

## CHAPTER XX.

### 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 eleven seasons ended 1948–49, and on page 963 there is a graph showing the area of crops in Australia from 1860 onward:—

AREA OF CROPS.  
(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1860–61	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870–71	385,151	602,840	52,210	801,571	54,527	157,410	..	..	2,143,709
1880–81	606,277	1,548,809	113,978	2,087,237	65,902	140,788	..	..	4,560,991
1890–91	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900–01	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
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	1,726,091	4,541,614	4,331,299	258,038	340	8,119	22,249,394
1940–41	6,374,354	4,467,191	1,734,248	4,254,348	4,026,969	253,941	322	6,457	21,117,830
1941–42	5,929,553	4,734,613	1,671,336	3,976,232	3,852,092	280,970	(a)	5,549	20,450,345
1942–43	5,297,313	3,816,430	1,742,802	3,436,675	2,819,713	300,005	(a)	6,779	17,419,717
1943–44	4,797,385	3,462,537	1,757,396	2,760,778	2,782,414	334,933	(a)	6,769	15,902,212
1944–45	5,044,792	4,310,152	1,796,833	3,179,374	2,790,376	342,916	(a)	7,410	17,471,853
1945–46	6,087,566	5,327,122	1,822,108	3,824,128	2,944,879	411,824	(a)	8,846	20,426,473
1946–47	6,511,493	5,102,980	1,617,280	3,884,459	3,589,971	361,120	(a)	9,282	21,076,585
1947–48	7,168,068	5,023,149	1,848,539	3,851,855	4,026,201	342,311	(a)	11,409	22,271,532
1948–49	5,711,369	4,644,841	1,952,495	3,757,426	4,215,112	344,734	(a)	9,790	20,635,767

(a) Not available.

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 1914-18 War, 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, and reached a maximum of 23½ million acres in 1938-39. Thereafter it declined to under 16 million acres in 1943-44, then rose in each succeeding year up to and including 1947-48, when 22.3 million acres were under crop. A fall to 20.6 million acres was recorded in 1948-49. Following the outbreak of war in 1939, the area under crop declined with each successive year until 1944-45, when the areas commenced to increase. This movement was contrary to the experience of the 1914-18 War when the decline did not occur until the third war-year. As the area under wheat in Australia constitutes a large proportion of the total areas cropped (62 per cent. during the five years ended 1948-49), fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

3. *Area under Sown Pastures.*—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops", have expanded from 5½ million acres in 1929-30 to approximately 14 million acres in 1948-49.

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 and Agriculture 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. Its functions are :—(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 of quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Commonwealth Scientific and Industrial Research Organization, the Commonwealth Director-General of Health, the Secretary, Department of Commerce and Agriculture, the Director-General of Agriculture and a representative of the Commonwealth Treasury. The Council and the Standing Committee meet normally two or three times a year according to the nature and urgency of the problems to be discussed.

### § 3. Distribution, Production and Value of Crops.

1. **Distribution of Crops.**—The following table shows the areas in the several States and Territories of each of the principal crops for the season 1947-48. Similar details for the season 1946-47 appear in Part II. of *Production Bulletin* No. 41.

#### AREA OF PRINCIPAL CROPS, 1947-48.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Aust.
Cereals for Grain—									
Barley—									
2 Row ..	15,127	149,567	12,334	522,053	38,089	7,569	..	..	744,739
6 Row ..	8,351	14,622	4,876	40,352	25,047	580	..	2	93,830
Maize ..	86,979	7,968	127,703	..	90	7	..	1	222,748
Oats ..	609,207	650,119	24,974	308,783	494,589	17,076	..	486	2,105,234
Rice ..	26,208	..	..	..	..	..	..	..	26,208
Rye ..	694	8,148	..	25,029	1,996	205	..	..	36,072
Wheat ..	5,043,017	3,227,162	462,239	2,374,873	2,760,446	7,776	..	4,783	13,880,296
Hay ..	627,654	657,146	71,834	296,261	229,172	84,354	..	3,766	1,970,187
Green Fodder ..	488,028	(b) 46,100	511,115	141,452	400,100	116,482	..	2,044	1,705,321
Other Stock Fodder ..	5,751	11,255	19,421	13,851	14,386	15,015	..	20	79,699
Grass and other Seeds ..	9,659	11,746	4,688	20,119	9,925	4,262	..	..	60,399
Industrial Crops—									
Cotton ..	..	..	8,460	..	..	..	..	..	8,460
Broom Millet ..	3,294	422	172	..	..	..	..	..	3,888
Flax for Fibre ..	..	12,183	..	3,544	2,063	..	..	..	17,790
Hops ..	..	240	..	..	(c)	1,263	..	..	(d) 1,503
Sugar-cane—									
Productive ..	7,113	..	215,378	..	..	..	..	..	222,491
Unproductive ..	9,315	..	113,108	..	..	..	..	..	122,423
Tobacco ..	414	958	1,912	..	559	..	..	..	3,843
Vegetables—									
Legumes—									
Beans, Navy ..	2,441	28	1,119	..	..	10	..	..	3,598
Peas, Blue ..	..	714	..	70	..	6,878	..	..	7,662
Onions ..	568	6,722	2,378	583	475	19	..	6	10,751
Potatoes, ordinary ..	21,911	59,400	10,664	6,202	6,955	40,382	..	115	145,629
Other vegetables for human consumption ..	58,671	35,186	35,039	10,488	9,763	7,403	..	61	156,611
Vines—									
Bearing ..	14,930	41,438	2,691	55,645	8,670	..	..	3	123,377
Not Bearing ..	1,611	2,346	396	3,240	1,355	..	..	6	8,954
Orchards and other Fruit Gardens ..	98,901	71,513	38,665	28,338	22,063	30,739	..	101	290,320
All other Crops ..	28,224	8,166	179,373	972	458	2,291	..	15	219,499
Total Area ..	7,168,068	5,023,149	1,848,539	3,851,855	4,026,201	342,311	..	11,409	22,271,532

(a) Not available.

(b) Excludes 46,915 acres of pasture land sown to lucerne and 102,255 acres sown to oats, for grazing.

(c) Not available for publication. Included with "All other Crops".

(d) Incomplete.

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 1947-48 is shown in the next table. Similar details for the season 1946-47 appear in Part II. of *Production Bulletin* No. 41. 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 crop. In Queensland the most extensive crops are green fodder, wheat and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing over 60 per cent. of the total area of crops in 1947-48.

## RELATIVE AREAS UNDER CROP, 1947-48.

(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Wheat (Grain) ..	70.35	64.25	25.00	61.66	68.56	2.27	..	41.92	62.32
Oats (Grain) ..	8.50	12.94	1.35	8.02	12.29	4.99	..	4.26	9.45
Hay ..	8.76	13.08	3.89	7.69	5.69	24.64	..	33.01	8.85
Green Fodder(b) ..	6.81	0.92	27.65	3.67	9.94	34.03	..	17.92	7.66
Barley (Grain) ..	0.33	3.27	0.93	14.60	1.57	2.38	..	0.02	3.77
Sugar-cane ..	0.23	..	17.77	..	..	..	..	..	1.55
Orchards and Fruit									
Gardens ..	1.38	1.42	2.09	0.73	0.55	8.98	..	0.88	1.30
Maize (Grain) ..	1.21	0.16	6.91	..	..	..	..	0.01	1.00
Potatoes, ordinary ..	0.31	1.18	0.58	0.16	0.17	11.80	..	1.01	0.65
Vineyards ..	0.23	0.87	0.17	1.53	0.25	..	..	0.08	0.59
All other ..	1.89	1.91	13.66	1.94	0.98	10.91	..	0.89	2.86
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	..	100.00	100.00

(a) Not available.

(b) Includes green forage except in Victoria.

3. Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1947-48, compared with the average for the decennium ended 1938-39 is shown hereunder :—

## AREA OF PRINCIPAL CROPS : AUSTRALIA.

('000 Acres.)

Crop.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Cereals for Grain—						
Barley, 2 Row ..	428	357	500	593	663	745
Maize ..	295	283	257	236	260	223
Oats ..	1,393	1,415	2,034	1,949	1,728	2,105
Rice ..	22	41	25	28	32	26
Wheat ..	14,345	7,875	8,463	11,425	13,180	13,880
Hay ..	2,994	2,044	2,409	2,757	2,006	1,970
Green Fodder ..	1,272	2,265	2,043	1,806	1,602	1,705
Vegetables—						
Beans and Peas ..	49	57	37	35	19	11
Onions ..	8	10	12	12	9	11
Potatoes, ordinary ..	130	192	242	176	145	146
Other vegetables for human consumption ..	(a) 34	199	240	231	186	156
Industrial Crops—						
Cotton ..	43	41	17	8	8	8
Hops ..	1	1	1	1	1	2
Sugar-beet ..	3	1	..	..	1	1
Sugar-cane ..	332	336	326	337	324	345
Tobacco ..	12	7	5	4	4	4
Vineyards ..	118	129	129	129	130	132
Orchards ..	276	262	263	270	280	290
All other Crops ..	203	387	469	429	499	512
Total ..	21,958	15,902	17,472	20,426	21,077	22,272

(a) Market Gardens.

4. Weights and Measures.—The production of agricultural commodities in Australia is recorded either in terms of capacity or weight. When measured in terms of capacity the unit is the bushel of 2,218.192 cubic inches or gallon of 277.274 cubic inches. When measured in terms of weight, the unit adopted is either the long ton of 2,240 lb. (except in the case of flour, bran and pollard, when the short ton of 2,000 lb. is used), the hundred-weight (cwt.) of 112 lb. or pound (lb.).

The production of cereals and fruit is recorded in bushels, the production of wine in gallons, while hay, vegetables, grapes and industrial crops are measured by weight, generally in terms of long tons or cwts.

In the following table the weights adopted per bushel are given for the more important cereals, fruits, etc. Several types of cases are used for fruits, but in determining the average weights shown below, that with a capacity of 2,223 cubic inches was adopted. The packed weight of a bushel of fruit also is subject to considerable variation according to the kind and variety of fruit.

Data compiled by the State Departments of Agriculture made available to this Bureau were used in determining these average weights.

## APPROXIMATE BUSHEL EQUIVALENTS.

Commodity.	Approximate Bushel Equivalent in lb.	Commodity.	Approximate Bushel Equivalent in lb.
<b>Cereals—</b>		<b>Fruit—continued.</b>	
Barley .. ..	50	Bananas .. ..	56
Canary Seed .. ..	56	Cherries .. ..	48
Maize .. ..	56	<b>Citrus—</b>	
Millet .. ..	60	Oranges .. ..	48
Oats .. ..	40	Mandarins .. ..	48
Panicum .. ..	60	Lemons .. ..	48
Rice (Paddy) .. ..	42	Grape Fruit .. ..	42
Rye .. ..	60	Custard Apples .. ..	35
Sorghum .. ..	60	Figs .. ..	44
Wheat .. ..	60	Mangoes .. ..	40
<b>Legumes—</b>		Nectarines .. ..	50
Beans .. ..	60	Passion Fruit .. ..	34
Peas .. ..	60	Peaches .. ..	45
Other Crops—Flax Seed .. ..	56	Pears .. ..	45
<b>Fruit—</b>		Persimmons .. ..	44
Apples .. ..	42	Plums and Prunes .. ..	58
Apricots .. ..	48	Quinces .. ..	42

5. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1947-48, and for the decennium ended 1938-39:—

## PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
<b>Cereals for Grain—</b>							
Barley, 2 Row .. ..	’000 bus.	7,480	6,397	4,188	9,581	10,558	18,937
Maize .. ..	”	7,228	7,433	6,463	5,729	5,808	6,168
Oats .. ..	”	16,437	17,712	8,970	25,774	15,566	40,697
Rice .. ..	”	2,005	4,015	1,693	2,735	2,978	2,676
Wheat .. ..	”	169,398	109,720	52,880	142,410	117,262	220,116
Hay .. ..	” tons	3,490	2,717	1,994	3,493	2,357	3,008
<b>Vegetables—</b>							
Beans and Peas .. ..	”	20	20	16	10	8	5
Onions .. ..	”	43	47	67	67	45	86
Potatoes, ordinary .. ..	”	351	599	881	646	544	498
<b>Industrial Crops—</b>							
Cotton, Unginned .. ..	” lb.	15,667	9,540	8,508	1,819	3,022	2,064
Hops .. ..	”	2,127	2,999	2,594	2,222	2,495	(a) 2,738
Sugar (from Beet) .. ..	” tons	5	0.7	..	..	1.0	0.6
Sugar (from Cane) .. ..	”	658	524	670	666	552	605
Tobacco (Dried leaf) .. ..	” lb.	5,336	4,633	2,844	2,505	3,994	2,484
<b>Vineyards—</b>							
Grapes .. ..	” tons	381	527	358	447	435	508
Wine made .. ..	” gals.	16,330	19,865	14,419	25,858	33,190	34,159
Raisins and Currants .. ..	” tons	70	103	69	74	65	85

(a) Incomplete.

6. **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 1947-48 and the decennium ended 1938-39.

**AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.**

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
<b>Cereals for Grain—</b>							
Barley, 2 Row .. ..	Bushel	17.49	17.89	8.38	16.15	15.92	25.43
Maize .. .. .	"	24.53	26.29	25.15	24.30	22.36	27.69
Oats .. .. .	"	11.80	12.52	4.41	13.22	9.01	19.33
Rice .. .. .	"	93.00	98.67	68.82	96.40	93.08	102.12
Wheat .. .. .	"	11.81	13.93	6.25	12.46	8.90	15.86
Hay .. .. .	Ton	1.17	1.33	0.83	1.27	1.18	1.53
<b>Vegetables—</b>							
Onions .. .. .	"	5.54	4.61	5.59	5.38	4.77	8.00
Potatoes, ordinary .. ..	"	2.71	3.12	3.64	3.67	3.76	3.42
<b>Industrial Crops—</b>							
Cotton, Unginned (a) ..	lb.	366	230	488	236	382	244
Hops (a) .. .. .	"	2,003	2,350	2,044	1,754	1,702	1,831
Sugar (from Beet) .. ..	Ton	1.40	0.84	..	..	1.35	1.06
Sugar (from Cane) (a) ..	"	2.76	2.29	2.96	2.83	2.43	2.72
Tobacco (Dried leaf) ..	lb.	463	700	596	631	889	646
<b>Vineyards—</b>							
Grapes (a) .. .. .	Ton	3.45	4.26	2.89	3.62	3.52	4.12
Wine (a) .. .. .	Gallon	340	402	290	471	570	608
Raisins and Currants (a) ..	Ton	1.28	1.57	1.05	1.23	1.14	1.43

(a) Per acre of productive crops.

7. **Gross Value of Agricultural Production in Australia.**—The following table shows the gross value of recorded agricultural production at the principal markets in Australia for the years 1938-39 and the five years ended 1947-48 :—

**GROSS VALUE OF AGRICULTURAL PRODUCTION : AUSTRALIA.**  
(£'000.)

Crop.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
<b>Cereals for Grain—</b>						
Barley, 2 Row .. ..	1,417	1,856	(a) 1,324	(a) 3,007	(a) 4,483	15,044
Maize .. .. .	1,503	2,530	2,189	2,054	2,119	2,340
Oats .. .. .	2,085	2,471	(a) 2,654	(a) 4,573	(a) 3,432	12,823
Rice .. .. .	540	983	416	672	692	950
Wheat (a) .. .. .	21,989	28,387	17,409	50,193	52,189	(c) 143,927
Hay .. .. .	12,704	13,488	13,119	18,445	11,586	17,096
Green Fodder .. .. .	2,999	(b) 4,170	3,646	3,854	3,627	3,518
<b>Vegetables—</b>						
Beans and Peas (Dry) ..	253	599	686	493	495	608
Onions .. .. .	306	696	1,129	961	744	1,245
Potatoes, ordinary .. ..	3,649	7,233	10,969	7,989	6,734	6,543
Other vegetables for human consumption .. .. .	(d) 2,473	14,864	16,361	15,124	12,838	12,025
<b>Industrial Crops—</b>						
Cotton, Unginned .. ..	(a) 230	212	186	(a) 42	66	46
Hops .. .. .	183	238	230	226	278	318
Sugar-beet .. .. .	27	17	9	3	27	19
Sugar-cane .. .. .	9,178	8,521	10,334	10,400	9,035	11,422
Tobacco (Dried leaf) ..	360	536	316	328	538	405
Vineyards .. .. .	3,924	7,384	5,248	6,505	6,727	8,398
Orchards .. .. .	(a) 9,695	19,466	17,021	(a) 18,750	17,933	22,066
All other Crops .. .. .	3,336	2,978	3,780	4,250	4,658	6,421
<b>Total, Gross Value ..</b>	<b>76,851</b>	<b>116,569</b>	<b>107,026</b>	<b>147,869</b>	<b>138,401</b>	<b>265,214</b>

(a) Includes Governmental assistance.  
revision.

(b) Excludes Western Australia.

(c) Subject to

(d) Market Gardens.

8. **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 XXVIII. "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 plant; consequently the figure stated is inflated to that extent.

### GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1946-47 AND 1947-48.

(£.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)	Deprecia- tion (esti- mated).
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in pro- cess of production.		
1946-47.(b)							
New South Wales ..	29,988,000	3,838,000	26,150,000	4,663,000 <sup>c</sup>	1,136,000	20,351,000	(d)
Victoria ..	41,055,961	4,617,162	36,438,799	5,483,773	1,689,373	29,265,653	1,000,000
Queensland ..	20,373,000	2,050,000	18,323,000	1,530,000	1,420,000	15,373,000	940,000
South Australia ..	24,413,282	2,471,874	21,941,408	1,727,192	1,342,900	18,871,316	594,493
Western Australia..	16,183,433	1,405,649	14,777,784	1,255,979	1,679,962	11,841,843	582,040
Tasmania ..	6,317,190	1,350,550	4,966,640	1,388,750 <sup>(e)</sup>	239,180	3,338,710	128,000
Total ..	138,330,866	15,733,235	122,597,631	16,048,694	7,507,415	99,041,522 <sup>e</sup>	3,244,533

### 1947-48.(b)

New South Wales ..	90,588,000	11,129,000	79,459,000	7,084,000 <sup>c</sup>	1,372,000	71,003,000	(d)
Victoria ..	61,250,238	5,874,245	55,375,993	5,293,990	1,909,151	48,172,852	1,000,000
Queensland ..	30,280,000	3,150,000	27,130,000	2,300,000	2,100,000	22,730,000	1,390,000
South Australia ..	47,433,686	3,971,071	43,462,615	2,126,485	1,397,673	39,938,457	594,493
Western Australia ..	28,172,810	2,023,659	26,149,151	1,229,549	1,955,791	22,963,811	603,154
Tasmania ..	7,335,240	1,831,160	5,504,080	1,293,590 <sup>(e)</sup>	273,110	3,937,380	126,660
Total ..	265,059,974	27,979,135	237,080,839	19,327,614	9,007,725	208,745,500 <sup>e</sup>	3,814,307

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

(b) Subject to revision.

(c) No allowance made for costs of power, power kerosene, petrol and other oils.

(d) Not available.

(e) Incomplete.

(ii) *States 1938-39 to 1947-48.* In the following table the net value of agricultural production and the net value per head of population are given by States for the years 1938-39 to 1947-48 :-

### VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a)(£.)							
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 ..	16,367,000	11,907,131	13,696,000	9,458,140	7,064,100	2,433,760	60,926,131
1940-41 ..	9,323,000	7,097,209	13,723,000	6,048,310	3,678,106	1,730,480	41,600,105
1941-42 ..	16,043,000	15,511,086	13,380,000	8,053,375	6,528,077	3,179,810	62,695,348
1942-43 ..	24,444,000	19,026,308	15,416,000	11,086,377	5,490,585	3,525,910	78,989,180
1943-44 ..	27,916,000	16,062,000	16,755,000	10,738,133	5,841,624	4,826,620	82,140,277
1944-45 ..	17,499,000	14,899,962	18,308,000	8,997,864	7,079,309	5,852,060	72,636,195
1945-46 ..	39,345,000	20,326,838	18,731,000	13,780,913	8,098,960	4,344,410	104,627,151
1946-47(b)	20,351,000	29,265,653	15,373,000	18,871,316	11,841,843	3,338,710	99,041,522
1947-48(b)	71,003,000	48,172,852	22,730,000	39,938,457	22,963,811	3,937,380	208,745,500

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

(b) Subject to revision.

VALUE OF AGRICULTURAL PRODUCTION—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF MEAN POPULATION. (£ s. d.)							
1938-39 ..	4 6 4	3 0 0	11 10 5	9 4 6	8 14 2	12 19 7	6 0 3
1939-40 ..	5 18 4	6 6 3	13 8 3	15 15 11	14 19 3	10 2 9	8 14 0
1940-41 ..	3 6 10	3 14 1	13 6 0	10 2 0	7 15 2	7 3 7	5 17 7
1941-42 ..	5 14 0	7 19 2	12 18 3	13 5 10	13 14 11	13 4 7	8 15 6
1942-43 ..	8 11 10	9 13 7	14 16 5	18 2 11	11 10 2	14 11 9	10 19 3
1943-44 ..	9 18 7	8 2 1	15 17 9	17 8 6	12 4 3	19 15 4	11 5 11
1944-45 ..	6 0 7	7 9 1	17 2 8	14 8 9	14 12 0	23 13 11	9 17 8
1945-46 ..	13 8 4	10 1 8	17 5 7	21 16 9	16 10 6	17 7 1	14 1 9
1946-47 (a) ..	6 17 4	14 6 11	14 0 3	29 9 3	23 16 4	13 2 3	13 3 5
1947-48 (a) ..	23 12 4	23 5 8	20 8 6	61 4 7	45 2 7	15 0 10	27 6 5

(a) Subject to revision.

## § 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 § 20. Bounties, hereafter.

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to enquire into and report upon:—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of costs could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—The licensing of areas sown to wheat throughout Australia during each of the seasons 1941-42 to 1948-49 was operated under the direction of the Wheat Stabilization Board. The area allotted to each grower was fixed in proportion to the average area normally sown by him, principally in the three years 1938-39 to 1940-41. Although licensing continued during the seasons 1945-46 to 1948-49, growers were permitted to plant without restriction in those years. In Western Australia, growers' acreages during 1942-43 were restricted to a maximum of two-thirds of their basic acreage which restriction continued during the 1943-44 and 1944-45 seasons. During 1945-46 no such restriction was imposed but where growers voluntarily restricted the area sown to five-sixths or less of their basic acreage, compensation equal to one-sixth of their basic acreage was payable subject to the qualification that half of the area licensed for wheat was cropped for grain.

In the following table supplied by the Wheat Stabilization Board the basic acreage (i.e., the area normally sown by growers, principally in the three years 1938-39 to 1940-41) and the areas licensed to grow wheat for grain are shown for each State and the Australian Capital Territory for the years 1944-45 to 1948-49. Details of the area sown as well as the percentage that these areas bear to the area licensed are also given.

The Wheat Industry Stabilization Board ceased to function on 31st December, 1948 and the licensing of wheat areas was discontinued from that date. The details of areas licensed and numbers of licences issued for the year 1948-49 shown in the table following are incomplete.



