29,167	20,811	33,779	70	277,762

2. **Varieties of Crops.**—(i) *General.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, paw-paw, mango and guava of the tropics to the strawberry, the raspberry and the currant of the colder parts of the temperate zone. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In New South Wales citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. In Queensland, the banana, the pineapple, the apple, the orange, the peach, the plum and the coco-nut are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies nearly four-fifths of the fruit-growing area, but small fruits, such as the currant, raspberry and gooseberry are extensively grown, while the balance of the area is taken up with the pear, apricot, plum and cherry. The following tables give the acreage—bearing and non-bearing—under the principal kinds of fruit, and the quantity and value of fruit produced.

(ii) *Area.* The table hereunder shows the total acreage for 1934–35:—

ORCHARDS AND FRUIT GARDENS.—AREA, 1934–35.

Fruit.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Apples ..	16,341	30,839	5,373	10,717	12,450	26,645	49	102,414
Apricots ..	1,832	4,081	162	3,059	673	1,447	3	11,257
Bananas ..	16,072	..	10,323	..	198	..	..	26,593
Cherries ..	3,644	1,397	6	817	14	96	2	5,976
Citrus—								
Oranges ..	20,815	5,367	3,421	4,819	2,865	..	..	42,974
Mandarins ..	5,504				183	..	..	
Lemons ..	2,796	1,699	139	432	490	..	..	5,556
Other ..	620	..	..	66	31	..	..	717
Nectarines and Peaches ..	7,116	12,330	1,828	1,855	982	66	4	24,181
Nuts	680	536	..	1,464	277	..	1	2,958
Pineapples ..	193	..	5,584	..	9	..	..	5,786
Pears	3,678	11,492	245	1,892	1,013	2,254	4	20,578
Plums	5,769	4,394	1,295	2,674	1,014	590	5	15,741
Small fruits ..	16	801	159	372	70	2,595	..	4,013
Other fruits ..	1,959	3,318	2,111	1,000	542	86	2	9,018
Total ..	87,035	76,254	30,646	29,167	20,811	33,779	70	277,762

(*a*) Estimated

(iii) *Production*—(*a*) *Quantities.* The production in 1934–35 is shown in the next table :—

ORCHARDS AND FRUIT GARDENS.—PRODUCTION, 1934–35.

Fruit.		New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
Apples ..	bushel	1,235,389	2,085,081	284,893	800,768	1,228,300	3,934,000	730	9,569,161
Apricots ..	,,	160,295	260,161	6,992	359,816	62,760	107,000	42	957,066
Bananas ..	,,	1,589,064	..	1,429,425	..	8,679	..	..	3,027,168
Cherries ..	,,	112,549	30,712	419	27,100	376	5,300	17	176,473
Citrus—									
Oranges ..	,,	2,296,987	621,813	} 388,207	575,314	{ 289,955	..	.. }	4,629,333
Mandarins ..	,,	423,321	17,712			{ 16,024	..	.. }	
Lemons ..	,,	278,642	219,944	14,621	47,761	64,085	..	..	625,053
Other ..	,,	44,494	793	..	6,398	1,275	..	..	52,960
Nectarines and Peaches ..	,,	554,074	1,186,641	101,492	172,349	76,889	4,000	28	2,095,473
Nuts	lb.	329,280	158,421	..	733,488	70,992	..	..	1,292,181
Pineapples ..	dozen	37,403	..	1,126,831	..	..	..	..	1,164,234
Pears ..	bushel	333,905	1,021,780	19,396	175,966	103,869	280,000	59	1,934,975
Plums ..	,,	340,869	265,811	73,948	190,365	77,717	56,000	111	1,004,821
Small Fruits ..	cwt.	308	19,336	3,440	6,114	578	86,760	..	116,536

(*b*) *Values.* The value of production for the various classes of fruit for the year 1934–35 is given in the following table :—

ORCHARDS AND FRUIT GARDENS.—VALUE OF PRODUCTION, 1934–35.

Fruit.		New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Federal Capital Territory.	Australia.
		£	£	£	£	£	£	£	£
Apples ..	..	382,200	417,016	89,940	142,086	474,500	1,075,600	226	2,581,568
Apricots ..	..	67,100	58,536	3,496	97,811	27,784	23,600	18	278,345
Bananas ..	..	558,660	..	335,685	..	6,312	..	..	900,657
Cherries ..	..	70,210	23,802	500	16,712	865	2,700	11	114,800
Citrus—									
Oranges ..	..	562,230	204,162	} 97,900	189,660	{ 106,450	..	.. }	1,261,508
Mandarins ..	..	89,060	5,314			{ 6,732	..	.. }	
Lemons ..	..	68,960	60,485	5,239	14,328	16,756	..	..	165,768
Other ..	..	14,680	258	..	1,440	549	..	..	16,927
Nectarines and Peaches		210,150	267,675	38,651	47,325	42,277	1,100	10	607,188
Nuts ..	..	7,815	5,559	..	21,233	2,366	..	..	36,973
Pineapples ..	..	8,570	..	207,870	..	136	..	..	216,576
Pears ..	..	104,610	225,643	5,170	37,539	46,437	80,500	18	499,937
Plums ..	..	117,820	43,194	38,200	33,069	28,202	9,100	41	269,626
Small Fruits ..	..	1,140	33,849	5,375	16,090	3,885	106,600	..	166,939
Other Fruits ..	..	51,025	92,093	48,004	17,154	16,022	2,100	29	226,427
Total ..	..	2,314,230	1,437,586	876,030	634,467	779,273	1,301,300	353	7,343,239

3. **Principal Fruit Crops.**—(i) *Area.* The area in Australia under the principal fruit crops for the year 1913–14 and for each of the last five years is shown hereunder :—

