CHAPTER XVII.
AGRICULTURAL PRODUCTION.

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

§ 1. Introductory.

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 is contained in early issues of the Official Year Book. (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 of crops 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 of crops 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 of crops 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 of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the last five seasons:—

AREA OF CROPS.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N.T.	A.C.T.	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
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
1935–36	5,735,681	4,438,761	1,334,690	4,463,163	3,754,158	242,189	1,070	4,330	19,974,042
1936–37	5,957,520	4,407,312	1,506.423	4,577,707	3,884,349	263,251	1,305	4,728	20,602,595
1937–38	6,470,160	4,662,354	1,618.738	4,736,428	4,201,548	255,260	1,612	5,631	21,951,731
1938–39	7,049,357	5,019,299	1,734,789	4,724,090	4,719,254	243,048	1,116	6,827	23,497,780
1939–40	6,381,531	5,002,362	1,726,209	4,541,614	4,331,299	258,038	340	8,119	22,249,512

The progress of agriculture was practically uninterrupted from 1860 to 1915–16, when, as the result of a special effort to raise wheat during the War of 1914–19, 18,528,234 acres were cultivated in Australia. Four years later the area of crops declined to 13,296,407 acres owing to the accumulation of wheat stocks consequent

upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum of 25,163,816 acres in 1930–31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935–36. Subsequently the area increased; amounting to 22¼ million acres in 1939–40. Wheat is the most extensively grown crop in Australia and material changes in the total area of crops are largely a reflection of variations in the acreage sown to this cereal.

3. **Artifically-sown Grasses.** In all the States there are considerable areas of artificially-sown grasses mainly sown on cultivated land after burning off the scrub. These areas, which are not included in "area of crops", have expanded from 5¼ million acres in 1929–30 to more than 9 million acres in 1939–40.

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 Commonwealth Minister for Commerce, the Commonwealth Minister in charge of Development and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principle 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 in 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, and the Secretary, Department of Commerce.

§ 3. Distribution, Production and Value of Crops.

1. **Distribution of Crops.**—The following table gives the areas in the several States and Territories of each of the principal crops for the season 1939–40:—

AREA OF PRINCIPAL CROPS, 1939–40.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	4,380,595	2,827,417	362,044	2,734,595	2,970,411	7,495	..	2,448	13,285,005
Oats ..	405,262	439,555	11,595	349,018	452,764	23,110	..	658	1,681,962
Maize ..	115,856	18,963	176,844	39	110	..	..	..	311,812
Barley—									
Malting ..	13,871	179,552	9,279	450,530	55,200	7,215	..	..	715,647
Other ..	10,402	24,687	3,929	53,018	27,521	508	..	..	120,065
Beans and Peas	157	6,819	357	18,297	5,872	18,418	40	..	49,960
Rye ..	12,196	1,728	80	8,196	1,680	149	..	30	24,059
Other Cereals	24,120	..	..	70	..	72	..	..	24,262
Hay ..	706,599	1,204,810	59,970	531,614	395,639	96,264	..	3,746	2,998,642
Green Forage	519,581	91,441	550,716	284,317	380,793	26,130	..	974	1,853,952
Grass and other Seeds ..	(a)	17,452	17,957	10,999	..	4,726	..	..	51,134
Orchards and other Fruit-gardens ..	85,099	70,315	33,014	29,099	22,155	31,074	40	139	270,935

(a) Not available.

AREA OF PRINCIPAL CROPS, 1939–40—*continued.*

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Vines—	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Productive ..	16,035	40,321	2,400	55,075	5,445	..	..	2	119,278
Unproductive	948	2,273	521	3,147	1,012	..	..	..	7,901
Market-gardens	27,185	24,414	7,688	3,056	3,754	1,076	..	53	67,226
Sugar-cane—									
Productive ..	10,488	..	262,181	..	..	..	..	..	272,669
Unproductive	10,483	..	91,815	..	..	..	..	..	102,298
Potatoes ..	19,232	32,177	12,446	4,499	5,676	30,452	..	52	104,534
Onions ..	241	4,503	1,191	644	221	17	..	3	6,820
Other Root Crops	8,837	5,391	6,923	811	..	9,790	5	14	31,771
Tobacco ..	717	2,018	4,520	2	1,019	105	25	..	8,406
Broom Millet ..	3,543	659	429	..	..	..	..	..	4,631
Pumpkins and Melons ..	5,373	1,449	28,766	425	287	5	1	..	36,306
Hops ..	..	173	..	..	21	946	..	..	1,140
Cotton ..	..	..	41,212	..	..	..	175	..	41,387
All other Crops	4,711	6,245	40,332	4,163	1,719	486	54	..	57,710
Total Area ..	6,381,531	5,002,362	1,726,209	4,541,614	4,331,299	258,038	340	8,119	22,249,512

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories on the total area of crops for the season 1939–40 is shown in the next table. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive. In Queensland the most extensive crops are green forage, wheat, sugar-cane and maize, and in Tasmania hay, orchards and fruit-gardens, potatoes, green forage and oats occupy the greatest area.

As pointed out previously wheat is the main crop in Australia, the area thereof for grain and hay representing 63 per cent. of the total area of crops in 1939–40.

RELATIVE AREAS UNDER CROP, 1939–40.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
	%	%	%	%	%	%	%	%	%
Wheat ..	68.64	56.52	20.97	60.21	68.58	2.90	..	30.15	59.71
Hay ...	11.07	24.08	3.47	11.71	9.13	37.31	..	46.14	13.48
Oats ..	6.35	8.79	0.67	7.68	10.45	8.96	..	8.10	7.56
Green Forage..	8.14	1.83	31.90	6.26	8.79	10.13	..	12.00	8.33
Barley ..	0.38	4.08	0.77	11.09	1.91	2.99	..	..	3.76
Sugar-cane	0.33	..	20.50	..	..	..	..	..	1.69
Maize ..	1.82	0.38	10.24	..	..	..	..	..	1.40
Orchards and Fruit-gardens	1.33	1.41	1.91	0.64	0.51	12.04	11.76	1.71	1.22
Potatoes ..	0.30	0.64	0.72	0.10	0.13	11.80	..	0.64	0.47
Vineyards	0.27	0.85	0.17	1.28	0.15	..	..	0.02	0.57
All other..	1.37	1.42	8.68	1.03	0.35	13.87	88.24	1.24	1.81
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3. **Area of Principal Crops in Australia.**—The area of the principal crops during each of the last five seasons, together with the average for the decennium ended 1929–30 is shown hereunder :—

AREA OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Average, Ten years ended 1929–30.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	'000 acres.	'000 acres.	'000 acres.	'000 acres.	'000 acres.	'000 acres.
Barley (*a*)	279	486	394	525	650	716
Maize	321	298	318	320	324	312
Oats	1,047	1,564	1,525	1,408	1,784	1,682
Rice	5	22	23	24	24	24
Wheat	11,291	11,957	12,317	13,735	14,346	13,285
Green Forage	844	1,423	1,625	1,640	1,789	1,854
Hay	2,956	3,007	3,101	2,982	3,250	2,999
Beans and Peas	46	52	48	41	43	50
Onions	8	7	8	8	7	7
Potatoes (*b*)	140	125	130	114	98	105
Sugar-beet	2	3	3	4	4	4
Vineyards	108	119	123	125	127	127
Hops	1.6	1	1	1	1	1
Sugar-cane	257	335	359	358	357	375
Cotton	37	55	62	53	66	41
Tobacco	2.4	11	11	11	8	8
Market-gardens (*c*)	46	55	62	66	66	104
Orchards	277	271	278	277	272	271
All Other Crops	103	183	215	260	282	285
Total	17,771	19,974	20,603	21,952	23,498	22,250

(*a*) Malting only. (*b*) Excluding Sweet Potatoes. (*c*) Including Pumpkins and Melons.

4. **Total and Average Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the five years ended 1939–40 and for the decennium ended 1929–30 :—

TOTAL AND AVERAGE PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, Ten years ended 1929–30.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
Barley (*a*)	'000 bus.	5,077	8,413	6,383	10,802	9,704	13,732
Maize	,, ,,	8,510	7,468	7,246	6,817	7,057	6,560
Oats	,, ,,	14,775	18,721	16,662	17,165	15,555	25,302
Rice	,, ,,	431	2,164	2,277	2,269	2,775	1,858
Wheat	,, ,,	135,400	144,218	151,390	187,256	155,369	210,487
Hay	,, tons	3,608	3,498	3,448	3,424	3,321	4,158
Beans and Peas ..	,, bus.	729	616	778	625	495	808
Onions	,, tons	40	35	53	56	18	38
Potatoes (*b*)	,, ,,	365	323	461	345	274	323
Sugar (Beet)	,, ,,	2.3	5.1	4.2	5.6	1.5	6.3
Grapes	,, ,,	263	364	409	505	402	475
Wine	,, gals.	14,761	17,728	20,168	20,430	14,958	14,775
Raisins and Currants ..	,, tons	42	64	73	93	75	95
Hops	,, lb.	2,412	2,403	2,376	2,277	2,402	1,992
Sugar (Cane) ..	,, tons	402	647	783	810	823	929
Cotton, Unginned ..	,, lb.	9,008	20,785	19,199	11,793	13,688	17,550
Tobacco	,, ,,	1,620	6,007	5,510	5,860	4,046	4,912
Pumpkins and Melons	,, tons	39	62	66	82	81	96

(*a*) Malting only. (*b*) Excluding Sweet Potatoes.

5. **Average Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1939–40 and for the decennium ended 1929–30.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, Ten years ended 1929–30.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
Barley (*a*)	Bushel	18.20	17.31	16.20	20.56	14.92	19.19
Maize	,,	26.47	25.09	22.81	21.29	21.77	21.04
Oats	,,	14.11	11.97	10.93	12.19	8.72	15.04
Rice	,,	87.07	99.64	97.36	95.59	117.92	77.02
Wheat	,,	11.99	12.06	12.29	13.63	10.83	15.84
Hay	Ton	1.22	1.16	1.11	1.15	1.02	1.39
Beans and Peas	Bushel	15.85	11.95	16.16	15.27	11.47	16.18
Onions	Ton	5.19	4.95	6.81	6.67	2.74	5.60
Potatoes (*b*)	,,	2.61	2.59	3.55	3.02	2.80	3.09
Sugar (Beet)	,,	1.17	1.62	1.20	1.39	0.35	1.48
Grapes (*c*)	,,	3.09	3.29	3.62	4.40	3.43	3.98
Wine (*c*)	Gallon	..	364	411	412	300	295
Raisins and Currants (*c*)	Ton	..	1.17	1.31	1.63	1.26	1.56
Hops (*c*)	lb.	1,572	2,388	2,243	2,193	2,235	1,806
Sugar (Cane) (*c*)	Ton	2.30	2.71	3.06	3.17	3.14	3.41
Cotton, Unginned (*c*)	lb.	387.86	378	309	224	206	424
Tobacco	,,	779	527	449	563	518	584
Pumpkins and Melons	Ton	2.69	3.02	2.34	2.57	2.65	2.64

(*a*) Malting only. (*b*) Excluding Sweet Potatoes. (*c*) Per acre of productive crops.

6. **Gross Value of Agricultural Production in Australia.**—The following table shows the gross value of recorded agricultural production at the principal markets in each State for the years 1934–35 to 1939–40 :—

GROSS VALUE OF AGRICULTURAL PRODUCTION : AUSTRALIA.

Crops.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Barley (*a*)	984	1,036	1,326	2,231	1,417	2,429
Maize	1,298	1,619	1,785	1,761	1,503	1,365
Oats	1,940	2,136	2,282	2,537	2,085	2,597
Rice	383	409	458	459	540	413
Wheat	24,738	29,768	40,471	37,000	21,989	38,360
Green Forage	2,435	2,703	2,784	3,043	2,999	3,039
Hay	10,587	10,061	12,104	13,629	12,704	10,567
Beans and Peas	194	165	258	222	253	377
Onions	311	297	250	255	306	296
Potatoes (*b*)	2,491	2,561	2,165	2,442	3,649	3,497
Sugar-beet	76	77	65	97	27	97
Grapes	3,562	3,754	4,233	4,865	3,924	4,657
Hops	151	172	171	190	183	148
Sugar-cane	7,310	7,493	8,742	9,065	9,178	11,192
Tobacco	257	484	437	513	360	504
Cotton, Unginned	397	376	330	205	230	301
Market-gardens (*c*)	2,136	2,240	2,330	2,395	2,473	3,347
Orchards	7,343	7,702	8,508	9,204	9,695	9,212
Other Crops	1,994	2,335	2,704	3,116	3,336	2,971
Total, Gross Value	68,587	75,388	91,403	93,229	76,851	95,369

(*a*) Malting only. (*b*) Excluding Sweet Potatoes. (*c*) Including Pumpkins and Melons.

7. **Value of Production—Gross and Net.**—(i) *General.* Uniform methods for arriving at the gross and net values of production in the various States were finally determined at a Conference of Statisticians held in March, 1935. The returns for the year 1933–34 and subsequent years have been valued on the new basis, and a revaluation was made for the years back to 1928–29. 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 XXVII "Miscellaneous".

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 inflated to this extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1939-40.

(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 (estimated)
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in process of production.		
	£	£	£	£	£	£	£
New South Wales ..	26,152,000	5,760,000	20,392,000	2,425,000	2,462,000	15,505,000	1,152,000
Victoria	21,327,593	4,111,043	17,216,550	3,830,304	1,479,115	11,907,131	875,000
Queensland ..	18,086,000	1,560,000	16,526,000	1,330,000	1,500,000	13,696,000	830,000
South Australia ..	14,321,460	2,122,728	12,198,732	1,352,073	1,388,519	9,458,140	625,015
Western Australia..	11,104,917	1,948,365	9,156,552	623,221	1,469,231	7,064,100	535,334
Tasmania ..	3,830,270	631,270	3,199,000	582,070	183,170	2,433,760	84,770
Total ..	94,822,240	16,133,406	78,688,834	10,142,668	8,482,035	60,064,131	4,102,119

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

(ii) *States* 1930-31 *to* 1939-40. In the following table the net value of agricultural production and the net value per head of population are given by States for each year since 1930-31 :—

VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
			NET VALUE.(a)				
	£	£	£	£	£	£	£
1930-31	9,776,000	6,314,177	10,211,044	2,183,945	2,534,495	1,294,600	32,314,261
1931-32	12,969,000	11,489,164	9,682,821	8,340,631	5,550,466	1,681,650	49,713,732
1932-33	15,124,000	11,130,699	8,944,145	6,282,382	4,973,710	1,231,950	47,686,886
1933-34	11,724,000	10,077,018	9,703,968	5,909,760	4,598,144	1,679,380	43,692,270
1934-35	12,787,000	8,735,776	9,018,187	6,375,538	4,268,547	1,951,150	43,136,198
1935-36	13,285,000	11,716,768	9,699,000	7,336,655	4,678,390	1,723,180	48,438,993
1936-37	19,364,000	16,356,341	10,706,000	9,057,406	5,921,108	1,708,630	63,113,485
1937-38	14,829,000	14,962,412	11,264,000	9,150,941	6,142,705	2,482,500	58,840,558
1938-39	11,804,000	5,619,765	11,615,000	5,489,228	4,065,616	3,084,971	41,678,580
1939-40	15,505,000	11,907,131	13,696,000	9,458,140	7,064,100	2,433,760	60,064,131
			NET VALUE PER HEAD OF MEAN POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1930-31	3 16 10	3 10 5	11 .2 5	3 16 0	5 17 7	5 16 2	4 19 6
1931-32	5 1 0	6 7 4	10 8 1	14 9 2	12 16 0	7 8 9	7 11 9
1932-33	5 16 9	6 2 8	9 10 1	10 16 10	11 7 8	5 8 1	7 4 5
1933-34	4 9 9	5 10 5	10 4 2	10 2 11	10 8 10	7 6 8	6 11 4
1934-35	4 17 1	4 15 2	9 7 8	10 18 3	9 12 8	8 10 4	6 8 9
1935-36	5 0 0	6 7 1	9 19 6	12 10 4	10 8 11	7 9 8	7 3 6
1936-37	7 4 6	8 16 7	10 17 7	15 7 11	13 2 1	7 7 2	9 5 6
1937-38	5 9 6	8 0 9	11 6 4	15 10 2	13 8 8	10 8 7	8 11 5
1938-39	4 6 4	2 19 11	11 10 9	9 4 8	8 15 9	13 0 5	6 0 4
1939-40	5 12 2	6 6 0	13 9 1	15 16 10	15 3 0	10 4 0	8 11 10

(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.* Wheat is the principal crop raised in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion. The only serious interruptions in more recent years were those occasioned by the War of 1914–1919 and the economic depression of the early thirties. As previously mentioned, any variation in the acreage sown to this cereal is materially reflected in the total area of crops. The area and yield of wheat for grain in each State are given below for the five years ended 1939–40; the table also includes an estimate for the 1940–41 crop and the average for the decennium ended 1939–40 :—

WHEAT : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia.
			AREA ('000 OMITTED).					
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36 ..	3,851	2,324	240	2,989	2,541	10	2	11,957
1936–37 ..	3,983	2,394	284	3,058	2,575	21	2	12,317
1937–38 ..	4,465	2,686	373	3,162	3,026	21	2	13,735
1938–39 ..	4,651	2,748	442	3,080	3,413	10	2	14,346
1939–40 ..	4,381	2,827	362	2,735	2,970	8	2	13,285
1940–41 ..	4,454	2,673	322	2,560	2,625	8	2	12,644
Average for ten seasons ended 1939–40 ..	4,343	2,989	293	3,435	3,098	16	2	14,176
			PRODUCTION ('000 OMITTED).					
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1935–36 ..	48,822	37,552	2,690	31,616	23,316	186	36	144,218
1936–37 ..	55,668	42,845	2,016	28,715	21,549	571	26	151,390
1937–38 ..	55,104	48,173	3,750	43,428	36,225	526	50	187,256
1938–39 ..	59,898	18,104	8,584	31,675	36,844	205	59	155,369
1939–40 ..	76,552	45,054	6,795	41,072	40,861	108	45	210,487
1940–41 ..	23,933	13,522	5,687	17,856	21,060	140	35	82,233
Average for ten seasons ended 1939–40 ..	60,149	40,380	4,374	36,473	35,990	347	45	177,758

Graphs showing the expansion of the area sown to wheat for grain in Australia since 1860 and its distribution during 1938–39 appear on pages 487 and 451. A similar graph showing the distribution in 1924–25 is shown in Official Year Book, No. 22, p. 695.

(ii) *Production.* The size of the wheat harvest in Australia is largely determined by the nature of the season and as this varies quite considerably from year to year production fluctuates in a similar manner.

It should be noted, however, that with improved farming methods, which includes the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during the past four decades have shown a continued improvement and fluctuations in production have become less pronounced.

Australia's wheat production in 1939–40 amounted to 210.5 million bushels representing an average yield of 15.84 bushels per acre. This is the third highest output and is only exceeded by the harvests of 1930–31 and 1932–33 when more than 213 million bushels were produced. In contrast with this, the estimated figures available for 1940–41 indicate a harvest of only 82 million bushels or a return of 6.50 bushels per acre and indicates the severity of the conditions under which the crop was grown. It is the first occasion since 1919–20 that the total harvest for Australia has fallen below 100 million bushels.