**WHEAT FOR GRAIN: LICENSED AND SOWN ACREAGES.**  
(<sup>000</sup> Ac:es.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.
Basic Acreage .. ..	5,014	3,333	481	3,058	3,243	12	1	15,142
1944-45—								
Area licensed .. ..	3,992	2,562	523	2,215	(a) 1,980	3	2	11,277
Area sown .. ..	2,845	2,142	332	1,623	(a) 1,516	4	1	8,463
Area sown as a percentage of area licensed .. per cent.	71	84	63	73	76	133	75	75
Number of licences issued No.	21,566	15,810	3,675	14,743	8,683	(b)	(b)	(c) 64,477
1945-46—								
Area licensed(d) .. ..	4,880	3,570	524	2,829	(e) 2,559	3	2	14,367
Area sown .. ..	3,774	3,251	392	2,165	(e) 1,836	5	2	11,425
Area sown as a percentage of area licensed .. per cent.	77	91	75	77	72	167	100	80
Number of licences issued No.	23,340	18,099	3,436	15,507	8,475	132	30	69,019
1946-47—								
Area licensed(d) .. ..	5,540	4,087	618	3,240	3,364	4	3	16,856
Area sown .. ..	4,475	3,501	248	2,519	2,426	8	3	13,180
Area sown as a percentage of area licensed .. per cent.	81	86	40	78	72	200	100	78
Number of licences issued No.	24,983	21,190	4,400	17,690	10,093	189	26	78,571
1947-48—								
Area licensed (d) .. ..	6,100	3,723	671	3,050	3,477	6	5	17,032
Area sown .. ..	5,043	3,227	462	2,375	2,760	8	5	13,880
Area sown as a percentage of area licensed .. per cent.	83	87	69	78	79	133	100	81
Number of licences issued No.	26,494	20,354	4,785	17,732	9,679	213	32	79,289
1948-49—								
Area licensed(d) .. ..	5,843	3,431	747	2,801	3,648	(b)	5	(f) 16,475
Area sown .. ..	4,038	2,996	608	2,063	2,867	7	4	12,583
Area sown as a percentage of area licensed .. per cent.	69	87	81	74	79	(b)	80	(f) 76
Number of licences issued No.	25,338	19,297	5,292	17,287	10,072	(b)	24	(f) 77,310

(a) Compulsorily restricted by one-third. (b) Not available. (c) Excludes Tasmania and Australian Capital Territory. (d) Includes areas temporarily licensed on temporary wheat farms. (e) Restriction not compulsory but compensation paid where area voluntarily restricted. (f) Incomplete.

4. **Legislation relating to Wheat Industry.**—(i) *Financial Assistance to Wheat Growers.* Details of financial assistance rendered by the Commonwealth Government to wheat growers between the years 1931-32 and 1944-45 were given on page 1296 of Official Year Book No. 37.

(ii) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the permanent Wheat Stabilization Plan in 1948 were given in the Appendix to Official Year Book No. 37 (pp. 1295-1299).

(iii) *Wheat Stabilization Plan.* Briefly the principal provisions of the Wheat Stabilization Plan which is operated by the Australian Wheat Board conjointly with State Wheat Boards and similar authorities nominated by State Governments, are as follows:—

(a) The Commonwealth Government has guaranteed a price for wheat grown and delivered to the Australian Wheat Board or other approved organizations for each season 1947-48 to 1952-53.

(b) The price guaranteed was 6s. 3d. per bushel f.o.r. ports, bulk basis (this being related to costs of producing wheat in the 1947-48 season), subject to variation, as agreed upon by the Commonwealth Minister for Commerce and Agriculture in consultation with the appropriate State Ministers, in accordance with variations in the cost of producing wheat in subsequent seasons. Following reviews of wheat production costs, the guaranteed price was increased to 6s. 8d. per bushel f.o.r. ports, bulk basis for the 1948-49 season and to 7s. 1d. per bushel for the 1949-50 season. For the 1947-48 and 1948-49 seasons the price of wheat fixed for home consumption was the guaranteed price of 6s. 3d. and 6s. 8d. per bushel respectively, but for the 1949-50 season it remained unchanged from the previous year at 6s. 8d. per bushel. The additional 5d. per bushel payable to growers for wheat for home consumption in 1949-50 is being met by subsidy provided by the Commonwealth Government.

- (c) The guaranteed price applies in respect of the export from any one season's crop up to a maximum of 100 million bushels.
- (d) A Wheat Prices Stabilization Fund has been established by means of a tax on wheat exported. The tax applies when the export price is greater than the guaranteed price, the rate of tax being 50 per cent. of the difference between the two but not exceeding 2s. 2d. per bushel.
- (e) The Stabilization Fund will be drawn upon as required to meet the guaranteed price when this exceeds the export price. If amounts held in the Fund are at any time insufficient for this purpose, the deficiency will be provided by the Commonwealth Government from Consolidated Revenue.

(iv) *The Australian Wheat Board and the Stabilization Fund.* The Australian Wheat Board as reconstituted under the Commonwealth Wheat Industry Stabilization Act 1948, commenced to perform its functions under the Act on 18th December, 1948.

The provisions of the Commonwealth Wheat Stabilization Plan relating to the levy of a tax on wheat exported and the establishment of a Stabilization Fund were implemented by the Commonwealth Government under legislation passed in 1946 in respect of the 1945-46, 1946-47 and 1947-48 harvests, contributions to the Stabilization Fund amounting to about £7,000,000, £4,000,000 and £16,400,000 respectively. Contributions to the Fund from the 1948-49 harvest were approximately £12,500,000. Amounts contributed to the fund from the 1945-46 and 1946-47 harvests, which were equivalent to approximately 1s. 1½d. per bushel and 10½d. per bushel respectively, have been refunded to growers.

5. *War-time and Post-war Marketing of Wheat.*—(i) *General.* On page 908 of Official Year Book No. 37 an outline was given of the circumstances leading up to the establishment by the Commonwealth Government on 21st September, 1939 of the Australian Wheat Board under the National Security (Wheat Acquisition) Regulations.

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations the Board was empowered, subject to directions of the Minister for Commerce and Agriculture, 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. The Australian Wheat Board was reconstituted and vested with similar powers under the Commonwealth Wheat Stabilization Act 1948 for the purpose of administering the post-war Wheat Stabilization Plan (see preceding Section). The reconstructed Board commenced operations on 18th December, 1948.

(iii) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board up to 30th November, 1949 are shown in the following table :—

**AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED TO 30th NOVEMBER, 1949.**  
(’000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
1	1938-39a	6,226	2,805	..	5,884	2,925	..	17,840
2 and 3	1939-40	66,688	46,960	6,255	38,130	37,370	41	195,444
4	1940-41	16,919	9,983	5,287	13,818	17,575	75	63,659
5	1941-42	41,235	48,135	2,680	27,738	34,078	78	153,944
6	1942-43	44,709	40,213	4,403	34,660	17,983	22	141,990
7	1943-44	40,880	17,227	4,599	18,141	13,853	57	94,757
8	1944-45	12,167	941	5,837	6,758	13,079	39	38,821
9	1945-46	54,889	25,621	7,492	18,162	17,742	23	123,929
10	1946-47	8,635	44,482	444	24,818	20,521	68	98,966
11 and 11A	1947-48	89,416	44,402	10,017	29,572	31,128	59	204,594
12	1948-49	58,352	46,661	13,544	23,514	32,825	103	174,999
Total to 30th November, 1949..	..	440,116	327,432	60,558	241,195	239,079	565	1,308,945

(a) Balance only.

(b) *Wheat Disposal.* Details relating to the disposal of this wheat are shown in the following table :—

**AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT  
TO 30th NOVEMBER, 1949.**

('000 Bushels.)

Particulars.	To 30th November, 1944.	1945.	1946.	1947.	1948.	1949.	Total to 30th November, 1949.
Sold for export as wheat ..	194,313	2,742	19,820	13,314	104,253	67,225	401,667
Sold for export as flour ..	134,660	14,897	37,487	34,927	45,553	41,938	309,462
Sold for local consumption as flour ..	169,631	33,373	32,204	30,833	33,606	34,493	334,140
Sold for all other purposes..	106,619	45,104	26,283	25,071	22,702	24,109	249,888

(iv) *Finance.* The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

**AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS  
TO 30th NOVEMBER, 1949.**

( £.)

Particulars.	No. 7 Pool. (a)	No. 8 Pool. (a)	No. 9 Pool. (a)	No. 10 Pool. (a)	No. 11 and 11A Pools. (b)	No. 12 Pool. (b)
Paid to growers ..	23,795,653	8,943,681	44,274,573	43,683,708	126,316,756	62,898,006
Rail freight ..	1,881,808	758,564	2,460,831	1,795,753	5,120,000	4,590,000
Expenses ..	2,862,250	1,103,715	1,810,734	1,769,592	3,590,000	3,725,000
Total Payments ..	28,539,711	10,705,960	48,546,138	47,249,053	135,026,756	71,213,006
Value of sales delivered ..	26,651,903	8,842,987	47,785,890	45,309,645	(e)	791,353,987
Value of flour tax ..	1,887,808	1,862,971	760,248	1,939,408	..	..

(a) Complete. (b) Incomplete. (c) Includes £6,900,000 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest, £219,633. (d) Includes £4,329,780 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest, £99,224. (e) Includes £16,415,073 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948. (f) Includes £8,897,817 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948.

NOTE.—Details of earlier pools will be found in Official Year Books No. 36, p. 798 and No. 37, p. 909.

(v) *Advances to Growers.* Full details of advances made to wheat growers in respect of No. 8 and preceding pools were given in Official Year Book No. 37 (pp. 910, 911) and in earlier issues of the Year Book.

The table below shows particulars of advances made in pools Nos. 11, 11A and 12 to 5th April, 1950. Pools No. 9 and 10 are complete while a small amount equivalent to a fraction of a penny per bushel remains to be distributed to growers in respect of No. 11 and No. 11A pools.

### WHEAT POOLS Nos. 9 TO 12 : ADVANCES MADE TO GROWERS TO 5th APRIL, 1950.

Particulars.	Amount Paid (Trucks Terminal Port Basis).									
	1945-46 Harvest.				1946-47 Harvest.					
	No. 9 Pool.(a)		No. 10 Pool.(a)		No. 11 Pool.(a)		No. 11A Pool.ab		No. 12 Pool.(c)	
	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.
	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.
Advances made to Growers—										
1st Payment—										
Bulk ..	4 1	26,044	4 1	20,654	4 6	46,608	4 6	1,672	5 0	45,327
Bagged ..	4 4		4 4		5 0		5 6		5 6	
2nd Payment—										
Bulk ..	1 0	6,196	1 6	7,423	2 0	19,789	2 0	670	1 6	13,117
Bagged ..	1 0		1 6		2 0		2 0		1 6	
3rd Payment—										
Bulk ..	0 6	3,098	1 0	4,948	2 0	19,789	2 0	670	1 0	5,165
Bagged ..	0 6		1 0		2 0		2 0		1 0	
4th Payment—										
Bulk ..	0 6	3,098	1 0	5,395	2 0	19,789	1 6	503	..	..
Bagged ..	0 6		1 3		2 0		1 6		..	
5th Payment—										
Bulk ..	0 12	1,027	0 5½	2,268	1 6	14,840	1 0	335	..	..
Bagged ..	0 2½		0 5½		1 6		1 0		..	
6th Payment—										
Bulk ..	1 2	7,260	1 2	4,742	0 7	6,278	0 11½	362	..	..
Bagged ..	1 2½		1 2½		0 8½		1 1		..	
Total—										
Bulk ..	7 4½	46,723	9 0	45,430	12 7	127,093	11 11½	4,212	7 6	63,609
Bagged ..	7 8½		9 6		13 2½		12 7		8 0	

(a) Rail freight was deducted from 2nd payment.

(b) This Pool refers to low grade wheat (under 54 lb. per bushel) which was segregated from other wheat received in No. 11 Pool.

(c) Rail freight was deducted from 1st payment.

6. **International Wheat Agreement.**—Following a series of unsuccessful attempts extending over a period of years to secure an arrangement for the stabilization of international trade in wheat, an International Wheat Agreement was signed in Washington, D.C., United States of America, on 6th March, 1948 by 33 importing nations and the three exporting countries of Canada, United States of America and Australia. However, principally owing to the failure of the Government of the United States of America to ratify the Agreement within the prescribed time, it was allowed to lapse.

A further International Wheat Agreement was signed in Washington in March and April, 1949 by the representatives of 41 nations, comprising all the important wheat importing countries excluding Germany and Japan and the wheat exporting countries of Canada, United States of America, Australia, France and Uruguay. The 1949 Agreement is similar to that proposed in 1948, its stated objectives being "to assure supplies of wheat to importing countries and markets for wheat to exporting countries at equitable and stable prices".

The new Agreement covers a period of four years from 1st August, 1949 to 31st July, 1953, with provision for extension beyond that date, if desired. Under its terms, the five exporting countries who signed the agreement guarantee to sell 456.3 million bushels of wheat (including wheat flour as wheat) annually to the 37 importing countries specified, who in turn guarantee to purchase a similar quantity each year. Paraguay did not actually sign the agreement, reducing the number of importing countries who were signatories to 36, while Peru when signing specified a reduction in its guaranteed purchases shown in the original quotas. Details of the original quotas fixed in the Agreement are shown below. They do not include an amount of 70 million bushels which Germany agreed to purchase following its admission to the International Wheat Agreement in

1950. The source of this supply during 1950 was allocated as follows:—United States, 54 million bushels; Canada, 12 million bushels; Australia, 3 million bushels; and 1 million bushels to other exporters.

Japan's admission to the Agreement was rejected by the International Wheat Council. Purchases by this country will therefore be made outside the scope of the Agreement.

### INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES.

('000,000 Bushels.)

Exporting Country.	Guaranteed Annual Sales.(a)	Importing Country.	Guaranteed Annual Purchases.(a)
Canada .. .. .	203.1	United Kingdom .. .. .	117.1
United States of America .. .. .	168.1	Italy .. .. .	40.4
Australia .. .. .	80.0	India .. .. .	38.3
France .. .. .	3.3	Netherlands (including In-	
Uruguay .. .. .	1.8	donesia) .. .. .	25.7
		Belgium .. .. .	20.2
		Remaining 32 Importing	
		Countries .. .. .	214.6
Total .. .. .	456.3	Total .. .. .	456.3

(a) Wheat and wheat flour as wheat.

The original quotas specified in the Agreement are subject to adjustment in the event of a country or countries failing to ratify, withdrawing from or being expelled from the Agreement or under such other special circumstances as are provided for in the Agreement. The quotas shown exclude wheat to be supplied to any Occupied Areas, for which the United States has accepted responsibility, this being outside the scope of the Agreement.

The Agreement fixes maximum and minimum prices between which transactions can be freely concluded and prices will move within the range prescribed in accordance with market conditions. But at the maximum price the exporting country must sell the quantity it has guaranteed to supply and at the minimum price the importing country must purchase the quantity it has guaranteed to buy.

The basic minimum and maximum prices fixed in the Agreement for No. 1 Manitoba Northern Wheat in bulk in store Fort William/Port Arthur in terms of Canadian currency at parity at 1st March, 1949 are shown in the following table. The approximate equivalent prices in terms of Australian currency at the exchange rates (average of buying and selling rates) operating prior to and from 19th September, 1949, the date on which Australian currency was devalued, are also shown.

### INTERNATIONAL WHEAT AGREEMENT: MINIMUM AND MAXIMUM PRICES.

Crop Year August-July.	Minimum Price Per Bushel.			Maximum Price Per Bushel.		
	Canadian Currency.	Australian Currency.		Canadian Currency.	Australian Currency.	
		Prior to 19th September, 1949.	From 19th September, 1949.		Prior to 19th September, 1949.	From 19th September, 1949.
	\$	s. d.	s. d.	\$	s. d.	s. d.
1949-50 ..	1.50	9 4	13 5	1.80	11 2	16 1
1950-51 ..	1.40	8 8	12 6			
1951-52 ..	1.30	8 1	11 8			
1952-53 ..	1.20	7 6	10 9			

NOTE.—The £ (Sterling and Australian) was devalued and the price of gold in those currencies raised on 19th September, 1949.

The equivalent maximum price for Australian bulk f.a.q. wheat under the Agreement is—

- (a) The maximum price specified in the Agreement in Canadian currency converted into Australian currency at the prevailing rate of exchange (at present 16s. 1d. per bushel); or
- (b) The price f.o.b. Australia, equivalent to the c. and f. price in the country of destination of the maximum Canadian price specified above, computed by using currently prevailing transportation and exchange rates; whichever is the lower.

The minimum prices for f.a.q. Australian bulk wheat are the f.o.b. prices, Australia, equivalent to the c. and f. prices in the United Kingdom of the minimum Canadian prices specified above, computed by using current transportation and exchange rates.

Transactions between signatory exporting and importing countries at prices within the range will count towards fulfilment of the obligations assumed under the Agreement but any country is free to trade in wheat above the ceiling or below the floor price in respect of quantities additional to those covered by the Agreement.

A new International Wheat Council has been established to administer the Agreement. Its functions include adjustment to sale and purchase quotas as provided for in the Agreement and adjudication in the event of countries, either importers or exporters, finding difficulty in meeting their obligations under the Agreement.

Australia ratified the Agreement under the International Wheat Agreement Act 1949, which was assented to on 30th June, 1949. The Agreement came into operation as planned on 1st August, 1949.

7. **Wheat Farms.**—(i) *Number.* Particulars of the number of farms growing wheat for grain on 20 acres and upwards during each of the years 1939-40, 1940-41 and 1946-47 to 1948-49, compared with the average for the five years ended 1938-39, 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.**

State.	Average 1934-35 to 1938-39.	1939-40.	1940-41. (a)	1946-47.	1947-48.	1948-49.
New South Wales ..	15,657	16,175	15,831	15,971	16,797	15,674
Victoria ..	12,393	12,065	11,972	13,155	12,793	12,105
Queensland ..	2,403	2,542	2,169	2,006	2,921	3,804
South Australia ..	12,255	11,468	10,986	10,412	10,171	9,405
Western Australia ..	8,859	8,482	8,074	7,460	7,551	7,779
Tasmania ..	269	143	140	122	126	123
Total (b) ..	51,836	50,875	49,172	49,126	50,269	48,890

(a) Particulars for years 1941-42 to 1945-46 are not available.

(b) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1947-48. The tabulations, which covered, *inter alia*, a series of size classifications of wheat farms, have been published in detail in *Production Bulletin* No. 42—Part II., Primary Industries and Total Recorded Production. Particulars are shown below of the number of holdings growing wheat for grain, the area under wheat for grain and the production of wheat classified according to the size of the areas under wheat for grain for each State for the year 1947-48. A similar tabulation was made for the year 1935-36, a summary of the results being published in *Official Year Book* No. 33, pp. 374 to 377.

# HOLDINGS GROWING WHEAT FOR GRAIN : CLASSIFICATION IN AREA SERIES, AUSTRALIA, 1947-48.

Area Series—Area under Wheat for Grain (Acres.)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.(a)
NUMBER OF HOLDINGS GROWING WHEAT FOR GRAIN.							
1- 19 ..	885	1,133	628	581	179	305	3,711
20- 49 ..	1,067	1,295	811	836	339	98	4,446
50- 99 ..	1,454	1,750	737	1,438	442	21	5,842
100- 199 ..	3,459	3,164	696	2,866	1,139	6	11,330
200- 299 ..	3,647	2,314	278	2,071	1,522	1	9,833
300- 399 ..	2,786	1,646	163	1,355	1,400	..	7,350
400- 499 ..	1,761	994	92	742	987	..	4,576
500- 599 ..	1,004	523	58	369	616	..	2,570
600- 699 ..	640	403	28	206	409	..	1,686
700- 799 ..	363	216	17	114	205	..	915
800- 899 ..	193	150	10	76	164	..	593
900- 999 ..	133	92	8	36	87	..	356
1,000-1,999 ..	264	149	20	59	207	..	699
2,000 and over ..	26	7	3	3	34	..	73
Total ..	17,682	13,836	3,549	10,752	7,730	431	53,980

## AREA UNDER WHEAT FOR GRAIN (ACRES).

1- 19 ..	8,622	11,250	7,395	5,857	1,891	2,489	37,504
20- 49 ..	33,562	41,216	27,840	27,274	10,673	2,822	143,387
50- 99 ..	101,099	124,310	53,404	103,291	30,693	1,354	414,333
100- 199 ..	489,781	448,128	96,609	405,370	162,404	861	1,603,153
200- 299 ..	864,583	544,665	67,293	487,999	365,028	250	2,329,818
300- 399 ..	920,155	540,386	56,045	448,806	465,444	..	2,430,836
400- 499 ..	753,613	425,042	41,067	317,740	423,959	..	1,963,421
500- 599 ..	528,028	276,117	31,420	194,101	324,747	..	1,354,413
600- 699 ..	399,060	251,335	18,358	127,775	256,072	..	1,052,600
700- 799 ..	262,657	157,119	12,523	82,084	149,556	..	663,939
800- 899 ..	158,406	123,955	8,549	62,400	135,401	..	488,711
900- 999 ..	122,303	85,725	7,581	33,294	80,914	..	329,817
1,000-1,999 ..	324,510	184,429	25,774	69,532	250,339	..	854,584
2,000 and over ..	76,638	13,285	8,381	9,350	101,323	..	208,977
Total ..	5,043,017	3,227,162	462,239	2,374,873	2,760,446	7,776	13,875,513

## PRODUCTION OF WHEAT (BUSHELS).

1- 19 ..	136,455	177,139	135,810	86,367	19,400	39,306	594,477
20- 49 ..	564,291	685,518	518,208	393,492	106,147	40,035	2,307,691
50- 99 ..	1,824,882	2,173,101	1,110,531	1,560,810	324,270	18,819	7,012,413
100- 199 ..	9,526,398	7,940,801	2,129,418	6,312,747	1,799,345	17,047	27,725,756
200- 299 ..	16,852,446	9,149,721	1,534,071	7,307,091	4,129,577	3,000	38,975,906
300- 399 ..	17,614,083	8,250,476	1,379,070	6,354,606	5,636,208	..	39,234,443
400- 499 ..	14,162,469	5,933,252	989,379	4,007,370	5,497,551	..	30,590,021
500- 599 ..	9,852,615	3,557,946	737,889	2,406,789	4,181,523	..	20,736,762
600- 699 ..	7,465,170	2,894,360	513,456	1,367,754	3,368,013	..	15,608,753
700- 799 ..	4,921,884	1,752,739	341,622	899,289	1,930,338	..	9,845,872
800- 899 ..	2,937,972	1,395,292	242,334	622,473	1,805,220	..	7,003,291
900- 999 ..	2,130,186	986,206	221,919	372,663	1,052,602	..	4,763,576
1,000-1,999 ..	5,979,423	1,914,153	672,096	766,983	3,187,100	..	12,519,755
2,000 and over ..	1,258,521	151,681	158,760	65,988	1,462,706	..	3,097,656
Total ..	95,226,795	46,962,385	10,684,563	32,524,422	34,500,000	118,207	220,016,372

(a) Excludes Northern Territory and Australian Capital Territory.