PRINCIPAL FRUIT CROPS.—AREA, BEARING AND NON-BEARING, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1913–14 ..	56,577	7,778	24,840	13,645	9,657	8,410
1930–31 ..	97,898	22,999	54,222	22,694	20,668	17,113
1931–32 ..	99,150	21,941	53,052	22,760	20,042	16,443
1932–33 ..	100,309	21,893	52,407	22,321	19,922	16,418
1933–34 ..	101,812	28,440	52,724	22,392	19,751	16,210
1934–35 ..	102,414	26,593	49,247	22,990	20,578	15,741

(ii) *Production—(a) Quantities.* In the next table the total production for the principal varieties of fruit grown in Australia is shown for the same periods :—

PRINCIPAL FRUIT CROPS.—PRODUCTION, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1913–14 ..	5,000,178	835,868	1,638,961	930,144	951,277	621,525
1930–31 ..	7,678,103	2,627,317	4,688,848	1,725,039	1,549,233	959,213
1931–32 ..	9,227,736	2,728,982	5,220,772	1,191,166	1,641,228	579,293
1932–33 ..	10,798,538	2,256,520	4,920,419	2,090,584	2,152,887	1,183,700
1933–34 ..	10,500,288	2,636,288	5,159,524	1,762,923	1,914,118	943,102
1934–35 ..	9,569,161	3,027,168	5,307,146	2,011,542	1,934,975	1,004,821

(*b*) *Values.* The value of the principal fruit crops during the periods mentioned is given in the subjoined table :—

PRINCIPAL FRUIT CROPS.—VALUE OF PRODUCTION, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.
	£	£	£	£	£	£
1913–14 ..	1,132,427	157,710	719,808	306,433	258,235	135,654
1930–31 ..	2,267,769	1,105,226	1,490,373	484,904	377,800	297,687
1931–32 ..	2,320,629	899,401	1,650,315	446,211	428,707	223,959
1932–33 ..	2,266,713	907,820	1,528,067	699,296	504,634	327,172
1933–34 ..	2,249,108	1,013,812	1,540,767	455,021	465,875	243,549
1934–35 ..	2,581,568	900,657	1,444,203	572,643	499,937	269,626

4. **Imports and Exports of Fruit.**—(i) *General.* A considerable export trade in both fresh and dried fruits is carried on by Australia with overseas countries. The import trade in fresh fruits declined heavily during recent years owing to the imposition of a Customs duty of 1d. per lb. on imported bananas, which had previously been the chief variety of fresh fruit imported into Australia. Under the terms of the agreement reached at Ottawa in 1932, however, 40,000 centals of bananas may be admitted annually from Fiji at the rate of duty of 2s. 6d. per cental. The imports of dried fruits at present consist mainly of dates. The export trade in fresh and dried fruits has expanded greatly during recent years, the value of the shipments in 1934–35 amounting to £1,777,331 and £2,165,534 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruits and pears are fairly considerable, and experiments are being conducted in regard to the dispatch of other fruits. Shipments of raisins and currants have increased greatly since 1914–15, and are mainly responsible for the growth in the dried fruits exports. Dried apricots also figure amongst the exports.

(ii) *Fresh Fruits.* Information with regard to the Australian oversea trade in fresh fruits is given hereunder :—

FRESH FRUITS.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb.	£	lb.	£	lb.	£
1930–31 (*a*)	4,015,400	26,930	168,035,900	1,588,128	164,020,500	1,561,198
1931–32 (*a*)	3,007,000	18,115	225,466,700	2,085,597	222,459,700	2,067,482
1932–33 (*a*)	5,186,400	34,462	275,080,400	2,417,982	269,894,000	2,383,520
1933–34 (*a*)	6,219,200	33,592	240,290,800	2,011,731	234,071,600	1,978,139
1934–35 (*a*)	4,212,300	20,247	226,132,000	1,777,331	221,919,700	1,757,084

(*a*) Australian currency values.

(iii) *Exports of Apples, Pears and Citrus Fruits.* The quantity and value of apples, pears and citrus fruits exported during each of the last five years are shown in the following table :—

APPLES, PEARS AND CITRUS FRUITS.—EXPORTS, AUSTRALIA.

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cental.	£	Cental.	£	Cental.	£
1930–31 ..	1,329,563	1,235,583	160,684	150,069	117,000	110,414
1931–32 ..	1,879,653	1,701,569	127,708	130,744	181,450	170,573
1932–33 ..	2,273,724	1,951,994	283,397	262,134	136,183	123,809
1933–34 ..	2,058,965	1,654,241	171,753	163,585	132,666	132,363
1934–35 ..	1,745,337	1,307,791	254,978	240,836	242,891	212,135

(iv) *Dried Fruits.* The quantity and value of oversea imports and exports of dried fruits, other than raisins and currants, for the last five years are shown below ; about 95 per cent. of the total imports consisted of dates obtained almost entirely from Iraq :—

DRIED FRUITS(*a*).—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb.	£	lb.	£	lb.	£
1930–31(*b*)	4,423,939	40,766	2,083,242	65,168	2,340,697	— 24,402
1931–32(*b*)	9,988,817	74,002	727,186	14,220	9,261,631	59,782
1932–33(*b*)	9,415,551	62,281	2,093,159	51,764	7,322,392	10,517
1933–34(*b*)	8,302,384	71,594	5,674,846	151,573	2,627,538	— 79,979
1934–35(*b*)	13,187,250	94,903	5,507,100	134,426	7,680,150	— 39,523

(*a*) Excluding raisins and currants referred to separately under Vineyards, § 15, 4. (*b*) Australian currency values.