(iii) *Decennial Averages, 1861–70 to 1931–40.* The following table gives the 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.

Decennium.	Area.	Production.	Yield per Acre.	Average Wholesale Price.
	'000 Acres.	'000 Bushels.	Bushels.	s. d.
1861–70	831	10,622	12.77	(a)
1871–80	1,646	17,711	10.76	5 1
1881–90	3,258	26,992	8.29	4 7
1891–1900	4,087	29,934	7.32	3 8
1901–10	5,711	56,058	9.82	3 10
1911–20	8,928	95,480	10.69	5 0
1921–30	11,291	135,400	11.99	5 8
1931–40	14,176	177,758	12.54	3 4½

(a) Not available.

(iv) *Average Yield.* In the next table will be found the average yield of wheat per acre for specified periods :—

WHEAT : YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1934–35 ..	12.50	10.51	18.38	8.61	9.76	18.46	21.91	10.63
1935–36 ..	12.68	16.16	11.23	10.58	9.18	17.88	22.37	12.06
1936–37 ..	13.98	17.90	7.11	9.39	8.37	26.78	17.98	12.29
1937–38 ..	12.34	17.93	10.05	13.74	11.97	24.95	24.24	13.63
1938–39 ..	12.88	6.59	19.42	10.28	10.79	20.84	28.74	10.83
1939–40 ..	17.48	15.93	18.77	15.02	13.76	14.37	18.54	15.84
1940–41 ..	5.37	5.06	17.66	6.97	8.02	17.46	17.09	6.50
Average 10 seasons, ended 1939–40	13.85	13.51	14.95	10.62	11.62	21.33	20.50	12.54

Variation in the average yield is chiefly due to the vagaries of the seasons. The best average yields for single seasons since 1901 were obtained in 1920–21, 16.08 bushels ; in 1924–25, 15.20 bushels ; and in 1939–40, 15.84 bushels.

(v) *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.

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 noted 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.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	No.	No.	No.	No.	No.
New South Wales ..	14,923	15,425	16,287	16,550	16,175
Victoria	12,051	12,090	12,936	12,305	12,065
Queensland	1,847	2,211	2,809	3,190	2,542
South Australia ..	11,974	12,155	12,251	11,842	11,468
Western Australia ..	8,681	8,625	8,841	8,989	8,482
Tasmania	171	379	372	146	143
Total	49,647	50,885	53,496	53,022	50,875

4. **World Production of Wheat.**—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world for the latest available period. These range from a maximum in the Netherlands of 45 bushels per acre to a minimum in Palestine of 6 bushels per acre :—

WHEAT : YIELD PER ACRE IN VARIOUS COUNTRIES.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1936–1938.	1939.		Average, 1936–1938.	1939.
Netherlands ..	44.90	43.50	Chile	16.15	(*a*) 17.40
Denmark ..	44.68	(*a*) 52.17	China	(*e*) 15.65	(*f*) 14.93
Belgium ..	40.50	(*b*) 42.90	Argentine Republic	15.35	8.30
Sweden	35.41	38.00	Greece	15.21	14.80
Germany ..	35.30	(*c*) 34.30	Brazil	(*d*) 14.39	(*d*) 14.39
Switzerland ..	33.92	32.10	U.S.S.R. (Russia)	14.23	(*a*) 14.85
United Kingdom ..	33.22	33.90	Syria	13.97	(*a*) 16.54
New Zealand ..	32.08	(*a*) 29.40	U.S.A.	13.25	11.30
Eire	31.56	31.00	**Australia** ..	**12.24**	**15.84**
Egypt	31.47	32.70	Manchukuo ..	11.99	(*a*) 10.40
Norway	30.17	(*a*) 30.40	Uruguay ..	11.90	(*a*) 11.39
Finland	27.10	26.00	Korea	11.83	(*a*) 12.31
Japan	26.92	33.50	Portugal ..	11.52	(*a*) 14.00
Czechoslovakia ..	26.26	(*a*) 29.60	Iraq	11.36	(*a*) 12.26
France	22.55	23.60	Spain	11.28	12.70
Hungary ..	21.76	24.00	India	10.95	10.50
Italy	21.56	22.90	Mexico	9.98	(*a*) 10.20
Bulgaria ..	21.38	23.40	Canada	9.92	17.90
Yugoslavia ..	19.07	19.40	Algeria	7.71	10.40
Iran	(*d*) 18.81	(*d*) 18.81	Columbia ..	(*e*) 7.48	(*f*) 6.75
Latvia	18.52	(*a*) 20.26	Tunisia	7.47	8.90
Poland	17.86	19.10	Union of South Africa ..	7.28	(*a*) 8.36
Lithuania ..	16.78	18.40	French Morocco ..	6.11	12.20
Rumania ..	16.64	17.20	Palestine ..	5.80	10.00
Estonia	16.58	16.20			
Turkey	16.31	(*a*) 16.40			

(*a*) Year 1938. (*b*) Includes Luxemburg. (*c*) Includes Austria and Sudeten area.
(*d*) Year 1936. (*e*) Subject to revision. (*f*) Year 1937.

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

WHEAT : TOTAL PRODUCTION IN VARIOUS COUNTRIES.

Country.	Yield in Bushels ('000 omitted).		Country.	Yield in Bushels ('000 omitted).	
	Average, 1936–1938.	1939.		Average, 1936–1938.	1939.
U.S.S.R. (Russia)	1,418,307	(a) 1,494,000	Chile	31,544	(a) 35,174
U.S.A.	810,433	739,400	Sweden	25,810	31,500
China (b) ..	706,956	(c) 636,456	Iraq	21,015	(a) 22,046
India	373,756	371,000	Syria and Lebanon	18,961	(a) 23,674
France	284,128	276,000	French Morocco ..	18,767	38,800
Italy	272,641	294,000	Belgium ..	17,278	(f) 17,000
Argentine Republic	256,281	147,000	Netherlands ..	15,033	13,300
Canada	253,884	479,000	Union of South Africa ..	14,481	15,000
Germany ..	177,248	(d) 205,200	Denmark ..	13,949	14,000
Australia ..	**163,470**	**210,487**	Uruguay ..	13,702	(a) 15,461
Rumania ..	148,011	164,900	Tunisia	13,233	18,600
Turkey	144,970	158,000	Portugal ..	12,911	18,300
Spain	(e) 121,493	111,800	Mexico	12,539	13,000
Yugoslavia ..	101,669	105,400	Korea	9,867	12,300
Hungary ..	85,893	112,100	Lithuania ..	8,429	9,200
Iran	(e) 79,352	(e) 79,352	Eire	7,408	8,000
Poland	76,313	83,400	Finland	7,055	8,670
Bulgaria ..	67,722	71,200	New Zealand ..	6,262	(a) 5,910
United Kingdom ..	61,649	59,700	Latvia	6,208	6,500
Czechoslovakia ..	57,835	40,000	Switzerland ..	6,118	6,559
Japan	46,950	61,000	Brazil	(e) 5,512	(e) 5,512
Egypt	45,672	49,000	Columbia ..	(b) 3,734	(c) 3,336
Manchukuo ..	33,772	39,000	Palestine ..	3,036	5,000
Algeria ..	32,642	42,600	Estonia	2,786	3,010
Greece	32,321	35,300			

NOTE.—The harvests reported above for 1939 relate to the year 1939 for the Northern, and 1939–40 for the Southern Hemisphere.

(a) Year 1938. (b) Recorded production. Subject to revision. (c) Year 1937. (d) Includes Austria and Sudeten area. (e) Year 1936. (f) Includes Luxemburg.

(iii) *Total World Production.* 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 and the latest available figures are given in the following table. The output of China has been omitted. Normally this country is a large producer of wheat and is generally ranked with the United States next to the U.S.S.R. (Russia). In 1937, the recorded production exceeded 636 million bushels but this refers to some provinces and does not include the output of all Territories forming the Chinese Republic.

WHEAT : WORLD'S PRODUCTION.(a)

Year.	Area.	Production.	Yield per acre.
	'000 Acres.	'000 Bushels.	Bushels.
Average 1909–1913	270,266	3,779,479	13.98
„ 1928–1932	337,761	4,652,000	13.77
1934	330,941	4,620,520	13.96
1935	339,244	4,698,784	13.85
1936	345,347	4,653,590	13.48
1937	365,115	5,435,863	14.89
1938	379,076	6,007,964	15.85
Average 1934–1938	351,945	5,083,344	14.44

(a) From countries reporting including the U.S.S.R. (Russia) but excluding China.

As a producer of wheat, Australia occupies tenth position on the list of producing countries of the world and, on the average of the five years 1934–38, contributed about 3½ per cent. of the area and 3 per cent. of production. As an exporter of wheat, however, Australia occupies a position, ranking next after Canada and Argentina. During the five years 1934–38, exports of wheat and flour, in terms of wheat, from Australia averaged nearly 18½ per cent. of the world net exports compared with 7½ per cent., the average for the quinquennium 1909–13.

(iv) *World Wheat Supplies, Requirements and Carryover.* The following table of world wheat statistics has been compiled from the latest available data published by the International Institute of Agriculture. It shows details of the world exportable supplies, import requirements, carryover stocks and consumption covering four quinquennial periods and the years 1938 and 1939.

The figures given exclude, where indicated, details in respect of the Soviet Union, China, Iraq and Iran. This omission is due to the insufficiency of data respecting these countries.

WHEAT : WORLD STATISTICS.

(In million bushels.)

Period.	World Exportable Supplies.(a)	World Import Requirements.	End of Season Stocks.		World Consumption.(b)	World Production. (b)
			Exporting Countries. (a)	World.		
Average five years ended—						
1913–14 ..	(c)	680	(c)	(c)	3,300	3,130
1927–28 ..	960	780	180	620	3,440	3,480
1932–33 ..	1,290	765	525	980	3,770	3,860
1937–38 ..	840	540	300	790	3,760	3,640
Year—						
1938–39 (d) ..	1,138	618	520	1,100	3,993	4,508
1939–40 (d) ..	1,324	610	714	1,319	3,969	4,185

(a) Stocks held by the four major exporting countries, European exporting countries and those afloat. (b) Excluding Soviet Union, China, Iraq and Iran. (c) Not available. (d) Forecast.

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. 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. Subsequent to 1931, prices fluctuated between 2s. 6d. and 3s. per bushel until 1936 when an upward movement coincided with the depletion of excess stocks following crop failures in North America. By December, 1936, prices exceeded 5s. per bushel and remained at that level during 1937. By the end of 1938, world exportable surpluses had again accumulated. Prices receded during 1938 and by August, 1939, had reached the lowest level recorded in Australia, viz., 2s. 1d. per bushel.

On 21st September, 1939, the Australian Wheat Board was appointed under war-time legislation and the price of wheat for export or local consumption is determined by that authority. In consequence, the open market for wheat ceased and therefore a price comparison on a pre-war basis is no longer possible. The following table shows the price of wheat in Australia for the periods indicated. The price stated for 1940 and 1941 represents the approximate average price of wheat exported during those years.

PRICE OF WHEAT: AUSTRALIA.

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

Item.	1936.	1937.	1938.	1939. (a)	1940. (b)	1941. (b)
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Price per bushel	4 1¾	5 0½	3 4¾	2 4	3 11⅛	4 2

(a) Average for eight months ended August. (b) Approximate export price.

6. **Exports of Wheat and Flour.**—(i) *Quantities.* The table appended shows the exports and net exports of wheat and flour from 1934–35 to 1938–39. Later details are not available for publication. 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. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900; in 1902–3 the wheat harvest was as low as 12,378,000 bushels and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914–15 to supplement the yield of 25 million bushels produced in that season. During the last five years exports in terms of wheat ranged between 97,932,000 bushels in 1938–39 and 124,767,000 bushels in 1937–38, the net exports for the period averaging 107,530,000 bushels:—

WHEAT AND FLOUR: EXPORTS FROM AUSTRALIA.

Year.	Exports.			Net Exports.
	Wheat.	Flour.	Total.	
	'000 Bushels.	'000 Eq. Bushels.(a)	'000 Bushels.	'000 Bushels.
1934–35 ..	75,960	33,503	109,463	109,458
1935–36 ..	76,993	29,620	106,613	106,611
1936–37 ..	71,778	27,109	98,887	98,886
1937–38 ..	94,504	30,263	124,767	124,765
1938–39 ..	63,129	34,803	97,932	97,931

(a) Equivalent in bushels of wheat.

(ii) *Destination.* The following table gives the exports of wheat to various countries for each of the five years ended 1938–39, together with averages for the period 1909–13. Later details are not available for publication.

WHEAT: EXPORTS FROM AUSTRALIA.

('000 omitted.)

Country to which Exported.	Average, Five years ended 1912–13.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom ..	30,305	41,198	46,776	44,244	61,522	32,235
India	(a)	169	486	..	735	6,922
Eire	(a)	2,623	4,744	5,699	1,012	2,303
Union of South Africa ..	2,992	21	327	3	955	1,706
Other British Countries	(a)	439	1,447	957	4,507	3,880
Belgium	1,218	254	2,429	613	162	324
China	(a)	13,664	5,053	1,273	144	10,621
Egypt	136	1,606	..	30	491	389
France	1,682	..	41	776	3,876	..
Germany	287	..	..	797	..	376
Italy	581	19	1,737	10,167	3,837	..
Japan	330	15,530	11,044	2,507	2,845	431
Other Foreign Countries	4,466	437	2,909	4,712	14,418	3,942
Total	41,997	75,960	76,993	71,778	94,504	63,129

(a) Included with Other Foreign Countries.

Exports of flour from Australia for the periods mentioned are given in the next table. Later details are not available for publication :—

FLOUR : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Average, Five years ended 1912–13.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
United Kingdom	27,699	99,332	130,998	177,329	187,943	118,957
Ceylon	3,389	18,821	17,090	16,210	14,305	18,147
Hong Kong	2,672	50,616	44,382	40,503	66,291	23,040
Malaya (British)	15,492	61,926	55,592	66,596	65,464	66,965
Union of South Africa ..	30,714	371	545	208	273	132
Other British Countries ..	(a)	46,158	60,314	65,758	76,623	86,494
China	(a)	814	951	2,113	31,544	216,878
Egypt	(a)	26,864	23,722	35,005	18,674	17,153
Manchuria (b)	(a)	240,181	112,789	9,422	11,941	..
Netherlands East Indies ..	26,099	82,147	82,077	74,928	83,079	96,524
Philippine Islands	13,680	27,437	40,491	35,522	27,280	32,722
Other Foreign Countries ..	47,367	43,304	48,130	41,184	47,054	48,053
Total	167,112	697,971	617,081	564,778	630,471	725,065

(a) Included with Other Foreign Countries. (b) Including Kwantung Peninsula.

7. **Exports—Principal Countries.**—The following table shows the latest available net quantities of wheat exported from the chief exporting countries in recent years and during the period from 1909 to 1913. In the years before the War of 1914–19 the U.S.S.R. (Russia) was the outstanding contributor to the world's supply of wheat followed by the United States of America, but in recent years the net exports from both of these countries have been relatively unimportant. Canada now occupies the foremost position with the Argentine Republic and Australia coming next in order.

Although the local production of wheat is little more than 3 per cent. of the world's total, the exports from Australia represented just under 18½ per cent. of the quantities shipped during 1934 to 1938, and as an exporting country Australia has made the greatest relative advance since 1913.

WHEAT (a) : NET EXPORTS, PRINCIPAL COUNTRIES.

Country.	Average 1909–13.		1937.	1938.	Average 1934–38.	
	'000 Bushels.	Per cent.	'000 Bushels.	'000 Bushels.	'000 Bushels.	Per cent.
U.S.S.R. (Russia)(b) ..	157,109	23.71	33,803	39,154	22,520	4.04
U.S.A.	100,864	15.22	36,416	105,540	43,648	7.83
Argentine Republic ..	95,041	14.34	147,493	75,413	122,739	22.01
Canada	89,919	13.57	112,462	125,195	175,407	31.45
British India ..	50,886	7.68	20,043	12,203	8,877	1.59
Australia	49,417	7.46	99.658	124,202	102,695	18.41
All Other Countries ..	119,351	18.02	108,431	99,303	81,839	14.67
Total ..	662,587	100.00	558,306	581,010	557,725	100.00
World's Production ..	3,779,479		5,435,863	6,007,964	5,083,344	
Percentage of Australian Net Exports on Total Net Exports	7.46		17.85	21.38	18.41	
Percentage of Australian Production on World's Production	2.39		3.46	2.51	3.02	

(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 during 1921.

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 for the latest available years. The United Kingdom is easily the leading importing country. The quantities imported into certain European countries, particularly Germany, Netherlands, Belgium and Italy are both relatively and actually much smaller now than formerly owing to the encouragement given to the local wheat-growing industries in those countries. During recent years the imports of wheat into 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.		1937.	1938.	Average, 1934–38.	
	'000 Bushels.	Per cent.	'000 Bushels.	'000 Bushels.	'000 Bushels.	Per cent.
United Kingdom ..	219,365	30.42	202,058	208,854	208,749	33.80
Germany	89,732	12.44	47,161	48,253	25,606	4.15
Netherlands ..	76,340	10.59	24,058	27,009	22,584	3.66
Belgium	73,963	10.26	44,972	38,196	42,856	6.94
Italy	57,156	7.93	61,097	10,698	25,891	4.19
France	38,682	5.36	18,931	19,332	23,767	3.85
Brazil	20,774	2.88	36,226	7,146	29,812	4.83
Egypt	7,915	1.10	115	208	586	0.09
Union of South Africa	6,519	0.90	38	2,643	753	0.12
China (*c*)	5,526	0.77	6,914	24,242	27,471	4.45
Japan	3,714	0.52	7,555	2,617	11,551	1.87
All Other	121,409	16.83	187,599	202,295	198,051	32.05
Total ..	721,095	100.00	636,724	591,493	617,677	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 in 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, 1935–36 TO 1939–40.

Flour milled		1,308,782	tons
Less net exports of flour	645,563 tons		
Less net exports of flour in biscuits	1,012 ,,		
		646,575	,,
		662,207	
Change in flour stocks		—6,450	,,
Net quantity consumed		655,757	,,
Equivalent in terms of wheat		31,476,000	bushels
Net quantity consumed per head of population—			
As flour		191	lb.
Equivalent in terms of wheat		4.6	bushels

AVERAGE USED FOR SEED, 1935–36 TO 1939–40.

Average area sown for grain, hay and green forage ..	13,122,764	acres
Average quantity of seed used	14,053,000	bushels
Average quantity of seed used per acre	60	lb.
Average quantity per head of population	2.05	bushels

In addition to the above, allowance must be made for wheat fed to poultry and other live stock. The quantity so used, which varies according to the movement in prices, is estimated at 10,218,000 bushels or 1½ bushels per head of population for the five

years ended 1939–40. Almost the whole of this quantity is used in the form of grain as feed for poultry, principally fowls, which numbered a little more than 16 million during the year 1939–40. Grain used for seed in Victoria, South Australia and Western Australia has been estimated on the basis of data collected from growers. In the other States estimates supplied by the Agricultural Departments have been used. The average annual quantity used for seed during the last five years was 2.05 bushels per head of population, or 60 lb. per acre sown. The consumption of wheat in Australia for all purposes (human consumption, live-stock and seed) during the period dealt with averaged 55,748,000 bushels, or 8.1 bushels per head of population.

10. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the season 1939–40, including amount of assistance paid from Flour Tax, is shown below. The values are on a gross basis at the principal market in each State. Pending the finalizing of the accounts of the Australian Wheat Board, these values are subject to slight revision.

WHEAT: VALUE OF CROP.(a) 1939–40.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value(b)	13,651,750	8,470,256	1,313,514	7,617,632	7,269,316	29,620	8,095	38,360,183
Value per acre (b)	£3/2/4	£2/19/11	£3/12/7	£2/15/9	£2/8/11	£3/19/0	£3/6/2	£2/17/9
Amount of Assistance—								
Total ..	306,788	194,043	28,758	175,400	171,915	..	..	876,904
Per acre ..	1/5	1/4	1/7	1/3	1/2	..	..	1/4
Per bushel ..	1d.	1d.	1d.	1d.	1d.	..	..	1d.

(a) Gross value of total crop, including seed used on farm, but exclusive of value of straw. (b) Including assistance paid from Flour Tax.

11. **Varieties of Wheat Sown.**—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrar (1845–1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which has accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Council for Scientific and Industrial Research but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States, 1939.* Particulars of the varieties of wheat sown and the areas thereunder are collected annually. The following table shows details 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 1939.

WHEAT: PRINCIPAL VARIETIES SOWN, 1939.

New South Wales.		Victoria.		South Australia.		Western Australia.	
Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.	Variety.	Percentage.
	%		%		%		%
Bencubbin ..	24.3	Ghurka ..	47.3	Ranee ..	20.1	Bencubbin ..	37.0
Ford ..	18.2	Ranee ..	22.5	Bencubbin ..	11.6	Gluclub ..	15.9
Dundee ..	13.9	Dundee ..	9.4	Dundee ..	10.5	Merredin ..	8.4
Nabawa ..	9.1	Free Gallipoli ..	7.2	Nabawa ..	8.0	Noongaar ..	5.4
Waratah ..	5.3	Bencubbin ..	3.7	Sword ..	7.5	Gluyas Early	4.6
Ranee ..	5.1	Sepoy ..	1.7	Waratah ..	5.7	Nabawa ..	4.3
Gular ..	3.2	Bobin ..	1.5	Gluyas ..	5.0	Totadgin ..	4.2
Pusa No. 4 ..	2.9	Rajah ..	1.2	Ghurka ..	4.0	Dundee ..	2.9
Bobin ..	2.8	Nabawa ..	0.6	Ford ..	3.3	Waratah ..	2.1
All Others ..	15.2	All Others ..	4.9	All Others ..	24.3	All Others ..	15.2
Total ..	100.0	Total ..	100.0	Total ..	100.0	Total ..	100.0

Continued progress in the breeding of new and better wheats has resulted in many changes in the varieties sown. In New South Wales, Bencubbin, previously a variety relatively unimportant outside Western Australia, is the leading wheat sown. It is also the second variety sown in South Australia, while in Victoria it is unimportant, but the area sown to this wheat is increasing. The leading variety sown in Victoria between 1929 and 1934 was Free Gallipoli, but since 1935 it has been supplanted by Ghurka, Ranee and Dundee. In South Australia, Nabawa came into prominence in 1933, but in 1939, though still relatively important, it ceded the leading position to Ranee and now occupies fourth place after Bencubbin and Dundee. Nabawa was the principal variety in Western Australia until it was displaced by Bencubbin in 1934. While this latter variety had occupied only 7 per cent. of the total area in 1933, in the year following no less than 22.5 per cent. was sown to Bencubbin and in 1939 it retained its leading position with 37 per cent.

12. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November, 1939, and the total held in Australia on the same date for the previous four years will be found in the following table. Later details are not available for publication. The figures have been compiled from information collected from millers, merchants, the Railway Departments and other sources.

WHEAT AND FLOUR : STOCKS AT 30th NOVEMBER 1939.(a)

State.	Wheat.	Flour.	Total in terms of wheat.(a)
	Bushels.	Tons.	Bushels.
New South Wales	5,059,320	34,875	6,733,320
Victoria	3,435,783	27,350	4,748,584
Queensland	304,199	5,292	558,215
South Australian	5,139,508	21,479	6,170,500
Western Australia	2,114,766	8,592	2,527,182
Tasmania	162,251	1,695	243,611
Total, 30th November, 1939 ..	16,215,827	99,283	20,981,412
" " 1938 ..	9,639,443	89,502	13,935,539
" 1937 ..	5,233,866	76,450	8,903,465
" " 1936 ..	3,505,469	101,063	8,356,493
" " 1935 ..	12,371,270	89,637	16,673,867

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

An accumulation of wheat stocks occurred in Australia following the large harvest of 1939-40. This arose from the scarcity of shipping, while the loss of some European markets due to the war and the added disadvantage of a long sea haul were additional factors. The small harvest of 1940–41, however, relieved the storage position for the time being, but with a return to normal harvests and the continuance of shipping difficulties the problem of future storage will be accentuated.

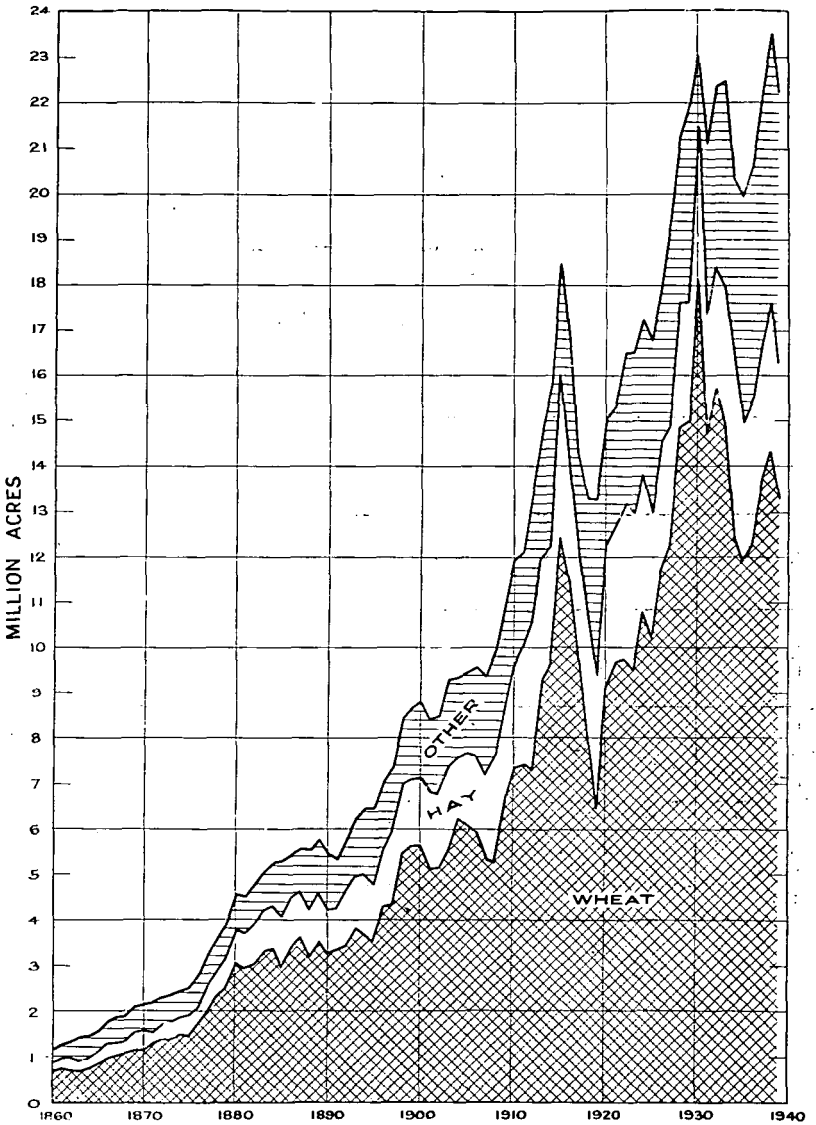
The Australian Wheat Board has planned the storage of wheat in Australia in order to prevent deterioration and to minimize the risk of infestation by weevils and other vermin. The Board has estimated that storage charges per bushel for one year would be 1¾d. for bagged and 1½d. for bulk wheat. For two years, the respective charges would be about 2½d. and 1¾d. per bushel.

13. **Voluntary Wheat Pools.**—Details of wheat pools operating in Australia are given in previous issues of the Official Year Book. These pools ceased to function when the Australian Wheat Board was created in September, 1939.

14. **War-time Marketing of Wheat.**—(i) *General.* At the outbreak of war in September, 1939, the wheat industry of Australia was experiencing a period of low prices. Wheat had fallen to 2s. 1d. per bushel in August, 1939, compared with 3s. 1d. in August, 1938, 5s. 1d. in August, 1937, and 2s. 2d. per bushel in the same month of 1931, which was the lowest monthly quotation during the economic depression of that period.

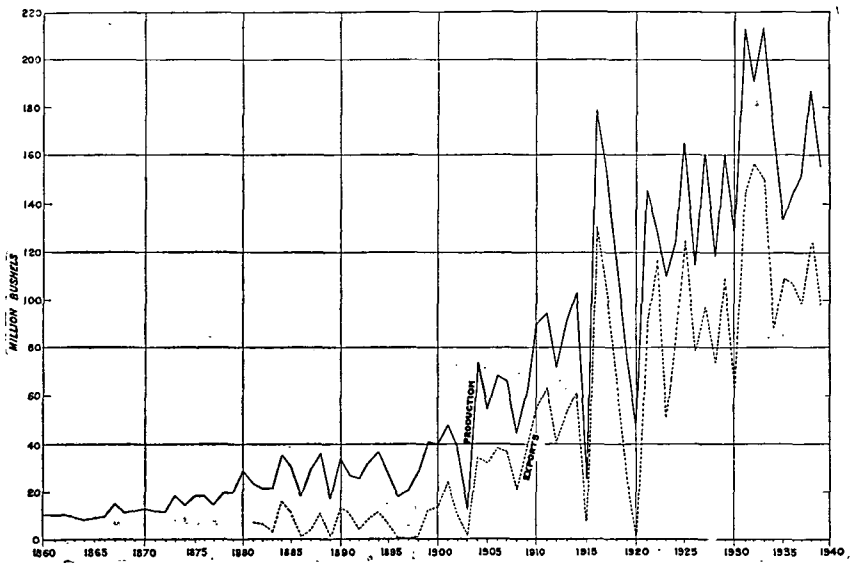
Apart from low prices, other difficulties created by war conditions were those of marketing and transport. There was also a large accumulation of surplus stocks in the

AREA OF CROPS—AUSTRALIA, 1860-61 TO 1939-40.



EXPLANATION.—The total area of crops is shown by the top curve in this graph, and the area of wheat by the bottom curve. The vertical distances between these curves and that in the centre indicate the areas of hay and other crops.

PRODUCTION AND EXPORTS OF WHEAT—AUSTRALIA, TO 1938-39.



NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the War of 1914-1919. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

chief exporting countries of the world and the natural disability of Australia's remoteness from the main centres of consumption was another factor adding to a most difficult position.

In view of these circumstances, the Commonwealth Government, under the Wheat Acquisition Regulations, constituted the Australian Wheat Board on the 21st September, 1939, to acquire, with certain exceptions, all wheat held in Australia. The harvest of 1939–40 was also acquired by notification published on 16th November, 1939.

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations, the Board was empowered, subject to directions of the Minister for Commerce, to purchase, sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc., of wheat acquired, and such other matters necessary to give effect to the regulations under which it was created.

(iii) *Wheat Acquired and Disposed—No. 1 Pool.*—The total quantity of wheat of the 1938–39 season acquired amounted to 17,840,000 bushels, which was sold at an average price of 2s. 9.386d. per bushel f.o.b. main shipping ports basis.

No. 2 Pool.—The quantity of wheat acquired from the 1939–40 harvest and handled under No. 2 Pool amounted to 195,444,000 bushels. Of this quantity, sales overseas up to 25th October, 1941, amounted to 139,000,000 bushels of which 122,000,000 bushels had been shipped. Local sales amounted to 49,009,000 bushels. The unsold balance of this Pool amounted to 7,127,000 bushels on 25th October, 1941.

No. 3 Pool.—A relatively small quantity of wheat of inferior quality harvested during 1939–40 was subsequently excluded from the No. 2 Pool and placed in No. 3 Pool created for that purpose. All wheat so transferred was paid 3d. per bushel less than that under No. 2 Pool.

No. 4 Pool.—The quantity of wheat acquired from the 1940–41 harvest and handled under No. 4 Pool amounted to 63,632,000 bushels. Of this quantity, sales overseas up to 25th October, 1941, amounted to 14,000,000 bushels of which 12.7 million bushels had been shipped. Local sales amounted to 26,661,000 bushels. The unsold balance of this Pool amounted to 22,896,000 bushels on 25th October, 1941.

Particulars of the quantities in thousands of bushels of wheat acquired and disposed of are given by States in the following table :—

AUSTRALIAN WHEAT BOARD.—STATEMENT OF QUANTITIES OF WHEAT ACQUIRED AND DISPOSED OF AS AT 25th OCTOBER, 1941.

'000 Bushels.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
No. 1 Pool (Balance of 1938–39 Harvest).							
Wheat acquired ..	6,226	2,805	..	5,884	2,925	..	17,840
Wheat sold—							
Overseas (*a*) ..	2,210	..	..	4,899	2,380	..	9,489
Locally (*b*) ..	4,016	2,805	..	985	545	..	8,351
Total Sales ..	6,226	2,805	..	5,884	2,925	..	17,840
No. 2 Pool (1939–40 Harvest).							
Wheat acquired ..	66,688	46,960	6,255	38,130	37,370	41	195,444
Wheat delivered against sales—							
Overseas (*a*) ..	40,181	27,076	563	25,720	28,467	..	122,007
Locally (*b*) ..	25,102	18,452	5,692	3,624	4,033	1,038	57,941
To Tasmania ..	112	144	..	1,228	..	(*c*) 1,484	..
Stocks on hand	1,293	1,288	..	7,558	4,870	487	15,496

(*a*) Including wheat delivered for gristing and export as flour. (*b*) Including wheat sold for gristing for local consumption. (*c*) Quantity imported from other States.

AUSTRALIAN WHEAT BOARD.—STATEMENT OF QUANTITIES OF WHEAT ACQUIRED AND DISPOSED OF AS AT 25th OCTOBER, 1941—*continued.*

'000 Bushels.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
No. 4 POOL (1940–41 HARVEST).							
Wheat acquired ..	16,915	9,978	5,287	13,816	17,561	75	63,632
Wheat delivered against sales—							
Overseas (*a*) ..	2,586	2,492	5	4,770	2,895	..	12,748
Locally (*b*) ..	7,659	2,896	4,313	1,664	929	387	17,848
To Tasmania ..	..	..	..	623	..	(*c*) 623	..
Stocks on hand	6,670	4,590	969	6,759	13,737	311	33,036

(*a*) Including wheat delivered for gristing and export as flour. (*b*) Including wheat sold for gristing for local consumption. (*c*) Quantity imported from other States.

Contracts made by the Board, for the sale of wheat and flour include 64,000,000 bushels to the United Kingdom Government, but shipment has not been completed.

(iv) *Finance.* Under the terms of the Wheat Acquisition Regulations the Minister is empowered to arrange with the Commonwealth Bank for the making of advances to the Board, such advances to be guaranteed by the Commonwealth Government.

The financial operations of the Board under No. 2 Pool disclose that at the 25th October, 1941, the total payments amounted to £37,432,000, of which £30,200,000 represented the amounts paid to growers, £3,699,000 rail freight and £3,533,000 expenses. The amount received from sales was £34,966,000 and proceeds under the Flour Tax £900,000. The overdraft at the Commonwealth Bank at that date was £1,566,000.

Under the No. 4 Pool total payments at 25th October, 1941, amounted to £10,965,000 of which £9,197,000 represented the amounts paid to growers, £1,177,000 rail freight and £591,000 expenses. The amount received from sales was £7,775,000 and proceeds under the Flour Tax £940,000. The overdraft at the Commonwealth Bank at that date was £2,250,000.

Details of advances made to growers to 25th October, 1941, are given below :—

ADVANCES MADE TO GROWERS TO 25th OCTOBER, 1941.

Particulars.	No. 1 Pool. Amount Disbursed (f.o.b. Basis).		No. 2 Pool. Amount Disbursed (Trucks Terminal Port Basis).		No. 4 Pool. Amount Disbursed (Trucks Terminal Port Basis).	
	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.
Advances made to Growers—	*s. d.*	£'000.	*s. d.*	£'000.	*s. d.*	£'000.
1st Payment (*a*)—						
Bulk ..	2 0	1,784	2 8.50	27,283	2 10.50	9,327
Bagged ..	2 0		2 10.50		3 0	
2nd Payment—						
Bulk ..	0 6	501	0 4	3,257	0 4	1,056
Bagged ..	0 8		0 4		0 4	
3rd Payment—						
Bulk ..	0 1.75	130	0 3	2,442	(*b*)0 3	792
Bagged ..	0 1.75		0 3		(*b*)0 3	
Final Payment—						
Bulk ..	0 0.158	12	0 1.125	913	..	..
Bagged ..	0 0.158		0 1.125		..	..
Total—						
Bulk ..	2 7.908	2,427	3 4.625	33,895	(*c*)3 5.50	11,175
Bagged ..	2 9.908		3 6.625		(*c*)3 7.00	

(*a*) From which rail freight was deducted. (*b*) Approved for distribution on 25th November, 1941. (*c*) Total advance per bushel to 25th November, 1941.

15. **Special Tabulation of Wheat Holdings.**—With the co-operation of the State Statisticians an extensive analysis was made of the returns collected at the annual agricultural census of 1935–36 in respect of all holdings growing wheat for grain in the principal producing States. The results are published in the Official Year Book No. 33, pp. 374 to 377.

§ 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 59.71 per cent., oats represented only 7.56 per cent. of the area of crops in 1939–40. The acreage and production of oats for the last five years are shown in the table hereunder.

OATS: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia.
				AREA ('000 ACRES).				
1935–36.. ..	280	505	7	300	448	24	..	1,564
1936–37.. ..	236	381	8	415	463	22	..	1,525
1937–38.. ..	255	394	8	332	386	33	..	1,408
1938–39.. ..	399	658	9	267	426	25	..	1,784
1939–40.. ..	405	439	12	349	453	23	1	1,682
Average 10 seasons ended 1939–40 ..	251	459	6	289	376	28	..	1,409
				PRODUCTION ('000 BUSHELS).				
1935–36.. ..	4,736	6,365	119	2,381	4,558	557	5	18,721
1936–37.. ..	3,968	6,108	22	2,364	3,445	751	4	16,662
1937–38.. ..	3,395	5,327	79	2,961	4,365	1,032	6	17,165
1938–39.. ..	4,831	2,909	93	2,401	4,668	645	7	15,554
1939–40.. ..	6,904	8,281	200	4,063	5,315	529	10	25,302
Average 10 seasons ended 1939–40 ..	4,015	6,073	84	2,483	4,099	766	5	17,525

The oat crop showed considerable variation during the past decennium, ranging from 15,195,000 bushels in 1931–32 to 25,302,000 bushels in 1939–40 with an average for the period of 17,525,000 bushels. For Australia as a whole the record yield of oats was obtained during 1939–40, when 25,301,980 bushels were harvested. 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. Considerable quantities are produced in the other States. In Queensland, however, the area sown to this cereal is very small.