8. Area, Production and Average Yield.—(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 most serious interruptions in more recent years were those occasioned by the two World Wars and the economic depression of the early thirties.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area and yield of wheat for grain in each State are given below for the years 1943-44 to 1948-49 in comparison with the averages for the decennial periods ended 1938-39 and 1948-49:—

#### WHEAT FOR GRAIN: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES.)								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1943-44 ..	2,093	1,794	281	1,534	1,567	5	1	7,875
1944-45 ..	2,845	2,142	332	1,623	1,516	4	1	8,463
1945-46 ..	3,774	3,251	392	2,105	1,836	5	2	11,425
1946-47 ..	4,475	3,501	248	2,519	2,419	7	3	13,172
1947-48 ..	5,043	3,227	462	2,375	2,760	8	5	13,880
1948-49 ..	4,038	2,996	608	2,063	2,867	7	4	12,583
Average, 1939-40 to 1948-49 ..	3,871	2,731	363	2,191	2,298	6	2	11,462
PRODUCTION ('000 BUSHEL.)								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1943-44 ..	47,500	19,733	5,084	20,691	16,550	122	39	109,719
1944-45 ..	17,134	3,497	6,981	9,244	15,929	93	2	52,880
1945-46 ..	62,520	29,634	8,188	21,034	20,929	67	38	142,410
1946-47 ..	15,682	48,971	705	27,906	23,800	139	59	117,262
1947-48 ..	95,227	46,962	10,685	32,524	34,500	118	100	220,116
1948-49 ..	64,704	49,064	14,317	26,136	30,250	156	76	190,703
Average, 1939-40 to 1948-49 ..	50,344	34,519	6,653	26,350	26,798	116	45	144,825

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 963 while a graph showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 is shown on pp. 965-6. Similar graphs showing the distribution of wheat areas in 1924-25 and 1938-39 appeared in Official Year Book No. 22, p. 695 and Official Year Book No. 34, p. 451, respectively.

(ii) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

It should be noted, however, that with improved farming methods, which include the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during four decades to 1940 have shown a continued improvement, and fluctuations in production have become less pronounced.

Australia's wheat production in 1947-48 was a record at 220.1 million bushels, representing an average yield of 15.86 bushels per acre. This was 75.3 million bushels more than the average for the decennium ended 1948-49 and 50.7 million bushels above the average for the ten years ended 1938-39. The record 1947-48 harvest was followed by exceptionally heavy crops of 190.7 million bushels in 1948-49 and 216.5 million bushels in 1949-50. The 1949-50 yield of 17.83 bushels per acre was a record.



(iii) *Decennial Averages, 1861-70 to 1940-49.* The following table shows the average area, production and yield per acre for decennial periods since 1861, together with the average wholesale price since 1871. Up to and including 1939 the price quoted represents the arithmetic mean of the annual averages at Melbourne (f.o.r. Williamstown), and may be accepted as fairly representative for Australia; from 1940 the price represents the average return to the grower for all wheat, bulk and bagged, f.o.r. ports basis.

**WHEAT FOR GRAIN : 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 4
1940-49 .. ..	11,462	144,825	12.65	(b) 5 3 $\frac{1}{2}$

(a) Not available.

(b) Subject to revision. See letterpress above.

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

**WHEAT FOR GRAIN : YIELD PER ACRE.  
(Bushels.)**

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39..	13.00	12.54	14.88	9.84	11.34	21.73	20.63	11.81
1943-44 ..	17.64	11.00	18.07	13.49	10.56	25.24	27.75	13.93
1944-45 ..	6.02	1.63	21.00	5.70	10.51	24.18	1.22	6.25
1945-46 ..	16.57	9.11	20.86	9.72	11.40	13.38	21.20	12.46
1946-47 ..	3.50	13.99	2.84	11.08	9.84	18.47	18.09	8.90
1947-48 ..	18.88	14.55	23.11	13.70	12.50	15.20	20.90	15.86
1948-49 ..	16.02	16.38	23.56	12.67	12.64	22.69	18.23	15.15
Average, 1939-40 to 1948-49..	13.01	12.64	18.31	12.03	11.66	18.76	18.67	12.64

Variation in the short-term 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 1942-43, 16.78 bushels; and in 1949-50, 17.83 bushels.

The table in par. 8 (iii) above, however, which shows changes in the average yield per acre of wheat for decennial periods from 1861 to 1949 discounts seasonal fluctuations. This long-term comparison shows that the yield per acre of 12.77 bushels, obtained in the decennium 1861-70 from 831,000 acres of almost virgin soil in selected areas, was followed by a downward trend to 7.32 bushels per acre for the ten years 1891-1900. From this period onward, decennial yields per acre have improved, and for the decennium 1940-49 stood at 12.65 bushels. This improvement was associated with advances in farming practices such as (i) development of superior wheat varieties; (ii) judicious use of fertilizers; (iii) education in soil conservation and crop rotation; and (iv) increased use of machinery on wheat farms.

(v) *Relation to Population.* The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally 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.

9. *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 Commonwealth Scientific and Industrial Research Organization, but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States.* 1948. Particulars of the varieties of wheat sown and the areas thereunder were collected annually up to 1940. The collection was then suspended but was resumed in 1946-47. Details of the nine principal varieties sown in 1948 in the four main producing States and the percentage each bears to the total area sown are given in the following table.

WHEAT : PRINCIPAL VARIETIES SOWN, 1948.

New South Wales.		Victoria.		South Australia.		Western Australia.	
Variety.	Per-centage.	Variety.	Per-centage.	Variety.	Per-centage.	Variety.	Per-centage.
	%		%		%		%
Bencubbin ..	34.79	Quadrat ..	47.20	Bencubbin ..	19.31	Bencubbin ..	30.44
Gabo ..	13.00	Insignia ..	11.77	Warigo ..	15.03	Bungulla ..	25.51
Ford ..	7.12	Bencubbin ..	7.27	Waratah ..	6.75	Glucub ..	17.05
Charter ..	5.29	Magnet ..	7.23	Reldep ..	5.42	Ranee ..	3.72
Bordan ..	3.88	Ghurka ..	7.10	Gluyas ..	4.69	Kondut ..	3.68
Yalta ..	3.86	Pindar ..	5.67	Quadrat ..	4.60	Koorda ..	2.85
Quadrat ..	2.72	Pinnacle ..	4.82	Marathon ..	4.28	Merredin ..	2.39
Koala ..	2.60	Ranee ..	2.46	Sword ..	4.02	Eureka ..	1.45
Dundee ..	2.49	Regalia ..	1.75	Ranee ..	3.07	Waratah ..	1.40
All other (a) ..	24.25	All other (a) ..	4.73	All other (a) ..	32.83	All other ..	11.51
Total ..	100.00	Total ..	100.00	Total ..	100.00	Total ..	100.00

(a) Includes not stated.

Continued progress in the breeding of new and better wheats has resulted in many changes in the varieties sown. Bencubbin, formerly a variety relatively unimportant outside Western Australia, was the leading wheat sown in 1948 in New South Wales, South Australia and Western Australia, although its popularity has declined to some extent since 1946. In Victoria, Quadrat is the principal variety sown and in 1948 it accounted for 47.2 per cent. of the total State area compared with 26.9 per cent. in 1946. The varieties which were second in importance in the respective States in 1948 were Gabo in New South Wales, Insignia in Victoria, Warigo in South Australia and Bungulla in Western Australia. The first three varieties occupied very minor places in 1946.

10. **F.A.Q. Standard of Wheat.**—The Chambers of Commerce in each of the four main wheat States each year determine the “f.a.q.” standard for the State. “F.a.q.” means “fair average quality”, and the standard is used as the basis for sales of the season’s crop. It represents the average quality for the season, and this average varies from year to year, and from State to State. “F.a.q.” is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed, and do not vary from year to year.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined.

The following table sets out the f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States from 1944-45 to 1948-49.

#### F.A.Q. STANDARD WEIGHT OF A BUSHEL OF WHEAT.

(lb.)

Year.				New South Wales.	Victoria.	South Australia.	Western Australia.
1944-45	..	..	..	63	63½	63	63
1945-46	..	..	..	63½	62½	61½	63½
1946-47	..	..	..	62½	63½	61½	63
1947-48	..	..	..	60½	60½	61	64½
1948-49	..	..	..	63½	63	63½	63½

11. **Price of Wheat.**—(i) *Home Consumption.* The price charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed is shown in the table below for the years indicated.

#### AUSTRALIAN WHEAT BOARD'S PRICE FOR WHEAT FOR HOME CONSUMPTION : AUSTRALIA.

(s. d. per Bushel, Bulk Basis).

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.	1949.
For Flour ..	(a)	(b) 3 11	(b) 3 11	(b) 3 11	(b) 3 11	6 3	6 8
For Stock Feed ..	(a)	(c) 3 4	(c) 3 4	(c) 4 3	4 11	6 3	6 8

(a) Not available. (b) Excluding 1s. per bushel recovered from Flour Tax and included in advances to growers. (c) Disregarding subsidies paid by the Commonwealth Government which were included in advances to growers. These approximated 8d. per bushel.

(ii) *Export Wheat Prices.* (a) *Australian Wheat Board's Basic Selling Price.* Details of the export wheat prices are given in the table below for the years stated. Owing to changes which have occurred in the manner of selling export wheat, it is not possible to quote prices on a strictly comparable basis throughout the period covered by the table. The prices for 1939 represent the “weighted average shippers’ limits f.o.r. ports for growers’ bagged and bulk lots, Sydney, Melbourne and Adelaide.” Following the

acquisition of the 1939-40 and later wheat crops by the Commonwealth Government, it was no longer possible to record prices on this basis. The prices shown below for the years 1944 to 1949 are the basic export selling prices of the Australian Wheat Board (averages for bulk and bagged wheat, f.o.r. ports basis).

The quotations are more or less nominal. The market has been "broad" and wheat has been sold at times above and below this basic price, depending upon conditions of sale. Much of the wheat is sold at prices fixed under contract for delivery over lengthy periods. The prices shown below do not, therefore, necessarily represent the prices actually received for wheat currently being shipped. This matter is referred to in the succeeding paragraph.

#### AUSTRALIAN WHEAT BOARD'S SELLING PRICE FOR WHEAT FOR EXPORT: AUSTRALIA.

(s. d.)

Particulars.	1939.(a)	1944.	1945.	1946.	1947.	1948.	1949.
Average Price Per Bushel for Bulk and Bagged Lots f.o.r., ports basis	2 4	5 4	(b)	10 11	16 8	18 8	(c) 15 1

(a) Average of shippers' limits for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide for eight months ended August, 1939. (b) Not available. The export price of wheat for January and February, 1945 averaged 6s. 5d. per bushel and 9s. 8d. for December. There were no sales for the other months of the year. (c) Average for seven months ended July, 1949. On 1st August, 1949, the price of wheat was fixed in accordance with the terms of the International Wheat Agreement.

(b) *Average Bushel Value of Wheat Actually Exported.* The following table shows for the years indicated the wheat price used in compiling the Export Price Index. The figure for 1939 represents the weighted average of shippers' limits f.o.r. ports for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide. For 1946 and succeeding years the prices are based on the average actual realizations for current shipments, as it was impossible to determine representative average prices at which current sales were being effected because a very large proportion of Australia's exportable wheat was sold forward on long-term contracts at widely differing prices outside the basic price shown in the table above. The prices shown in the following table, therefore, give the average realizations f.o.b. for wheat shipped during the years shown.

#### AVERAGE VALUE OF WHEAT ACTUALLY EXPORTED : AUSTRALIA.

(s. d.)

Particulars.	1939.	1945.	1946.	1947.	1948.	1949.
Average actual realizations per bushel f.o.b. basis ..	2 4	(a)	10 1	14 5	18 0	15 1

(a) Not available.

(iii) *Payments to Growers.* Reference is made in par. 5 (v) of this section to the amounts paid to growers from the wheat pools.

(iv) *Prices under International Wheat Agreement.* Details of the minimum and maximum prices fixed under the terms of this Agreement and adjustments made following the devaluation of Australian currency in terms of gold are given in par. 6 of this section.

12. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the seasons 1946-47 and 1947-48 is shown below. The values are on a gross basis at the principal market in each State and are based upon payments made to producers. Pending the finalizing of the accounts of the Australian Wheat Board these values are subject to revision.

**WHEAT FOR GRAIN : VALUE OF CROP(a), 1946-47 and 1947-48.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
1946-47.								
Aggregate value £	8,616,370	19,790,625	178,656	12,651,739	10,890,128	38,290	23,078	52,188,886
Value per acre ..	£1/18/6	£5/13/1	£0/14/5	£5/0/5	£4/9/9	£5/1/7	£7/1/8	£3/19/2
1947-48.								
Aggregate value £	61,691,090	32,130,370	6,269,314	22,772,336	20,955,543	39,890	68,608	143,927,151
Value per acre ..	£12/4/8	£9/19/1	£13/11/3	£9/11/10	£7/11/10	£5/2/7	£14/6/10	£10/7/5

(a) Gross value of total crop, including drought relief and also seed used on farm, but excluding value of straw.

13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the cereal years ended 30th November, 1945 to 1949 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 see graph, p. 964).

**WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.**

('000,000 Bushels.)

Particulars.	Average, Three Years ended 30th Nov- ember, 1939.	Year ended 30th November—				
		1945.	1946.	1947	1948.	1949.
Opening stocks (including flour as wheat) .. ..	10.4	77.9	11.5	20.2	13.5	26.4
Production .. ..	164.7	52.9	142.4	117.3	220.1	190.7
Total Available Supplies ..	175.1	130.8	153.9	137.5	233.6	217.1
Exports—						
Wheat .. ..	75.0	6.1	19.4	12.0	87.0	82.4
Flour as wheat .. ..	31.8	12.9	37.7	34.0	44.6	37.1
Local Consumption—						
Flour as wheat .. ..	30.9	33.1	32.2	33.5	33.6	34.5
Stock feed .. ..	8.2	44.9	24.4	22.2	20.7	22.6
Seed .. ..	14.6	12.0	13.2	13.8	12.5	(u) 12.5
Breakfast foods and other uses ..	(b)	3.1	3.0	4.2	4.2	4.2
Balance retained on farm (excluding seed) .. ..	(c)	7.2	3.8	4.3	4.6	(a) 4.7
Closing stocks (including flour as wheat) .. ..	14.6	11.5	20.2	13.5	26.4	(a) 19.1
Total Disposals .. ..	175.1	130.8	153.9	137.5	233.6	217.1

(a) Subject to revision.

(b) Included with flour (local consumption.)

(c) Included with stock feed.

14. **Consumption of Wheat in Australia.**—Details of the average Australian consumption of wheat as flour, for stock feeding and for seed are shown in the following table in total and per head of population for the periods of three years ended November, 1939 and 1949.

### CONSUMPTION OF WHEAT : AUSTRALIA.

Particulars.	Average, 1936-37 to 1938-39.		Average, 1946-47 to 1948-49.	
	Total.	Per Head of Population.	Total.	Per Head of Population.
Flour—As flour .. .. .	Tons.(a) 643,750	lb. 187.4	Tons.(a) 706,250	lb. 184.6
Flour—Equivalent as Wheat (b) ..	mill. bush. 30.9	bush. 4.50	mill. bush. 33.9	bush. 4.43
Wheat for—				
Stock Feed .. .. .	8.2	1.19	21.8	2.85
Seed .. .. .	14.6	2.13	12.9	1.69
Total as Wheat .. .. .	53.7	7.82	68.6	8.97

(a) Ton = 2,000 lb.

(b) One ton (2,000 lb.) of flour is taken to be equivalent to 48 bushels of wheat.

15. **Exports of Wheat and Flour.**—(i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39. 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 five years ended 1947-48 exports in terms of wheat averaged 61,076,000 bushels compared with the average of 107,533,000 bushels for the five years ended 1938-39.

### WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.

Year.	Quantity.				Value (£A'000. f.o.b.)		
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour.	As Wheat. (a)				
	'000 bush.	Tons. (2,000 lb.)	'000 bush.	'000 bush.			
Average, 1934-35							
1938-39 ..	76,473	647,073	31,060	107,533	14,813	5,058	19,871
1943-44 ..	33,658	590,544	28,346	62,005	8,264	6,699	14,963
1944-45 ..	32,391	559,749	26,868	59,259	9,752	6,732	16,484
1945-46 ..	12,484	518,876	24,906	37,390	6,223	11,337	17,560
1946-47 ..	12,176	765,098	36,725	48,900	6,338	22,535	28,873
1947-48 ..	60,174	784,370	37,650	97,824	52,813	31,823	84,636

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 48 bushels of wheat.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1947-48, and the average for the five years ended 1938-39.

**WHEAT : EXPORTS FROM AUSTRALIA.**  
(’000 Bushels).

Country to which Exported.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom .. .. .	45,195	321	..	..	..	17,226
Ceylon .. .. .	134	2,435	602	659	..	..
Eire .. .. .	3,276	..	..	..	..	2,402
India .. .. .	1,662	8,404	15,626	9,123	6,692	21,336
New Zealand .. .. .	1,537	2,834	2,486	944	4,332	4,401
Rhodesia, Southern .. ..	1	81	342	331	868	741
Union of South Africa ..	602	813	276	286	38	5
Other British Countries ..	574	4,145	632	3	237	1,757
Belgium .. .. .	756	..	..	..	..	341
China .. .. .	6,151	..	..	639	..	11
Egypt .. .. .	503	3,705	..	..	1	509
France .. .. .	939	..	..	..	..	3,516
French Dependencies .. ..	1	667	44	15	7	2,317
Italy .. .. .	3,152	5,636	5,600	..	..	665
Iraq .. .. .	..	1,899	724	..	..	1,465
Other Foreign Countries ..	11,990a	2,718	6,059	484	1	3,482b
<b>Total .. .. .</b>	<b>76,473</b>	<b>33,658</b>	<b>32,391</b>	<b>12,484</b>	<b>12,176</b>	<b>60,174</b>

(a) Includes Japan, 6,471.

(b) Includes Norway, 687; Sweden, 556; Switzerland, 682.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1947-48, and the average for the five years ended 1938-39:—

**FLOUR : EXPORTS FROM AUSTRALIA.**  
(Tons of 2,000 lb.)

Country to which Exported.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom .. .. .	142,912	..	32,995	3,267	99,954	56,366
Ceylon .. .. .	16,915	315,505	229,996	152,040	171,191	190,104
Hong Kong .. .. .	44,966	..	..	28,231	33,050	21,988
India .. .. .	2,732	28,698	84,105	95,115	49,581	58,922
Malaya (British) .. .. .	63,309	..	..	117,749	194,036	136,255
Mauritius .. .. .	54,960	40,709	42,470	22,969	42,243	46,367
New Zealand .. .. .	3,187	137	3,570	16,183	17,047	22
Union of South Africa ..	306	258	1,586	2,556	9,024	448
Other British Countries ..	6,190	117,362	35,867	49,823	33,300	124,445a
China .. .. .	50,460	..	..	..	39,192	4,304
Egypt .. .. .	24,284	56,880	84,807	149	37,545	85,841
French Dependencies .. ..	13,743	17,189	17,053	15,286	28,463	35,035
Other Foreign Countries ..	223,109	13,806	27,300	15,508	10,472	24,273
<b>Total .. .. .</b>	<b>647,073</b>	<b>590,544</b>	<b>559,749</b>	<b>518,876</b>	<b>765,098</b>	<b>784,370</b>

(a) Includes Palestine, 57,620 tons.

16. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November in each year 1939 and 1944 to 1948, and the total in terms of wheat, are shown in the following table. The source of these data is the Australian Wheat Board, but, in order to maintain comparability with pre-war figures, adjustments have been made where possible to allow for stocks estimated to be held by merchants, bakers and farmers.

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

30th November.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
WHEAT (BUSHELS).							
1939 .. ..	5,059,320	3,435,783	304,199	5,139,508	2,114,766	162,251	16,215,827
1944 .. ..	17,662,000	18,274,000	278,000	19,858,000	17,297,000	378,000	73,747,000
1945 .. ..	695,000	1,848,000	175,000	900,000	2,191,000	238,000	6,047,000
1946 .. ..	10,510,000	1,994,000	751,000	940,000	884,000	62,000	15,141,000
1947 .. ..	1,571,000	3,735,000	372,000	1,715,000	766,000	217,000	8,376,000
1948 .. ..	13,102,000	3,227,000	1,273,000	3,890,000	583,000	386,000	22,461,000

### FLOUR (TONS OF 2,000 LB.).

1939 .. ..	34,875	27,350	5,292	21,479	8,592	1,695	99,283
1944 .. ..	29,747	22,014	3,578	11,300	18,418	385	86,042
1945 .. ..	28,895	25,664	3,674	42,000	12,419	987	113,639
1946 .. ..	28,000	35,997	5,521	20,000	15,287	726	105,531
1947 .. ..	30,244	47,242	4,001	9,400	15,132	1,089	107,108
1948 .. ..	20,505	24,609	5,637	17,000	15,163	117	83,031

### TOTAL IN TERMS OF WHEAT (BUSHELS).

1939 .. ..	6,733,320	4,748,584	558,215	6,170,500	2,527,182	243,611	20,981,412
1944 .. ..	19,089,856	19,359,472	449,744	20,400,400	18,181,004	396,480	77,877,016
1945 .. ..	2,081,960	3,079,872	351,352	2,916,000	2,787,112	285,376	11,501,672
1946 .. ..	11,854,000	3,721,856	1,016,008	1,900,000	1,617,776	96,848	20,206,488
1947 .. ..	3,022,712	6,002,616	564,048	2,166,200	1,492,336	209,272	13,517,184
1948 .. ..	14,086,240	4,408,232	1,543,576	4,706,000	1,310,824	391,616	26,446,488

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

17. **Flour Milling.**—Particulars of the grain-milling industry are given in some detail in Chapter XXIV. "Manufacturing Industry". The following table summarizes the operations of flour mills in Australia for the years 1938-39 and 1943-44 to 1947-48.

### OPERATIONS OF FLOUR MILLS : AUSTRALIA.

Particulars.	Unit.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of mills ..	No.	172	167	168	170	172	167
No. of persons employed ..	"	3,783	3,993	4,175	4,099	4,442	4,623
Wheat milled ..	'000 bus.	66,999	69,559	75,210	63,416	73,780	66,842
Output of Flour(a) ..	" tons	1,373	1,358	1,413	1,219	1,490	1,598
" " Bran ..	" "	289	278	280	238	288	308
" " Pollard ..	" "	284	280	286	256	316	326

(a) Includes wheatmeal for baking.

18. **Voluntary Wheat Pools.**—Details of voluntary wheat pools operating in Australia are given in issues of the Official Year Book prior to No. 33, 1940. These pools ceased to function when the Australian Wheat Board was created in September, 1939.



19. **World Area and Production of Wheat.**—The details in the following table of the world area and production of wheat by countries and continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following. Figures in parentheses are unofficial estimates.

**WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.**

Continent and Country.	Area.(a)			Production.			Yield per acre.		
	Average—		1948.	Average—		1948.	Average—		1948.
	1930-34.	1935-39.		1930-34.	1935-39.		1930-1934.	1935-1939.	
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
<b>North America—</b>									
Canada ..	25,682	25,595	24,106	348,560	312,399	393,302	13.6	12.2	16.3
Mexico ..	1,237	1,244	1,426	14,364	14,282	17,525	11.6	11.5	12.3
United States	54,193	57,293	71,904	732,527	758,623	1,288,288	13.5	13.2	17.9
<b>Total (b) ..</b>	<b>81,150</b>	<b>84,150</b>	<b>97,608</b>	<b>1,096,000</b>	<b>1,086,000</b>	<b>1,701,062</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>Europe—</b>									
Austria ..	535	(c) 616	502	12,626	c 15,117	(11,500)	23.6	c 24.5	22.9
Belgium ..	384	402	353	14,726	16,150	(12,505)	38.3	40.2	35.6
Bulgaria ..	3,078	3,080	(d)	52,864	64,228	(d)	17.2	20.9	(d)
Czechoslovakia	2,129	(c) 2,220	2,108	53,697	c 59,090	46,733	25.2	c 26.6	22.2
Denmark ..	259	316	171	11,131	14,358	8,818	43.0	45.4	51.6
Eire ..	42	225	516	1,698	7,689	12,345	39.5	34.2	26.3
France ..	13,280	(c) 12,724	10,362	305,318	c 292,568	272,574	23.0	c 23.0	26.3
Germany ..	5,310	(c) 5,074	(3,610)	170,212	c 176,654	(112,057)	32.1	c 34.8	31.0
Greece ..	1,612	2,150	2,093	18,414	30,205	28,290	11.4	14.0	13.5
Hungary ..	3,943	4,091	3,306	76,506	c 91,210	58,453	19.4	c 22.3	17.7
Italy ..	12,089	12,635	11,523	252,604	279,519	227,384	20.9	22.1	19.7
Netherlands ..	267	338	245	11,802	15,209	11,132	44.2	45.0	45.4
Poland ..	4,280	4,303	2,842	74,267	77,245	43,721	17.4	18.0	15.4
Portugal ..	1,321	1,227	1,673	18,359	16,066	10,361	14.0	13.1	6.2
Rumania ..	7,703	9,053	(d)	103,447	140,816	(d)	13.4	15.6	(d)
Spain ..	11,236	10,220	9,637	138,081	c 113,905	119,993	14.1	c 11.1	12.5
Sweden ..	697	740	781	23,214	26,351	25,314	33.3	35.6	32.4
United Kingdom ..	1,522	1,843	2,278	51,176	62,361	85,163	33.6	33.8	37.4
Yugoslavia ..	5,098	5,349	(d)	79,494	96,750	(d)	15.6	18.1	(d)
<b>Total (b)</b>	<b>76,033</b>	<b>78,313</b>	<b>67,955</b>	<b>1,516,000</b>	<b>1,632,000</b>	<b>1,348,358</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>U.S.S.R. (b) ..</b>	<b>85,798</b>	<b>98,764</b>	<b>(d)</b>	<b>c 860,448</b>	<b>1,050,000</b>	<b>(d)</b>	<b>10.0</b>	<b>10.6</b>	<b>(d)</b>
<b>Africa—</b>									
Algeria ..	3,893	4,184	(3,707)	32,571	35,201	(45,007)	8.4	8.4	12.1
Egypt ..	1,560	1,464	1,574	43,128	45,848	39,679	27.6	31.3	25.2
French Morocco	2,887	3,254	2,595	29,509	23,198	(22,999)	10.2	7.1	8.9
Tunisia ..	1,995	1,901	(2,044)	12,956	14,965	11,022	6.5	7.9	5.4
Union of South Africa (f) ..	1,516	1,926	2,701	12,301	16,259	18,848	8.1	8.4	7.0
<b>Total (b)</b>	<b>12,630</b>	<b>13,720</b>	<b>13,591</b>	<b>135,000</b>	<b>142,000</b>	<b>154,308</b>	<b>..</b>	<b>..</b>	<b>..</b>

See footnotes on next page.

**WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—continued.**

Continent and Country.	Area.(a)			Production.			Yield per acre.		
	Average—		1948.	Average—		1948.	Average—		1948.
	1930-34.	1935-39.		1930-34.	1935-39.		1930-1934.	1935-1939.	
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Asia—									
China ..	(c) 49,106	(c) 48,120	52,820	6 820,624	6 175,536	939,883	616.7	614.9	17.8
Korea ..	809	832	269	9,048	10,240	2,792	11.2	12.3	10.4
India ..	33,340	34,492	20,206	355,593	370,660	199,572	10.7	10.7	9.9
Japan ..	1,356	1,738	1,582	36,806	50,133	34,462	27.1	28.8	21.8
Manchuria ..	3,301	2,903	(d)	40,770	35,200	(d)	12.4	12.1	(d)
Syria and Lebanon ..	1,245	1,363	2,397	14,638	19,485	22,044	11.8	14.3	9.2
Turkey ..	7,023	8,952	10,949	94,796	135,690	180,834	13.5	15.2	16.5
Total(b) ..	102,300	105,900	108,234	1,456,000	1,442,000	1,601,864	..	..	..
South America—									
Argentina ..	17,709	15,834	(d)	243,932	221,769	(157,982)	13.8	14.0	..
Chile ..	1,763	1,963	2,150	27,355	35,562	(34,903)	15.5	16.1	16.2
Uruguay ..	1,055	1,210	1,263	9,876	13,256	(14,329)	9.4	11.0	11.3
Total (b) ..	21,800	20,500	17,051	295,000	280,000	224,114	..	..	..
Oceania—									
Australia ..	15,223	12,980	12,971	185,773	154,325	189,820	12.2	11.9	14.6
New Zealand ..	266	221	131	8,037	7,129	4,188	30.2	32.3	32.0
Total ..	15,489	13,201	13,102	193,810	161,454	194,008	..	..	..
World Total(b)	395,213	414,703	401,554	5,553,000	5,810,000	6,113,536	..	..	..
Totals—									
Northern Hemisphere(b)	356,507	378,866	368,700	5,051,164	5,351,186	5,676,566	14.2	14.1	15.4
Southern Hemisphere(b)	38,706	35,837	32,854	501,836	458,814	436,970	13.0	12.8	10.3
World Total(b)	395,213	414,703	401,554	5,553,000	5,810,000	6,113,536	..	..	..

(a) The figures of areas are, as far as possible, those of areas harvested. (b) Estimated total including the area and production of countries whose particulars are not shown separately. (c) Average of less than five years. (d) Not available. (e) Production estimates for the U.S.S.R. for the years 1933 and 1934 have been reduced 15 per cent. to take account of heavy harvesting losses. (f) Excludes native cultivation.

20. **Exports—Principal Countries.**—The following table shows the net quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1946-47 and 1947-48 according to statistics recently published by the Food and Agriculture Organization. In the years before the 1914-18 War the U.S.S.R. (Russia) was the outstanding contributor to the world's supply of wheat, followed by the United States of America. Owing to increased demands within their own borders, however, the net exports from U.S.S.R. have since become relatively unimportant, while those from the United States of America declined considerably during the period between the 1914-18 and 1939-45 Wars. Since 1945, however, wheat production in the United States of America has risen to record levels and net exports from that country have greatly increased and in 1947-48 represented more than half the world total. Canada is now the second largest wheat exporter, followed by Argentina and Australia.

While Australia's production of wheat ranges between 2 and 4 per cent. of the world's total, its exports represent up to 20 per cent. of the quantities shipped. Australia's relative share in world wheat exports in 1947-48 was however only about half that for the five years 1934-38.

**WHEAT (a) : NET EXPORTS, PRINCIPAL COUNTRIES.(b)**

Exporting Country.	Average, 1934-38.		1946-47.		1947-48.	
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.
Canada .. .. .	175,403	32.74	228,719	30.15	205,052	22.12
Argentina .. .. .	122,739	22.91	59,863	7.89	101,910	11.00
Australia .. .. .	102,408	19.11	48,900	6.45	98,222	10.80
U.S.S.R. (Russia) .. .. .	24,363	4.55	5,749	0.76	35,530	3.83
United States of America .. .. .	22,547	4.21	405,637	53.48	484,862	52.32
All Other .. .. .	88,333	16.48	9,630	1.27	1,243	0.13
Total .. .. .	535,791	100.00	758,498	100.00	926,819	100.00
World Production ('000 bush.)	6,058		5,584		5,614	
Percentage of Australia's net Exports to Total net Exports .. .. .	19.11		6.45		10.60	
Percentage of Australian Production to World Production .. .. .	2.55		2.10		3.92	

(a) Includes flour expressed in terms of wheat. (b) In some instances the average for 1934-38 is not strictly comparable with the later years shown, owing to changes of frontiers.

21. Imports—Principal Countries.—The net 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:—

**WHEAT (a) : NET IMPORTS, PRINCIPAL COUNTRIES.(b)**

Importing Country.	Average, 1934-38.		1946-47.		1947-48.	
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.
United Kingdom .. .. .	201,098	38.95	197,562	26.40	199,651	21.41
Belgium(c) .. .. .	39,262	7.61	24,404	3.26	23,715	2.54
Brazil .. .. .	36,373	7.05	35,305	4.72	22,157	2.38
China (d) .. .. .	27,932	5.41	14,470	1.93	4,140	0.44
Netherlands .. .. .	21,571	4.18	25,464	3.40	27,597	2.96
Germany .. .. .	21,545	4.17	83,049	11.10	136,403	14.63
Italy .. .. .	18,076	3.50	46,759	6.25	81,718	8.76
Switzerland .. .. .	16,915	3.28	9,376	1.25	14,639	1.57
Greece(f) .. .. .	16,422	3.18	11,979	1.60	24,219	2.60
Austria .. .. .	8,921	1.73	11,859	1.59	22,295	2.39
France .. .. .	5,424	1.05	16,795	2.24	53,236	5.71
Ceylon .. .. .	924	0.18	14,402	1.92	10,767	1.15
Mexico .. .. .	698	0.13	13,922	1.86	10,876	1.17
Spain .. .. .	(g)	(g)	10,655	1.42	16,353	1.75
Japan and Korea .. .. .	(g)	(g)	36,167	4.83	45,598	4.89
India and Pakistan .. .. .	(g)	(g)	37,613	5.03	48,161	5.17
All Other .. .. .	101,087	19.58	158,696	21.20	190,993	20.48
Total .. .. .	516,248	100.00	748,477	100.00	932,518	100.00

(a) Includes flour expressed in terms of wheat. (b) In some instances the average 1934-38 is not strictly comparable with the later years shown, owing to changes of frontiers. (c) Includes Luxembourg. (d) Includes Manchurian ports. (e) Includes Trieste. (f) Includes Aegean Islands. (g) Net exports.

## § 5. Oats.

1. *Area, Production and Average Yield.*—(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 in 1947-48 accounted for 62.32 per cent., oats grown for grain represented only 9.45 per cent. of the area of crops. The acreage and production of oats for the years 1943-44 to 1947-48 and the averages for the ten year periods ended 1938-39 and 1947-48 are shown in the following table :—

OATS FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	229	478	5	282	369	30	..	1,393
1943-44.. ..	374	426	22	225	358	10	..	1,415
1944-45.. ..	544	722	17	334	402	15	..	2,034
1945-46.. ..	617	511	40	370	396	14	I	1,940
1946-47.. ..	558	454	15	252	425	23	I	1,728
1947-48.. ..	609	650	25	309	495	17	..	2,105
Average, 1938-39 to 1947-48 ..	448	527	18	313	414	18	..	1,738
PRODUCTION ('000 BUSHELS).								
Average, 1929-30 to 1938-39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1943-44.. ..	7,051	3,705	389	2,294	3,964	299	10	17,712
1944-45.. ..	1,752	1,335	296	1,316	3,845	420	1	8,970
1945-46.. ..	9,997	7,402	830	3,178	4,081	281	5	25,774
1946-47.. ..	2,046	6,402	79	2,780	3,656	595	8	15,566
1947-48.. ..	13,674	15,381	474	5,394	5,411	360	3	40,697
Average, 1938-39 to 1947-48 ..	5,971	6,283	278	3,042	4,313	468	6	20,361

The oat crop showed considerable variation during the past decennium, ranging from 8,970,000 bushels in 1944-45 to a record yield of 40,697,000 bushels in 1947-48, with an average for the period of 20,360.819 bushels. The 1947-48 oat crop exceeded the previous record in 1945-46 by 14,923,000 bushels or 57.9 per cent.

The principal oat-growing States are New South Wales and Victoria, which produce, on the average, more than half the total quantity grown in Australia. Western Australia and South Australia also produce considerable quantities, but in Queensland and Tasmania the output is small.

Oats are mainly used in Australia as feed grain. During the ten years ended 1947-48 the average annual quantity consumed by stock was about 14 million bushels, leaving a balance of about 3.5 million bushels for seed purposes, about 2 million bushels for oat-meal and a small quantity for the production of spirits and for malting. Normally the exports of oats are small but a large surplus was available from the heavy 1947-48 crop and shipments of over 6,800,000 bushels were made in that year.

(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 seasons 1943-44 to 1947-48 and for the ten-year periods ended 1938-39 and 1947-48 are given in the following table :—

## OATS FOR GRAIN : AVERAGE YIELD PER ACRE.

(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 ..	15.66	12.03	12.77	7.91	10.77	28.15	22.35	11.80
1943-44 ..	18.84	8.69	17.60	10.22	11.07	30.69	24.67	12.52
1944-45 ..	3.23	1.85	17.64	3.94	9.57	28.41	2.65	4.41
1945-46 ..	16.20	14.47	20.75	8.60	10.30	20.15	9.21	13.22
1946-47 ..	3.67	14.10	5.09	11.02	8.60	26.24	12.81	9.01
1947-48 ..	22.45	23.66	18.97	17.47	10.94	21.09	6.86	19.33
Average 1938-39 to 1947-48 ..	13.33	11.92	15.99	9.71	10.43	25.39	13.35	11.72

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1944-45, namely, 4.41 bushels, while the largest in the last ten years was that of the season 1947-48, amounting to 19.33 bushels per acre, this being the highest yield since 1920-21.

2. *Price of Oats.*—The average wholesale prices in the Melbourne market for oats of good milling quality for the years 1943-44 to 1947-48 in comparison with 1938-39 are shown in the following table :—

## OATS : MELBOURNE AVERAGE WHOLESALE PRICES.

(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Average price per bushel ..	3 5½	3 3	3 9½	3 11½	4 3½	4 6½

3. *Value of Oat Crop.*—The estimated values of the oat crop for the seasons 1946-47 and 1947-48 were as follows :—

## OATS : VALUE OF CROP (a), 1946-47 and 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value £	610,480	1,379,949	21,617	560,536	711,016	146,460	1,983	3,432,041
Value per acre ..	£1/1/11	£3/0/10	£1/8/0	£2/4/5	£1/13/5	£6/9/1	£3/1/5	£1/19/9
1947-48—								
Aggregate value £	2,763,260	5,715,609	138,211	2,782,514	1,328,102	94,540	668	12,822,904
Value per acre ..	£4/10/9	£8/15/10	£5/10/8	£9/0/3	£2/13/8	£5/10/9	£1/11/7	£6/1/10

(a) Excludes the value of straw.

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular, though usually small, export trade. The quantities and values of oats imported into and exported from Australia during the years 1943–44 to 1947–48 compared with the average for the years 1934–35 to 1938–39 are shown hereunder :—

**OATS : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average, 1934–35 to 1938–39 .. ..	7,723	1,639	286,360	36,458	278,637	34,819
1943–44 .. ..	643	176	88,040	18,618	87,397	18,442
1944–45 .. ..	202	72	30,368	9,700	30,166	9,628
1945–46 .. ..	1,231,085	251,878	429,163	112,931	801,922	138,947
1946–47 .. ..	85	25	106,645	27,934	106,560	27,909
1947–48 .. ..	177	61	6,803,427	3,945,807	6,803,250	3,945,746

NOTE.—Minus sign (–) denotes net imports.

The quantity of oats imported into Australia is usually not very large, although in 1945–46 imports exceeded exports by 801,922 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was in 1927–28 (by 460,581 bushels) when New Zealand was the main supplier. In 1947–48 the principal countries of destination of the exports were the United Kingdom, Netherlands, France, Switzerland, Ceylon and Hong Kong.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1947–48 to 679,217 cwt. equivalent to about 3,800,000 bushels of oats, or about 9.3 per cent. of the total production. Prior to the 1939–45 War the exports of oatmeal were small, but in recent years a considerable export trade has developed and in 1947–48 the quantity shipped amounted to 344,759 cwt. or 50.8 per cent. of total production. Imports in 1947–48 amounted to 192 cwt.

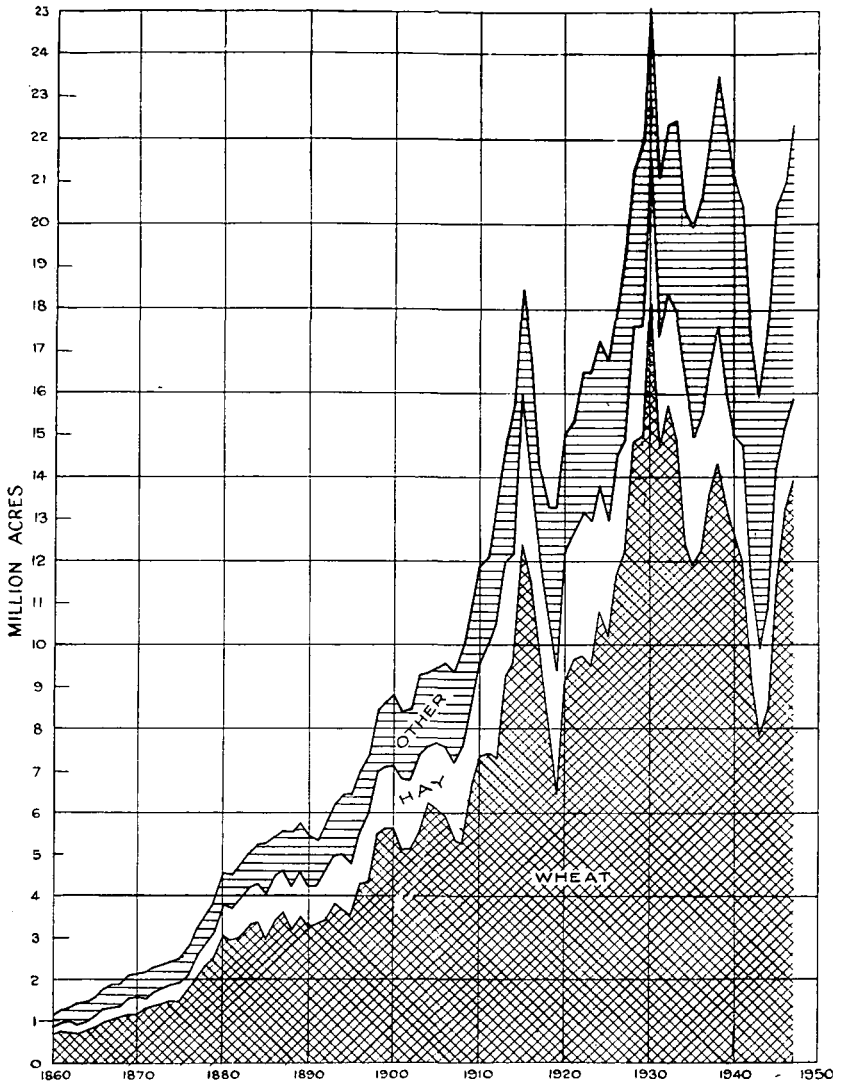
6. **World Production.**—The world's production of oats for the year 1948, as compiled by the Food and Agriculture Organization of the United Nations, amounted to 4,326 million bushels. This quantity was harvested from 135 million acres, and represents an average yield of 32.04 bushels per acre. In comparison with this average return per acre, that of Australia for the same period (19.33 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 period 1935–39 and for each of the five years ended 1948.

**OATS : WORLD PRODUCTION.**

Year.				Area.	Production.	Average Yield per acre.
				Million Acres.	Million Bushels.	Bushels.
Average 1935–1939 .. ..	..	..	..	139	4,336	31.26
1944 .. ..	..	..	..	134	4,045	30.19
1945 .. ..	..	..	..	128	3,865	30.20
1946 .. ..	..	..	..	129	3,920	30.39
1947 .. ..	..	..	..	128	3,672	28.69
1948(a) .. ..	..	..	..	135	4,326	32.04

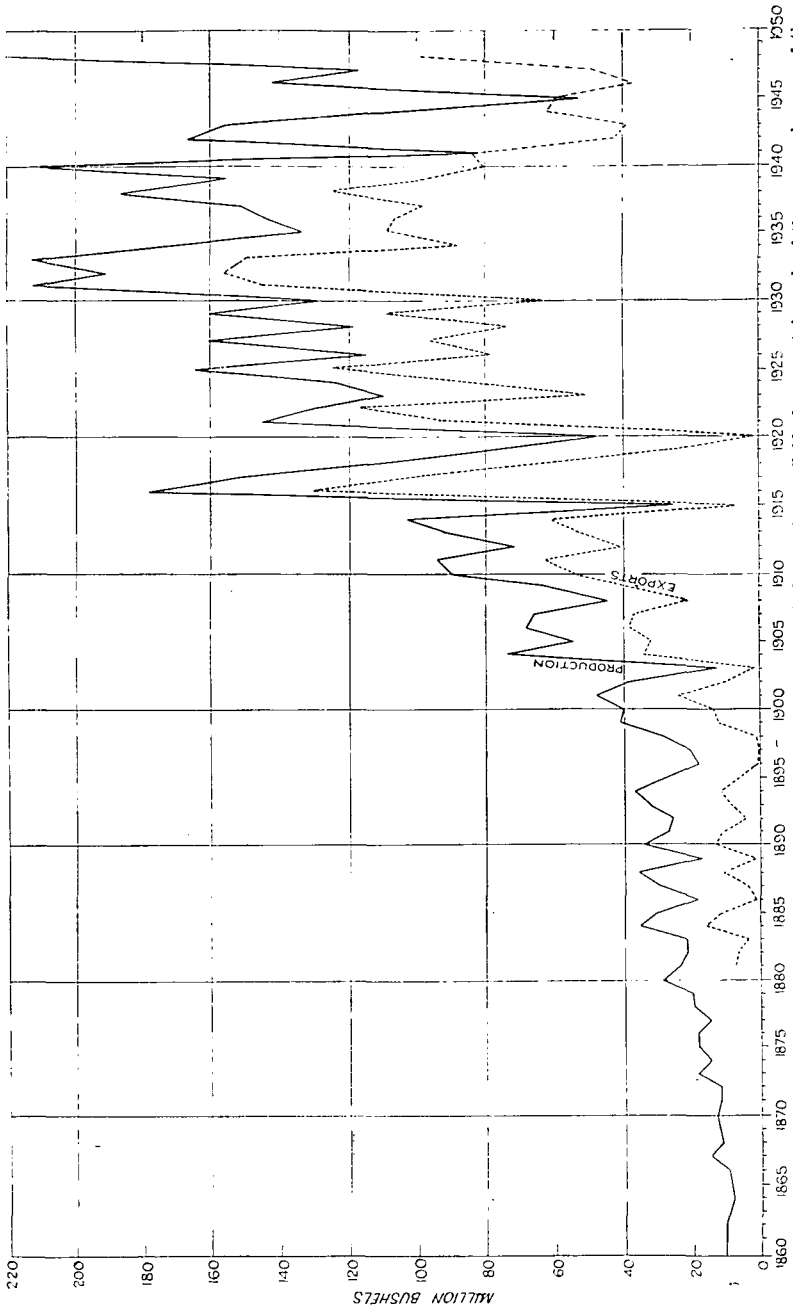
(a) Preliminary. Subject to revision.