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

(v) *Jams and Jellies.* Jams and jellies were exported in large quantities during the war years, and in 1918–19 the record shipment of 79,277,560 lb., valued at £1,847,970, was dispatched from Australia. Since that year, however, the trade has dwindled, the value of the exports in 1934–35 amounting to only £63,425. Particulars relative to imports and exports during each of the last five years are as follows :—

JAMS AND JELLIES.—IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb.	£	lb.	£	lb.	£
1930–31(*a*)	6,423	471	1,445,520	40,916	1,439,097	40,445
1931–32(*a*)	2,099	182	1,674,862	44,630	1,672,763	44,448
1932–33(*a*)	24,492	1,180	1,886,344	47,682	1,861,852	46,502
1933–34(*a*)	16,159	909	2,245,262	55,958	2,229,103	55,049
1934–35(*a*)	30,322	1,265	2,949,105	63,425	2,918,783	62,160

(*a*) Australian currency values.

(vi) *Preserved Fruit.* Details concerning the quantities and values of preserved fruit imported into Australia cannot readily be obtained, owing to the fact that in the Customs returns particulars concerning fruit and vegetables are in certain cases combined. The total value of fruit and vegetables preserved or partly preserved in liquid, or pulped, imported into Australia during 1934–35 was £25,560 or £32,014 in Australian currency. Overseas exports in 1934–35 were as follows—Apricots, 8,142,169 lb., £136,901; peaches, 33,365,307 lb., £503,669; pears, 15,668,656 lb., £264,655; pineapples, 3,839,827 lb., £69,819; and other 1,069,222 lb., £22,127; or a total shipment valued at £997,171.

§ 17. Minor Crops.

1. **General.**—In addition to the crops previously dealt with, there are many others which, owing either to their nature, or to the fact that their cultivation has advanced but little beyond the experimental stage, do not occupy so prominent a position. Some of the more important of these are included under the headings—Market Gardens, Pumpkins and Melons, Nurseries, Grass Seed, Tobacco and Millet. Cotton growing has received considerable attention in the tropical portions of Queensland, and the prospects of establishing this industry are hopeful. The total area in Australia during the season 1934–35 devoted to crops not dealt with in previous sections was 206,022 acres, the major portion of which consisted of cotton, market gardens and tobacco.

2. **Market Gardens.**—Under this head are included all areas on which mixed vegetables are grown. Where considerable areas are devoted to the production of one vegetable, such for instance as the potato, the onion, the melon, the tomato, etc., the figures are usually not included with market gardens, but are shown either under some specific head, or under some general head as "Other Root Crops," or "All Other Crops." The area under market gardens during each of the last five seasons is given hereunder :—

MARKET GARDENS.—AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1930–31	7,448	20,197	903	1,663	3,025	600	13	33,849
1931–32	6,655	19,786	778	1,726	3,123	660	33	32,761
1932–33	6,047	18,249	992	1,896	3,807	804	55	31,850
1933–34	5,664	20,010	833	2,105	3,281	779	61	32,733
1934–35	6,696	20,728	801	1,994	3,024	869	13	34,125

3. **Grass Seed.**—The area under this crop during 1934–35, exclusive of New South Wales and Western Australia, for which States complete figures as to area are not available, was 14,650 acres, of which 5,840 acres were in Victoria, 1,587 acres in Tasmania, 3,823 acres in Queensland, and 3,400 acres in South Australia. The production for 1934–35 for these States was 210,443 bushels. In addition to the areas planted above, 8,337 acres were sown to canary seed in Queensland and 50 acres in New South Wales during 1934–35, returning a total yield of 61,806 bushels, valued at £41,723.

4. **Tobacco.**—Tobacco growing some years ago promised to occupy an important place amongst the agricultural industries of Australia. Thus, as early as the season 1888–89, the area under this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area declined considerably.

In all the States in which its cultivation has been tried, the soil and climate appear to be suitable for the growth of the plant, and the large import of tobacco in its various forms is an index of the market for a satisfactory product. The net imports of tobacco into Australia during the year 1934–35 were valued at £A.1,508,715, while the net quantity of unmanufactured tobacco imported was 17,036,835 lb. valued at £A.1,628.669. The area under this crop in 1934–35 amounted to 8,429 acres which produced 3.1 million lb. Victoria with 4,765 acres and Queensland with 2,585 acres were the chief producing States.

It has been proved that suitable leaf can be grown, and research is in progress with a view to improvement in the quality and aroma of the product and the combating of disease. With the increased protection afforded by the Tariff the area expanded considerably in 1931–32 and in that year, as the result of an agreement with the Commonwealth Government, the Australian Tobacco Manufacturers agreed to purchase 7.2 million lb. of suitable leaf at an average price of 2s. 3d. per lb.; actually more than 10.5 million lb. was purchased at an average of 2s. 1½d. per lb. The agreement was not renewed and the area has since declined to less than half of that planted in 1931–32, after encountering many checks from frosts and diseases of the plant.

The following table furnishes details of the average area, production, etc., in quinquennial periods from 1901 to 1930, and annually from 1930–31 to 1934–35 :—

TOBACCO.—AREA, PRODUCTION, ETC., AUSTRALIA.

Period.	Area.	Production.	Value.	Number of Producers Registered.
	Acres.	lb.	£	No.
1901–05	1,412	1,172,976	(a)	387
1906–10	1,678	1,419,040	41,581	518
1911–15	2,496	2,106,160	65,615	479
1916–20	1,648	1,449,616	104,978	487
1921–25	2,677	1,962,576	158,748	925
1926–30	2,478	1,632,243	121,589	666
1930–31	3,354	1,593,872	186,984	693
1931–32	17,738	10,160,192	1,114,737	2,774
1932–33	26,272	9,723,056	960,565	5,527
1933–34	16,304	4,348,964	339,663	5,081
1934–35	8,429	3,113,315	256,655	4,205

(a) Not available.