(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 ended 1939–40 are given in the table below:—

OATS: AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1935–36	16.94	12.59	17.50	7.94	10.17	23.27	20.41	11.97
1936–37	16.82	16.03	2.83	5.70	7.44	34.22	17.65	10.93
1937–38	13.31	13.51	10.29	8.90	11.30	31.82	40.01	12.19
1938–39	12.09	4.42	10.77	8.99	10.95	25.97	21.95	8.72
1939–40	17.04	18.84	17.23	11.64	11.74	22.91	15.77	15.04
Average for 10 seasons ended 1939–40 ..	16.01	13.23	13.38	8.58	10.91	27.45	21.62	12.43

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914–15, namely, 5.60 bushels, while the largest in the last ten years was that of the season 1932–33, amounting to 15.73 bushels per acre.

2. **World's Production.**—The world's production of oats for the year 1938, as compiled by the International Institute of Agriculture, amounted to 3,704 million bushels. This quantity was harvested from 136 million acres, and represents an average yield of 27.24 bushels per acre. In comparison with this average return per acre, that of Australia for the same period (8.72 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre. The following table shows the world's production and average yield for the quinquennium 1928–32 and for each of the six years ended 1938 which is the latest available :—

OATS : WORLD'S PRODUCTION.

Year.	Area.	Production.	Average Yield per Acre.
	Million Acres.	Million Bushels.	Bushels.
Average 1928–32	146	3,670	25.13
1933	139	3,365	24.09
1934	136	3,222	23.69
1935	146	3,732	25.56
1936	137	3,290	24.01
1937	138	3,605	26.12
1938	136	3,704	27.24

3. **Price of Oats.**—The average wholesale prices in the Metropolitan markets for the year 1939–40 are given in the following table :—

OATS : AVERAGE WHOLESALE PRICES, 1939–40.

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average price per bushel ..	2 5	2 2¼	3 5½	1 7½	1 8½	3 9¾

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a small regular export trade. The quantities and values of oats imported into and exported from Australia during the years 1935–36 to 1939–40 are given hereunder :—

OATS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	Bushels.	£	Bushels.	£	Bushels.	£
1935–36 ..	3,790	1,065	244,698	28,783	240,908	27,718
1936–37 ..	11,828	1,676	258,703	35,923	246,875	34,247
1937–38 ..	5,268	1,777	234,990	37,136	229,722	35,359
1938–39 ..	10,428	2,762	117,347	18,866	106,919	16,104
1939–40 ..	2,553	1,033	266,068	35,850	263,515	34,817

(a) Australian currency values.

The quantity of oats imported into Australia is usually not very large, although in 1927–28 imports exceeded exports by 460,581 bushels. New Zealand is the chief supplier. The principal countries to which oats were exported during the years quoted were the United Kingdom, New Zealand, Malaya (British), Ceylon, India and Mauritius.

5. **Oatmeal, etc.**—The production of oatmeal in Australia during 1939–40 amounted to 336,588 cwt., practically the whole of which is consumed locally, the quantity of oats used for oatmeal being 1,721,827 bushels, or about 7 per cent. of the total production. Oversea trade in this and similar products is small; the imports of oatmeal, wheatmeal and rolled oats during 1939–40 amounted to 3 cwt., and exports to 46,181 cwt.

6. **Value of Oat Crop.**—The estimated value of the oat crop for the season 1939–40 was as follows:—

OATS: VALUE OF CROP,(a) 1939–40.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	661,610	862,563	39,953	364,851	570,287	97,060	994	2,597,318
Value per acre ..	£1/12/8	£1/19/3	£3/8/11	£1/0/11	£1/5/3	£4/4/0	£1/10/3	£1/10/11

(a) Exclusive of the value of straw.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1939–40 season being 292,700 acres, or 94 per cent. of the total for Australia. Of the balance, Victoria contributed 18,963 acres, South Australia 39 acres, and Western Australia 110 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 lesser extent for green forage, particularly in connexion with the dairying industry.

2. **Progress of Cultivation.**—(i) *Area and Production.* Notwithstanding its extensive cultivation in other countries the area sown to maize in Australia has averaged only 296,000 acres during the past decennium. Compared with the previous year, the area in 1939–40 decreased by 12,334 acres, but the acreage sown was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown respectively in 1910–11 and 1927–28.

The area and production of maize for grain in each State for the last five years and the average for the decennium ended 1939–40 are given in the following table.

MAIZE: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	N.T.	A.C.T.	Australia.
	AREA.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36.. ..	119,849	20,377	157,370	3	..	..	17	297,616
1936–37.. ..	116,286	20,115	181,266	..	38	..	5	317,710
1937–38.. ..	125,049	20,879	174,243	22	1	..	13	320,207
1938–39.. ..	122,201	18,485	183,415	37	8	..	..	324,146
1939–40.. ..	115,856	18,963	176,844	39	110	..	..	311,812
Average 10 seasons ended 1939–40 ..	115,645	18,545	161,903	16	23	..	7	296,139
	PRODUCTION ('000 omitted).							
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1935–36.. ..	3,325	639	3,504	..	..	..	..	7,468
1936–37.. ..	3,303	794	3,149	..	..	..	..	7,246
1937–38.. ..	3,403	785	2,628	1	..	..	..	6,817
1938–39.. ..	2,905	417	3,733	2	..	..	..	7,057
1939–40.. ..	2,833	381	3,345	..	1	..	..	6,560
Average 10 seasons ended 1939–40 ..	3,051	616	3,422	1	..	..	..	7,090

The greatest production of maize in Australia was recorded in 1910–11, when it amounted to over 13,000,000 bushels. A bountiful harvest in Queensland increased the Australian total to 12,400,000 bushels in 1924. The production in 1939–40 amounted to 6,560,000 bushels, and the average for the decennium ended 1939–40 was 7,090,000 bushels.

(ii) *Average Yield.* The following table gives particulars of the average yields per acre of the maize crops of the States for the seasons 1935–36 to 1939–40 and for the decennium ended 1939–40 :—

MAIZE : AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Terr.	A.C.T.	Aust.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1935–36	27.74	31.34	22.27	36.00	..	..	7.59	25.09
1936–37	28.40	39.50	17.37	..	12.79	..	11.40	22.81
1937–38	27.21	37.54	15.08	47.73	3.00	..	9.69	21.29
1938–39	23.77	22.54	20.36	41.35	11.25	..	..	21.77
1939–40	24.45	20.08	18.91	3.54	14.24	..	..	21.04
Average for 10 seasons ended 1939–40 ..	26.38	33.21	21.13	23.47	11.79	..	8.48	23.94

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 that for Queensland.

(iii) *Production per Acre—Various Countries.* The average for Australia for the past 10 years was 23.94 bushels per acre. During the period 1928–32 the United States of America averaged 25.1 bushels, Argentine Republic 30.7 bushels, Rumania 17.7 bushels, and the U.S.S.R. (Russia) 14.0 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 for the latest available period 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 1928–32	204	4,449	21.81
1934	201	3,669	18.25
1935	201	4,299	21.39
1936	200	3,700	18.50
1937	196	4,617	23.56
1938	196	4,547	23.20

The United States of America is the most important maize-producing country in the world. Approximately 100,000,000 acres are planted there annually, and in normal seasons more than 2,000 million bushels are reaped, representing about 50 per cent. of the world's production. About 85 per cent. of the production is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction—less than 1 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.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	s. d.	s. d.	s. d.	s. d.	s. d.
Average price per bushel ..	4 10½	5 3	5 2½	4 6½	4 7½

5. **Oversea Imports and Exports.**—The imports of maize into Australia during the five years ended 1939–40 were negligible, averaging 36,000 bushels compared with nearly 600,000 bushels during the five years ended 1929–30. Details of imports and exports for the years 1935–36 to 1939–40 are as follows :—

MAIZE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	Bushels.	£	Bushels.	£	Bushels.	£
1935–36.. ..	47,609	12,233	527	129	47,082	12,104
1936–37.. ..	7,934	2,326	1,130	366	6,804	1,960
1937–38.. ..	47,442	8,493	54	20	47,388	8,473
1938–39.. ..	54	55	282,018	41,489	—281,964	—41,434
1939–40.. ..	75,123	13,864	5,013	1,317	70,110	12,547

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

6. **Maize Products.**—A small quantity of cornflour 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 have been unimportant. Exports from Australia are small, and in 1939–40 were 293,773 lb., valued at £4,664.

7. **Value of Crop.**—The value of the crop for the season 1939–40 was as follows :—

MAIZE : VALUE OF CROP, 1939–40.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Australia.
	£	£	£	£	£	£
Aggregate value ..	649,190	107,962	607,157	46	790	1,365,145
Value per acre ..	£5/12/1	£5/13/10	£3/8/8	£1/3/7	£7/3/7	£4/7/7

§ 7. Barley.

1. **Progress of Cultivation.**—(i) *Area and Production.* Despite wide annual fluctuations the area sown to barley has expanded considerably during the past ten years ; the average annual area sown for the decennium ended 1939–40 amounted to 533,007 acres, compared with an average of 336,889 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 60 per cent. of the Australian acreage in 1939–40. Victoria was next in importance with 24 per cent., leaving a small

balance of about 16 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, but 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 ended 1939–40 are shown in the following table :—

BARLEY: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AREA ('000 Acres).							
1935–36.. ..	12	116	6	394	32	5	565
1936–37.. ..	12	100	7	304	40	7	470
1937–38.. ..	11	140	9	411	45	9	625
1938–39.. ..	14	176	14	457	75	9	745
1939–40.. ..	24	204	13	504	83	8	836
Average 10 seasons ended 1939–40 ..	12	118	8	351	37	7	533
PRODUCTION ('000 Bushels).							
1935–36.. ..	215	2,314	91	6,494	418	93	9,625
1936–37.. ..	206	2,143	38	4,260	449	241	7,337
1937–38.. ..	167	2,709	121	8,647	584	306	12,534
1938–39.. ..	218	1,672	246	7,541	946	208	10,831
1939–40.. ..	466	3,738	270	9,960	971	196	15,601
Average 10 seasons ended 1939–40 ..	209	2,131	139	6,244	442	189	9,354

South Australia and Victoria were the only States producing more than 1,000,000 bushels on the average during the past decade, the yields being respectively 6,244,000 and 2,131,000 bushels.

(ii) *Malting and Other Barley.* (a) *Year* 1939–40. Particulars for the season 1939–40 are as follows :—

BARLEY-MALTING AND OTHER: AREA AND PRODUCTION, 1939–40.

('000 omitted.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting barley ..	14	180	9	451	55	7	716
Other barley ..	10	24	4	53	28	1	120
Total ..	24	204	13	504	83	8	836
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley ..	307	3,205	203	9,163	672	182	13,732
Other barley ..	159	533	67	797	299	14	1,869
Total ..	466	3,738	270	9,960	971	196	15,601

Taking Australia as a whole, about 86 per cent. of the area of barley in 1939–40 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 1939–40 was as follows: malt works, 3,579,777 bushels; flour and other grain mills, 227,762 bushels; distilleries, 77,591 bushels; exports, 3,890,462 bushels; leaving a balance of 7,825,329 bushels for feed 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 and the decennium ended 1939–40:—

BARLEY–MALTING AND OTHER: AREA AND PRODUCTION, AUSTRALIA.

Season.	'000 Acres.			'000 Bushels.			Average Yield per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
							Bus.	Bus.	Bus.
1935–36 ..	486	79	565	8,413	1,212	9,625	17.31	15.35	17.04
1936–37 ..	394	76	470	6,383	954	7,337	16.20	12.48	15.60
1937–38 ..	525	100	625	10,802	1,732	12,534	20.56	17.31	20.04
1938–39 ..	650	95	745	9,705	1,126	10,831	14.92	11.92	14.54
1939–40 ..	716	120	836	13,732	1,869	15,601	19.19	15.56	18.67
Average 10 seasons ended 1939–40 ..	460	73	533	8,210	1,144	9,354	17.83	15.75	17.55

During the past ten seasons the area and production of malting barley have approximated seven 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 malting 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 ended 1939–40 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.
1935–36	18.55	19.89	14.32	16.49	13.23	17.74	17.04
1936–37	17.15	21.43	5.62	13.99	11.21	34.65	15.60
1937–38	14.44	19.38	13.98	21.02	13.00	32.94	20.04
1938–39	15.34	9.50	17.56	16.50	12.63	23.94	14.54
1939–40	19.19	18.30	20.42	19.78	11.74	25.33	18.67
Average for 10 seasons ended 1939–40 ..	17.28	18.10	16.75	17.83	11.91	25.33	17.55

2. **Australian Barley Board.**—The whole of the 1939–40 barley crop was acquired by the Australian Barley Board, which was created under the National Security Act 1939, and is responsible for the marketing and storage of barley.

Particulars of the quantities acquired, sold, and advances made to growers are given in the following table :—

QUANTITIES ACQUIRED, SOLD, ETC., AT NOVEMBER, 1941.

Particulars.	No. 1 Pool (1939–40 Crop).	No. 2 Pool (1940–41 Crop).
Quantity acquired .. .. '000 bus.	11,616	4,173
Quantity sold .. .. .. „	11,616	4,143
	s. d.	*s. d.*
Advances made per bushel on 2-row, No. 1 Grade—		
1st Advance	1 3	(*a*)2 9
2nd Advance	(*a*)1 0	0 7
3rd Advance	0 8	0 6
4th Advance	0 4	(*c*)
Final Advance	(*b*)	..

(*a*) From which rail freight was deducted. (*b*) Advance varied between ½d. and 3½d. per bushel according to State. (*c*) Advance varied between 4d. and 7d. per bushel according to State.

3. **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 1938 are as follows :—United States of America, 242 million bushels; Germany, 187 million bushels; Turkey, 106 million bushels; and Canada, 98 million bushels. Details of production in the U.S.S.R. (Russia) are not available but in 1935 production approximated 360 million bushels, while China produced 281 million bushels in 1937. Later details are not available.

4. **World's Production.**—The following table shows the latest available details of the world's acreage of barley, together with 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 1928–32	91.1	1,809	19.85
1934	87.2	1,663	19.07
1935	94.0	1,845	19.63
1936	89.7	1,744	19.44
1937	91.7	1,820	19.85
1938	90.7	1,915	21.11

5. **Prices.**—The average prices in the Melbourne market during each of the last five years are given in the following table :—

BARLEY : AVERAGE MELBOURNE PRICES PER BUSHEL.

Particulars.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Malting barley	2 10¼	4 0¾	4 1¾	3 5¾	3 5
Cape barley	2 5	3 7	3 7	2 11½	3 0

6. **Imports and Exports.**—Australian exports of barley during the last five years averaged 3,476,560 bushels. Consignments during 1939–40 were mainly to Korea, Japan, New Zealand and the United Kingdom; South Australia being the principal exporting State. Particulars of the Australian oversea imports and exports for the last five years are shown in the following table :—

BARLEY : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	'000 Bushels.	£	'000 Bushels.	£	'000 Bushels.	£
1935–36	..	3	3,472	369,391	3,472	369,388
1936–37	..	69	2,606	504,495	2,606	504,426
1937–38	..	..	4,796	805,943	4,796	805,943
1938–39	..	24	2,618	341,935	2,618	341,911
1939–40	1	85	3,891	520,521	3,890	520,436

(a) Australian currency values.

In addition to barley grain, there is also an export of Australian pearl and scotch barley, the total for 1939–40 amounting to 2,934,172 lb., valued at £17,486 consigned mainly to the United Kingdom, Ceylon and India.

7. **Imports and Exports of Malt.**—In the years before the War of 1914–1919 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. The production of malt in Australia is more than sufficient to meet local requirements and the surplus is shipped chiefly to the Far East and New Zealand. Details of imports and exports for the five years ended 1939–40 are given in the next table :—

MALT : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	Bushels.	£	Bushels.	£	Bushels.	£
1935–36 ..	300	195	62,518	19,457	62,218	19,262
1936–37 ..	395	217	123,463	40,352	123,068	40,135
1937–38 ..	252	155	164,548	62,327	164,296	62,172
1938–39 ..	140	91	137,473	49,552	137,333	49,461
1939–40 ..	170	123	320,410	111,499	320,240	111,376

(a) Australian currency values.

8. **Value of Barley Crop.**—The estimated value of the barley crop for the season 1939–40 and the value per acre are shown in the following table :—

BARLEY : VALUE OF CROP,(a) 1939–40.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Total	89,750	657,544	49,173	1,745,644	143,873	37,200	2,723,184
Per acre ..	£3/13/11	£3/4/5	£3/14/6	£3/9/4	£1/14/9	£4/16/4	£3/5/2

(a) Exclusive of the value of straw.

§ 8. Rice.

Experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales 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.

The area which growers may plant is subject to control. Each year representatives of the Rice Marketing Board, Rice Growers, the Department of Agriculture and the Water Conservation and Irrigation Commission of New South Wales meets to decide the maximum area which growers may plant in the following season. Since 1933–34, the area has been fixed at 80 acres per grower.

During the past five years an annual average of 290,000 centals of cleaned and 4,000 centals of uncleaned rice has been exported from Australia, mainly to the United Kingdom, Canada and the Pacific Islands.

Figures relating to area, production, trade and price, since 1931–32 will be found in the following table :—

RICE : AREA, PRODUCTION, TRADE AND PRICE, AUSTRALIA.

Year.	No. of Growers. (a)	Area.	Production Paddy Rice.	Average Yield.	Imports.		Exports.		Weighted Average Retail Price.
					Uncleaned.	Cleaned.	Uncleaned.	Cleaned.	
		Acres.	'000 Bushels.	Bushels.	Centals.	Centals.	Centals.	Centals.	d. per lb.
1931–32 ..	277	19,589	1,350	68.91	..	40,363	40,968	92,157	3.48
1932–33 ..	280	22,034	1,901	86.30	..	44,063	29,623	79,860	3.24
1933–34 ..	292	20,226	2,172	107.36	..	41,368	7,556	209,348	3.24
1934–35 ..	290	21,746	1,888	88.84	67	37,725	28,618	235,872	3.22
1935–36 ..	304	21,715	2,164	99.64	963	41,697	9,820	215,793	3.27
1936–37 ..	320	23,384	2,277	97.36	26	32,605	2,137	320,893	3.07
1937–38 ..	319	23,737	2,269	95.59	9,535	33,315	2,825	308,844	3.09
1938–30 ..	313	23,533	2,775	117.92	29	46,019	3,386	277,851	3.24
1939–40 ..	314	24,120	1,858	77.02	5	29,765	2,554	326,267	3.44

(a) New South Wales.