AREA OF CROPS—AUSTRALIA, 1860-61 TO 1947-48.



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 1947-48.



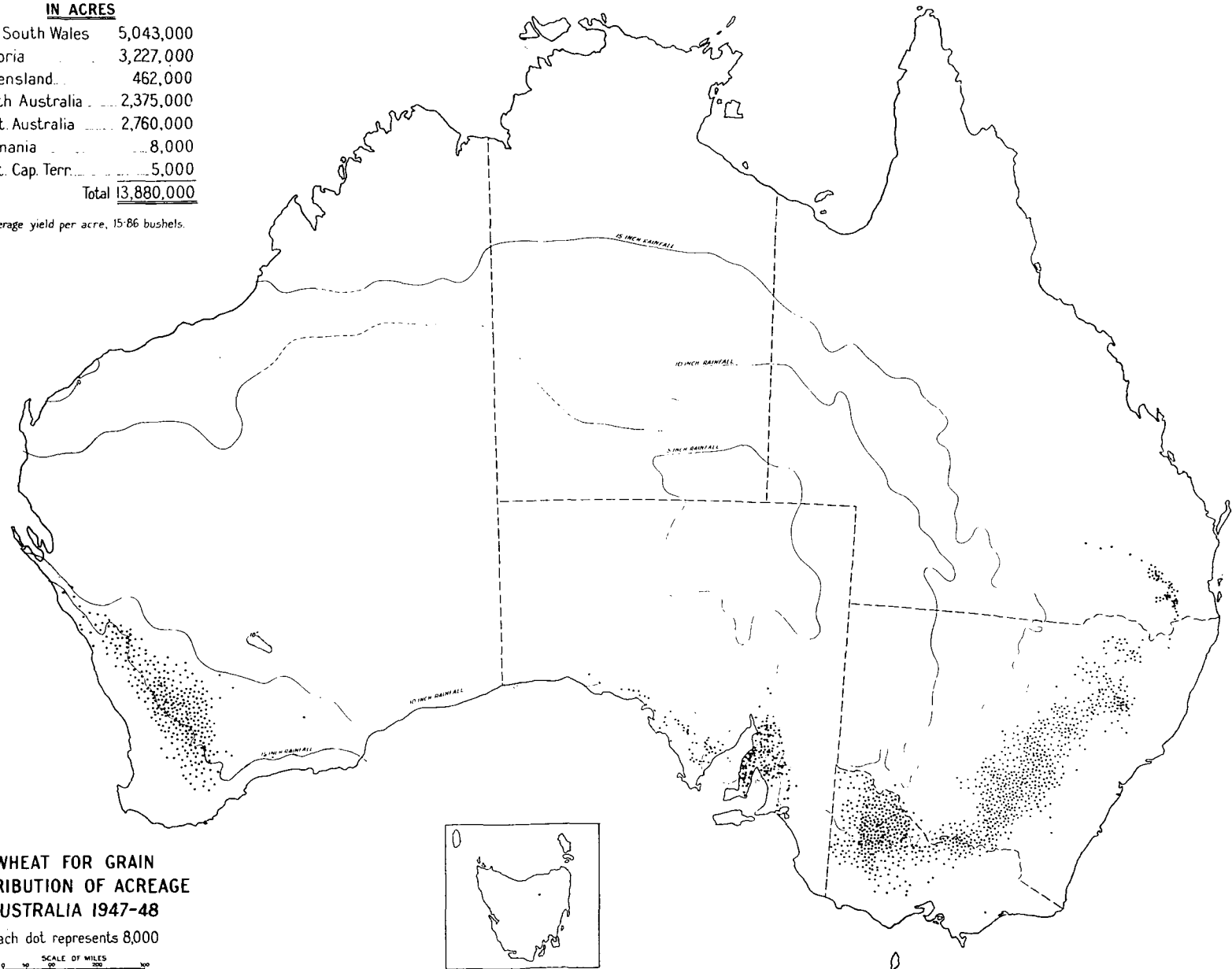
NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.



**AREA UNDER WHEAT FOR GRAIN  
IN ACRES**

New South Wales	5,043,000
Victoria	3,227,000
Queensland	462,000
South Australia	2,375,000
West. Australia	2,760,000
Tasmania	8,000
Aust. Cap. Terr.	5,000
<b>Total</b>	<b>13,880,000</b>

Average yield per acre, 15.86 bushels.



**WHEAT FOR GRAIN  
DISTRIBUTION OF ACREAGE  
AUSTRALIA 1947-48**

Each dot represents 8,000

SCALE OF MILES  
0 50 100 200

## § 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 1947-48 season being 214,682 acres, or 96 per cent. of the total for Australia. Of the balance, Victoria contributed 7,968 acres and Western Australia 90 acres. The climate of Tasmania is generally unsuitable for the growing of maize for grain although 7 acres were sown in this State in 1947-48. In the States mentioned the crop is also grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Average Yield.**—(i) *Area and Production.* Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only about 284,000 acres during the past decennium. Compared with the previous year, the area in 1947-48 decreased by 36,990 acres and was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

The area and production of maize for grain in each State for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are given in the following table :—

MAIZE FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA (ACRES.)								
Average 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1943-44 ..	103,237	6,598	172,722	..	105	19	..	282,681
1944-45 ..	94,107	4,544	158,170	..	125	9	..	256,955
1945-46 ..	92,416	6,809	136,445	..	48	11	..	235,720
1946-47 ..	1,0038	8,107	141,487	..	98	6	2	259,738
1947-48 ..	6,979	7,068	127,703	..	90	7	1	222,748
Average 1938-39 to 1947-48 ..	108,783	10,358	165,036	11	68	5	1	284,262
PRODUCTION ('000 BUSHELS). (a)								
Average 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1943-44 ..	2,769	151	4,512	..	1	..	..	7,433
1944-45 ..	2,437	165	3,859	..	2	..	..	6,463
1945-46 ..	2,561	328	2,860	..	..	..	..	5,720
1946-47 ..	2,507	357	2,943	..	1	..	..	5,808
1947-48 ..	2,356	324	3,487	..	1	..	..	6,168
Average 1938-39 to 1947-48 ..	2,837	338	3,697	..	1	..	..	6,873

(a) 56 lb. per bushel.

The greatest production of maize in Australia was in 1910-11 when over 13,000,000 bushels were recorded. The production in 1947-48 amounted to 6,168,000 bushels compared with the average of 6,873,000 bushels for the decennium ended 1947-48.

(ii) *Average Yield.* (a) *Australia.* The following table gives particulars of the average yields per acre of the maize crops of the States for the seasons 1943-44 to 1947-48, and for the ten-year periods ended 1938-39 and 1947-48 :—

**MAIZE FOR GRAIN : AVERAGE YIELD PER ACRE.**  
(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	26.74	34.28	21.84	29.84	10.02	..	8.48	24.53
1943-44 ..	26.82	22.80	26.12	..	11.89	6.63	..	26.29
1944-45 ..	25.90	36.39	24.40	..	12.34	14.11	..	25.15
1945-46 ..	27.71	45.22	20.96	..	9.75	2.45	..	24.30
1946-47 ..	22.78	44.02	20.80	..	7.99	10.17	15.00	22.36
1947-48 ..	27.10	40.66	27.30	..	7.17	15.73	11.00	27.69
Average 1938-39 to 1947-48 ..	26.08	32.65	22.40	25.48	11.49	8.67	8.09	24.18

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.

(b) *Various Countries.* The average for Australia for the past ten years was 24.18 bushels per acre. During 1947 the United States of America averaged 28.40 bushels, China Proper, 21.53 bushels, Argentina, 38.83 bushels, Rumania, 19.52 bushels and India, 10.89 bushels per acre.

3. *Price of Maize.*—The average wholesale price of maize in the Melbourne market is shown in the following table :—

**MAIZE : AVERAGE PRICE, MELBOURNE.**  
(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Average price per bushel ..	(a) 4 6½	8 0	8 4	8 5	8 6	8 6

(a) Sydney.

4. *Value of Crop.*—The values of the crop for the seasons 1946-47 and 1947-48 were as follows :—

**MAIZE FOR GRAIN : VALUE OF CROP, 1946-47 and 1947-48.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1946-47—								
Aggregate value ..£	927,040	146,416	1,044,458	..	646	40	11	2,118,611
Value per acre ..	£8/8/6	£18/1/3	£7/7/8	..	£6/11/10	£6/13/4	£5/10/0	£8/3/2
1947-48—								
Aggregate value ..£	873,940	162,467	1,303,326	..	503	60	4	2,340,300
Value per acre ..	£10/0/11	£20/7/10	£10/4/1	..	£5/11/9	£8/11/5	£4/0/0	£10/10/2

5. *Maize Products.*—Imports of cornflour into Australia are negligible. Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal countries of destination being New Zealand and the Pacific Islands. In 1947-48 3,417,133 lb., valued at £104,944, were exported, compared with an

annual average of 36,761 lb., valued at £364, during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat.

6. **Oversea Imports and Exports.**—Details of the imports and exports of maize for the five years ended 1947-48 compared with the five-yearly averages ended 1938-39 are shown below.

#### MAIZE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average 1934-35 to 1938-39 .. ..	20,609	4,209	57,432	8,571	36,823	4,362
1943-44 .. ..	613	1,603	5,166	2,321	4,553	718
1944-45 .. ..	4	1	4,682	2,237	4,678	2,236
1945-46 .. ..	14	140	411	899	397	759
1946-47 .. ..	389	871	1,468	6,147	1,079	5,276
1947-48 .. ..	313	1,036	547,536	627,565	547,223	626,529

7. **World Production.**—The following table furnishes particulars of the world's acreage, production and average yield per acre of maize, according to records published by the Food and Agriculture Organization of the United Nations :—

#### MAIZE : WORLD PRODUCTION.

Year.				Area.	Production.	Average Yield per Acre.
				Million Acres.	Million Bushels.	Bushels.
Average 1935-1939 .. ..	..	..	..	216	4,725	21.88
1944 .. ..	..	..	..	215	5,240	24.37
1945 .. ..	..	..	..	209	4,752	22.74
1946 .. ..	..	..	..	214	5,209	24.34
1947 .. ..	..	..	..	215	4,772	22.20
1948 (a) .. ..	..	..	..	214	5,976	27.93

(a) Preliminary. Subject to revision.

The United States of America is the most important maize-producing country in the world and during the four years ended 1948 the area sown to maize in that country averaged 86.5 million acres or 40.6 per cent. of the world total. During the same period production averaged 3,100 million bushels or about 60 per cent. of the world total. 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.

### § 7. Barley.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* The area sown to barley for grain expanded considerably during the ten years preceding the 1939-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44 but the area sown has increased in succeeding years and reached the record level of 839,000 acres in 1947-48. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 67 per cent. of the Australian acreage in 1947-48. Victoria was next in importance with 20 per cent. leaving a balance of about

13 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain; small areas 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 years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table :—

### BARLEY FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average 1929-30 to 1938-39	11	107	8	331	31	7	..	495
1943-44 ..	20	83	13	262	61	4	..	443
1944-45 ..	28	129	15	360	76	6	..	614
1945-46 ..	29	134	21	442	66	7	..	699
1946-47 ..	27	138	9	502	66	6	..	748
1947-48 ..	23	165	17	562	63	9	..	839
Average 1938-39 to 1947-48 ..	22	150	13	434	67	6	..	692

### PRODUCTION ('000 BUSHEL). (a)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Average 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	1	8,553
1943-44 ..	380	1,078	250	5,057	723	95	6	7,589
1944-45 ..	122	359	319	3,185	884	159	1	5,029
1945-46 ..	496	1,744	520	7,566	666	123	2	11,117
1946-47 ..	107	2,322	68	8,424	519	156	..	11,596
1947-48 ..	519	3,577	433	15,393	745	219	..	20,856
Average 1938-39 to 1947-48 ..	301	2,174	251	7,961	768	148	1	11,604

(a) 50 lb. per bushel.

(ii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Tasmania and lowest in Western Australia. Details for each State during the seasons 1943-44 to 1947-48 and for the ten-year periods ended 1938-39 and 1947-48 are given in the following table :—

### BARLEY : YIELD PER ACRE.

(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 ..	16.62	18.44	16.67	17.29	11.89	25.21	18.88	17.29
1943-44 ..	18.91	12.95	19.38	19.34	11.80	27.54	17.20	17.14
1944-45 ..	4.33	2.79	21.01	8.85	11.61	29.42	2.90	8.19
1945-46 ..	17.16	13.00	24.70	17.12	10.03	18.28	21.42	15.90
1946-47 ..	4.01	16.82	7.52	16.78	7.88	24.88	..	15.50
1947-48 ..	22.13	21.78	25.18	27.32	11.79	26.79	19.50	24.87
Average 1938-39 to 1947-48 ..	13.64	14.51	19.99	18.36	11.38	24.67	13.59	16.78

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 7,961,000 and 2,174,000 bushels.

(iii) *Malting (2-row) and Other (6-row) Barley.* (a) *Season 1947-48.* In the following table details of the area sown to barley of the 2-row or malting variety and 6-row or feed variety, and production therefrom for the season 1947-48 are given by States :—

**BARLEY, MALTING (2-ROW) AND OTHER (6-ROW) : AREA AND PRODUCTION, 1947-48.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES.)								
Malting (2-row) ..	15	150	12	522	38	8	..	745
Other (6-row) ..	8	15	5	40	25	1	..	94
Total ..	23	165	17	562	63	9	..	839

PRODUCTION ('000 BUSHEL.)								
Malting (2-row) ..	356	3,254	311	14,359	455	201	..	18,936
Other (6-row) ..	163	323	122	1,004	290	18	..	1,920
Total ..	519	3,577	433	15,363	745	219	..	20,856

Taking Australia as a whole, about 89 per cent. of the area of barley for grain in 1947-48 was sown with malting, or 2-row, barley while the remainder consisted of 6-row, or feed varieties. The proportion, however, varied considerably in the several States. The disposal of barley during the season 1947-48 was as follows : malt works, 4,976,615 bushels ; flour and other grain mills, 889,876 bushels ; distilleries, 175,296 bushels ; exports, 8,050,016 bushels : leaving a balance of 6,764,129 bushels for feed, seed and other purposes.

(b) *Area, Production and Average Yield.* The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48.

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

Season.	Area. ( '000 Acres.)			Production. ( '000 Bushels.)			Average Yield per Acre. (Bush.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average 1929-30 to 1938-39 ..	428	67	495	7,480	1,073	8,553	17.49	16.03	17.29
1943-44 ..	357	86	443	6,397	1,192	7,589	17.89	13.96	17.14
1944-45 ..	500	114	614	4,188	841	5,029	8.38	7.38	8.19
1945-46 ..	593	106	699	9,581	1,536	11,117	16.15	14.52	15.90
1946-47 ..	663	85	748	10,558	1,038	11,596	15.92	12.27	15.50
1947-48 ..	745	94	839	18,936	1,920	20,856	25.43	20.46	24.87
Average 1938-39 to 1947-48 ..	588	103	691	10,178	1,426	11,604	17.30	13.81	16.78

During the past ten seasons the average area of barley of the malting, or 2-row class, was nearly six times the corresponding figures for barley of the 6-row, or feed class. The average yield per acre for the last ten-yearly period for malting barley was 25 per cent. higher than that for 6-row barley.

2. **Australian Barley Board.**—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board is responsible for the marketing and storage of barley, and, like the Australian Wheat Board, has appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in smaller producing States after 1941-42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

Particulars of the barley acquired and sold, and of advances made to growers by the Australian Barley Board in respect of the 1943-44 to 1947-48 crops are given in the following table. The Commonwealth Government did not acquire barley after the 1947-48 crop and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 crops of the two States. Details of this acquisition are also shown in the table below.

**AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC.,  
TO JANUARY, 1950.**

Pool.		Quantity Acquired.	Quantity Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade.		Total Payments to Growers.
				'000 bushels.	s. d.	
No. 5 (1943-44 Crop)	.. ..	3,340	3,356	4	5.75	649,579
No. 6 (1944-45 " )	.. ..	2,171	2,190	5	0	541,484
No. 7 (1945-46 " )	.. ..	6,716	6,782	6	0.17	1,962,049
No. 8 (1946-47 " )	.. ..	8,543	8,572	8	4.625	3,497,956
No. 9 (1947-48 " )	.. ..	17,238	(b) 17,243	614	8	612,411,683
No. 10 (1948-49 " )	.. ..	13,958	(b) 11,114	(b) 6	6	64,520,216

(a) Includes surplus in out-turn.

(b) Subject to revision.

3. **Prices.**—The average prices in the Melbourne market during each of the years 1938-39 and 1943-44 to 1947-48 are given in the following table :—

**BARLEY : AVERAGE MELBOURNE PRICES PER BUSHEL.**

(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Malting barley ..	3 5½	5 3	5 7½	6 1	6 1	6 5½
Cape barley ..	2 11½	4 6	4 10½	5 4	5 4	5 8½

4. **Value of Barley Crop.**—The estimated values of the barley crop for the seasons 1946-47 and 1947-48 and the value per acre are shown in the following table :—

**BARLEY FOR GRAIN : VALUE OF CROP(a), 1946-47 and 1947-48.**

Value.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47— Aggregate value £	39,550	811,317	17,610	3,798,946	136,968	42,540	..	4,846,931
Value per acre	£1/19/8	£5/17/7	£1/18/8	£7/11/4	£2/1/7	£6/15/11	..	£6/9/7
1947-48— Aggregate value £	184,620	2,500,808	148,610	13,113,942	291,667	59,590	12	16,299,249
Value per acre	£7/17/3	£15/4/8	£8/12/9	£23/6/4	£4/12/5	£7/6/3	£6/0/0	£19/8/9

(a) Excludes the value of straw.

5. *Imports and Exports.*—Australian exports of barley during the five years ended 1947-48 averaged 2,441,000 bushels, South Australia being the principal exporting State. Particulars of the Australian oversea imports and exports for the years 1943-44 to 1947-48 together with the average for the five years ended 1938-39 are shown in the following table :—

**BARLEY : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 Bushels.	£	'000 Bushels.	£	'000 Bushels.	£
Average 1934-35 to 1938-39 .. ..	1,483	261,730	3,279	483,246	1,796	221,516
1943-44 .. ..	..	4	998	205,790	998	205,786
1944-45 .. ..	..	..	199	57,277	199	57,277
1945-46 .. ..	953	219,071	702	359,741	-251	140,670
1946-47 .. ..	..	..	2,256	1,636,020	2,256	1,636,020
1947-48 .. ..	..	1	8,050	8,134,000	8,050	8,133,999

NOTE.—Minus sign (—) denotes net imports.

In addition to barley grain, there is also an export of Australian pearl and scotch barley, the total for 1947-48 amounting to 27,588,057 lb., valued at £884,919, and consigned mainly to Italy, Singapore and India.

6. *Malt.*—(i) *Production.* The production of malt in Australia is sufficient to meet local requirements and to provide a margin for export as indicated below. Details of the quantity of grain used and the production of barley and other malt are given in the following table.

**MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.**

Year.	Barley Malt.		Wheaten and Oaten Malt.	
	Grain used.	Malt produced.	Grain used.	Malt produced.
	Bushels.	Bushels.(a)	Bushels. (b)	Bushels.(a)
1938-39 .. ..	3,729,730	3,620,909	..	111,728
1943-44 .. ..	3,915,925	3,822,215	221,739	196,153
1944-45 .. ..	3,568,981	3,512,957	291,909	286,844
1945-46 .. ..	3,734,780	3,596,004	241,992	229,811
1946-47 .. ..	4,669,729	4,563,920	173,772	158,387
1947-48 .. ..	4,976,615	4,879,145	186,772	170,877

(a) 40 lb. per bushel.

(b) Not available.

(ii) *Imports and Exports.* The surplus production of malt in Australia, after meeting local requirements, is shipped chiefly to the Far East and New Zealand. Details of imports and exports for the years 1943-44 to 1947-48, together with the average for the five years ended 1938-39 are given in the next table :—

**MALT : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average 1934-35 to 1938-39 ..	248	133	108,798	37,780	108,550	37,647
1943-44 .. ..	..	..	19,695	9,756	19,695	9,756
1944-45 .. ..	..	..	27,390	12,521	27,390	12,521
1945-46 .. ..	..	..	15,040	6,590	15,040	6,590
1946-47 .. ..	..	..	20,673	8,023	20,673	8,023
1947-48 .. ..	..	..	12,920	14,159	12,920	14,159



7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. World production in 1948 is placed at 2,388 million bushels, the main producers being U.S.S.R. (Russia), China and the United States of America. Australian production in that year was less than one per cent. of the world total.

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 Food and Agriculture Organization of the United Nations :—

**BARLEY : WORLD PRODUCTION.**

Period.					Area.	Production.	Average Yield per Acre.
					Million Acres.	Million Bushels.	Bushels.
Average 1935-1939	..	..	..	..	114.2	2,338	20.47
1944	..	..	..	..	108.6	2,180	20.07
1945	..	..	..	..	105.3	1,911	18.15
1946	..	..	..	..	103.0	2,016	19.57
1947	..	..	..	..	110.7	2,122	19.17
1948(a)	..	..	..	..	116.1	2,388	20.57

(a) Preliminary. Subject to revision.

### § 8. Rice.

Rice growing is almost entirely concentrated in Asia and the extent to which this crop is grown in other countries is relatively small. In Australia experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales for a number of years before 1924-25, but it was not until that year that an attempt was made to grow the crop on a commercial basis, 16,240 bushels being produced 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 production soon equalled Australian requirements and later provided a margin for export.

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 meet to decide the maximum area which growers may plant in the following season. Because of war-time demands the areas sown were expanded, but the extent of any expansion is determined by the limits imposed by the quantity of water available.

Consequent upon the outbreak of war in the Pacific in 1941 and the enemy occupation of the rice producing countries north of Australia, the demand for rice was so great as to be beyond the capacity of the industry. From August, 1942 civilian consumption in Australia was prohibited, except in the case of invalids, hospitals, resident Asiatics and other priorities, and the total production was diverted to service needs and for the feeding of natives in the south-west Pacific area. Towards the end of 1950 the distribution of rice reverted to the trade, and supplies have been made available for general consumption.

For the five years ended 1938-39 the area sown to rice in the Murrumbidgee Irrigation Area averaged 22,800 acres. No marked expansion occurred until after Japan's entry into the war in 1941. The area was increased to 34,300 acres in 1942-43 and to 36,500

acres in 1943-44. This expansion was not sufficient to meet the war-time demand and new areas in the Wakool and Berenambah Irrigation Districts of New South Wales were developed, bringing the total area for the State and for Australia to 40,690 acres in 1943-44. Owing to water shortage the area sown in 1944-45 fell to 24,596 acres, but rose to 28,372 acres in 1945-46 and to 31,995 acres in 1946-47. A decline to 26,208 acres was recorded in 1947-48. The production of rice in the Wakool District was suspended in 1946-47 and 1947-48 but was resumed in 1948-49.

The production of paddy rice reached its highest level in 1943-44 with more than 4 million bushels or an average yield of just under 100 bushels per acre. In 1944-45 it dropped to nearly 1.7 million bushels or 68.8 bushels per acre due to water shortage arising from severe drought conditions. In 1947-48 production amounted to 2.7 million bushels or an average of 102.1 bushels per acre.