In 1929 a Select Committee was appointed by the House of Representatives to report on the tobacco industry in Australia. The report of the Committee was submitted on 1st July, 1930, and among the recommendations made was one for the formation of a Tobacco Investigation Committee. This Committee was formed, and was financed jointly by the Commonwealth Government and the British Australian Tobacco Company, the Company undertaking to contribute up to £3,000 on the £ for £ basis. In 1933 another Committee was appointed. The recommendation of this Committee, which reported on 16th November, 1933, that the sum of £20,000 should be provided annually for five years to assist the States to continue economic and scientific investigations was adopted, and this amount has been included in the Budget for each year since 1933–34. £5,000 was allotted to the Council for Scientific and Industrial Research, and the balance was distributed among the States to provide additional services, £3,750 being allocated to each of the States of New South Wales, Victoria and Queensland, and £1,250 each to South Australia, Western Australia and Tasmania. The Council for Scientific and Industrial Research is investigating diseases affecting the tobacco plant, including work on disease resisting varieties, and is making tests of smoking quality. The Council has been successful in discovering effective means of preventing blue mould, and consequently the development of the industry should proceed on much sounder lines than hitherto.

The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

5. **Pumpkins and Melons.**—The total area under this crop in Australia during 1934–35 was 18,405 acres, of which 3,713 acres were in New South Wales, 1,199 acres in Victoria, 12,461 acres in Queensland, 308 acres in South Australia, and 707 acres in Western Australia. The production for Australia amounted to 53,503 tons.

6. **Hops.**—Hop growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for the season 1934–35 being 978 acres, of which 854 acres were in Tasmania and 112 acres in Victoria. Small areas were also recorded in South Australia, 1 acre, and in Western Australia, 11 acres. The Tasmanian area, though still small, has increased during the past 32 years, the total for the season 1901–2 being only 599 acres. In Victoria, the area which in 1901–2 was 307 acres, dwindled to 71 acres in 1918–19, then rose to 312 acres in 1925–26 and dropped to 112 in 1934–35. The cultivation of hops was much more extensive in Victoria some 50 years ago than at present, the area in 1883–84 being 1,758 acres. During the year 1934–35 the imports of hops exceeded the exports by 93,057 lb., valued at £A10,095. This excess of imports was due to the reimportation of 85,920 lb. to meet local requirements. The value of the production in Australia in 1934–35 amounted to £151,112.

7. **Flax.**—For many years flax was grown intermittently in the Gippsland district of Victoria, and attempts were made to introduce its cultivation into Tasmania and New South Wales, but without success. About the end of the year 1917 the shortage of flax fibre in the world had become acute, and endeavours were made by the Commonwealth Government to encourage local cultivation. The acreage in Victoria increased from 419 acres in 1917–18 to 1,611 acres in 1919–20, but fell to 179 acres in 1928–29. As the result of a bounty introduced in 1930 the area increased to 1,216 acres in 1930–31, but declined to 509 acres in 1932–33. In 1933–34 the area expanded to 769 acres but fell again in 1934–35 to 584 acres.

An investigation into the linseed-flax industry was conducted by the Development Branch of the Prime Minister's Department and a report was presented in 1933. From the evidence obtained in the course of the investigation it was concluded that, on account of the limited local demand and the inability to develop an export trade, any aggresive policy of expansion was to be avoided. It was found also that the growing of flax solely for seed was not likely to become an important industry.

Bounty was payable on flax and linseed grown in Australia for a period of five years ending 28th February, 1935. During this period the total amount disbursed as bounty was £2,839.

8. **Millet.**—Millet figures in the statistical returns of three of the States. The total area devoted thereto in 1934–35 was 3,986 acres, of which 2,614 acres were in New South Wales, 955 in Victoria, and 399 in Queensland. The particulars here given relate to millet grown for grain and fibre, the quantity for green forage being dealt with in the section relating thereto.

9. **Nurseries.**—In all the States fairly large areas are occupied as nurseries, but figures in regard to acreages under flowers, fruit trees, etc., are available only for New South Wales, Victoria, South Australia and Western Australia. During 1934–35 the areas in those States were 733, 1,111, 165 and 163 acres respectively.

10. **Cotton.**—The cultivation of cotton was begun in Queensland in 1860, and ten years later the area cropped had increased from 14 acres to over 14,000 acres. The reappearance of American cotton in the European market on the conclusion of the Civil War gave a severe setback to the new industry, and the area declined continuously till 1888, when only 37 acres were planted. Later on the industry was resuscitated, and manufacturing on a small scale was undertaken on two separate occasions at Ipswich, but low prices over a term of years checked development. In 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton, and ginned

it on owner's account, the final return being equal to about 1¾d. per lb. The rise in price enabled the Government to offer a guarantee of 5½d. per lb. for seeded cotton of good quality for the three years ended 31st July, 1923, and the area picked increased from 166 acres in 1920 to 50,186 acres in 1924. Guarantees were continued until 1926, when the Commonwealth Government granted a bounty of 1½d. per lb. on the better grades and ¾d. on the lower grades of seed cotton grown in Australia. In addition to this direct assistance to the growers the Government subsidized the cotton-manufacturing industry by granting a graduated bounty, varying from ⅛d. to 1s. per lb., on all cotton yarn manufactured in Australia which contained 50 per cent. of home-grown cotton. This bounty, however, ceased to operate after 30th June, 1932. The Raw Cotton Bounty Act of 1934, which repealed the previous Acts, provided, *inter alia*, that a bounty of 5½d. per lb., fluctuating according to variations in the Liverpool price, shall be payable on raw cotton produced in Australia from Australian grown seed. The amount of raw cotton for the purpose of the bounty was limited to the requirements of Australia plus 20 per cent. With the change over to the bounty system, a cotton pool was formed in Queensland under the Primary Products Pools Act, and a Cotton Board was elected to control the handling, financing and marketing of all cotton grown in the State. The number of growers were ;—1930, 1,461 ; 1931, 1,988 ; 1932, 1989 ; 1933, 3,857 ; and 1934, 2,679.