The production from several small experimental plots in States other than New South Wales is included in the foregoing 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 of the first two mentioned crops for the season 1939–40 was 49,960 acres, giving a yield of 808,403 bushels, or an average of 16.18 bushels per acre, which was less than the average yield for the decennium ended 1939–40, namely 14.91 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 of rye in Australia during the season 1939–40 was 24,059 acres, yielding 253,769 bushels, or an average of 10.55 bushels per acre, as compared with the average of 11.44 bushels for the last ten seasons. Of the total area sown to rye in 1939–40, about 51 per cent. in New South Wales, 35 per cent. was located in South Australia, and 7 per cent. in Victoria.

§ 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 widely grown. The principal areas are the central highlands, the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, but the production exceeded that of Victoria in the last two years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 78 per cent. of the total for Australia in 1939–40.

The area and production of potatoes in each State during the last five years and the average for the decennium ended 1939–40 are given hereunder :—

POTATOES : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36 ..	22,743	44,287	13,620	4,612	4,946	34,719	62	124,989
1936–37 ..	24,909	45,627	13,448	4,657	4,324	36,967	88	130,020
1937–38 ..	21,372	41,105	10,817	4,387	4,202	32,468	34	114,385
1938–39 ..	16,866	34,396	10,389	4,290	5,355	26,696	56	98,048
1939–40 ..	19,232	32,177	12,446	4,499	5,676	30,452	52	104,534
Average 10 seasons ended 1939–40..	19,844	51,996	11,433	5,038	4,918	34,357	35	(a) 127,622
PRODUCTION.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36 ..	62,882	104,125	24,765	19,257	26,278	85,806	127	323,240
1936–37 ..	66,255	196,623	15,826	20,923	22,916	138,557	218	461,318
1937–38 ..	50,833	134,712	16,565	21,615	21,587	99,969	101	345,382
1938–39 ..	39,385	81,415	19,183	18,487	26,532	89,330	109	274,441
1939–40 ..	40,531	87,931	28,306	21,251	30,761	114,409	128	323,317
Average 10 seasons ended 1939–40..	45,784	141,857	19,191	20,828	23,732	96,827	76	348,295

(a) Includes Northern Territory, 1 acre.

The area sown to potatoes averaged 140,000 acres during the ten years ended 1929–30, but it has declined to an average of 127,600 acres during the past decade. Victoria, with a drop of 12,000 acres, was mainly responsible for this decline, followed by New South Wales with 2,000 acres and Tasmania with 1,500 acres. In the other States a small increase occurred in South and Western Australia, while in Queensland, the increase amounted to 2,700 acres or 30 per cent.

The greatest yield during the past decade was 461,318 tons in 1936–37, compared with the record output of 507,153 tons in 1906–7.

(ii) *Average Yield.* Particulars for each State for the five seasons, and the average for the decennium ended 1939–40 are given hereunder :—

POTATOES : AVERAGE YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36	2.76	2.35	1.82	4.18	5.31	2.47	2.05	2.59
1936–37	2.66	4.31	1.18	4.49	5.30	3.75	2.48	3.55
1937–38	2.38	3.28	1.53	4.93	5.14	3.08	2.97	3.02
1938–39	2.34	2.37	1.85	4.31	4.95	3.35	1.95	2.80
1939–40	2.11	2.73	2.27	4.72	5.42	3.76	2.46	3.09
Average for 10 seasons ended 1939–40 ..	2.31	2.73	1.68	4.13	4.83	2.82	2.17	2.73

Compared with the average yield per acre obtained in other countries, that returned for Australia is very low; the production in New Zealand, for example, in 1939–40 averaged 7.04 tons per acre from an area of 20,033 acres, as compared with 3.09 tons per acre from 104,534 acres in Australia.

(iii) *Relation to Population.* The average annual production of potatoes for the last five seasons was slightly in excess of 50 tons per 1,000 of population. 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 9 cwt. Details for each State for the five seasons ended 1939–40 are as follows :—

POTATOES : PRODUCTION PER 1,000 OF POPULATION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36 ..	24	56	25	33	59	373	13	48
1936–37 ..	25	106	16	35	51	596	22	68
1937–38 ..	19	72	17	37	47	420	10	50
1938–39 ..	14	43	19	31	57	377	9	40
1939–40 ..	15	47	28	36	66	479	10	46

(iv) *Consumption.* The consumption in Australia during the last five years averaged about 49 tons per 1,000 of population. These figures include the quantities used for seed. Omitting seed potatoes the consumption per 1,000 of population would be 44 tons or 98 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. It may be noted, however, that the production of the latter State during the last two years was barely sufficient for local needs and exports, if any, must have been very restricted.

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.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	Tons.	£	Tons.	£	Tons.	£
1935–36	19	364	1,363	14,034	1,344	13,670
1936–37	1	13	1,368	12,641	1,367	12,628
1937–38	..	3	4,269	26,565	4,269	26,562
1938–39	2	35	1,255	17,443	1,253	17,408
1939–40	1	26	1,971	21,995	1,970	21,969

(a) Australian currency values.

3. **Value of Potato Crop.**—The estimated value of the potato crop of each State for the season 1939–40 is given in the following table :—

POTATOES : VALUE OF CROP, 1939–40.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Total	634,990	934,267	311,366	253,559	303,481	1,057,810	2,005	3,497,478
Per acre ..	£33/0/3	£29/0/9	£25/0/4	£56/7/2	£53/9/4	£34/14/9	£38/11/2	£33/9/2

§ 11. Other Root and Tuber Crops.

1. **General.**—Root crops, other than potatoes, are not extensively grown in Australia, the total area of such crops for the season 1939–40 being only 38,591 acres. The most important were onions, mangolds, sugar-beet, turnips and sweet potatoes. Of these, onions and sugar-beet are most largely grown in Victoria, turnips in Tasmania, and mangolds and sweet potatoes in Queensland. The total area of onions in Australia

during the season 1939–40 was 6,820 acres, giving a yield of 38,178 tons, and averaging 5.60 tons per acre. The area in 1939–40 of root crops other than potatoes and onions was 31,771 acres, from which a production of 184,374 tons was obtained, an average of 5.80 tons per acre. The areas and yields here given are exclusive of the production of "market gardens", reference to which is made in § 17 par. 2.

2. **Imports and Exports.**—The only root crop, other than potatoes, is that of onions, in which any considerable oversea trade is carried on by Australia. During the last five years 14,776 tons, valued at £A168,888, were imported, principally from Japan, the United States of America, New Zealand and Egypt, while during the same period the exports, which amounted to 14,659 tons, valued at £A107,809, 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 1939–40 averaged 13.48 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 of hay of all kinds in the several States during the last five years is given below.

HAY: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Aust.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36 ..	658,810	1,140,361	71,309	566,064	494,495	74,741	1,690	3,007,470
1936–37 ..	747,927	1,181,612	62,758	539,127	478,099	89,394	1,959	3,100,876
1937–38 ..	759,562	1,079,039	73,629	562,057	432,399	73,047	2,732	2,982,465
1938–39 ..	1,068,925	1,104,558	65,732	519,309	408,276	79,959	3,501	3,250,260
1939–40 ..	706,599	1,204,810	59,970	531,614	395,639	96,264	3,746	2,998,642
Average 10 seasons ended 1939–40..	757,831	1,144,595	68,872	539,983	429,911	84,729	2,491	3,028,412
				PRODUCTION.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36 ..	837,386	1,346,953	122,687	586,658	504,571	96,888	2,534	3,497,677
1936–37 ..	917,499	1,403,049	73,787	501,003	412,982	136,871	2,456	3,447,647
1937–38 ..	825,309	1,245,935	98,218	687,312	450,419	112,995	3,565	3,423,753
1938–39 ..	1,181,264	892,975	109,761	585,554	437,809	109,533	4,265	3,321,161
1939–30 ..	965,678	1,820,878	102,750	646,075	475,677	141,404	5,602	4,158,064
Average 10 seasons ended 1939–40..	986,421	1,348,905	106,614	597,150	468,716	121,986	3,197	3,632,989

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 of hay is liable to fluctuate considerably. The area of hay in Australia during the season 1915–16, 3,597,771 acres, was the largest on record, whilst the average during the decennium ended 1939–40 amounted to 3,028,412 acres.

(ii) *Average Production.* During the last ten years Queensland and Tasmania show the highest average production per acre, although the area sown in these States is small. 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 24 cwt. Particulars for the several States for the seasons 1935–36 to 1939–40 and the average of the ten years ended 1939–40 are given hereunder :—

HAY : PRODUCTION PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36	1.27	1.18	1.72	1.04	1.02	1.30	1.50	1.16
1936–37	1.23	1.19	1.18	0.93	0.86	1.53	1.25	1.11
1937–38	1.09	1.15	1.33	1.22	1.04	1.55	1.31	1.15
1938–39	1.11	0.72	1.67	1.13	1.07	1.37	1.22	1.02
1939–40	1.37	1.51	1.71	1.22	1.20	1.47	1.50	1.39
Average for 10 seasons ended 1939–40 ..	1.30	1.18	1.55	1.11	1.09	1.44	1.28	1.20

(iii) *Varieties Grown.* Information in regard to the crops cut for hay is available for all States, and details for the last five seasons are given in the following table :—

HAY : VARIOUS KINDS GROWN.

Varieties.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
NEW SOUTH WALES—	Acres.	Acres.	Acres.	Acres.	Acres.
Wheaten	224,632	293,854	348,339	559,437	264,239
Oaten	328,866	342,334	312,337	413,002	349,266
Barley	930	912	815	2,225	1,921
Lucerne	103,478	110,422	97,354	92,598	89,958
Other..	904	405	717	1,663	1,215
Total	658,810	747,927	759,562	1,068,925	706,599
VICTORIA—					
Wheaten	77,795	72,837	90.244	258,839	95,610
Oaten	926,293	940,058	817,001	722,528	804,246
Lucerne, etc.	136,273	168,717	171,794	123,191	304.054
Total	1,140,361	1,181,612	1,079,039	1,104,558	1,204,810
QUEENSLAND—					
Wheaten	1,789	5,259	6,004	6,628	7,259
Oaten	2,928	3,218	4,187	4,901	3,179
Lucerne	62,779	42,526	51,084	50,228	46,385
Other..	3,813	11,755	12,354	3,975	3,147
Total	71,309	62,758	73,629	65,732	59,970
SOUTH AUSTRALIA—					
Wheaten	213,703	243,561	194,196	227,604	197,728
Oaten	334,529	277,413	343,480	270,425	303,436
Lucerne	5,093	3,944	6,052	4,805	6,433
Other..	12,739	14,209	18,329	16,475	24,017
Total	566,064	539,127	562,057	519,309	531,614
WESTERN AUSTRALIA—					
Wheaten	214,406	201,792	175,374	165,153	135,094
Oaten	250,039	241,485	220,922	204,610	213,248
Lucerne	63	120	335	..	..
Other..	29,987	34,702	35,768	38,513	47,297
Total	494,495	478,099	432,399	408,276	395,639
TASMANIA—					
Wheaten	..	..	525	979	491
Oaten	88,075	121,288	60,479	64,310	70,097
Barley	..	..	920	533	310
Other..	8,813	15,583	11,123	14,137	25,366
Total	96,888	136,871	73,047	79,959	96,264

Oats is generally the predominant hay crop throughout Australia except in Queensland where lucerne is the chief variety grown. For all States the proportions of the areas sown to the principal kinds of hay were 58 per cent. for oaten, 23 per cent. for wheaten, 6 per cent. for lucerne, and 13 per cent. for other hay.

2. **Comparison with Other Countries.**—As already stated, 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 1938 amounted to 1,893,000 tons from 1,571,000 acres, while from permanent grasses a yield of 3,389,000 tons of hay was obtained from 4,402,000 acres, giving a total of 5,282,000 tons from 5,973,000 acres, or an average of about 18 cwt. per acre. Details later than 1938 are not available.

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 figure largely amongst the imports and exports of Australia. During 1939–40, 85 tons were imported, while the exports amounted to 2,123 tons, valued at £13,675, the principal purchases being made by Malaya (British), Philippine Islands, Korea, Ceylon, India and Netherlands East Indies.

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 1939–40 :—

HAY : VALUE OF CROP, 1939–40.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Total Value ..	3,525,440	3,770,306	562,867	1,096,714	1,166,411	424,210	21,235	10,567,183
Value per acre ..	£4/19/9	£3/2/7	£9/7/9	£2/1/3	£2/19/0	£4/8/2	£5/13/5	£3/10/6

§ 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. Under normal conditions the principal crops cut for green forage are maize, sorghum, rape and lucerne, while small quantities of sugar-cane also are so used. In certain circumstances the area sown to green forage may be supplemented by areas of cereals sown originally for grain. In an adverse season some cereal crops may show no promise of producing grain or even hay and consequently the area may be turned over to stock for grazing. Particulars concerning the area of 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.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36	610,401	111,056	379,651	98,121	197,931	25,500	548	1,423,208
1936–37	645,713	102,744	429,782	136,548	284,676	24,742	836	1,625,041
1937–38	638,408	121,839	441,560	144,320	268,589	24,764	442	1,639,922
1938–39	573,569	108,796	448,643	275,988	352,442	28,681	681	1,788,800
1939–40	519,581	91,441	550,716	284,317	380,793	26,130	974	1,853,952

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 1939–40 exclusive of Western Australia may be taken approximately as £3,039,000.

§ 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 374,967 acres of sugar-cane grown for this purpose in Australia for the season 1939–40, there were 353,996 acres, or about 94 per cent., in Queensland. This latter area is made up of 262,181 acres cut for crushing, 10,881 acres cut for plants, and 80,934 acres left to stand-over or young cane on areas not ready for cutting. 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 of this crop. The area of 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. Since 1924–25, the area has fluctuated between 15,000 acres and 20,000 acres, the average for the decennium ended 1939–40 amounting to 18,822 acres. In Queensland, although fluctuations in area are manifest, the general trend has been upwards. In 1939–40 the acreage of cane was the highest on record, namely, 353,996 acres. The area of sugar-cane in Australia from 1935–36 and the average for the decennium ended 1939–40 are given in the following table :—

SUGAR-CANE : AREA, ACRES.

Season.	New South Wales.			Queensland.			Australia.			
	Area crushed	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted. cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total.
1935–36 ..	10,416	9,794	184	228,515	76,589	9,596	238,931	86,383	9,780	335,094
1936–37 ..	10,231	10,190	221	245,918	81,365	11,403	256,149	91,555	11,624	359,328
1937–38 ..	10,716	10,137	203	245,131	92,203	11,506	255,847	102,340	11,709	369,896
1938–39 ..	10,458	10,772	163	251,847	84,098	11,254	262,305	94,870	11,417	368,592
1939–40 ..	10,488	10,229	254	262,181	80,934	10,881	272,669	91,163	11,135	374,967
Average 10 seasons ended 1939–40 ..	9,358	9,300	164	234,057	77,889	9,682	243,415	87,189	9,846	340,450

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table do not include the small acreage cut for green forage which in 1939–40 amounted to 4,204 acres in Queensland. 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. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

(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 6,313,369 tons in 1939–40. The average production of cane during the decennium ended 1939–40 was 4,843,587 tons, and the quantity of raw sugar amounted to 697,009 tons. Particulars of the total production of cane and sugar for the last five years and the decennium ended 1939–40 are as follows.

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.
1935–36	280,472	36 461	4,220,435	610,080	4,500,907	646,541
1936–37	275,169	38,158	5,170,571	744,676	5,445,740	782,834
1937–38	361,724	47,077	5,132,886	763,242	5,494,610	810,319
1938–39	336,701	45,022	5,342,193	778,064	5,678,894	823,086
1939–40	274,548	36,883	6,038,821	891,738	6,313,369	928,621
Average 10 seasons ended 1939–40 ..	248,314	32,048	4,595,273	664,961	4,843,587	697,009

The production of raw sugar in Australia in 1939–40 amounted to 928,621 tons manufactured from 6,313,369 tons of cane, and exceeded the previous highest recording of 823,086 tons in 1938–39. Official data are not available regarding the total number engaged in the sugar industry in Queensland, other than the number of separate holdings growing cane and employees in sugar mills which in 1939–40 totalled 7,820 and 4,519 respectively. 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 1940–41 season are not yet complete, but latest estimates indicate a yield of 806,500 tons of raw sugar.

(iv) *Average Production of Cane Sugar.* Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the decennium ended 1939–40 were 14.47 tons for New South Wales, and 18.13 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 1.87 tons and 2.62 tons respectively. Leaving aside the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1939–40 were 19.90 tons and 2.86 tons respectively, as compared with 18.03 tons and 2.30 tons for the decennium ended 1929–30.

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.
1935–36	26.93	3.50	7.69	18.47	2.67	6.92	18.84	2.71	6.96
1936–37	26.90	3.73	7.21	21.03	3.03	6.94	21.26	3.06	6.96
1937–38	33.76	4.39	7.68	20.94	3.11	6.73	21.48	3.17	6.78
1938–39	32.20	4.31	7.48	21.21	3.09	6.87	21.65	3.14	6.90
1939–40	26.18	3.52	7.44	23.03	3.40	6.77	23.15	3.41	6.80
Average 10 seasons ended 1939–40 ..	26.53	3.43	7.75	19.64	2.84	6.91	19.90	2.86	6.95

(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. For the decennium ended 1939–40 it took 6.95 tons of cane to produce 1 ton of sugar or 14.39 per cent. of its total weight. 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, and in 1937–38 only 6.78 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 1929–30 it required on the average 7.83 tons of cane to produce one ton of sugar in Australia, whereas the average figure for the decennium ended 1939–40 was reduced to 6.95 tons.

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 260 lb. per head of population. Details for the period 1935–36 to 1939–40 are as follows:—

RAW SUGAR: PRODUCTION PER HEAD OF POPULATION.

State.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	lb.	lb.	lb.	lb.	lb.
New South Wales ..	31	32	39	37	30
Queensland	1,406	1,695	1,718	1,731	1,962
Australia	215	258	264	266	297

(vii) *Consumption.* The average annual consumption of raw sugar during the five years ended 1939–40 was estimated at 371,767 tons, equal to 121.26 lb. of raw sugar or 115.80 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 five years in factories is shown in the following table, the figures including, where necessary, estimates of consumption based on the sugar content 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.	1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
	Tons.	Tons.	Tons.	Tons.	Tons.
Aerated Waters and Cordials	7,786	8,905	10,744	11,810	12,346
Bacon Factories	165	276	281	267	265
Bakeries—including Cakes and Pastry	10,404	17,150	18,182	18,801	18,728
Biscuits	6,663				
Breweries	12,404	13,451	15,663	16,733	17,742
Cereal Foods	(a)	(a)	478	1,287	1,317
Condensed and Concentrated Milk	5,547	7,637	8,156	6,889	7,918
Confectionery, Ice Cream, &c.	21,123	24,809	25,644	26,926	29,710
Jams, Jellies and Preserved Fruit	(c)32,595	(b)40,721	(b)42,218	(b)40,537	(b)52,391
Other	(a)	461	633	583	459
Total	96,687	113,410	121,999	123,833	140,876

(a) Not available. (b) Including Condiments, Pickles, etc. (c) Including Jelly Crystals.