Prior to 1938-39 the greater part of Australia's export of rice was consigned to the United Kingdom, but, because of shortages in Pacific areas arising from war damage in south-east Asia, exports from Australia have been diverted mainly to the islands in this region.

Details relating to area, production, and trade for the years 1943-44 to 1947-48 compared with the averages for the years 1934-35 to 1938-39 are shown in the following table :—

**RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA.(a)**

Year.	No. of Growers.	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (b)		Uncleaned.	Cleaned.	Uncleaned.	Cleaned.
		Acres.	'000 Bushels.c	£'000.	Bushels.	Centals.	Centals.	Centals.	Centals.
Average 1934-35 to 1938-39 ..	(d) 313	22,823	2,274	450	99.66	2,124	38,272	9,357	271,851
1943-44 ..	364	40,690	4,015	983	98.67	1	3,258	259,230	531,158
1944-45 ..	330	24,596	1,693	416	68.82	..	..	262,429	188,815
1945-46 ..	329	28,372	2,735	672	96.40	..	420	344,874	222,485
1946-47 ..	350	31,995	2,978	892	93.08	13	6	28,419	530,985
1947-48 ..	349	26,208	2,676	950	102.12	4	1	4,763	622,208

(a) Rice growing in Australia has been confined to New South Wales.

(b) Excludes the value of straw.

(c) 42 lb. per bushel.

(d) 1938-39 figure, previous years not collected.

## § 9. Sorghum for Grain.

1. **Area, Production and Average Yield.**—The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40 but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to live-stock and is becoming an important source of supply for supplementing other coarse grains for the feeding of live-stock. Other sorghums are grown in Australia mainly as green fodder, hay and for the production of brush for broom manufacture. Details of these are included in § 14 and § 19 hereinafter. Particulars of the area and production of sorghum grown for grain are given in the following table.

## GRAIN SORGHUM : AREA, PRODUCTION AND YIELD, AUSTRALIA.

Year.	Area.			Production.			Average Yield per Acre.		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939-40 ..	(a)	4,397	b 4,397	(a)	57,936	b 57,936	(a)	13.17	b 13.17
1943-44 ..	(a)	54,685	b 54,685	(a)	1,333,073	b 1,333,073	(a)	24.30	b 24.30
1944-45 ..	8,393	54,709	63,102	126,372	1,110,477	1,236,849	15.06	20.30	19.60
1945-46 ..	6,248	49,451	55,699	100,182	918,780	1,018,962	16.03	18.58	18.29
1946-47 ..	51,868	68,775	120,643	629,097	1,295,442	1,924,539	12.13	18.84	15.95
1947-48 ..	24,680	116,079	140,759	467,412	3,335,322	3,802,734	18.94	28.73	27.01

(a) Not available.

(b) Queensland only.

2. **Queensland-British Food Corporation Project.**—Early in 1948 an agreement was entered into between the Queensland Government and the Overseas Food Corporation of the United Kingdom Government to develop selected areas of Central Western Queensland for the growing of grain sorghum for pig-raising in Queensland and/or for export to the United Kingdom, and for sunflower and possibly other oilseed production. The Queensland-British Food Corporation was established in April, 1948 with head-quarters in Brisbane, some 300,000 acres of land being initially acquired for the project. The land acquired comprises the pastoral property known as "Peak Downs" and other similar properties in the Central Western District of the State and is estimated to embrace about 180,000 acres of arable land. The first year's operations of the Corporation consisted of developmental work, the seedling of 29,286 acres of grain sorghum and the sowing of small areas with sunflower and other experimental crops on the "Peak Downs" property for 1949 cropping. The ultimate target of the Corporation is the establishment of 250,000 acres under cultivation and the raising of pigs on an appropriate scale for export to Britain. In addition, it is planned to run other stock on areas of the properties acquired by the Corporation which are suitable only for grazing.

## § 10. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the principal other grain and pulse crops grown in Australia are navy beans, blue peas and rye.

The areas of crops of blue peas and navy beans for the season 1947-48 were 7,662 acres and 3,598 acres respectively, giving yields of 4,431 tons and 653 tons, or averages of 0.58 tons and 0.18 tons respectively per acre. Navy beans are grown chiefly in New South Wales, Queensland and Victoria in that order, but in other States the quantity produced is negligible. The production of blue peas is almost entirely restricted to Tasmania which now accounts for over 90 per cent. of the total area and production for Australia. Blue 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 1947-48 was 36,072 acres, yielding 181,937 bushels, or an average of 5.04 bushels per acre, as compared with the average of 6.85 bushels for the last ten seasons. Of the total area sown to rye in 1947-48, about 69.4 per cent. was in South Australia, 22.6 per cent. in Victoria, and 5.5 per cent. in Western Australia.

## § 11. Potatoes.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* Victoria possesses peculiar advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavorable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 80 per cent. of the total for Australia in 1947-48.

The area sown and production of potatoes in each State during the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown hereunder :—

## POTATOES : AREA SOWN AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA SOWN (ACRES).								
Average 1929-30 to 1938-39 .. ..	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1943-44 .. ..	30,067	70,430	14,609	8,958	7,375	60,500	136	192,075
1944-45 .. ..	34,796	83,238	18,173	12,562	11,735	81,092	207	241,803
1945-46 .. ..	22,865	63,000	15,216	8,854	9,781	56,245	118	176,079
1946-47 .. ..	21,309	56,400	10,536	6,191	6,961	43,227	105	144,729
1947-48 .. ..	21,911	59,400	10,664	6,202	6,955	40,382	115	145,629
Average 1938-39 to 1947-48 .. ..	22,706	52,838	12,266	6,841	7,100	44,698	93	146,542

## PRODUCTION (TONS).

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 .. ..	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1943-44 .. ..	65,655	217,380	30,717	35,991	39,552	217,800	960	599,055
1944-45 .. ..	80,587	305,216	33,644	64,154	51,190	345,232	1,026	881,049
1945-46 .. ..	61,768	230,749	33,605	35,097	47,672	236,140	575	645,666
1946-47 .. ..	61,303	223,782	22,599	29,212	36,042	170,621	518	544,077
1947-48 .. ..	65,535	184,882	29,299	34,181	40,603	142,746	716	497,967
Average 1938-39 to 1947-48 .. ..	56,851	186,152	25,776	32,096	35,242	167,610	452	504,179

The area sown to potatoes averaged 129,605 acres during the ten years ended 1938-39 and rose to 146,542 acres for the decennium ended 1947-48. After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes rose rapidly and reached a peak of 241,803 acres in 1944-45. This was followed by a sharp fall to 176,079 acres in 1945-46 and to 144,729 acres in 1946-47. The area sown in 1947-48 was 145,629 acres.

The expansion during the war years was necessary in order to meet the large demand for potatoes by Australian and Allied Servicemen based upon Australia and to maintain supplies for civil needs. As a result, production rose to the record level of 881,049 tons in 1944-45. The production recorded for 1947-48 represented a decline of 43.5 per cent. from the war-time peak.

(ii) *Average Yield.* Average yields for each State for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown hereunder :—

POTATOES : AVERAGE YIELD PER ACRE.  
(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 .. ..	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1943-44 .. ..	2.18	3.09	2.10	4.02	4.14	3.60	7.06	3.12
1944-45 .. ..	2.32	3.67	1.85	5.11	4.36	4.26	4.96	3.64
1945-46 .. ..	2.70	3.66	2.21	3.96	4.87	4.20	4.87	3.67
1946-47 .. ..	2.88	3.97	2.14	4.72	5.18	3.95	4.93	3.76
1947-48 .. ..	2.99	3.11	2.75	5.51	5.84	3.53	6.23	3.42
Average 1938-39 to 1947-48 .. ..	2.50	3.52	2.10	4.69	4.96	3.76	4.86	3.44

Compared with the average yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1946-47 averaged 5.81 tons per acre from an area of about 20,000 acres, as compared with 3.76 tons per acre in Australia from 144,729 acres.

(iii) *Relation to Population.* The average annual production of potatoes for the last five seasons was 85 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 almost 18 cwt. due to the abnormally high production during the war years, in one of which, 1944-45, it averaged 1.4 tons per head. Details for each State for the 1938-39 and 1943-44 to 1947-48 seasons are as follows:—

**POTATOES : PRODUCTION PER 1,000 OF POPULATION.**  
(Tons.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1938-39 ..	14	43	19	31	57	377	9	40
1943-44 ..	23	109	29	58	63	893	69	82
1944-45 ..	28	152	31	103	105	1,402	71	120
1945-46 ..	21	114	31	55	97	947	39	87
1946-47 ..	21	110	21	46	73	669	32	72
1947-48 ..	22	89	26	52	80	545	40	65

2. *Gross Value of Potato Crop.*—The estimated gross value of the potato crop of each State for the seasons 1946-47 and 1947-48 is given in the following table:—

**POTATOES : VALUE OF CROP, 1946-47 and 1947-48.**

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value	904,220	2,479,641	357,817	398,312	453,300	2,132,763	7,640	6,733,693
Value per acre	£42/8/8	£43/19/4	£33/19/3	£64/10/0	£65/2/5	£49/6/9	£72/15/3	£46/10/6
1947-48—								
Aggregate value	1,032,180	2,251,590	468,784	446,944	548,208	1,784,320	11,273	6,543,299
Value per acre	£47/2/2	£37/18/1	£43/19/2	£72/1/3	£78/17/0	£44/3/8	£98/0/6	£44/17/3

3. *Consumption.*—The annual consumption of potatoes in Australia during each of the three years 1946-47 to 1948-49 amounted to 446,600 tons, 450,200 tons and 403,500 tons respectively, or 133.0 lb. 132.0 lb. and 115.9 lb. per head of population respectively. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938-39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. *Australian Potato Committee.*—Full details of the war-time potato marketing scheme operated under the National Security (Potatoes) Regulations by the Australian Potato Committee were shown on p. 929 of Official Year Book No. 37. The Committee ceased to function as from the close of the 1947-48 season.

In the following table details of the quantities of potatoes received and the manner of their distribution are given for the years ended 31st October, 1944 to 1948 according to the records of the Committee. The details shown exclude quantities which did not come within the Committee's control.

# AUSTRALIAN POTATO COMMITTEE : RECEIVALS AND DISPOSALS OF POTATOES, AUSTRALIA.

(Tons.)

Particulars.	Year ended 31st October—				
	1944.	1945.	1946.	1947.	1948.
Quantity received from current crop .. ..	441,435	619,710	477,980	413,418	404,013
Carry-over from previous year ..	..	..	55,166	48,371	(a)30,000
<b>Total .. ..</b>	<b>441,435</b>	<b>619,710</b>	<b>533,146</b>	<b>461,789</b>	<b>434,013</b>
<b>Distribution—</b>					
Human consumption ..	394,660	412,224	414,743	405,674	399,001
Exports ..	5,226	25,005	22,287	15,498	17,007
Canning, including Meat Packs	16,473	19,490	7,078	1,530	1,652
Dehydration ..	21,758	59,025	29,270	148	60
Loss in weight, stock feed and waste ..	3,318	48,800	11,397	8,939	9,254
Carried to next year, including quantities in transit ..	..	55,166	48,371	(a)30,000	7,039
<b>Total .. ..</b>	<b>441,435</b>	<b>619,710</b>	<b>533,146</b>	<b>461,789</b>	<b>434,013</b>

(a) Partly estimated.

5. **Post-war Marketing.**—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947-48 crop.

The 1948-49 crops have been marketed by Boards established in the respective States under State legislation. Although the State Boards operate separately they have a working arrangement for the interstate marketing of potato crops.

6. **Imports and Exports.**—Prior to the 1939-45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war an expanded export trade has been developed, principally with Eastern countries including Singapore, Ceylon, Hong Kong and Indo-China. Details showing the trade for the years 1943-44 to 1947-48 and the period 1934-35 to 1938-39 are given in the following table:—

## POTATOES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Average 1934-35 to 1938-39 .. ..	Tons.	£	Tons.	£	Tons.	£
1938-39 .. ..	5	79	18,838	16,639	18,833	16,560
1943-44 .. ..	..	..	2,956	43,932	2,956	43,932
1944-45 .. ..	..	5	8,152	135,545	8,152	135,540
1945-46 .. ..	..	21	44,645	861,023	44,645	861,002
1946-47 .. ..	..	3	25,852	504,658	25,852	504,655
1947-48 .. ..	..	1	30,008	622,379	30,008	622,378

## § 12. Onions.

1. **Area, Production and Average Yield.**—Australia's supply of onions comes chiefly from Victoria which accounted for 62.5 per cent. of the total area and 71.6 per cent. of the quantity produced in 1947-48. Queensland came next with nearly 22.1 per cent. of the area and 14.9 per cent. of the production, leaving a balance of about 15.4 per cent. of area and 13.5 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion growing on a commercial scale. Onion production in 1947-48 was a record at 85,997 tons and exceeded the average for the ten years ended in 1947-48 by 39,102 tons or 75.9 per cent. The yield per acre in 1947-48 was 8.00 tons, this also being a record. Details of the area, production and average yield per acre are given in the following table for the years 1943-44 to 1947-48 together with averages for the ten-year periods ended 1938-39 and 1947-48.

## ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.U.T.	Aust.
AREA (ACRES).								
Average 1929-30 to 1938-39 ..	124	6,159	840	450	109	5	3	7,690
1943-44 ..	876	6,151	1,934	702	445	62	5	10,175
1944-45 ..	835	7,905	2,124	635	330	50	9	11,888
1945-46 ..	747	8,170	2,537	511	383	52	8	12,408
1946-47 ..	408	6,460	1,497	521	431	27	3	9,347
1947-48 ..	568	6,722	2,378	583	475	19	6	10,751
Average 1938-39 to 1947-48 ..	584	6,005	1,660	576	333	46	5	9,209
PRODUCTION (TONS).								
Average 1929-30 to 1938-39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1943-44 ..	2,774	27,994	7,665	5,274	2,945	237	33	46,922
1944-45 ..	2,587	47,277	8,677	5,429	2,377	137	28	66,512
1945-46 ..	2,939	46,338	9,939	4,779	2,720	54	24	66,793
1946-47 ..	1,710	28,244	6,089	4,774	3,562	203	15	44,597
1947-48 ..	2,158	61,540	12,843	5,350	4,000	75	31	85,997
Average 1938-39 to 1947-48 ..	1,831	33,413	6,319	4,741	2,434	135	22	48,895
AVERAGE YIELD PER ACRE. (TONS).								
Average 1929-30 to 1938-39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1943-44 ..	3.17	4.55	3.96	7.51	6.62	3.82	6.60	4.61
1944-45 ..	3.10	5.98	4.09	8.55	7.20	2.74	3.11	5.59
1945-46 ..	3.93	5.67	3.92	9.35	7.10	1.04	3.00	5.38
1946-47 ..	4.19	4.37	4.07	9.16	8.26	7.52	5.00	4.77
1947-48 ..	3.80	9.16	5.40	9.18	8.42	3.95	5.17	8.00
Average 1938-39 to 1947-48 ..	3.14	5.56	3.81	8.23	7.30	2.97	4.27	5.31

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 18.

2. **Gross Value of Onion Crop.**—The gross value of the onion crop is shown in the following table for the years 1938-39 and 1943-44 to 1947-48.

**ONIONS : GROSS VALUE, AUSTRALIA.**

Year.	Total Production.	Gross Value of Crop.	Average value per ton.	Average value per acre.
	Tons.	£	£ s. d.	£ s. d.
1938-39 .. .. .	18,372	305,744	16 12 10	45 11 7
1943-44 .. .. .	46,922	695,909	14 16 7	68 7 2
1944-45 .. .. .	66,512	1,129,246	16 19 7	94 19 10
1945-46 .. .. .	66,793	961,111	14 7 9	77 9 2
1946-47 .. .. .	44,597	744,332	16 13 10	79 12 8
1947-48 .. .. .	85,997	1,244,771	14 9 6	115 15 8

3. **Consumption.**—Details of the estimated total production and consumption of onions for the three years ended 1938-39 and each year 1946-47 to 1948-49 are shown in the following table.

**ESTIMATED TOTAL PRODUCTION AND CONSUMPTION OF ONIONS : AUSTRALIA.**  
(‘000 Tons.)

Particulars.	Average 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49.
Estimated total production(a) ..	46.3	51.6	94.0	65.1
Imports .. .. .	2.8	0.1	..	..
Total .. .. .	49.1	51.7	94.0	65.1
Exports (including Ships' Stores) ..	4.0	7.5	18.5	12.2
Estimated Wastage .. .. .	4.5	2.4 (b)	18.5	2.8
Estimated Consumption .. .. .	40.6	41.8	57.0	50.1
Estimated Consumption per Head of Population .. .. .	13.2	12.5	16.7	14.4

(a) Includes estimates for "self-suppliers."

(b) Includes quantities used for dehydration.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. During the five years ended 1947-48, 98 tons, valued at £1,952 were imported, principally from New Zealand, while during the same period the exports, which amounted to 36,263 tons, valued at £694,001, were shipped mainly to Canada and the Pacific Islands.

**§ 13. Hay.**

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. In most years hay is next in importance but in 1947-48 it was third to oats (for grain), the area of the latter crop constituting a record.



Nevertheless, the 1947-48 hay area represented 8.8 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 963. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area and production of hay of all kinds in the several States during the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown below:—

### HAY : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average 1929-30 to 1938-39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1943-44 ..	534,470	740,672	71,992	312,277	282,614	99,283	2,806	2,044,114
1944-45 ..	585,829	901,983	64,783	428,173	328,729	96,012	3,174	2,408,683
1945-46 ..	738,400	1,060,496	69,084	484,060	281,410	99,758	4,028	2,757,236
1946-47 ..	546,431	677,787	67,757	329,307	277,489	104,014	2,973	2,005,758
1947-48 ..	627,654	657,146	71,834	296,261	229,172	84,354	3,766	1,970,187
Average 1938-39 to 1947-48 ..	699,423	881,718	66,295	428,781	320,023	91,042	3,281	2,490,563
PRODUCTION (TONS).								
Average 1929-30 to 1938-39 ..	958,519	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1943-44 ..	735,641	963,103	138,080	407,078	314,359	153,834	4,777	2,716,872
1944-45 ..	371,153	704,246	115,263	316,802	338,912	145,911	1,231	1,993,518
1945-46 ..	990,747	1,444,250	126,258	521,957	287,476	117,079	5,208	3,492,975
1946-47 ..	380,567	985,224	106,103	432,955	280,252	169,384	2,701	2,357,186
1947-48 ..	978,236	1,042,438	132,694	443,659	267,901	137,648	5,182	3,007,758
Average 1938-39 to 1947-48 ..	792,130	1,092,696	116,407	506,520	346,960	132,756	4,126	2,991,595

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 under hay in Australia during the season 1915-16, 3,597,771 acres, was the largest on record, whilst the average for the decennium ended 1947-48 was 2,490,563 acres.

(ii) *Average Production per acre.* 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 16.6 cwt. per acre in 1944-45, while the highest was that of 30.6 cwt. in 1947-48. The average for the decennium was 24.0 cwt. Particulars for the several States for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are given hereunder:—

### HAY : PRODUCTION PER ACRE.

(Tons).

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1943-44 ..	1.38	1.30	1.92	1.30	1.11	1.55	1.70	1.33
1944-45 ..	0.63	0.78	1.75	0.74	1.03	1.52	0.39	0.83
1945-46 ..	1.31	1.36	1.83	1.08	1.02	1.17	1.29	1.27
1946-47 ..	0.70	1.45	1.57	1.31	1.01	1.63	0.91	1.18
1947-48 ..	1.56	1.59	1.85	1.50	1.17	1.63	1.38	1.53
Average 1938-39 to 1947-48 ..	1.13	1.24	1.76	1.18	1.08	1.46	1.26	1.20

(iii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1938-39 and the five seasons ended 1947-48 are given in the following table:—

## HAY : AREA UNDER VARIOUS KINDS GROWN.

(Acres.)

Varieties.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
<b>NEW SOUTH WALES—</b>						
Wheaten .. ..	559,437	198,066	279,120	389,918	263,557	278,361
Oaten .. ..	413,002	252,300	237,834	289,720	198,134	228,359
Lucerne .. ..	92,598	82,179	66,820	69,745	79,666	110,324
Other .. ..	3,888	1,925	2,055	9,017	5,074	10,610
Total .. ..	1,068,925	534,470	585,829	758,400	546,431	627,654
<b>VICTORIA—</b>						
Wheaten .. ..	258,839	71,467	104,488	114,165	65,354	52,020
Oaten .. ..	722,528	448,315	602,300	667,451	356,442	340,036
Lucerne .. ..	(a) 36,838	36,040	32,674	44,416	41,330	45,809
Other .. ..	86,353	184,850	162,521	234,464	214,661	219,281
Total .. ..	1,104,558	740,672	901,983	1,060,496	677,787	657,146
<b>QUEENSLAND—</b>						
Wheaten .. ..	6,628	6,891	10,377	13,015	9,573	7,388
Oaten .. ..	4,901	6,889	5,944	6,817	5,146	7,046
Lucerne .. ..	50,228	50,391	42,427	45,645	44,510	46,798
Other .. ..	3,975	7,821	6,035	3,607	8,528	10,602
Total .. ..	65,732	71,992	64,783	69,084	67,757	71,834
<b>SOUTH AUSTRALIA—</b>						
Wheaten .. ..	227,604	120,129	208,667	224,170	134,391	106,404
Oaten .. ..	270,425	157,352	184,603	211,361	159,681	149,461
Lucerne .. ..	4,805	4,157	3,079	8,902	4,940	6,800
Other .. ..	16,475	30,639	31,824	39,627	30,295	33,596
Total .. ..	519,309	312,277	428,173	484,060	329,307	296,261
<b>WESTERN AUSTRALIA—</b>						
Wheaten .. ..	165,153	117,149	153,441	104,798	108,378	76,625
Oaten .. ..	204,610	126,093	137,606	138,706	130,194	106,004
Lucerne .. ..	..	104	75	128	136	125
Other .. ..	38,513	39,268	37,607	37,778	38,781	46,418
Total .. ..	408,276	282,614	328,729	281,410	277,489	229,172
<b>TASMANIA—</b>						
Wheaten .. ..	979	3,879	3,719	4,779	3,607	3,032
Oaten .. ..	64,310	69,002	65,651	70,988	60,538	38,184
Lucerne .. ..	3	663	475	499	628	602
Other .. ..	14,667	25,739	26,167	23,492	39,241	42,536
Total .. ..	79,959	99,283	96,012	99,758	104,014	84,354

(a) Includes barley and rye hay.

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1947-48 were 44 per cent. for oats, 37 per cent. for wheat, 11 per cent. for lucerne, and 18 per cent. for other hay. In that year, oats hay predominated in the States of Victoria, South Australia and Western Australia, wheat hay in New South Wales, and lucerne in Queensland.

2. **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 seasons 1946-47 and 1947-48 :—

**HAY : VALUE OF CROP, 1946-47 and 1947-48.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value	3,065,430	4,122,770	1,286,607	1,198,395	874,432	1,016,300	22,200	11,586,134
Value per acre	£5/12/2	£6/1/8	£18/19/9	£3/12/9	£3/3/0	£9/15/5	£7/9/4	£5/15/6
1947-48—								
Aggregate value	7,059,990	5,303,943	1,405,612	1,523,014	890,448	874,060	38,625	17,095,692
Value per acre	£11/4/11	£8/1/5	£19/11/4	£5/2/10	£3/17/8	£10/7/3	£10/5/2	£8/13/6

3. **Farm Stocks of Hay.**—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1944 to 1948 are given in the table below.