In the report covering the operations of the Cotton Board for the year 1934–35 it is stated that the crop for that year in terms of raw cotton was disposed of in the following manner :—12,242 bales were sold for use within Australia, 3,430 bales were exported to Liverpool and 1,799 bales to Japan. The quantity of cotton seed treated at the oil mill for the same year was 17.2 million lb. The products manufactured therefrom included 7,238, 105 lb. of cake, 1,560,050 lb. of meal, 918,568 lb. of bran and lintens, and 2,373,500 lb. of crude oil. Other oils were obtained from this crude oil and included 1.8 million lb. of refined oil and 523,000 lb. of soap-making oil.

The area under cultivation and the production in Queensland since the year 1926 are shown hereunder :—

COTTON.—AREA AND PRODUCTION, QUEENSLAND.

Year.	Area(*a*).	Yield of Unginned Cotton.
	Acres.	lb.
1926	18,743	9,059,907
1927	14,975	7,060,756
1928	20,316	12,290,910
1929	15,003	8,024,502
1930	22,652	17,022,897
1931	22,452	15,244,644
1932	29,995	6,270,116
1933	68,203	17,718,306
1934	43,397	26,924,179
1935(*b*)	57,000	20,765,036

(*a*) Area picked. (*b*) Subject to revision.

11. **Coffee.**—Queensland is the only State in which coffee has been grown to any extent, and the results have not been satisfactory. The area under crop reached its highest point in the season 1901–2 with 547 acres. Thereafter the acreage fluctuated, but on the whole with a downward tendency, and in 1934–35 only 23 acres were recorded with a production of 13,766 lb.

12. **Other Crops.**—Miscellaneous small crops grown in Australia include tomatoes, rhubarb, artichokes, arrowroot, chicory and flowers.

§ 18. Bounties.

1. **Bounties.**—The bounties paid by the Commonwealth Government during the year ended 30th June, 1936, amounted to £367,539. This amount refers only to bounties paid under the Bounties Acts and does not include financial assistance given to wheat-growers and other primary producers under other Acts. Particulars of the assistance so rendered by the Commonwealth Government are furnished hereafter. Particulars of the amounts paid as bounty on the items mentioned during the years 1931-32 to 1935-36 have been included in the following table :—

BOUNTIES.—AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable(a).	Date of Expiry of Bounty.	Amount Paid.				
			1931-32.	1932-33.	1933-34.	1934-35	1935-36.
			£	£	£	£	£
Iron and Steel Products Bounty Act—							
*Fencing Wire ..	£2 12s. per ton (d) ..	(e) 6th Nov., 1930	..	..	..	..	..
*Galvanized Sheets ..	£2 12s. per ton (b) ..	(e) 27th Mar., 1931	..	..	..	..	..
*Wire Netting ..	£3 8s. per ton (c) ..	..	6,334	8,947	9,838	10,644	10,659
Traction Engines .. * Manufactured from Materials produced and manufactured in Australia	According to capacity, £40-£90 per tractor less 10 per cent. from 9th July, 1930, increased to 16 per cent. from 7th November, 1930, and to 40% from 11th July, 1931. Restored to original rate from 4th December, 1933	..	1,058	894	5,152	6,192	9,814
Sulphur Bounty Act— Sulphur from Australian Pyrites and other Sulphide Ores or Concentrates	£2 5s. per ton ..	..	30,962	46,245	47,955	50,831	74,282
Flax and Linseed Bounties Act 1930	Rates vary according to year	28th Feb., 1935	1,561	412	205	599	62
Wine Export Bounty Act 1934-35— Fortified Wine, containing not less than 34 per centum of proof spirit, exported from Australia from 1st March, 1935, to 29th February, 1940	1s. 3d. per gallon from 1st March, 1935, to 28th February, 1937, reduced by 1d. per annum from 1938 to 1s. per gallon in 1940.	29th Feb., 1940	201,268	178,491	183,981	184,330	194,467

(a) All bounties are subject to 20 per cent. reduction from 20th July, 1931, excepting that paid on gold, wine and wheat. (b) Amount of Bounty raised to £3 12s. per ton on 1st January, 1928; to £4 10s. per ton from 1st January, 1930; reduced to £3 10s. on 21st June, 1930; and to £3 3s. on 10th July, 1930. Bounty ceased on 27th March, 1931, owing to increase in Customs duty. (c) Amount of Bounty reduced to £2 14s. per ton on 10th July, 1930; to £2 5s. 6d. per ton on 7th November, 1930; and to 12s. per ton from 11th July, 1931. (d) Amount of Bounty reduced to £2 6s. on 10th July, 1930. Bounty ceased on 6th November, 1930 owing to increase in Customs duty. (e) Date Bounty ceased.