(viii) *Control of Cane—Production in Queensland.* By agreement between the Commonwealth and Queensland Governments an Australian price has been fixed for refined sugar of £33 4s. per ton in each of the captial cities. This is substantially above the world price which has prevailed during recent years, and the proceeds of Australian sales are pooled with the proceeds of exports. This pooling is made possible by the acquisition by the Queensland Government of all sugar produced in the State, under legislation which has been in force since 1915. The small New South Wales production (about 5 per cent. of the whole) is also acquired by the Queensland Sugar Board by private agreement.

Sugar production, which in 1923 had scarcely been sufficient to cover Australian requirements, grew very rapidly in subsequent years. In 1925 the Queensland Government took steps to prevent, as a general rule, new land from being opened up for cane production. At this date 56 per cent. of the sugar production was consumed in Australia and 44 per cent. exported. After 1925, production remained stable for some years. In 1929 the operations of the pool, which had hitherto received at a uniform price all sugar offered it by the mills, were re-organized. After 1929 mills only received the full pool price for sugar up to the amount of their previous maximum production. Any further supplies were acquired at export price only.

Between 1929 and 1939 the export price was generally less than half the pool price. In spite of this, production increased by 72 per cent. between 1929 and 1939. In 1939, in view of the fact that the volume of Australian exports is now restricted by the International Sugar Agreement, the Queensland Parliament passed further legislation limiting the pool to 737,000 tons. Any production in excess of this was to be acquired at a penalty price of 10s. per ton. This tonnage was divided up in quotas between the mills, on the understanding that the mills would allocate quotas of production to individual farmers. Proclamations issued by the Government permitted the harvesting of the whole crops for 1939 and 1940; but the basic quotas totalling 737,000 tons will be strictly adhered to for the 1941 season.

2. **Sugar-beet.**—(i) *Area and Production.* Victoria is the only State growing beet for sugar, although 5 tons of sugar-beet were produced from 1 acre in Tasmania during 1939–40. Particulars in regard to acreage and production for Victoria for the last four years and for the decennium ended 1939–40 are shown in the table below:—

SUGAR-BEET: AREA AND PRODUCTION, VICTORIA.

Particulars.		1936–37.	1937–38.	1938–39.	1939–40.	Average ten seasons ended 1939–40.
Area harvested ..	acres	3,475	4,046	4,268	4,235	3,486
Production ..	tons	31,079	48,594	13,454	42,903	38,332
Average per acre	,,	8.94	12.01	3.15	10.13	11.00
Sugar produced ..	,,	4,180	5,625	1,507	6,250	4,920

As in the case of other agricultural production in this State, seasonal conditions were much more favourable during 1939–40 and production rose accordingly. The quantity of beet required to produce 1 ton of sugar was 6.86 tons as compared with 8.93 tons for the previous year and 7.79 tons, the average for the decennium ended 1939–40.

(ii) *Encouragement of Beet-growing.* The irrigation scheme on the Macallister River has provided an assured water supply for the district and has 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.**—Reference is made to the various Acts in connexion with sugar bounties and sugar excise tariffs in early issues of the Official Year Book. (See No. 6, pp. 394–6.)

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter are also referred to in the Official Year Book. (See No. 18, p. 720.)

5. **Sugar Agreement in Australia.—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 closely followed those previously in force, particularly as regards the embargo on imports and the 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, and in May, 1940, the agreement was extended for a further period of five years to 31st August, 1946. The wholesale and retail price of sugar remains unaltered but the concession to the fruit industry was increased to £216,000 in 1936.

6. **International Sugar Agreement.**—Delegates of 21 Nations representing 90 per cent. of producers met in London and entered into an agreement on 6th May, 1937, providing for the regulation of the production and marketing of sugar in the world during a period of five years from 1st September, 1937. The object of the agreement is to assure an adequate supply of sugar at a price not exceeding the cost of production, including a reasonable profit, to efficient producers. For this purpose, each country was given a basic annual export quota, which will be increased in proportion to any expansion in sugar consumption. By this means, and by limitations on stocks and measures to encourage more consumption it is expected that the International Sugar Council, which has been established to administer the agreement, will be able to hold in proper balance the supplies and requirements of sugar. The export quota originally allotted to Australia was 400,000 long tons. This figure may be increased, however, where the delivery from any British Colony falls short of its quota. In such circumstances, the deficiency may be allocated among other producing countries of the Empire including Australia.

This agreement, which would normally expire on 31st August, 1942, has proved of great benefit to Australia. Since the outbreak of war in September, 1939, however, the agreement has virtually lapsed because of the difficulties arising therefrom.

7. **Net Return for Sugar Crop.**—Calculations by the Sugar Board regarding the disposal of the crop, net value of exports and the average price realized during each of the last five years will be found in the following table :—

SUGAR : NET RETURNS, 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.	£
1935–36	47.97	7 18 9	16 5 11	11,010,892
1936–37	54.07	7 19 0	15 7 4	12,203,675
1937–38	54.94	8 6 0	15 7 6	12,748,348
1938–39	55.78	8 4 3	15 3 11	12,806,376
1939–40	58.68	10 7 6	15 17 7	15,329,011

(a) As supplied by the Queensland Sugar Board.

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 which in 1939–40 amounted to £338,823. 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 approximate proportions of 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.

8. **Imports and Exports of Sugar.**—Owing to the embargo and the increased production of sugar in Australia imports have practically ceased. Particulars showing 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. (a)	Quantity.	Value. (a)	Quantity.	Value. (a)
	Tons.	£	Tons.	£	Tons.	£
1935–36.. ..	22	415	300,680	2,758,170	300,658	2,757,755
1936–37.. ..	33	620	406,250	3,707,360	406,217	3,706,740
1937–38.. ..	47	817	427,184	4,026,698	427,137	4,025,881
1938–39.. ..	42	883	443,021	4,177,741	442,979	4,176,858
1939–40.. ..	230	6,151	(b)	6,185,992	(b)	6,179,841

(a) Australian currency values. (b) Not available for publication.

9. **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 quantities produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXI. "Manufacturing Industry". A distillation plant erected at Sarina, near Mackay, was opened during 1927 and produces power alcohol of excellent quality. Other distilleries have been erected since the outbreak of war in 1939.

Boards are now being made from the residuum of crushed fibre after the removal of the sugar content from sugar-cane. These boards are used in the building industry for walls and ceilings and possess high insulating and sound-absorbing properties.

10. Sugar Prices.—The prices of sugar in Australia from 1915 to 1946 are shown in the following table. During recent years the prices were fixed in accordance with the agreements referred to on page 510.

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
1.9.41 to 31.8.46	24 0 0	33 4 0	4

(a) The price of raw sugar for the years 1925 to 1940 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.; in 1935–36, £16 5s. 11d.; in 1936–37, £15 7s. 4d.; in 1937–38, £15 7s. 6d.; in 1938–39, £15 3s. 11d.; and in 1939–40, £15 17s. 7d.

11. War-time Contract.—After the outbreak of war in September, 1939, the British Ministry of Food concluded arrangements with the Queensland Government for the purchase of Australia's surplus production of raw sugar for the season 1939. The price was fixed at £Stg.7 10s. per ton at United Kingdom ports plus the existing tariff preference on dominion sugar of £Stg.3 15s. per ton. This was expected to give a net return in Australia of £A.10 7s. 6d. per ton compared with £A.8 4s. 3d. per ton in 1938.

Similar agreements were negotiated for the disposal of the surplus from the 1940 and 1941 crops. The price for both crops, however, was increased by £Stg.1 7s. 6d. to £Stg.8 17s. 6d. per ton plus the existing preference. The net return to Australia is estimated to be £A.11 5s. 6d. per ton.

The shipment of the surplus from the 1940 crop was very favourable but, because of shipping difficulties, the satisfactory disposal of the exportable surplus from the 1941 season appears unlikely. In anticipation of this, action has been taken to increase storage facilities in Australia.

§ 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 of 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 of 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 (*a*) for wine-making; (*b*) for table use; and (*c*) for drying. The total area of vines in the several States during each of the last five years and the average for the decennium ended 1939–40 are given in the following table :—

VINEYARDS : AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36 ..	15,158	41,081	2,470	54,219	6,051	..	118,979
1936–37 ..	16,542	41,895	2,501	56,122	6,105	..	123,165
1937–38 ..	16,950	41,883	2,716	57,414	6,208	..	125,171
1938–39 ..	16,979	42,436	2,793	58,020	6,277	..	*a* 126,507
1939–40 ..	16,983	42,594	2,921	58,222	6,457	..	*a* 127,179
Average 10 seasons ended 1939–40	15,917	40,763	2,260	54,745	5,815	..	119,500

(*a*) Includes Australian Capital Territory 2 acres.

The total area of 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 latter 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 around 114,000 acres but commenced to increase again in 1933–34. Since then the expansion has continued, reaching the record area of 127,179 acres in 1939–40.

(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 2½ million gallons only or 0.3 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 being made to bring the Australian wines under notice both here and abroad and with the assistance of a Commonwealth bounty on the export of fortified wine of specified strength, the industry has been greatly stimulated. Further development however, has been interrupted by the war. The loss of the United Kingdom market due to the lack of shipping space has placed the wine industry in a most difficult position. In addition, wine is not a priority cargo and until adequate shipping space becomes available, the problem will remain serious. The attention of growers to the question of over-production has been directed by the Australian Wine Board.

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. The payment of a bounty at the rate of 1s per gallon for a period of five years to 28th February, 1945, was provided for under the Wine Export Bounty Act of 1939.

At the Imperial Economic Conference at Ottawa in 1932, a margin of preference was granted by the Government of the United Kingdom on Australian wines. This margin diminished when the rates of duties on foreign and Empire wines were increased as a war-time measure, and, in July, 1940, was further diminished when greater preference was given to British wines by further imposts.

The quantity of wine produced in the several States during the last five seasons together with the average for the decennium ended 1939–40 are given in the table hereunder :—

WINE : PRODUCTION.

('000 omitted).

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
1935–36 ..	2,568	1,683	22	13,024	431	17,728
1936–37 ..	2,944	1,819	29	15,027	349	20,168
1937–38 ..	2,690	1,434	17	15,889	400	20,430
1938–39 ..	2,502	825	45	11,147	439	14,958
1939–40 ..	2,090	1,126	43	11,180	336	14,775
Average 10 seasons ended 1939–40 ..	2,115	1,425	35	12,227	399	16,201

2. **Imports and Exports of Wine.**—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the War, 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 INTO AUSTRALIA.

Year.	Quantity.			Value.(a)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1935–36 ..	5,701	24,214	29,915	19,017	18,258	37,275
1936–37 ..	7,197	27,039	34,236	20,721	20,799	41,520
1937–38 ..	9,002	40,759	49,761	21,598	26,926	48,524
1938–39 ..	10,759	30,451	41,210	23,303	22,792	46,095
1939–40 ..	6,500	19,847	26,347	18,164	17,428	35,592

(a) Australian currency values.

(ii) *Exports.* Practically all of the wine exported from Australia is sent to the United Kingdom; approximately 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 76,390 gallons valued at £33,619, while the latter imported 69,476 gallons valued at £29,954, during 1939–40.

Wine was not included among the commodities sold by contract to the Government of the United Kingdom as a war-time emergency. Because of the prior claims of other commodities to shipping space, the export of wine to the United Kingdom has virtually ceased.

Exports for the last five years are given in the following table :—

WINE : EXPORTS FROM AUSTRALIA.

Year.	Quantity.			Value.(a)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1935–36 ..	4,070	3,705,557	3,709,627	5,649	928,955	934,604
1936–37 ..	3,400	4,085,563	4,088,963	6,231	1,038,198	1,044,429
1937–38 ..	4,908	3,893,549	3,898,457	5,760	938,916	944,676
1938–39 ..	2,369	3,718,135	3,720,504	3,507	978,570	982,077
1939–40 ..	2,564	3,617,240	3,619,804	3,666	930,580	934,246

(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 area cultivated to this variety is only about 7 per cent. of the productive area of grapes. 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.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1935–36	4,376	4,215	2,184	547	2,676	13,998
1936–37	5,107	3,754	2,058	582	2,720	14,221
1937–38	5,076	4,372	2,259	657	2,918	15,282
1938–39	4,034	4,089	2,313	985	3,139	14,560
1939–40	3,975	4,107	2,118	1,046	2,523	13,769

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the last five seasons and the decennium ended 1939–40, are given in the following table. The production for the 1939–40 season amounted to 95,183 tons and was the greatest output in any year. For 1940–41 the production is estimated at 79,000 tons.

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.
1935–36 ..	4,158	864	35,486	4,421	10,508	5,871	778	1,958	50,930	13,114
1936–37 ..	5,416	1,094	37,267	7,610	11,381	8,093	707	1,887	54,771	18,684
1937–38 ..	6,139	1,155	48,504	8,948	16,609	9,367	725	1,887	71,977	21,357
1938–39 ..	4,837	1,239	33,659	10,301	11,656	9,569	737	2,762	50,889	23,871
1939–40 ..	6,613	1,459	47,328	10,642	14,993	10,447	723	2,978	69,657	25,526
Average 10 seasons ended 1939–40 ..	4,478	888	36,049	8,168	11,938	8,242	704	1,953	53,169	19,251

(a) Sultanas and Lexias.

4. **Exports of Raisins and Currants.**—The following table gives the oversea exports of raisins and currants during each of the last five years. Previously this table included details of imports. The quantities involved, however, were practicably negligible and therefore they have been omitted.

RAISINS AND CURRANTS: EXPORTS, AUSTRALIA.

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.(a)	Quantity.	Value.(a)	Quantity.	Value.(a)
	Tons.	£	Tons.	£	Tons.	£
1935–36 ..	37,998	1,501,146	9,945	375,923	47,943	1,877,069
1936–37 ..	40,875	1,540,909	11,739	440,734	52,614	1,981,643
1937–38 ..	47,490	1,968,450	15,266	571,143	62,756	2,539,593
1938–39 ..	49,550	1,974,045	23,759	772,966	73,309	2,747,011
1939–40 ..	37,285	1,447,353	13,711	487,678	50,996	1,935,031

(a) Australian currency values.

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 1939–40 was 72,000 tons, of which 54,800 tons were exported and about 17,200 tons were available for local requirements. The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, the quantities exported thereto in 1939–40 being, 28,940, 16,944 and 3,731 tons or 57, 33, and 7 per cent. respectively. Exports to Canada have increased from 4,600 tons in 1928–29 to 16,944 tons in 1939–40.

5. **War-time Contract.**—All unsold stocks of dried vine fruits in Great Britain and afloat were acquired by the Government of the United Kingdom soon after the outbreak of war. These stocks included 14,343 tons of Australian origin harvested during the 1939 season.

The surplus production of the 1940 season after providing for the Canadian and New Zealand requirements was also sold to the United Kingdom, the quantities involved being 16,400 tons of currants and 33,000 tons of raisins. The whole of the 1941 season's surplus output has been sold in a similar manner.

§ 16. Orchards and Fruit-Gardens.

1. **Progress of Cultivation.**—The greatest area of orchards and fruit-gardens was attained in 1933–34 when 281,989 acres were planted. The total area of orchards and fruit-gardens in the several States during the last five years is given in the following table :—

ORCHARDS AND FRUIT-GARDENS: AREA.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36 ..	82,702	75,788	28,544	29,122	21,667	33,372	76	271,271
1936–37 ..	87,887	76,760	28,828	29,755	22,143	32,285	66	277,724
1937–38 ..	87,293	75,067	31,136	29,874	21,976	31,677	98	277,121
1938–39 ..	85,598	71,300	32,641	28,943	22,029	31,580	97	a272,238
1939–40 ..	85,099	70,315	33,014	29,099	22,155	31,074	139	b270,935

(a) Includes 50 acres Northern Territory. (b) Includes 40 acres Northern Territory.

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. In New South Wales, citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In Queensland, the banana, pineapple, apple, orange, peach and plum 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 table gives the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

(ii) *Area.* The table hereunder shows the total acreage for 1939–40 :—

ORCHARDS AND FRUIT-GARDENS : AREA, 1939–40.

Fruit.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Apples ..	17,513	27,322	5,764	9,841	13,098	23,534	101	97,173
Apricots ..	1,848	4,233	266	3,250	655	1,401	7	11,660
Bananas ..	14,456	..	8,534	..	177	..	..	23,167
Cherries ..	3,528	1,286	7	1,105	62	95	2	6,085
Citrus—								
Oranges ..	20,474	} 4,200	4,370	4,477	{ 3,099	..	..	} 40,356
Mandarins ..	3,461				185	..	..	
Lemons ..	2,891	1,526	389	421	493	..	..	5,720
Other ..	564	(b)	24	63	93	..	..	744
Nectarines and Peaches ..	8,301	13,492	1,402	1,825	1,108	86	7	26,221
Nuts	870	510	105	2,889	373	..	5	4,752
Pineapples ..	224	..	7,350	..	1	..	..	7,575
Pears	4,058	11,871	332	1,852	1,045	2,448	5	21,611
Plums and Prunes	5,126	3,599	1,201	2,165	1,069	411	8	13,579
Small Fruits ..	17	607	203	302	32	3,032	..	4,193
Other Fruits ..	1,768	1,579	3,067	909	665	67	4	8,059
Total ..	85,099	70,315	33,014	29,099	22,155	31,074	139	270,895

(a) Estimated. (b) Included with oranges, etc.

(iii) *Production.*—(a) *Quantities.* The production in 1939–40 is shown in the next table :—

ORCHARDS AND FRUIT-GARDENS : PRODUCTION, 1939–40.

Fruit.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia.
Apples ..	bushel	615,932	1,603,043	246,934	589,112	1,118,404	5,148,000	1,475	9,322,900
Apricots ..	,,	194,994	485,612	10,664	438,190	62,879	73,500	118	1,265,957
Bananas ..	,,	1,654,678	..	843,751	..	23,881	..	..	2,522,310
Cherries ..	,,	69,225	23,891	73	43,913	1,170	4,800	32	143,104
Citrus—									
Oranges ..	,,	1,945,107	531,570	} 354,535	754,070	{ 343,346	..	..	} 4,144,407
Mandarins ..	,,	186,598	12,638			16,543	..	..	
Lemons ..	,,	211,567	120,647	41,287	49,419	70,198	..	..	493,118
Other ..	,,	62,513	487	2,486	9,069	4,455	..	..	79,910
Nectarines and Peaches ..	,,	531,916	1,211,343	68,914	173,380	89,486	6,700	112	2,081,851
Nuts ..	lb.	171,008	151,949	12,680	1,134,784	85,070	..	20	1,555,511
Pineapples ..	dozen	38,574	..	2,381,895	..	20	..	..	2,420,489
Pears ..	bushel	276,257	1,298,787	23,485	279,311	96,546	315,500	108	2,289,994
Plums and Prunes	,,	307,118	201,615	45,996	161,716	86,972	63,000	102	866,519
Small Fruits ..	cwt.	198	12,555	6,284	6,200	727	133,334	..	159,298

(*b*) *Gross Values.* The gross value of production for the various classes of fruit for the year 1939–40 is given in the following table :—

ORCHARDS AND FRUIT-GARDENS : VALUE OF PRODUCTION, 1939–40.