**STOCKS OF HAY HELD ON FARMS.**

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1944 ..	522,294	859,302	107,375	403,002	140,494	89,010	2,246	2,123,723
1945 ..	189,986	460,369	71,162	200,790	184,321	82,736	606	1,189,970
1946 ..	504,521	1,026,581	86,722	307,494	156,841	78,414	2,123	2,162,666
1947 ..	226,926	1,019,728	58,507	388,993	156,908	113,740	950	1,965,752
1948 ..	825,821	1,059,842	96,158	478,142	164,425	95,147	3,676	2,723,211

The decrease in stocks at 31st March, 1945 resulted from the disastrous drought which occurred during 1944-45.

4. **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 1947-48, 9 tons were imported, while the exports amounted to 4,249 tons, valued at £49,458.

## § 14. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. These crops may be cut for feeding to live stock as green fodder or may be fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1947-48 the area under green fodder (1,705,321 acres) consisted of oats (868,026 acres), lucerne (192,426 acres), wheat (112,779 acres), sorghum (76,668 acres), maize (57,061 acres), barley (49,433 acres), rye (22,457 acres), sugar-cane (4,510 acres) and other crops (321,961 acres). Particulars concerning the area of green fodder in the several States during each of the years 1943-44 to 1947-48 are given in the following table together with the average for the periods of ten years ended 1938-39 and 1947-48 :—

**GREEN FODDER : AREA.**

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 .. ..	482,989	120,355	347,804	106,820	189,332	24,255	656	1,272,211
1943-44 .. ..	782,265	112,880	600,181	269,645	446,803	51,592	1,436	2,204,802
1944-45 .. ..	647,187	73,159	622,268	262,394	388,466	48,087	1,679	2,043,240
1945-46 .. ..	541,810	63,311	581,905	189,882	288,206	138,540	2,094	1,805,748
1946-47 .. ..	462,894	49,059	543,030	121,800	319,181	103,607	2,091	1,602,262
1947-48 .. ..	488,026	46,100	511,115	141,452	400,100	116,482	2,044	1,705,321
Average 1938-39 to 1947-48 .. ..	541,338	83,074	510,249	208,488	330,215	52,221	1,204	1,726,789

2. Value of Green Fodder Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1947-48, excluding Western Australia, may be taken approximately as £3,518,000.

### § 15. 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 344,914 acres of sugar-cane grown for this purpose in Australia for the season 1947-48, there were 328,486 acres or about 95 per cent. in Queensland. This latter area is made up of 215,378 acres cut for crushing, 14,705 acres out for plants, and 98,403 acres left to stand-over or young cane on areas not ready for cutting. Sugar-cane growing appears to have commenced 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 fell gradually 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 21,000 acres, the average for the ten seasons ended 1947-48 amounting to 17,781 acres. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, but, because of the contingencies arising from war, the area under sugar in that State has been lower since 1940-41, but an increase of over 6 per cent. occurred in 1947-48. In 1939-40 Queensland's acreage under cane reached its highest level, namely, 353,996 acres. The area of sugar-cane in Australia for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

SUGAR-CANE : AREA.  
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			Total.
	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.	
Average 1929-30 to 1938-39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1943-44 ..	8,240	7,092	281	220,932	86,312	13,563	229,172	93,404	13,844	336,420
1944-45 ..	6,771	6,702	270	219,652	80,177	12,406	226,423	86,879	12,676	325,978
1945-46 ..	5,943	8,860	263	229,736	80,007	12,151	235,679	88,867	12,414	336,060
1946-47 ..	7,563	8,283	341	219,394	75,507	13,305	226,957	83,790	13,646	324,393
1947-48 ..	7,113	8,955	360	215,378	98,403	14,705	222,491	107,358	15,065	344,914
Average 1938-39 to 1947-48 ..	8,499	9,013	269	235,975	80,483	12,269	244,474	89,496	12,538	346,508

(ii) *Productive and Unproductive Cane*. The areas shown in the preceding table do not include the small acreage cut for green fodder, which in Queensland in 1947-48 amounted to 4,030 acres. The whole area planted is not 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 ten seasons ended 1947-48 was 4,881,037 tons, and of raw sugar 696,790 tons. Particulars of the total production of cane and sugar for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are as follows:—

### SUGAR-CANE ; PRODUCTION OF CANE AND SUGAR.

(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
Average 1929-30 to 1938-39 .. ..	241,402	39,317	4,461,988	626,789	4,703,390	657,106
1943-44 .. ..	290,364	37,442	3,397,617	486,423	3,687,981	523,865
1944-45 .. ..	200,050	26,423	4,398,268	643,520	4,598,318	669,943
1945-46 .. ..	166,069	21,220	4,551,971	644,661	4,718,040	665,881
1946-47 .. ..	309,605	39,768	3,717,330	512,086	4,026,935	551,854
1947-48 .. ..	267,261	33,560	4,150,986	571,694	4,418,247	605,254
Average 1938-39 to 1947-48 .. ..	288,459	38,004	4,592,578	658,786	4,881,037	696,790

The production of raw sugar in Australia in 1947-48 amounted to 605,254 tons manufactured from 4,418,247 tons of cane, the maximum production for earlier years being 928,676 tons recorded in 1939-40. This decline in production arose from war-time contingencies such as labour shortage and insufficient fertilizers. In addition, variations in seasonal conditions were contributing factors. There was a remarkable recovery in sugar production in 1948-49, the record quantity of 942,899 tons of raw sugar (94 net titre) being crushed from 6,707,530 tons of cane.

Official annual data are not available regarding the total number engaged in the sugar industry in Queensland, other than the number of separate holdings growing cane (6,424 in 1947-48) and of employees in sugar mills (4,762 in 1947-48).

According to data obtained from the population census of 30th June, 1947, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland was as follows:—

### SUGAR-CANE : NUMBER OF PERSONS ENGAGED IN GROWING AND HARVESTING, CENSUS, 30th JUNE, 1947.

Particulars.	New South Wales.		Queensland.		Total Persons.
	Males.	Females.	Males.	Females.	
Employer .. ..	59	12	2,289	161	2,521
Self-Employer .. ..	274	5	4,199	71	4,549
Employee (on Wages or Salary) .. ..	697	2	6,921	28	7,648
Other (including not stated)	52	1	1,298	7	1,358
Total .. ..	1,082	20	14,707	267	16,076

(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 ten years ended 1947-48 were 18.51 tons for New South Wales, and 17.96 tons for Queensland. Similarly, the yields of sugar

per acre crushed for the same period were estimated at 2.44 tons and 2.58 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1947-48 were 19.97 tons and 2.85 tons respectively, as compared with 19.73 tons and 2.76 tons for the decennium ended 1938-39.

## SUGAR-CANE AND SUGAR : YIELD PER ACRE.

(Tons.)

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.
Average 1929-30 to 1938-39 .. ..	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1943-44 .. ..	35.24	4.54	7.76	15.38	2.21	6.99	16.09	2.29	7.04
1944-45 .. ..	29.55	3.90	7.57	20.02	2.93	6.83	20.31	2.96	6.86
1945-46 .. ..	27.94	3.57	7.83	19.81	2.81	7.06	20.02	2.83	7.09
1946-47 .. ..	40.94	5.26	7.79	16.94	2.33	7.26	17.74	2.43	7.30
1947-48 .. ..	37.57	4.72	7.96	19.27	2.65	7.26	19.86	2.72	7.30
Average 1938-39 to 1947-48 .. ..	33.94	4.47	7.59	19.46	2.79	6.97	19.97	2.85	7.01

(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 ten years ended 1947-48 it required on the average 7.01 tons of cane to produce 1 ton of sugar, or 14.27 per cent. of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. 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.

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) *Production and Utilization.* Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1946-47 to 1948-49 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include beet sugar. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

## RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stock.	Production —Raw.	Exports. (a)	Miscellaneous Uses. (b)	Consumption in Australia. (a)	
					Total. (c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average 1936-37 to 1938-39 .. ..	+ 6.2	779.3	453.3	11.2	326.6	106.5
1946-47 .. ..	-42.9	521.0	153.6	21.3	389.0	115.9
1947-48 .. ..	+42.9	633.2	140.3	22.1	427.9	125.4
1948-49 .. ..	+ 7.3	897.3	461.0	19.5	409.5	117.6

(a) Includes sugar content of manufactured products.  
in refining.

(c) In terms of refined sugar.

(b) Includes industrial uses and losses

(vii) *Consumption in Factories.* The quantity of sugar used in factories during 1938-39 and each of the years 1943-44 to 1947-48 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.

(Tons.)

Factories.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Aerated Waters and Cordials	11,810	24,593	25,757	26,509	28,394	27,508
Bacon .. .. .	267	357	367	310	342	344
Biscuits and Bakeries, including Cakes and Pastry ..	18,801	26,648	25,959	25,538	28,486	28,684
Breweries .. .. .	16,733	20,132	20,404	21,081	23,966	23,339
Cereal Foods .. .. .	1,287	1,422	1,413	1,112	1,154	1,140
Condensed and Concentrated Milk .. .. .	6,889	12,973	13,611	15,922	17,664	19,620
Confectionery, Ice Cream, etc.	26,926	38,979	39,193	41,493	49,703	47,305
Jams, Jellies and Preserved Fruit(a) .. .. .	40,537	71,610	67,625	70,026	74,546	88,686
Other(b) .. .. .	633	944	1,007	4,271	3,175	4,593
Total (c) .. .. .	123,883	197,658	195,336	206,262	227,430	241,219

(a) Includes Condiments, Pickles, etc. (b) Includes sugar consumed in the industrial and heavy chemicals and dehydrated fruit and vegetables industries. (c) Excludes raw sugar used in wineries and distilleries, details of which are not available for publication.

(viii) *Control of Cane Production in Queensland.* Agreements between the Commonwealth and Queensland Governments have fixed the price of sugar in Australia from time to time. Under the latest agreement, the wholesale price of refined sugar in each of the capital cities was fixed at £33 4s. per ton (4d. per lb. retail) for the five years ended 1951. On the 3rd December, 1947, the wholesale price fixed under this agreement was increased to £37 6s. 8d. per ton (4½d. per lb. retail).\* The net proceeds of all sugar sold in Australia and sugar sold abroad are pooled and a uniform price per ton is paid to the mills. 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 Government 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. During that year 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 received the full pool price for sugar up to the amount of their previous maximum production only. 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. during that period. In 1939, in view of the fact that the International Sugar Agreement imposed certain restrictions on the volume of Australian exports, the Queensland Parliament passed further legislation limiting the pool to 737,000 tons in respect of production in Queensland. Any production in excess of this was to be acquired at a penalty price. 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 Queensland Government, however, permitted the harvesting of the whole of the crops for the seasons 1939 to 1948. In 1948 the pool was limited to 874,000 tons.

\* See p. 991 for later increase.

2. **Sugar-beet.**—Victoria is the only State growing beet for sugar, although 5 tons of sugar-beet were produced from 1 acre in Tasmania during 1942-43. Particulars of acreage and production for Victoria for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

SUGAR-BEET : AREA AND PRODUCTION, VICTORIA.

Particulars.	Average 1929-30 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	Average 1938-39 to 1947-48.
Area sown .. acres	3,312	836	485	108	753	553	1,865
Production .. tons	36,694	6,975	3,200	975	9,170	6,362	14,061
Average yield per acre .. "	11.08	8.34	6.60	9.03	12.18	11.50	7.54
Sugar produced .. "	4,642	704	..	..	1,014	584	1,679

During the 1939-45 War the area under sugar-beet declined steadily from 4,268 acres in 1938-39 to 108 acres in 1945-46 but increased to 753 acres in 1946-47. There was a further decline to 553 acres in 1947-48. Much of this decline was due to the diversion, as a war-time measure, of many areas to the production of vegetables. The mill at Maffra ceased operations at the end of 1943 but re-opened to treat the 1946-47 crop.

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.**—Reference was made in Official Year Book No. 37 (pp. 940, 941) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. The agreement at present covers the period up to 31st August, 1951.

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 was to ensure 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 exporting country was given a basic annual export quota which would 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 was hoped that the International Sugar Council, which was established to administer the agreement would 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 could be increased, however, where the delivery from any British Colony fell short of its quota. In such circumstances, the deficiency could be allocated among other producing countries of the Empire including Australia.

This agreement, which normally would have expired on 31st August, 1942, has proved of great benefit to Australia. In 1943, fourteen of the original 21 Nations signed a protocol continuing the agreement for another two years ending 31st August, 1944. Six further protocols have since been signed, each extending the agreement for a period of one year, the last protocol extending the agreement to 31st August, 1950. The first protocol, signed in 1943 continued the agreement unchanged, while the later protocols



contained two new provisions. The first of these provisions was that during the period of the extension, the quotas fixed in the agreement should be inoperative. The second provision was that the signatories of the protocols recognized that revision of the agreement was necessary and should be undertaken when the time appeared opportune.

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 years 1938-39 and 1943-44 to 1947-48 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.	£
1938-39 .. ..	55.78	8 4 3	15 3 11	12,806,376
1943-44 .. ..	17.12	13 2 6	20 18 4	12,554,579
1944-45 .. ..	32.19	15 0 6	19 16 3	12,417,262
1945-46 .. ..	31.53	16 17 9	20 6 5	13,674,661
1946-47 .. ..	16.02	21 10 0	21 16 9	12,326,952
1947-48 .. ..	17.61	29 12 6	24 19 9	14,879,144

(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 1947-48 amounted to £216,000. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been 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.**—Particulars showing the imports and exports of cane sugar for the five years ended 1938-39 and each year 1943-44 to 1947-48 are as follows :—

**SUGAR : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Average 1934-35 to 1938-39 ..	23	505	377,930	3,480,632	377,907	3,480,127
1943-44 .. ..	..	..	95,826	1,523,786	95,826	1,523,786
1944-45 .. ..	..	4	114,011	1,853,628	114,011	1,853,624
1945-46 .. ..	..	3	150,972	3,059,599	150,972	3,059,596
1946-47 .. ..	..	23	117,379	2,717,252	117,379	2,717,229
1947-48 .. ..	..	21	100,351	3,062,450	100,351	3,062,429

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 amounts used for distilling, fuel, manure and other purposes will be found in Chapter XXIV. "Manufacturing Industry".

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 are shown in the following table.

### SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per ton.	Retail Price per lb.
	Home Consumption.	Exports. (a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1931 ..	26 19 0	9 7 0	18 2 11	19.7.15 to 15.1.16	25 10 0	3
1932 ..	25 2 3	8 5 9	18 17 9	16.1.16 to 30.6.17	29 5 0	3½
1933 ..	23 18 6	8 0 6	16 6 3	1.7.17 to 24.3.20	29 5 0	3½
1934 ..	24 0 0	7 11 3	15 13 9	25.3.20 to 30.6.20	49 0 0	6
1935 ..	24 0 0	7 18 9	16 5 11	1.7.20 to 31.10.22	49 0 0	6
1936 ..	24 2 0	7 19 0	15 7 4	1.11.22 to 30.6.23	42 0 0	5
1937 ..	24 0 0	8 6 0	15 7 6	1.7.23 to 21.10.23	42 0 0	5
1938 ..	24 0 0	8 4 3	15 3 11	22.10.23 to 31.8.25	37 11 4	4½
1939 ..	23 12 6	10 7 6	15 17 7	1.9.25 to 31.8.31..	37 6 8	4½
1940 ..	23 1 0	11 5 6	17 2 11	1.9.31 to 4.1.33 ..	37 6 8	4½
1941 ..	22 13 0	10 18 9	17 18 11	5.1.33 to 31.8.36..	33 4 0	4
1942 ..	22 14 6	10 16 3	18 18 5	1.9.36 to 31.8.41..	33 4 0	4
1943 ..	22 10 6	13 2 6	20 18 4	1.9.41 to 31.8.46..	33 4 0	4
1944 ..	22 2 0	15 0 6	19 16 3	1.9.46 to 3.12.47	33 4 0	4
1945 ..	21 18 0	16 17 9	20 6 5	4.12.47 to 28.10.49	37 6 8	4½
1946 ..	21 18 0	21 10 0	21 16 9	29.10.49 to 31.8.51	41 9 4	5
1947 ..	24 0 0	29 12 6	24 19 9			
1948 ..	23 1 0	28 2 0	25 8 6			

(a) Including "Excess" Sugar.

11. War and Post-war Arrangements.—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 preference on dominion sugar of £Stg. 3 15s. per ton under the existing tariff.

Similar agreements were negotiated for the disposal of the surplus raw sugar in subsequent seasons, the price in sterling currency per ton c.i.f. United Kingdom ports, basic 96° polarization being as follows:—1940 and 1941, £12 12s. 6d.; 1942, £13 15s.; 1943, £14 5s.; 1944, £15 5s. and 1945, £17 5s., inclusive of the existing preference of £3 15s. From the 1st January, 1946 the price was further increased by £Stg. 2 5s. per ton and the United Kingdom agreed to absorb an additional 12s. 6d. per ton on the freight cost. The price was further increased to £stg. 24 5s. per ton from 1st January, 1947 and to £stg. 27 5s. per ton from 1st January, 1948.

The United Kingdom is to continue the bulk purchase of exportable sugar from Dominions and Colonies up to and including 1952.

## § 16. 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. 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 New South Wales in the area of this crop. In

Western Australia an expansion of area under vineyards has occurred in recent years, but in Queensland, where vine-growing has been carried on for many years, little progress has been made. 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 years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

## VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	A.C.T.	Australia.
Average 1929-30 to 1938-39 ..	15,777	40,563	2,142	54,156	5,666	..	118,304
1943-44 ..	16,001	42,711	2,998	57,261	10,240	2	129,213
1944-45 ..	15,891	42,914	3,032	56,925	10,117	2	128,881
1945-46 ..	15,983	42,843	3,003	57,440	9,583	3	128,855
1946-47 ..	16,338	42,948	2,945	58,221	9,857	3	130,312
1947-48 ..	16,541	43,784	3,087	58,885	10,025	9	132,331
Average 1938-39 to 1947-48 ..	16,394	42,865	3,041	57,963	9,053	3	129,319

The total area of vines in Australia has shown a substantial expansion since 1860. This development has been interrupted periodically, decreases occurring in 1896, in 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, with minor interruptions, and the record area of 132,331 acres was reached in 1947-48. A slight decline occurred in each of the years 1943-44 to 1945-46, the acreage in the latter year being 128,855 acres.

(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.

During 1944 the Minister for Trade and Customs referred a number of matters to the Tariff Board for inquiry and report. Subsequently four reports were issued during 1944-45 which dealt with the following subjects, viz. :—Use of cane sugar in sauterne, spirit for fortification of wine, prices for grapes and fortifying spirit and control of liquor order.

(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. Production for the ten years ended 1947-48 averaged 20.9 million gallons compared with 16.3 million gallons produced during the ten years ended 1938-39. This seems to arise from two causes. In the first place, Australians are not a wine-drinking people; it is estimated that prior to the 1939-45 War they consumed approximately 4.1 million gallons only, or 0.6 gallons per head per annum, and while this had risen to 10,467,000 gallons (1.37 gallons per head of population) in 1947-48, the local market is nevertheless 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, was interrupted by the war. The loss of the United Kingdom

market due to the lack of shipping space placed the wine industry of Australia in a most difficult position, but this was partly offset by the increase in local consumption due to the availability of supplies, the restriction on the production of beer and the presence of large numbers of defence personnel.

Particulars of the Wine Export Bounty are shown in § 20 hereafter. The Wine Export Bounty Act 1930 which provided for payment at the rate of 1s. 9d. per gallon was replaced in 1934 by a new Act 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, subsequently extended to 28th February, 1947, was provided for under the Wine Export Bounty Act of 1939-1944. This Act was repealed by the Wine Export Bounty Act 1947 which made provision for payment of bounty, subject to certain conditions, on wine sold overseas prior to 30th October, 1946 and exported after 28th February, 1947.

The quantity of wine produced in the several States during the 1943-44 to 1947-48 seasons, together with the averages for the ten-year periods ended 1938-39 and 1947-48, is shown in the following table :—

**WINE : PRODUCTION.**  
( '000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average 1929-30 to 1938-39 ..	2,099	1,449	36	12,349	397	16,330
1943-44 ..	3,530	1,320	27	14,435	553	19,865
1944-45 ..	2,579	785	22	10,573	460	14,419
1945-46 ..	2,968	1,916	35	20,213	726	25,858
1946-47 ..	3,905	3,082	30	25,422	751	33,190
1947-48 ..	4,500	2,958	28	26,000	673	34,159
Average 1938-39 to 1947-48 ..	3,114	1,576	33	15,657	533	20,913

**2. Imports and Exports of Wine.**—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the 1939-45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war wine imports have been obtained from France. The imports for the five years ended 1947-48 compared with average imports for the years 1934-35 to 1938-39 are shown hereunder :—

**WINE : IMPORTS INTO AUSTRALIA.**

Year.	Quantity (Gallons).			Value (£).		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average 1934-35 to 1938-39 ..	8,119	28,566	36,685	20,245	19,332	39,577
1943-44 ..	..	755	755	..	1,200	1,200
1944-45 ..	100	..	100	132	..	132
1945-46 ..	40	479	519	213	1,433	1,646
1946-47 ..	1,719	1,585	3,304	7,909	3,041	10,950
1947-48 ..	14,768	4,158	18,926	54,098	8,282	62,380

(ii) *Exports.* Before the 1939-45 War practically all wine exported was sent to the United Kingdom, only 200,000 gallons (approximately) being sent elsewhere. Exports in 1947-48 totalled 2,688,366 gallons, of which the United Kingdom received 2,157,056 gallons; New Zealand, 268,557 gallons; Canada, 135,816 gallons; Japan, 24,479 gallons; and other countries 102,458 gallons.

Exports for the five years ended 1947-48 are shown in the following table in comparison with average exports during the five years ended 1938-39 :—

#### WINE : EXPORTS FROM AUSTRALIA.

Year.	Quantity (Gallons).			Value. (£)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average 1934-35 to 1938-39 ..	3,772	3,559,094	3,562,866	5,400	938,195	943,595.
1943-44 ..	10,306	1,235,095	1,245,401	6,966	415,966	422,932
1944-45 ..	6,254	1,544,714	1,550,968	7,735	587,563	595,298.
1945-46 ..	7,984	1,776,452	1,784,436	10,619	729,969	740,588
1946-47 ..	3,244	2,717,355	2,720,599	4,975	1,176,626	1,181,601
1947-48 ..	5,935	2,682,431	2,688,366	8,071	1,421,861	1,429,932

3. *Overseas Marketing of Wine.*—(i) *The Wine Overseas Marketing Act 1929-1945.* This Act was introduced at the request of the viticultural interests in Australia with the object of placing the overseas marketing of Australia's surplus wine on an orderly basis. The Wine Overseas Marketing Board was appointed to supervise the exports, and the sale and distribution after export, of Australian wine.