BOUNTIES.—AUSTRALIA—*continued.*

Articles on which Bounty was paid.	Rate of Bounty Payable. (*c*)	Date of Expiry of Bounty.	Amount Paid.				
			1931–32.	1932–33.	1933–34.	1934–35.	1935–36.
			£	£	£	£	£
Cotton Bounty Act—							
Seed Cotton grown in Australia and delivered and graded as prescribed	Varies on Higher Grades from 1½d. per lb. up to 1932, to ½d. per lb. in 1936 Varies on Lower Grades from ¾d. per lb. up to 1932, to ¼d. per lb. in 1936	30th Sept., 1936	64,206	56,182	87,268	21,729	..
Cotton Yarn manufactured in Australia	Varies according to count and year	(*e*) 30th June, 1932	94,395	36,985	2,287	..	..
Raw Cotton Bounty Act—							
Raw cotton produced in Australia and graded as prescribed	5½d. per lb. fluctuating according to variations in Liverpool price	30th Nov., 1939	..	..	..	96,752	77,089
Papua and New Guinea Bounties Act—							
Cocoa and Coffee Beans (*a*) produced in these Territories imported into Australia for home consumption	1½d. per lb. ..	31st Dec., 1936	(*b*) 830	(*b*) 632	(*b*) 844	1,430	1,166
Sisal Hemp ..	£6 per ton ..	,, ,,	..	..	..	..	..
Gold Bounty Act—							
Gold produced in Australia as prescribed	Varies according to production (*d*)	(*e*) 30th Sept., 1932	80,904	96,112	1,216	..	
Wheat Bounty Act—(*g*)							
Wheat harvested in Australia during the period 1st October, 1931, and 31st March, 1932, and sold or delivered for sale between 1st October, 1931, and 31st October, 1932, as prescribed	4½d. per bushel ..	31st Oct., 1932	3,296,464	132,807 (*f*)	(*f*)	(*f*)	(*f*)
Total	.. .. ..	..	3,777,982	557,707	338,746	372,507	367,539

(*a*) Other goods are scheduled in the Act, *see* Note (*b*). (*b*) Including £1 9s. 3d., being amount of bounty paid on 234 lb. of spices in 1930–31; 12s. 7d. on 126 lb. in 1931–32; 17s. 2d. on 172 lb. in 1932–33; and £13 on 2,007 lb. of kapok in 1933–34. (*c*) All Bounties are subject to 20 per cent. reduction from 20th July, 1931, excepting that paid on gold, wine and wheat. (*d*) Rate of Bounty on gold produced for six months ending June, 1931, was 2.623s. and for six months ending December, 1931, 3.269s. per fine ounce; for the nine months ending September, 1932, the rate was 4.056s. per fine ounce. (*e*) Date Bounty ceased. (*f*) For details of other financial assistance *see* next table. (*g*) Includes Administrative expenses amounting to £14,087.

2. **Other Financial Assistance.**—In addition to the payment of bounties mentioned in the preceding paragraph financial assistance has been granted by the Commonwealth Government for the relief of wheat-growers, fruit-growers and other primary producers. The amounts shown, however, do not include such items as the expenditure on cattle tick control, banana industry, tobacco investigation and apple and pear research, which indirectly benefits the industries concerned. The distribution as bounty, relief or subsidy has been made in the following manner :—

AMOUNTS PAID BY THE COMMONWEALTH GOVERNMENT TO ASSIST PRIMARY PRODUCERS.—AUSTRALIA.

Amounts paid to—	Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Total.
		£	£	£	£	£	£	£	£
Wheat-growers as—									
Bounty (*a*) ..	1931–32	950,546	820,635	64,620	874,630	716,826	2,057	..	3,429,314
Relief	1932–33	570,902	442,421	40,744	507,138	436,145	2,342	308	2,000,000
Relief	1933–34	911,094	603,586	76,455	764,543	639,493	(*e*) 57,024	805	3,053,000
Bounty (*a*) ..	1934–35	531,593	285,000	45,717	300,687	296,652	2,543	222	1,462,414
Special Relief ..	1934–35	100,000	192,000	12,000	127,000	137,000	5,250	..	573,250
Relief	1934–35	590,000	400,000	42,740	503,545	434,527	(*e*) 33,906	226	2,004,944
Relief (*b*).. ..	1935–36	565,284	441,948	42,835	432,146	392,850	3,483	360	1,878,906
Total ..	..	4,219,419	3,185,590	325,111	3,509,689	3,053,493	106,605	1,921	14,401,828
Fruit-growers as—									
Relief (*c*) ..	1933–34	8,225	36,321	478	5,258	10,918	63,800	..	125,000
Relief (*c*) ..	1934–35	12,538	22,299	2,103	13,116	14,713	70,231	..	135,000
Relief (*c*) ..	1935–36	14,582	12,720	100	9,043	14,163	39,500	..	90,108
Total ..	..	35,345	71,340	2,681	27,417	39,794	173,531	..	350,108
Primary Producers (other than wheat-growers)—									
Manure subsidy ..	1932–33	19,870	90,227	32,822	34,930	51,487	17,480	(*d*) 3,184	250,000
Manure subsidy (*b*)	1934–35	32,970	133,416	29,690	64,000	73,000	17,611	44	350,731
Manure Subsidy (*b*)	1935–36	45,000	180,000	32,600	72,000	82,000	21,750	50	433,400
Total ..	..	97,840	403,643	95,112	170,930	206,487	56,841	3,278	1,034,131
Grand Total..	..	4,352,604	3,660,573	422,904	3,708,036	3,299,774	336,977	5,199	15,786,067

(*a*) Rate of Bounty 4½d. per bushel in 1931–32 and 3d. per bushel in 1934–35. (*b*) Subject to revision. (*c*) Growers of apples, pears and mandarins. (*d*) Includes £3,153 unallotted. (*e*) Includes special grant to Tasmania.