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Australia.
	£	£	£	£	£	£	£	£
Apples	269,320	300,571	107,807	203,282	504,135	1,093,950	645	2,479,710
Apricots	124,840	133,543	8,210	158,340	30,654	15,620	76	471,283
Bananas	866,120	..	373,750	..	16,551	..	..	1,256,421
Cherries	88,640	21,502	146	30,739	2,279	2,340	41	145,687
Citrus—								
Oranges	936,390	230,514	145,517	214,836	112,836	..	..	1,728,386
Mandarins	76,200	5,476			6,617	..	..	
Lemons	93,380	54,291	14,619	22,885	18,281	..	..	203,456
Other	28,620	219	497	3,900	1,708	..	..	34,944
Nectarines and Peaches	263,510	394,932	31,329	51,580	48,044	1,340	59	790,794
Nuts	7,480	5,587	385	33,549	2,791	..	1	49,793
Pineapples	9,080	..	467,369	..	21	..	..	476,470
Pears	122,080	324,697	8,610	86,998	45,831	78,870	48	667,134
Plums and Prunes ..	163,640	48,441	16,591	49,869	35,997	15,490	59	330,087
Small Fruits	900	34,596	19,497	11,813	3,294	190,980	..	261,080
Other Fruits	58,640	99,480	105,350	29,182	23,391	860	41	316,944
Total	3,108,840	1,653,849	1,299,677	896,973	852,430	1,399,450	970	9,212,189

3. **Principal Fruit Crops.**—(i) *Area.* The area in Australia of 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.(*a*)
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1913–14 ..	56,577	7,778	24,840	13,645	9,657	8,410
1935–36 ..	102,003	21,801	47,506	22,876	20,316	15,290
1936–37 ..	103,507	21,126	48,520	23,858	21,298	15,647
1937–38 ..	100,647	23,134	47,416	25,705	22,154	14,727
1938–39 ..	97,351	22,895	46,930	25,054	21,587	14,119
1939–40 ..	97,173	23,167	46,820	24,719	21,611	13,579

(*a*) Includes prunes.

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

PRINCIPAL FRUIT CROPS : PRODUCTION IN AUSTRALIA.

('000 omitted.)

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.(*a*)
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1913–14 ..	5,000	836	1,639	930	951	622
1935–36 ..	9,771	2,501	5,057	1,763	2,458	906
1936–37 ..	10,999	2,369	4,972	2,133	2,692	1,115
1937–38 ..	10,959	2,631	5,106	2,640	2,596	1,077
1938–39 ..	11,126	2,494	5,644	2,523	2,300	771
1939–40 ..	9,323	2,522	4,717	2,002	2,290	867

(*a*) Includes prunes.

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

PRINCIPAL FRUIT CROPS : VALUE OF PRODUCTION, AUSTRALIA.

Year.	Apples.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums.(*a*)
	£	£	£	£	£	£
1913–14 ..	1,132,427	157,710	719,808	306,433	258,235	135,654
1935–36 ..	2,500,361	915,409	1,575,662	554,094	639,429	268,669
1936–37 ..	2,794,633	1,114,025	1,686,569	640,433	669,782	333,186
1937–38 ..	2,826,451	1,455,355	1,717,270	754,929	675,887	333,041
1938–39 ..	3,357,817	1,206,879	1,916,912	737,791	674,887	232,681
1939–40 ..	2,479,710	1,256,421	1,966,786	745,233	667,134	330,087

(*a*) Includes prunes.

4. **Imports and Exports of Fruit.**—(i) *General.* The import trade in fresh fruits declined heavily when a Customs duty of 1d. per lb. was imposed in 1920–21 on imported bananas, which had previously been the chief 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. A considerable export trade in both fresh and dried fruits is carried on by Australia with oversea countries. The value of the shipments in 1939–40 amounted to £1,166,691 and £1,993,943 respectively. Apples constitute the bulk of the fresh fruit exported although the exports of citrus fruits and pears are fairly considerable, but the war has seriously curtailed the shipment of fresh fruit. 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.* Particulars of the Australian oversea trade in fresh fruits are given hereunder :—

FRESH FRUITS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	Cental.	£	Cental.	£	Cental.	£
1935–36 ..	37,205	18,910	2,517,624	2,027,222	2,480,419	2,008,312
1936–37 ..	37,040	19,986	2,493,292	1,980,102	2,456,252	1,960,116
1937–38 ..	42,518	22,469	2,556,226	2,055,186	2,513,708	2,032,717
1938–39 ..	69,883	29,843	2,752,437	2,022,936	2,682,554	1,993,093
1939–40 ..	57,852	36,791	1,222,089	1,166,691	1,164,237	1,129,900

(*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 FROM AUSTRALIA.

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cental.	£	Cental.	£	Cental.	£
1935–36 ..	2,008,656	1,494,524	275,860	270,262	190,094	188,255
1936–37 ..	1,847,189	1,344,885	336,812	320,325	256,784	228,356
1937–38 ..	1,929,088	1,399,773	258,433	245,505	313,649	317,793
1938–39 ..	2,111,139	1,433,440	294,930	264,805	274,229	221,184
1939–40 ..	827,299	741,854	117,523	134,589	232,644	211,546

(iv) *Dried Fruits.* The quantity and value of overseas imports and exports of dried fruits, other than raisins and currants, for the last five years are shown below; approximately 90 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.(*b*)	Quantity.	Value.(*b*)	Quantity.	Value.(*b*)
	'000 lb.	£	'000 lb.	£	'000 lb.	£
1935–36 ..	11,912	86,590	4,144	110,423	7,768	(*c*) 23,833
1936–37 ..	10,918	76,653	2,661	78,553	8,257	(*c*) 1,900
1937–38 ..	13,744	94,445	5,331	144,892	8,413	(*c*) 50,447
1938–39 ..	11,097	80,752	3,927	117,814	7,170	(*c*) 37,062
1939–40 ..	11,327	135,107	1,486	58,912	9,841	76,195

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

(v) *Jams and Jellies.* Jams and jellies were exported in large quantities during the War of 1914–1919 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 declined, but in 1939–40, exports almost doubled that of the previous year and amounted to £506,000. Particulars of 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.(*a*)	Quantity.	Value.(*a*)	Quantity.	Value.(*a*)
	'000 lb.	£	'000 lb.	£	'000 lb.	£
1935–36 ..	50	1,910	7,019	134,796	6,969	132,886
1936–37 ..	60	2,333	5,542	106,433	5,482	104,100
1937–38 ..	126	4,461	6,207	121,395	6,081	116,934
1938–39 ..	81	3,253	13,872	262,486	13,791	259,233
1939–40 ..	77	3,006	24,446	506,002	24,369	502,996

(*a*) Australian currency values.

(vi) *Preserved Fruit.* (*a*) *Imports and Exports.* 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 1939–40 was £39,595, or £49,593 in Australian currency. Oversea exports in 1939–40 were as follows :—Apricots, 7,039,658 lb., £131,707; peaches, 42,663,848 lb., £634,704; pears, 21,684,167 lb., £402,837; pineapples, 5,109,615 lb., £114,915; and other, 7,394,541 lb., £199,948; or a total shipment valued at £1,484,111.

(*b*) *War-time Contract.* Two contracts were negotiated between the Commonwealth and United Kingdom Governments whereby the latter undertook to purchase the exportable surplus of the 1940 pack of Australian canned apricots, peaches and pears. Similar arrangements were concluded for the disposal of the exportable surplus of the 1941 pack but the prices were slightly higher than those in the earlier contract.

5. **Apple and Pear Acquisition.**—The development of the apple and pear industry is dependent upon the expansion of exports; normally, little more than half of Australia's production is needed to meet the local demand. The interruption to exports due to the war imposed a severe strain on the industry and to meet such conditions the Commonwealth Government introduced the National Security (Apple and Pear Acquisition) Regulations to provide for the acquisition and orderly marketing of the 1940 crop.

The Australian Apple and Pear Board was appointed as the marketing authority and a Marketing Committee of the Board, with a committee in each State, was set up to supervise the whole of the marketing arrangements in Australia and for export.

§ 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 1939–40 devoted to crops not dealt with in previous sections was 267,940 acres, the major portion of which consisted of cotton, market-gardens, grass seed, pumpkins and melons, canary seed 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 of 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.	A.C.T.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1935–36	7,026	20,633	950	1,555	3,074	812	52	34,102
1936–37	7,335	20,790	1,105	1,499	3,399	752	48	34,928
1937–38	7,268	19,819	947	1,546	3,497	584	34	33,695
1938–39	7,528	21,059	1,546	1,691	3,292	508	41	35,665
1939–40	7,841	24,414	1,510	1,623	3,754	513	53	39,708

3. **Grass and Other Seed.**—Particulars of the area of crops grown for seed cannot be accurately determined as seed is obtained from certain crops such as clover, lucerne, etc., at a second cutting. The production of seed recorded in 1939–40 was 1,219,245 bushels, but particulars are not available for New South Wales.

4. **Tobacco.**—(i) *General.* Tobacco-growing years ago promised to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888–89, the area of 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.

(ii) *States, Area and Production.* An expansion of the tobacco-growing industry is hoped for as a war-time measure. This development is expected eventually to reach an area of 15,000 acres and a production of about 9 million lb. With this end in view a conference of growers, Government technical experts and manufacturers was held in 1940 at which the latter undertook to increase their purchases of suitable Australian leaf to double the present quantities.

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.

In the following table particulars of the area and production of tobacco are given by States for each year since 1930–31, and for the decennium ended 1939–40.

TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
AREA IN ACRES.								
1930–31 ..	547	2,650	382	83	3	..	..	3,665
1931–32 ..	2,869	12,191	3,817	959	348	72	10	20,266
1932–33 ..	4,105	13,418	4,004	859	466	171	..	(a) 23,037
1933–34 ..	1,187	8,900	2,081	467	291	100	..	13,026
1934–35 ..	560	4,765	3,117	151	313	55	..	8,961
1935–36 ..	934	5,840	3,973	141	426	80	..	11,394
1936–37 ..	851	5,492	3,812	102	1,041	113	..	11,411
1937–38 ..	610	4,736	3,740	90	1,216	159	..	10,551
1938–39 ..	629	2,559	3,653	39	908	130	1	7,919
1939–40 ..	717	2,018	4,402	2	1,019	105	25	8,288
Average 10 seasons ended 1939–40	1,301	6,257	3,298	289	603	99	4	11,851
PRODUCTION OF DRIED LEAF.								
'000 lb.								
1930–31 ..	229	1,270	261	34	2	..	..	1,796
1931–32 ..	2,614	6,659	2,304	374	201	51	(b)	12,203
1932–33 ..	2,807	4,073	2,080	181	335	23	..	9,499
1933–34 ..	425	1,471	1,025	114	199	60	..	3,294
1934–35 ..	230	1,501	1,555	23	289	45	..	3,643
1935–36 ..	667	2,879	2,005	31	352	73	..	6,007
1936–37 ..	606	1,754	2,317	24	666	143	..	5,510
1937–38 ..	409	2,336	2,197	14	789	115	..	5,860
1938–39 ..	398	720	2,094	13	767	54	..	4,046
1939–40 ..	524	1,098	2,596	(b)	712	18	9	4,957
Average 10 seasons ended 1939–40	891	2,376	1,844	81	431	58	1	5,682

(a) Includes Australian Capital Territory, 14 acres. No leaf was produced from this area. (b) No leaf produced.

(iii) *Australian Tobacco Board.* The Australian Tobacco Board, constituted in May, 1941, consists of three representatives of growers, manufacturers and brokers and a chairman, nominated by the Commonwealth Government. The object of the Board is to arrange for the marketing of all tobacco-leaf grown in Australia and the regulations provide for the submission of leaf by growers, for appraisement. A table of limits, based upon grades and types of leaf grown in Australia, has been prepared and appraisement is made by an Appraisal Committee in accordance with this table. The tobacco manufacturers have agreed to take all leaf appraised.

(iv) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into this industry in 1926, 1931 and 1940 and reports were issued. In 1930, a Select Committee appointed by the House of Representatives, presented a report of its investigations into the growing of tobacco.

(v) *Tobacco Inquiry Committee.* The Tobacco Inquiry Committee, which was appointed by the Commonwealth Government to investigate certain aspects of the industry in North Queensland, presented its report in 1933. Recommendations made included the payment of a sum of £20,000 annually for a period of five years to assist the States to continue economic and scientific investigations. This was adopted and the distribution was spread between the years 1934–1938 as follows:—£5,000 to the Council for Scientific and Industrial Research, £3,750 to each of the States of New South Wales, Victoria and Queensland, and £1,250 each to South Australia, Western Australia and Tasmania.

A further grant of £62,500 has been allotted by the Commonwealth Government and periodical payments will be made between the years 1939 and 1943. This is allocated as follows:—Council for Scientific and Industrial Research, £25,000; New South Wales, £5,250; Victoria, £7,500; Queensland, £9,750; South Australia, £3,000; Western Australia, £9,000; and Tasmania, £3,000.

The Council for Scientific and Industrial Research is investigating diseases effecting 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, which has seriously retarded the development of the industry. The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

(vi) *Tobacco Factories.* In 1939–40, the quantity of stemmed leaf used in tobacco factories in Australia amounted to 21.2 million lb. of which 4.7 million was of local origin and the balance was imported chiefly from the United States of America.

(vii) *Imports.* The total net imports of tobacco into Australia during the year 1939–40 were valued at £A.2,121,590, while the net value of unmanufactured tobacco imported was £A.2,246,481.

5. **Pumpkins and Melons.**—The total area of this crop in Australia during 1939–40 was 36,306 acres, of which 5,373 acres were in New South Wales, 1,449 acres in Victoria, 28,766 acres in Queensland, 425 acres in South Australia, 287 acres in Western Australia, 5 acres in Tasmania and 1 acre in the Northern Territory. The production for Australia amounted to 95,920 tons.

6. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1939–40 being 1,140 acres, of which 946 acres were in Tasmania, 173 acres in Victoria and a small area of 21 acres in Western Australia. The Tasmanian area, though still small, has increased during the present century, the total for 1901–2 being 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 173 in 1939–40. 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 1939–40 the imports of hops exceeded the exports by 1,142,380 lb., valued at £A.119,309.

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 1917 the shortage of flax fibre was 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 this expansion was not maintained during the years following. In 1938–39, however, another attempt was made to establish the industry and 1,358 acres were planted in this State compared with 1,167 acres in the previous year. In South Australia, 4 acres producing 6 cwt. of seed valued at £7 was also recorded.

The linseed flax industry has been the subject of two investigations during recent years, namely, in 1933 and in 1936 (see Official Year Book, No. 32, p. 658).

Bounty was paid on flax and linseed grown in Australia between the years 1907 and 1918 and again for a period of five years ending 28th February, 1935. During these periods the total amounts disbursed as bounty were £2,376 and £2,839 respectively.

As a war-time measure, the flax-growing industry is being rapidly expanded. Owing to the failure of supplies from European countries, the British Empire is experiencing a shortage of flax necessary for war and civil needs. Arrangements have been made to increase the area sown to flax in Australia to 50,000 acres. Fibre and tow produced will be sold to the Government of the United Kingdom at prices already arranged.

8. **Millet.**—Millet figures in the statistical returns of three of the States. The total area devoted thereto in 1939–40 was 4,631 acres, of which 3,543 acres were in New South Wales, 659 in Victoria, and 429 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. Figures in regard to acreages under flowers, fruit-trees, etc., are available for New South Wales, Victoria, South Australia, Western Australia, and Tasmania. During 1939–40 the areas in these States were 870, 1,092, 209, 216 and 337 acres respectively.

10. **Cotton.**—(i) *General.* The production of cotton in Australia is restricted to Queensland where cultivation began 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 until 1888, when only 37 acres were planted. Later on the industry was revived, and manufacturing on a small scale was undertaken on two separate occasions at Ipswich, but low prices over a term of years checked development.

(ii) *Bounties, etc.* 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 1⅞d. 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 areas 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 varying from ¾d. to 1⅛d. per lb. according to grade. In addition, the cotton-manufacturing industry received a graduated bounty 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 cotton-growing industry was further assisted by the Bounty Act of 1934, which extended the period to 1940 at varying rates of bounty.

The Raw Cotton Bounty Act 1940 provided an extension of assistance for a further period of five years ended 31st December, 1945.

(iii) *Expansion of the Cotton-growing Industry.* The increased demand for raw cotton to meet Australia's war and civil needs has stimulated production. At present Australia is producing less than one-third of its requirements and efforts are being directed to reduce the nation's dependence upon imported raw cotton obtained chiefly from the United States of America and India. Production is to be increased by means of an extension of area and the introduction of irrigation methods. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXI. " Manufacturing Industry ".

The area under cultivation and the production in Queensland since the year 1931 are shown herunder :—

COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season Ended September.	Area Harvested.	Production of Cotton.			Average Yield per Acre Harvested.	
		Unginned.	Ginned.	Ginned Equivalent in Bales.(a)	Unginned.	Ginned.
	Acres.	lb.	lb.	Bales.	lb.	lb.
1931 ..	22,452	15,244,644	4,908,775	9,689	679	219
1932 ..	29,995	6,270,116	2,018,977	3,989	209	67
1933 ..	68,203	17,718,306	5,545,830	10,974	260	81
1934 ..	43,397	26,924,179	8,777,282	17,471	620	202
1935 ..	54,947	20,785,418	7,067,042	14,515	378	129
1936 ..	62,200	19,198,600	6,653,973	13,504	309	107
1937 ..	52,692	11,792,828	4,113,684	8,519	224	78
1938 ..	66,470	13,687,872	4,773,936	9,654	206	72
1939 ..	41,212	17,527,709	6,182,808	12,447	424	150
1940 ..	41,262	12,108,491	4,127,823	8,370	295	100
1941(b) ..	55,000	17,000,000	6,000,000	12,000	309	109

(a) Bales of 500 lb. (b) Preliminary Estimate.

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 of this 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 1939–40 only 11 acres were recorded with a production of 5,583 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, 1941, amounted to £122,244. 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. Details of the amounts paid as bounty during the years 1936–37 to 1940–41 are as follows :—

BOUNTIES : AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
Iron and Steel Products Bounty Act—			£	£	£	£	£
* Wire Netting ..	12s. per ton (a) ..	23rd Oct., 1939.	8,467	6,741	5,736	4,451	..
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 per cent. from 11th July, 1931. Restored to original rate from 4th December, 1933(a)	23rd Oct., 1939.	20,503	25,556	17,313	6,052	221

(a) Subject to 20 per cent. reduction under Financial Emergency Act.