The moneys granted for the assistance of wheat-growers in 1932–33 and 1933–34 were paid through the Governments of the States on an acreage basis. In 1934–35, in accordance with the recommendations of the Royal Commission on the wheat industry, assistance took the form of a bounty of 3d. per bushel, supplemented by a further relief payment of 3s. per acre. Further special relief was given to those farmers who were adversely affected by the weather conditions of the season 1934–35. Altogether, the amount paid during 1934–35 for the benefit of wheat-growers exceeded £4 million. For the year 1935–36 the amount paid by the Commonwealth Government as relief was £1,878,906. This also was paid through the State Governments. The relief granted to fruit-growers was paid to growers of apples, pears and mandarins. Payments were made to primary producers, other than wheat-growers, at the rate of 15s. for each ton of artificial manure used for the production of primary produce. In addition to the assistance outlined above the Loan (Farmers' Debt Adjustment) Act 1935 made provision for grants totalling £12 million to be made available to the States for the adjustment of farmers'

debts. Of this amount £10 million was allocated as follows:—New South Wales, £3,450,000; Victoria, £2,500,000; Queensland, £1,150,000; South Australia, £1,300,000; Western Australia, £1,300,000; and Tasmania, £300,000. The remaining £2 million is to be allocated in the same proportion, but is subject to review at a later date.

§ 19. Fertilizers.

1. **General.**—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. The divergent character of the soils presented a difficulty in the proper use of fertilizers for different crops and the outstanding development of wheat-growing made a system of crop rotation impracticable. The importance of fallowing and the application of suitable fertilizers in adequate quantities is, however, now widely appreciated by farmers. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures, and much land formerly regarded as useless for cultivation has now been made productive.

2. **Fertilizers Acts.**—In order to protect the users of artificial manures, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features will be found in Official Year Book No. 12 (page 378).

3. **Imports.**—The Australian production of prepared fertilizers is sufficient for local requirements. Imports consist chiefly of rock phosphate, which is used in making superphosphate, a valuable fertilizer for cereals. During 1934–35 the value of rock phosphate imported represented more than 74 per cent. of the total imports of fertilizers. Nauru and Gilbert and Ellice Islands Colony supplied almost the whole of the shipments. Sodium nitrate is obtained chiefly from Chile.

The imports of manures during the last five years are given in the following table. Although considerable quantities of manufactured superphosphate were imported up to the year 1914–15, imports during recent years were very small:—

FERTILIZERS.—IMPORTS, AUSTRALIA.

Fertilizer.		1930–31. (a)	1931–32. (a)	1932–33. (a)	1933–34. (a)	1934–35. (a)
Guano	cwt.	..	..	130	11	..
„	£	..	..	13	30	..
Superphosphate ..	cwt.	511	..	..	..	51,360
„ ..	£	398	..	..	..	3,449
Rock phosphate ..	cwt.	8,614,718	5,948,490	9,569,006	7,480,378	8,201,296
„ „ ..	£	642,006	463,496	731,454	593,971	610,091
Soda nitrate ..	cwt.	27,434	13,041	64,388	59,534	83,548
„ „ ..	£	14,782	8,052	40,604	30,899	39,431
Other	cwt.	341,023	203,892	467,664	551,214	386,613
„	£	166,491	103,186	209,488	213,588	168,082
Total ..	cwt.	8,983,686	6,165,423	10,101,188	8,091,137	8,722,817
	£	823,677	574,734	981,559	838,488	821,053

(a) Australian currency values.

4. **Exports.**—The subjoined table shows the exports of manures for the years 1930–31 to 1934–35. Practically all these fertilizers are manufactured locally, the quantities exported being consigned chiefly to New Zealand, Japan, Java and the Pacific Islands :—

FERTILIZERS.—EXPORTS, AUSTRALIA.

Fertilizer.		1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
Bonedust ..	cwt.	6	1,140	5,470	25	41
„ ..	£	4	162	770	10	17
Superphosphate ..	cwt.	144	66	294	633	31,116
„ ..	£	52	28	89	155	5,590
Rock phosphate ..	cwt.	..	..	..	..	..
„ „ ..	£	..	..	..	..	..
Soda nitrate ..	cwt.	7	88	65	6	1
„ „ ..	£	14	69	49	7	1
Ammonia sulphate	cwt.	3,882	1,715	1,035	279	2,553
„ „ ..	£	1,470	546	423	121	1,074
Other	cwt.	12,935	41,399	11,811	21,445	18,188
„	£	4,186	11,453	1,664	8,493	1,703
Total ..	cwt.	16,974	44,408	18,675	22,388	51,899
	£	5,726	12,258	2,995	8,786	8,385

5. **Quantities Locally Used.**—Information regarding quantities, etc., of manures used in each State during the year 1934–35 is given in the table hereunder :—

FERTILIZERS USED, 1934–35.

State or Territory.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
New South Wales ..	5,687,988	3,367,725	59.21	193,992	95,441
Victoria	4,677,683	*a*4,939,170	*c*96.21	92,009	211,657
Queensland	1,296,619	166,289	12.83	82,379	44,279
South Australia ..	4,629,303	3,955,708	85.45	50,663	139,723
Western Australia ..	3,838,618	*a*4,345,811	*b*98.64	56,208	196,741
Tasmania	292,000	233,038	79.81	14,000	19,650
Northern Territory ..	1,132	..	..	..	..
Fed. Cap. Territory ..	5,456	3,743	68.60	104	126
Total ..	20,428,799	17,011,484	83.57	489,355	707,617

(*a*) Includes area under sown grasses and manure used thereon. (*b*) 1923 figure. (*c*) 1933–34 figure.

Similar particulars in respect of Australia during the last five years are as shown below :—

FERTILIZERS USED IN AUSTRALIA.