BOUNTIES: AUSTRALIA—*continued.*

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1936–37.	1937–38.	1938–39.	1939–40.	1940–41.
			£	£	£	£	£
Wire Netting Bounty Act 1939	9s. 7d. per ton ..	23rd Oct., 1944.	..	..	..	83	567
Tractor Bounty Act 1939	According to capacity, £32–£72	23rd Oct., 1944.	..	..	..	6,400	6,750
Motor Industry Bounty Act—							
Radiator Assembly ..	10s. each ..	6th Dec., 1940.	..	..	..	2,396	1,287
Sulphur Bounty Act 1923—							
Sulphur from Australian Pyrites and other Sulphide Ores or Concentrates	£2 5s. per ton(*a*) ..	23rd Oct., 1939.	68,011	83,114	87,575	55,036	..
Sulphur Bounty Acts 1939—	Varies	23rd Oct., 1944.	..	..	..	..	..
Wine Export Bounty Act 1934–35—							
Fortified Wine, containing not less than 34 per cent. 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.	214,886	184,693	167,872	..	..
Wine Export Bounty Act 1939	1s. per gallon from 1st March, 1940	28th Feb., 1945.	..	..	..	146,592	56,547
Raw Cotton Bounty Act 1934—(*a*)							
Raw cotton produced in Australia and graded as prescribed	5½d. per lb. to 30th November, 1935, 4¾d. to 30th November, 1936, and 4¼d. per lb. to 30th November, 1940, fluctuating according to variations in Liverpool spot price	30th Nov., 1940.	50,643	95,044	115,012	60,391	14,523
Raw Cotton Bounty Act 1940—	To 31st December, 1941, 4¼d. per lb.	31st Dec., 1945.	..	..	..	..	35,390
Papua and New Guinea Bounties Act—(*a*)							
Cocoa Beans ..	1½d. per lb. ..	31st Dec., 1947.	1,285	1,774	2,885	3,595	4,722
Bamboos and Rattans (Unmanufactured)	£4 per ton ..	,, ,,	..	..	27	..	18
Manila, Sisal and Other Hemp Fibres	£6 per ton ..	,, ,,	..	..	2	..	..
Coir Fibre ..	£3 per ton ..	,, ,,	..	..	45	239	264
Kapok	2d. per lb. ..	,, ,,	..	..	..	..	2
Fruit Exported—							
Oranges	2s. per export case	(*b*)	7,431	..	..	..	..
Oranges, Lemons, Grape Fruit and Mandarins	Varies from 1s. to 2s. per case	31st Dec., 1940.	..	9,807	9,820	3,872	1,953
Apples and Pears ..	4d. per bushel case	(*b*)	..	..	..	..	..
	4½d. ,, ,, ,,	(*b*)	104,045	..	..	..	..
	2½d. ,, ,, ,,	(*b*)	..	54,643	..	..	..
Prunes	¾d. per lb. ..	(*b*)	..	..	..	..	..
	½d. ,, ..	(*b*)	2,200	..	..	..	..
Total	.. .. ..	..	477,471	461,402	406,287	289,107	122,244

(*a*) Subject to 20 per cent. reduction under Financial Emergency Act on production prior to 1st January, 1938. (*b*) Acts passed in respect of each year.

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 exclude such items as the expenditure on cattle tick control, banana industry, tobacco investigation and apple and pear research, which indirectly benefits the industries concerned, and exclude loans made to States to alleviate hardship suffered by primary producers in consequence of drought. The distribution as bounty, relief or subsidy has been made in the following manner :—

AMOUNTS PAID BY THE COMMONWEALTH GOVERNMENT AS GRANTS TO ASSIST PRIMARY PRODUCERS : AUSTRALIA.

Amounts paid to—	Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	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	(*b*)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	(*b*)33,906	226	2,004,944
Relief	1935–36	565,327	441,948	42,835	432,146	392,850	(*b*)40,403	360	1,915,869
Relief	1938–39	558,489	307,564	70,824	398,559	421,296	(*b*)51,961	..	1,808,693
Relief	1939–40	910,839	415,119	109,805	436,667	497,888	*b* 114,716	1,033	2,486,067
Relief	1940–41	477,819	246,328	47,878	413,661	263,615	(*b*)49,292	..	1,498,593
Relief (Drought) ..	1940–41	320,000	250,000	..	200,000	200,000	..	..	970,000
Total ..	..	6,486,609	4,404,601	553,618	4,958,576	4,436,292	359,494	2,954	21,202,144
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
Total ..	..	20,763	58,620	2,581	18,374	25,631	134,031	..	260,000
Primary Producers (other than wheat-growers)—									
Manure subsidy ..	1932–33	19,903	88,697	32,588	34,930	50,823	17,711	32	244,684
Manure subsidy ..	1934–35	23,000	95,000	21,000	46,000	52,000	13,000	..	250,000
Manure subsidy ..	1935–36	56,211	203,324	40,944	99,610	105,821	28,127	94	534,131
Manure subsidy ..	1936–37	40,058	129,637	25,144	59,136	58,327	14,610	88	327,000
Manure subsidy ..	1937–38	30,048	99,746	18,828	48,000	53,028	12,450	66	262,166
Manure subsidy ..	1938–39	18,290	76,500	19,020	36,400	43,260	12,460	90	206,020
Manure subsidy ..	1939–40	427	17,100	4,320	783	320	250	..	23,200
Total ..	..	187,937	710,004	161,844	324,859	363,579	98,608	370	1,847,201
Grand Total ..	..	6,695,309	5,173,225	718,043	5,301,809	4,825,502	592,133	3,324	23,309,345

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

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 1934–35 season. 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 £1,915,869. No financial assistance was made to wheat-growers by the Commonwealth Government during the years 1936–37 and 1937–38. In 1938–39, however, a sum of £1,808,693, collected through the medium of a flour tax, was allocated for distribution as relief to wheat-growers. From the same source, a sum of £2,486,067 was allocated to the States for the same purpose during 1939–40 and £1,498,593 in 1940–41.

The relief granted to fruit-growers was paid to growers of apples, pears and mandarins. Assistance has been given to primary producers, other than wheat-growers, in the form of a manure subsidy ; the rate was 15s. for each ton of artificial manure

used in the production of primary produce, but in 1936–37 this was reduced to 10s. per ton. The payment of this subsidy ceased on 30th June, 1939. During the period 1932-33 to 1939–40, more than £1,847,000 was distributed in this manner.

Because of the substantial increases in the price of superphosphate and their effect on the efficiency of the farming industry, the Commonwealth Government introduced a bounty on superphosphate produced and sold in Australia after 1st July, 1941. The rate of bounty was fixed at 25s. per ton and is payable to manufacturers who are required to adjust their prices so that consumers receive the full benefit of the subsidy.

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. This practice is much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now 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 is given in Official Year Book No. 12, p. 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 1938–39 the value of rock phosphate imported represented 65 per cent. of the total imports of fertilizers. Nauru, Cocos Island and Gilbert and Ellice Islands Colony supplied the whole of the shipments.

Sodium nitrate is obtained chiefly from Chile.

The imports of manures during the latest available five-yearly period are given in the following table.

FERTILIZERS: IMPORTS INTO AUSTRALIA.

Australian Currency Values.

Fertilizer.		1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
Ammonium sulphate	cwt.	229,200	491,208	573,979	604,566	710,065
" "	£	104,809	216,671	240,089	279,949	336,872
Potash salts ..	cwt.	149,701	209,379	269,476	212,308	223,202
" " ..	£	59,841	75,120	115,925	97,989	102,794
Rock phosphate ..	cwt.	8,201,296	10,488,165	13,259,884	15,551,909	16,008,437
" " ..	£	610,092	735,962	893,252	984,313	1,038,399
Sodium nitrate ..	cwt.	83,548	110,273	134,311	188,129	203,666
" " ..	£	39,431	49,580	71,885	84,664	103,074
Other	cwt.	59,072	116,589	38,445	3,357	125,551
"	£	6,880	13,607	6,079	3,275	12,237
Total ..	cwt.	8,722,817	11,415,614	14,276,095	16,560,269	17,270,921
	£	821,053	1,090,940	1,327,230	1,450,190	1,593,376

4. **Exports.**—The following table shows the exports of manures for the years 1935–36 to 1939–40. Practically all these fertilizers are manufactured locally, the quantities exported being consigned chiefly to the Pacific Islands, New Zealand and Japan :—

FERTILIZERS : EXPORTS FROM AUSTRALIA.

Fertilizer.		1935–36.	1936–37.	1937–38.	1938–39.	1939–40.
Ammonium sulphate	cwt.	4,061	5,011	2,613	2,097	(a)
„ „	£	1,569	974	1,094	940	(a)
Bone-dust ..	cwt.	2,576	2,865	3,224	5,238	15,771
„	£	1,396	1,597	1,809	2,931	7,732
Rock phosphate ..	cwt.	..	1	220	61	87
„ „ ..	£	..	7	60	143	123
Sodium nitrate ..	cwt.	..	59	10	22	..
„ „ ..	£	..	59	17	42	..
Superphosphate ..	cwt.	36,454	41,254	33,924	37,062	49,643
„ ..	£	6,261	7,136	5,875	6,182	8,943
Other	cwt.	29,300	68,817	102,664	53,197	68,928
„	£	11,665	34,104	52,484	27,323	38,648
Total ..	cwt.	72,391	118,007	142,655	97,677	134,429
	£	20,891	43,877	61,339	37,561	55,446

(a) Not available for publication ; included with Other.

5. **Quantities Locally Used.**—Information regarding the area manured and the quantity used in each State during the year 1939–40 is given in the following table. The details are not complete as the area manured and the quantity used in the top-dressing of pasture lands in Queensland are not available. This omission, however, does not seriously impair the value of the table. Details of the area manured with natural manure (stableyard, etc.) have been omitted ; in 1939–40 the quantity involved amounted to 643,026 loads :—

AREA MANURED AND QUANTITY OF MANURE USED, 1939–40.

State or Territory.	Artificial Manure (Superphosphate, Bone-dust, Nitrates, etc.).				Total Area Manured.	Total Artificial Manure Used.
	Area of Crops Manured.		Pasture Lands Top-dressed.			
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
New South Wales	3,882,344	125,606	650,134	30,465	4,532,478	156,071
Victoria	4,119,706	169,092	3,218,761	171,541	7,338,467	340,633
Queensland	268,266	61,663	(a)	(a)	268,266	61,663
South Australia	4,001,234	170,111	1,074,843	53,583	5,076,077	223,694
Western Australia	4,254,656	204,132	1,283,614	66,346	5,538,270	270,478
Tasmania	219,179	21,668	297,288	15,328	516,467	36,996
Northern Territory ..	..	..	..	..	..	..
Australian Capital Territory ..	6,969	342	3,772	168	10,741	510
Total	16,752,354	752,619	6,528,412	337,431	23,280,766	1,090,050

(a) Included with area manured ; area and quantity probably very small.

Particulars of the quantity of artificial manure used in each State and Territory during the past ten years are included in the next table. These details include the quantity used in the top-dressing of pasture lands except where indicated by the footnote. The omission of Queensland, as previously mentioned, does not detract from the value of the table as the area involved is considered to be negligible.

The interruption of the imports of rock phosphate due to war has resulted in a serious diminution in the output of superphosphate. It has been necessary to introduce a system of rationing and, from 1st January, 1942, consumers will receive only 60 per cent. of the quantity of superphosphate purchased by them during 1939–40.

QUANTITY OF ARTIFICIAL MANURE USED : AUSTRALIA.

Year.	N.S.W.	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total. (b)
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1930–31 ..	132,619	274,470	28,783	205,110	236,146	24,870	..	131	902,079
1931–32 ..	70,374	163,234	31,255	148,707	178,509	22,050	..	92	614,221
1932–33 ..	89,955	199,557	35,505	157,995	199,337	24,235	..	128	706,712
1933–34 ..	98,313	217,251	42,517	158,989	203,848	25,844	..	120	746,882
1934–35 ..	101,885	211,657	44,279	157,189	196,741	25,824	..	135	737,710
1935–36 ..	123,472	251,897	40,393	174,593	202,325	27,104	2	166	819,952
1936–37 ..	151,088	306,846	(c) 40,393	208,053	224,473	31,364	4	304	962,525
1937–38 ..	178,369	364,281	66,889	227,547	249,640	33,131	..	357	1,120,214
1938–39 ..	186,569	395,163	61,300	235,443	280,384	33,933	..	432	1,193,224
1939–40 ..	156,071	340,633	61,668	223,694	270,478	36,996	..	510	1,090,050

(a) Exclusive of quantity used in top-dressing pasture lands. (b) Incomplete. See Note (a). (c) 1935–36.

As mentioned in § 18 the Commonwealth Government has encouraged the use of artificial manure by subsidizing primary producers, other than wheat-growers, at the rate of 15s. per ton up to 1936–37 when the subsidy was reduced to 10s. per ton. The payment of this subsidy ceased on 30th June, 1939. but was re-introduced as from 1st July, 1941, at the rate of 25s. per ton.

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 1939–40 was 36, made up as follows :—New South Wales, 5 ; Victoria, 7 ; Queensland, 6 ; South Australia, 6 ; Western Australia, 5 ; and Tasmania, 7. The production of superphosphate in Australia during 1939–40 amounted to 966,105 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 ensilage.

2. **Quantity Made.**—Information regarding the number of holdings on which ensilage was made and the quantity made during the seasons 1935–36 to 1939–40 is given in the following table.

ENSILAGE MADE.

State.	1935–36.		1936–37.		1937–38.		1938–39.		1939–40.	
	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 ..	1,311	109,731	1,350	113,542	1,399	109,628	1,476	124,496	1,743	173,220
Victoria	326	22,346	549	32,902	841	46,860	549	28,716	1,292	78,193
Queensland	86	5,644	(b) 86	)5,644	291	14,831	291	17,772	307	18,238
South Australia ..	124	9,160	118	9,270	160	11,183	103	6,056	177	15,546
Western Australia ..	332	14,896	306	13,197	379	17,650	328	16,156	322	17,196
Tasmania	29	1,341	17	619	20	648	12	490	185	1,102
Australia ..	2,208	163,118	2,426	175,174	3,090	200,800	2,759	193,686	4,026	303,495

(a) No. of holdings on which ensilage was made. (b) 1935–36.

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, but the output has increased during recent years. In 1939–40, the production amounted to 303,495 tons, and is the greatest output recorded in any year.

§ 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.**—A summary regarding agricultural colleges and experimental farms in respect of the year 1939–40 will be found in the *Production Bulletin* No. 34, Part II., issued by this Bureau.

§ 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 fruit-pickers, 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.(a)	S. Aust.	W. Aust.	Tasmania.	Total.(b)
1933–34 ..	42,084	38,514	32,400	30,329	24,925	13,945	182,197
1934–35 ..	42,135	37,294	29,500	30,177	23,775	13,353	176,234
1935–36 ..	42,204	35,926	29,700	30,096	22,585	12,731	173,242
1936–37 ..	43,648	35,575	31,600	30,273	22,317	12,138	175,551
1937–38 ..	43,279	35,592	(c) 34,000	30,365	22,527	11,929	177,692
1938–39 ..	44,627	35,548	31,600	28,981	19,653	11,676	172,085
1939–40 ..	43,269	35,570	33,800	28,502	18,703	11,507	171,351

(a) Estimated from returns furnished by Queensland State Government Insurance Office. (b) Revised since last issue. (c) As recorded by State Statistician.

Although the area of crops has expanded considerably during the past two decades there has been a decrease in the number employed in agriculture owing to the increasing use of machinery both in the cultivation of the soil and in the harvesting of the crops. For a number of years prior to the economic depression the value of machinery employed in agricultural pursuits steadily increased until it reached nearly £39 million in 1928–29. After 1929–30 machinery values declined each year to £30 million in 1934–35, but thereafter rose again to £40.7 million in 1939–40.

§ 23. Number and Area of Rural Holdings.

1. **General.**—The statistical data included in the Chapters relating to Agriculture, Pastoral and Dairying are obtained at an annual census taken in each State under the direction of the State Statisticians. This census is taken as early as practicable after the conclusion of the main harvest and covers every holding within the boundaries of each State.

A holding in Australia has been defined by the States on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate any comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent used in the production of agricultural produce, the raising of live stock or the products of live stock.

With the exception of Queensland, particulars of the number of holdings included in these censuses are available for all States over a series of years. It was not until 1938–39, however, that a complete tabulation became available for Queensland.

2. **Number and Area.**—The following table shows the number and area of the holdings by each State for the year 1939–40 and for previous years for which information is available.

RURAL HOLDINGS: NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Total.
NUMBER OF RURAL HOLDINGS.								
	No.	No.	No.	No.	No.	No.	No.	No.
1929-30 ..	76,158	74,161	(a)	30,246	21,101	11,623	(a)	(a)
1930-31 ..	74,717	74,537	(a)	30,449	21,918	11,461	(a)	(a)
1931-32 ..	74,106	74,996	(a)	30,648	21,959	11,481	(a)	(a)
1932-33 ..	74,778	75,392	(a)	30,724	22,066	11,335	(a)	(a)
1933-34 ..	74,981	75,386	(a)	30,986	22,639	11,731	(a)	(a)
1934-35 ..	75,800	74,473	(a)	31,123	22,874	11,754	186	(a)
1935-36 ..	75,631	73,772	(a)	31,262	22,652	11,857	202	(a)
1936-37 ..	76,239	72,845	(a)	31,321	21,763	11,735	202	(a)
1937-38 ..	75,923	72,792	(a)	31,277	21,682	11,680	202	(a)
1938-39 ..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1939-40 ..	74,909	72,557	42,076	31,244	20,807	11,575	204	253,372
TOTAL AREA OF RURAL HOLDINGS.								
	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.	'000. acres.
1929-30 ..	172,536	38,338	(a)	132,675	229,884	6,547	320	(a)
1930-31 ..	171,772	37,806	(a)	129,569	223,081	6,559	331	(a)
1931-32 ..	172,307	37,276	(a)	129,369	230,857	6,492	356	(a)
1932-33 ..	171,930	37,704	(a)	132,673	227,616	6,595	370	(a)
1933-34 ..	171,641	38,778	(a)	134,847	217,979	6,675	373	(a)
1934-35 ..	171,631	38,861	(a)	137,918	214,455	6,813	369	(a)
1935-36 ..	172,457	39,129	(a)	138,330	218,079	6,931	383	(a)
1936-37 ..	173,880	39,826	(a)	136,978	215,210	6,851	385	(a)
1937-38 ..	174,137	40,388	(a)	142,836	215,911	6,755	382	(a)
1938-39 ..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1939-40 ..	174,315	40,653	338,216	145,979	213,503	6,779	394	919,839

(a) Not available.

3. **Analysis of Holdings.**—(a) *General.* It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying or any of these in combination.

(b) *New South Wales.* Such an analysis is made in New South Wales but as pointed out by the Statistician it should be regarded as an approximation. It is compiled from the description of purpose given by the occupier of the holding at the time of the Census. This tabulation reveals that there were 72,339 holdings so classified in New South Wales during 1939–40. Of this number, 10,373 described their main purpose as Agricultural only, 20,578 as Pastoral only, 14,210 as Dairying only, 2,540 as Poultry, Pig or Bee Farming while the main purpose of the remaining 25,000 holdings were stated to be a combination of two or more of these activities. Holdings used mainly for residential or other purposes but which were used partly for the production of rural products have been omitted. These numbered 2,570 during 1939–40.