Year.	Total Area of Crops.	Area Manured.		Manure Used.		
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.	Average per Acre of Total Area (Artificial).
	Acres.	Acres.	%	Loads.	Tons.	lb.
1930–31	25,163,816	22,150,034	88.02	466,468	885,827	79
1931–32	21,166,900	14,951,476	70.64	438,429	602,689	64
1932–33	22,408,489	17,444,090	77.85	559,831	693,430	69
1933–34	22,454,327	17,781,101	79.19	521,114	728,213	73
1934–35	20,428,799	17,011,484	83.27	489,355	707,617	78

The quantity of chemical fertilizers used per acre of all crops increased from 75 lb., the average for the period 1910–13, to 87 lb. in 1929–30. Following that year the quantity dropped to 64 lb. in 1931–32, but subsequently rose to 78 lb. in 1934–35. The recent decline was principally due to the low prices of farm produce. In order to meet the altered conditions farmers sowed their crops with a lighter dressing of manure in an effort to reduce the cost of production. Seasonal conditions were favourable and prevented any serious decrease in the quantities produced. These circumstances caused the percentage of the area manured on the total area cultivated to decline from 90.86 in 1929–30 to 83.27 in 1934–35 while the use of artificial manures decreased by 145,000 tons during the same period. As a measure of relief to primary producers, other than wheat-growers already referred to in § 18, the Commonwealth Government provided for the State Governments a sum of £250,000 which was distributed on the basis of 15s. 0d. per ton of artificial manure used during the year ended 30th November, 1933. A sum of £350,731 was provided in 1934–35 and £433,400 in 1935–36 for distribution on the same basis.

6. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1934–35 was 33, made up as follows :—New South Wales, 4 ; Victoria, 6 ; Queensland, 5 ; South Australia, 7 ; Western Australia, 5 ; and Tasmania, 6. The production of superphosphates in Australia during 1934–35 amounted to 649,030 tons, the largest producing States being Victoria, Western Australia and South Australia.

§ 20. Ensilage.

1. **Government Assistance in Production.**—The various State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the silage.

2. **Quantity Made.**—Information regarding the number of holdings on which ensilage was made and the quantity made during the seasons 1930–31 to 1934–35 is given in the following table.

ENSILAGE MADE.

State.	1930–31.		1931–32.		1932–33.		1933–34.		1934–35.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales ..	669	60,172	628	54,885	738	62,435	892	70,835	1,068	88,991
Victoria	99	6,373	96	5,792	197	11,642	214	11,900	369	22,145
Queensland	60	4,880	79	5,819	112	6,305	134	8,515	105	7,566
South Australia ..	21	3,656	92	5,640	132	9,470	92	5,098	109	6,794
Western Australia ..	209	10,509	396	16,999	469	21,655	433	19,974	423	16,996
Tasmania	14	840	23	687	37	1,336	58	2,301	52	2,473
Australia ..	1,072	86,430	1,314	89,822	1,685	112,843	1,823	118,623	2,126	144,965

(a) No. of holdings on which ensilage was made.

The drought of 1902–3 drew increased attention to the value of stocks of ensilage and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The following five seasons, however, showed a falling off, but the reduction was due to the fact that stocks had not been drawn upon to any great extent during the previous seasons. The accumulated stocks proved of great value during the 1914 drought, though far below what would have been the case if more attention had been paid to production during the previous years, when there was a surplus of green forage. The quantities made since that date have fluctuated considerably, the output in 1934–35 amounting to 144,965 tons.

§ 21. Agricultural Colleges and Experimental Farms.

1. **General.**—In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but to show also how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder; in cheese and butter making; in the management, breeding and preparation for the market of live stock; in the eradication of pests and weeds; and in carpentering, blacksmithing and other trades.

Expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

2. **Agricultural Colleges and Experimental Farms.**—In previous issues of this volume detailed information was given regarding agricultural colleges, experimental farms and agricultural education generally. *See* Year Book No. 11, pages 393–5, and a summary in respect of the year 1934–35 will be found in the Production Bulletin No. 29 issued by this Bureau.

3. **Agricultural and Stock Departments.**—A synopsis of the activities and operations of the Agricultural and Stock Departments of the several States on 30th June, 1920, will be found in the Official Year Book No. 14, pages 1180 to 1191.

§ 22. Employment in Agriculture.

Information relating to the number of persons employed is furnished annually by landholders of one acre and upwards. The particulars furnished refer to the owner, occupier or manager, those members of his family and other employees who are permanently engaged throughout the year in the work of the farm. Casual labour, such as harvesters and fruitpickers, is excluded. In the collection of statistics of this nature difficulty is experienced in correctly determining whether the duties of female employees are more domestic than rural and on that account it is considered advisable to leave females out of the table.

MALES EMPLOYED IN AGRICULTURE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1913–14 ..	61,525	51,932	33,362	34,111	18,210	11,789	210,929
1923–24 ..	48,176	49,740	38,186	31,532	22,153	12,905	202,692
1930–31 ..	40,163	43,199	43,847	30,325	26,487	11,823	195,844
1931–32 ..	39,382	40,994	45,496	30,587	25,576	12,736	194,771
1932–33 ..	42,556	41,845	46,203	30,457	26,079	13,199	200,339
1933–34 ..	42,084	38,514	46,097	30,329	24,925	13,945	195,894
1934–35 ..	42,135	37,294	47,242	30,177	23,775	13,353	193,976

The above table reveals that there has been a decrease in the employment afforded in the agricultural branch of the rural industry in Australia. This has taken place despite the expansion in the area under crop during the past two decades. The increased employment of machinery in the cultivation of the soil and the harvesting of crops has largely contributed to this decline. Evidence of this is revealed by the fact that in 1913–14 the value of the machinery used mainly in general agriculture was £15.2 million, while the area under crop was 14.7 million acres. In 1923–24 the machinery values rose to £27.3 million and the area under crop increased to 16.5 million acres. Machinery values again increased to 29.6 million in 1934–35 while the area under crop also rose to 20.4 million acres, whereas employment decreased from 211,000 in 1913–14 to 203,000 in 1923–24 and to 194,000 in 1934–35.