The name of the Board was changed to the Australian Wine Board in 1936. An amendment to the Act in 1945 made provision for eleven members on the Board, comprising five representatives of proprietary and privately-owned wineries and distilleries, two representatives of co-operative wineries and distilleries, three representatives of grape-growers supplying to wineries and distilleries, and one representative of the Commonwealth Government. No wine may be exported except by means of a licence which is issued under conditions recommended to the Minister by the Board; these include the withholding of shipments as directed by the Board. The Board has a London agency which advises on marketing conditions. The methods of marketing adopted by the Board have resulted in the widening of the distribution of Australian wines overseas.

(ii) *The Wine Grapes Charges Act 1929-1941.* This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. *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 seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are as follows :—

**TABLE GRAPES : PRODUCTION.**  
(Tons.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Average 1929-30 to 1938-39 .. ..	4,354	3,884	2,060	738	2,874	13,910
1943-44 .. ..	5,325	4,067	2,696	1,150	3,240	16,478
1944-45 .. ..	4,363	5,255	2,237	917	2,903	15,675
1945-46 .. ..	4,817	4,133	3,120	1,036	2,342	15,448
1946-47 .. ..	4,682	3,537	2,669	1,314	2,436	14,638
1947-48 .. ..	4,835	4,328	2,851	660	2,320	14,994
Average 1938-39 to 1947-48 .. ..	4,666	4,155	2,636	1,106	2,693	15,256

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table. The production of 103,410 tons for the 1943-44 season represents the greatest output recorded in any year. Due to adverse seasonal conditions, heavy crop losses occurred during the three succeeding years. Production in 1944-45 amounted to 68,857 tons, in 1945-46 to 73,840 tons and in 1946-47 to 65,197 tons. In 1947-48 it rose to 84,828 tons.

**RAISINS(a) AND CURRANTS : PRODUCTION.**  
(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average 1929-30 to 1938-39 .. ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1943-44 .. ..	7,719	1,488	48,851	9,087	20,739	10,457	835	3,334	78,144	25,266
1944-45 .. ..	5,053	1,064	33,076	6,858	12,344	6,806	674	2,892	51,147	17,710
1945-46 .. ..	6,859	922	42,995	6,415	8,819	4,467	815	2,528	59,488	14,352
1946-47 .. ..	5,523	814	37,215	6,088	8,246	2,797	719	3,795	51,703	13,494
1947-48 .. ..	6,944	1,079	47,160	8,086	11,358	6,682	544	2,975	66,006	18,822
Average 1938-39 to 1947-48 .. ..	6,587	1,192	42,559	8,238	13,482	7,612	668	2,848	63,296	19,890

(a) Sultanas and lexias.

5. *Production and Disposal of Dried Vine Fruit.*—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export overseas. Details of the quantities disposed of in Australia and overseas are given in the table below. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

**DRIED VINE FRUIT : QUANTITIES DISPOSED OF, AUSTRALIA.**  
(Tons.)

Season ended December—	Australian Consumption.	Overseas.					Grand Total.
		United Kingdom.	Canada.	New Zealand.	Other Countries.	Total.	
1943 .. ..	25,204	42,810	15,830	5,770	761	65,171	90,375
1944 .. ..	35,071	44,570	16,000	6,756	1,820	69,146	104,217
1945 .. ..	24,415	21,500	15,000	5,548	1,569	43,617	68,032
1946 .. ..	20,549	32,000	14,000	5,000	844	51,844	72,393
1947 .. ..	19,015	21,300	10,988	4,443	612	37,343	56,358
1948 .. ..	25,999	28,542	18,274	6,167	1,649	54,632	80,631
1949 .. ..	24,676	11,978	14,073	4,650	1,045	31,746	56,422

Source : Commonwealth Dried Fruits Control Board.

6. **Exports of Raisins and Currants.**—The following table shows the oversea exports of raisins and currants during each of the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39. As the quantities of imports were practically negligible they have been omitted.

**RAISINS AND CURRANTS : EXPORTS, AUSTRALIA.**

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Average 1934-35 to 1938-39 ..	43,191	1,686,447	15,054	548,838	58,245	2,235,285
1943-44 ..	56,039	2,449,050	18,994	714,315	75,033	3,163,365
1944-45 ..	56,418	2,647,719	20,994	828,330	77,412	3,476,049
1945-46 ..	30,022	1,547,688	9,307	403,645	39,329	1,951,333
1946-47 ..	35,248	1,913,574	5,606	243,508	40,854	2,157,082
1947-48 ..	31,364	1,795,358	10,066	468,684	41,430	2,264,042

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 chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1947-48 being 31,612 tons, 5,490 tons and 2,999 tons respectively. Exports to Canada increased from 4,600 tons in 1928-29 to 16,944 tons in 1939-40 and to 25,955 tons in 1944-45, but decreased to 2,999 tons in 1947-48.

7. **War-time Contract.**—At the outbreak of war in 1939 the Government of the United Kingdom purchased all available surpluses after provision had been made for Canadian and New Zealand requirements. During the 1944 and 1945 seasons prices fixed under these contracts represented a substantial increase over pre-war prices.

8. **Post-war Contract.**—A long term agreement was negotiated between the Governments of the United Kingdom and Australia for the purchase of the exportable surplus of the dried vine fruit crop for the 1946, 1947 and 1948 seasons. A further agreement has been reached between the Governments of the United Kingdom and Australia under which Australian dried vine fruits will be purchased by the United Kingdom during the years 1949 to 1953. The contract provides that the quantity of fruit to be purchased each year shall not exceed a value of £2,500,000 sterling currency on an f.o.b. basis. Export prices have been fixed for the first two years, but during the remaining three years they are to be the subject of annual agreement by the two Governments. The contract prices for currants, sultanas and lexias sold to the United Kingdom during the war years 1943 and 1945, as well as the prices fixed under the post-war contracts covering the years 1946 to 1950, are shown in the following table.

**DRIED VINE FRUITS : CONTRACT PRICES PER TON TO UNITED KINGDOM.**

(£A. s. d., f.o.b. Australian Ports.)

Fruit.	Grade.	1943.	1944.	1945.	1946 to 1948.	1949 and 1950.
Currants ..	1 Crown and upwards ..	37 16 3	41 11 3	43 2 6	50 0 0	60 0 0
Sultanas ..	1 Crown and upwards ..	51 5 0	55 0 0	56 11 3	65 0 0	70 0 0
Lexias ..	4 and 5 Crown ..	50 12 6	54 7 6	55 18 9	64 7 6	64 7 6

9. Overseas Marketing of Dried Fruits.—(i) *The Dried Fruits Export Control Act* 1924-1938. This Act was passed by the Commonwealth Parliament at the request of the dried fruits industry to organize the overseas marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of eight members—including five growers' representatives, two members with commercial experience and one Government nominee—was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. In conjunction with its London agency, the Board has improved the marketing of Australian dried fruits overseas, and has increased the demand for the product. Its system of appraisalment has resulted in more satisfactory realizations. Its methods of ensuring continuity of supply and regulating shipments and its participation in the advertising campaign of the Australian Overseas Trade Publicity Committee have benefited the industry considerably. No dried fruits may be exported except by means of a licence, which is issued subject to conditions recommended by the Board.

(ii) *Dried Fruits Export Charges Act* 1924-1929. This Act provides for the imposition of a levy on all sultanas, currants and lexias exported from Australia for the purpose of defraying the administrative expenses of the Board and the cost of advertising, etc. The rate of the levy is fixed by regulation. Under an amendment made in 1927 provision was made for the exemption of sultanas, currants and lexias from the levy upon recommendations by the Board.

(iii) *The Dried Fruits Act* 1928-1935. In previous issues of the Official Year Book reference has been made to the Dried Fruits Act and its provisions have been outlined (see p. 894 of Official Year Book, No. 28).

## § 17. Orchards and Fruit-Gardens.

1. Area.—The largest area of orchards and fruit-gardens prior to the 1939-45 War was attained in 1933-34 when 281,899 acres were planted. From that year until 1942-43, when 260,384 acres were under fruit, there was a gradual decline. Since 1942-43 there has been a continuous upward movement, and the area in 1947-48 reached a new peak of 290,320 acres. The total area of orchards and fruit-gardens in the several States during the years 1943-44 to 1947-48, compared with the averages for the ten seasons 1929-30 to 1938-39 and the ten seasons 1938-39 to 1947-48, is shown in the following table:—

### ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Australia.
Average 1929-30 to 1938- 39 ..	84,025	76,643	32,437	29,365	20,703	32,627	5	69	275,874
1943-44..	81,283	70,024	31,878	25,521	21,154	32,135	..	105	262,100
1944-45..	82,230	68,245	32,133	26,484	21,060	32,350	..	97	262,599
1945-46..	84,062	69,479	34,946	27,223	21,730	32,284	..	99	269,823
1946-47..	90,599	71,312	35,928	28,126	21,968	31,619	..	108	279,660
1947-48..	98,901	71,513	38,665	28,338	22,063	30,739	..	101	290,320
Average 1938-39 to 1947- 48 ..	85,598	70,113	33,218	28,213	21,692	31,522	11	117	270,484



2. **Varieties of Crops.**—(i) *General.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, papaw, 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.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries 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, mandarin, 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, lemon, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies over two-thirds 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 mainly taken up with the pear, apricot and plum. The following tables show 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—bearing and non-bearing—for 1947-48 :—

### ORCHARDS AND FRUIT-GARDENS : AREA, 1947-48.

(Acres.)

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples ..	14,357	21,365	6,008	8,149	13,062	21,196	62	84,199
Apricots ..	1,967	5,173	367	3,864	499	1,304	5	13,179
Bananas ..	26,381		9,887		323			36,591
Cherries ..	2,487	1,688	6	1,077	35	90	3	5,386
Citrus—								
Oranges ..	24,244	4,446	3,795	4,691	3,480			40,656
Mandarins ..	2,551	89	1,834	126	198			4,798
Lemons ..	3,816	2,004	557	417	581			7,375
Other ..	954	286	210	161	179			1,790
Nuts ..	917	841	470	3,460	335		5	6,028
Peaches ..	9,001	15,409	1,508	1,589	819	141	7	28,474
Pears ..	3,614	13,664	419	1,717	984	2,381	6	22,785
Pineapples ..	327		9,135					9,462
Plums and Prunes ..	4,789	3,473	1,241	1,831	910	328	7	12,579
Other Small Fruits ..	32	688	200	223	25	5,232		6,400
Other Fruits ..	3,464	2,387	3,028	1,033	633	67	6	10,618
<b>Total ..</b>	<b>98,901</b>	<b>71,513</b>	<b>38,665</b>	<b>28,338</b>	<b>22,063</b>	<b>30,739</b>	<b>101</b>	<b>290,320</b>

(iii) *Production.* (a) *Quantities.* The production in 1947-48 is shown in the next table :—

### ORCHARDS AND FRUIT-GARDENS : PRODUCTION, 1947-48.

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples .. bushel	1,329,955	1,991,297	455,254	989,440	1,626,493	7,894,220	5,087	14,291,746
Apricots ..	339,809	563,774	22,386	461,784	47,831	115,320	287	1,551,191
Bananas ..	2,321,833		585,895		57,767			2,965,495
Cherries ..	95,275	57,988	175	65,871	1,639	13,700	38	234,686
Citrus—								
Oranges ..	2,962,654	720,581	256,848	900,876	377,603			5,218,562
Mandarins ..	253,218	19,892	133,264	25,119	17,084			448,577
Lemons ..	435,631	170,385	67,277	56,187	110,242			839,722
Other ..	142,635	52,608	23,030	23,429	21,761			263,463
Nuts .. lb.	339,308	219,984	99,567	1,441,440	39,523		256	2,140,078
Peaches .. bushel	973,178	1,619,066	85,961	189,177	66,356	28,340	195	2,962,273
Pears ..	429,916	1,854,909	38,498	191,947	123,622	600,900	203	3,239,995
Pineapples ..	20,230		2,073,472					2,093,702
Plums and Prunes ..	461,181	280,515	67,353	145,142	80,187	94,810	227	1,129,415
Other Small Fruits cwt.	858	12,023	3,724	3,364	433	175,440		195,842

(b) *Gross Values.* The gross value of production for the various classes of fruit for the year 1947-48 is shown in the following table :—

**ORCHARDS AND FRUIT-GARDENS : GROSS VALUE OF PRODUCTION, 1947-48.**  
(£.)

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples .. ..	1,470,270	920,975	372,270	508,821	1,273,054	2,165,840	5,681	6,716,911
Apricots .. ..	443,490	274,840	22,708	354,523	47,632	40,680	380	1,190,253
Bananas .. ..	2,010,040	..	590,655	..	154,525	..	..	3,355,820
Cherries .. ..	253,380	86,982	691	127,351	7,526	13,090	103	489,123
Citrus—								
Oranges .. ..	1,897,570	475,950	179,741	693,270	297,502	..	..	3,544,033
Mandarins .. ..	169,210	15,974	104,945	20,514	14,901	..	..	325,484
Lemons .. ..	141,960	66,765	31,469	25,284	49,673	..	..	315,151
Other .. ..	67,530	27,209	10,102	12,304	13,053	..	..	130,198
Nuts .. ..	23,180	18,265	3,032	81,341	2,816	..	18	128,652
Peaches .. ..	609,090	688,103	59,551	139,410	73,361	8,860	166	1,577,541
Pears .. ..	279,750	788,336	21,759	136,790	103,533	113,290	293	1,443,751
Pineapples .. ..	11,590	..	958,366	..	..	..	..	969,956
Plums and Prunes .. ..	366,640	103,983	63,239	83,039	65,041	32,500	190	714,632
Other Small Fruits .. ..	2,630	57,855	39,634	18,837	7,256	308,980	..	435,212
Other Fruits .. ..	197,970	53,347	218,712	77,057	39,846	142,150	117	729,199
<b>Total .. ..</b>	<b>8,544,900</b>	<b>3,578,524</b>	<b>2,675,874</b>	<b>2,278,561</b>	<b>2,149,719</b>	<b>2,831,390</b>	<b>6,948</b>	<b>22,065,916</b>

3. *Principal Fruit Crops.*—(i) *Area.* The area in Australia of the principal fruit crops for each of the years 1943-44 to 1947-48, compared with the average for the ten seasons 1929-30 to 1938-39 and the ten seasons 1938-39 to 1947-48, is shown hereunder:—

**PRINCIPAL FRUIT CROPS : AREA, BEARING AND NON-BEARING, AUSTRALIA.**  
(Acres.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1929-30 to 1938-39 .. ..	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1943-44 .. ..	86,069	12,353	20,504	50,053	26,996	22,425	12,742
1944-45 .. ..	83,968	12,300	23,564	49,534	26,464	22,569	12,357
1945-46 .. ..	84,377	12,445	26,587	51,217	26,588	22,616	12,413
1946-47 .. ..	83,617	13,184	30,222	52,269	28,196	23,030	12,670
1947-48 .. ..	84,199	13,179	36,591	54,619	28,474	22,785	12,579
Average 1938-39 to 1947-48 .. ..	88,717	12,349	24,854	49,706	26,420	22,493	12,956

(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 Bushels.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1929-30 to 1938-39 .. ..	10,013	1,014	2,270	5,011	1,984	2,130	948
1943-44 .. ..	14,523	1,433	2,262	5,332	2,573	2,684	1,171
1944-45 .. ..	10,468	881	2,129	5,657	2,173	2,922	729
1945-46 .. ..	15,267	1,107	2,621	5,249	2,095	2,644	949
1946-47 .. ..	10,293	1,239	2,791	5,547	2,432	3,607	743
1947-48 .. ..	14,292	1,551	2,965	6,770	2,962	3,240	1,129
Average 1938-39 to 1947-48 .. ..	11,900	1,217	2,544	5,377	2,329	2,765	909

(b) *Values.* The gross value of the principal fruit crops during the periods 1943-44 to 1947-48, compared with the average for the five years 1934-35 to 1938-39, is shown in the following table:—

**PRINCIPAL FRUIT CROPS : GROSS VALUE OF PRODUCTION, AUSTRALIA.**  
(£.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1934-35 to 1938-39 ..	2,812,166	323,980	1,118,465	1,668,124	651,978	631,984	287,440
1943-44 ..	4,869,367	899,892	3,016,013	4,698,099	1,357,242	1,114,797	817,065
1944-45 ..	3,528,787	600,115	3,035,460	4,406,520	1,241,020	1,305,727	559,236
1945-46 ..	4,836,299	894,454	3,256,522	4,084,870	1,293,578	1,167,671	701,581
1946-47 ..	4,080,940	885,215	3,039,808	4,335,412	1,338,809	1,501,942	609,601
1947-48 ..	6,716,911	1,190,253	3,355,820	4,314,866	1,577,541	1,443,751	714,632

4. **Production of Jams and Jellies and Preserved Fruit.**—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia, details of the output of these products being shown below for the years 1938-39 and 1944-45 to 1948-49.

**PRODUCTION OF JAMS AND JELLIES AND PRESERVED FRUIT : AUSTRALIA.**  
(’000 lb.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Jams and Jellies ..	84,916	149,939	148,323	160,064	198,454	132,951
Fruit Preserved in Liquid—						
Apricots ..	12,447	6,436	11,198	12,530	21,149	22,210
Peaches ..	86,176	59,875	48,251	70,568	77,332	56,641
Pears ..	27,344	28,402	31,023	40,615	42,082	50,298
Pineapples ..	14,356	5,562	7,644	6,267	21,237	21,562
Small Fruit ..	1,299	1,375	986	1,475	1,615	2,248
Other (a) ..	9,110	8,420	7,977	6,267	12,858	13,687
Total (a) ..	150,732	110,070	107,079	137,722	176,273	166,646
Apples, Preserved ..	(b)	15,751	21,062	20,773	12,778	21,077

(a) Excludes preserved apples.

(a) Not available.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 200,250 tons during the year 1947-48.

5. **Consumption of Fruit and Fruit Products.**—Details of the estimated consumption of fruit and fruit products per head of population are shown below for each year 1946-47 to 1948-49 compared with the average for the years 1936-37 to 1938-39.

**ESTIMATED CONSUMPTION OF FRUIT AND FRUIT PRODUCTS PER HEAD OF POPULATION : AUSTRALIA.**  
(lb.)

Commodity.	Average 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49.
Fresh Fruit—Citrus ..	31.9	33.5	38.9	35.4
Other (a) ..	86.1	92.0	100.9	95.9
Jam ..	11.4	12.1	14.2	11.1
Dried Fruit—Vine ..	5.2	5.7	5.8	7.4
Tree ..	2.9	2.3	2.6	2.7
Canned Fruit ..	10.7	8.4	11.0	12.3
Total Fresh Fruit Equivalent ..	163.6	169.1	187.9	186.0

(a) Includes table grapes.

6. Imports and Exports of Fruit.—(i) *General.* The imports of fresh fruits into Australia are negligible, whilst those of dried fruits consist mainly of dates.

A considerable export trade in both fresh and dried fruits is carried on by Australia with overseas countries. The values of the shipments in 1947-48 amounted to £3,886,059 and £2,558,974 respectively. Apples formerly constituted the bulk of the fresh fruit exported, although the exports of citrus fruits and pears were fairly considerable. Shipments of raisins and currants have increased greatly since 1914-15 and are mainly responsible for the growth in the dried fruits exports, although dried tree fruits also figure amongst the exports. Owing to shipping difficulties and other factors the exports of fresh fruit were seriously curtailed during the 1939-45 War.

(ii) *Fresh Fruits.* Particulars of the Australian overseas trade in fresh fruits are shown in the following table :—

#### FRESH FRUITS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£	Centals.	£	Centals.	£
Average 1934-35 to 1938-39 ..	45,554	20,289	2,520,842	1,981,483	2,475,288	1,961,194
1943-44 ..	596	1,018	135,081	315,329	134,485	314,311
1944-45 ..	789	1,725	179,297	318,351	178,508	316,626
1945-46 ..	1,088	3,110	813,179	1,264,681	812,091	1,261,571
1946-47 ..	5,459	3,703	673,485	1,549,890	668,026	1,546,187
1947-48 ..	500	995	1,899,863	3,886,059	1,899,363	3,885,064

(iii) *Exports of fresh Apples, Pears and Citrus Fruits.* The quantity and value of fresh apples, pears and citrus fruits exported during each of the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are shown in the following table :—

#### FRESH APPLES, PEARS AND CITRUS FRUITS : EXPORTS FROM AUSTRALIA.

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£	Centals.	£	Centals.	£
Average 1934-35 1938-39 ..	1,928,282	1,396,083	284,203	268,347	255,538	233,552
1943-44 ..	21,401	45,563	2,988	7,594	107,386	255,703
1944-45 ..	70,257	98,704	179	316	103,804	210,356
1945-46 ..	698,185	1,010,243	20,938	54,412	68,468	135,027
1946-47 ..	387,458	766,007	80,736	176,490	167,910	438,627
1947-48 ..	1,407,789	2,694,789	179,782	365,842	273,257	603,628

(iv) *Dried Fruits.* The quantity and value of overseas imports and exports of dried fruits, other than raisins and currants, for the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq. This trade was prohibited during the war years but has since been resumed.

#### DRIED FRUITS(a) : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average 1934-35 to 1938-39 ..	12,225	80,121	4,315	117,222	-7,910	37,101
1943-44 ..	24	660	3,631	131,188	3,607	130,528
1944-45 ..	6,626	141,996	1,860	95,239	-4,766	-40,757
1945-46 ..	7,556	150,100	3,078	198,087	-4,478	47,987
1946-47 ..	7,070	150,745	4,214	273,502	-2,856	122,757
1947-48 ..	11,835	253,971	4,508	294,932	-7,327	40,961

(a) Excludes raisins and currants referred to separately under Vineyards, § 16, par. 6.

NOTE.—Minus sign (-) denotes net imports.

(v) *Jams and Jellies.* The exports of jams and jellies have reached large proportions since the 1939-45 War. In 1947-48 shipments totalled 59,642,000 lb. valued at £2,232,168 compared with average exports of 7,118,000 lb. valued at £137,707 during the five years ended 1938-39. Small quantities of jam were imported before the war but the quantities involved now are negligible. Particulars of imports and exports during each of the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are as follows :—

#### JAMS AND JELLIES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average 1934-35 to 1938-39 ..	69	2,407	7,118	137,707	7,049	135,300
1943-44 ..	..	5	21,638	557,161	21,638	557,156
1944-45 ..	..	1	27,661	692,056	27,661	692,055
1945-46 ..	..	..	42,183	1,310,412	42,183	1,310,412
1946-47 ..	..	3	65,434	2,206,696	65,434	2,206,693
1947-48 ..	1	136	59,642	2,232,168	59,641	2,232,032

(vi) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1947-48 was 4,796 lb. valued at £420. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. Exports were considerably reduced during the recent war owing to the prior claims on Australia's output by the Australian and Allied Services based on Australia, but in 1947-48 the value of exports had increased to £2,765,791. In addition, the exports of pulped

fruits during 1947-48 amounted to 5,416,747 lb. valued at £256,450. Particulars of the quantities and values of fruit preserved in liquid exported from Australia for each of the five years ended 1947-48 compared with the average for the five years 1934-35 to 1938-39, are shown in the following table :—

### FRUIT PRESERVED IN LIQUID : EXPORTS FROM AUSTRALIA.

Year.	Apricots.	Peaches.	Pears.	Other.	Total.
QUANTITIES ('000 lb.).					
Average 1934-35 to 1938-39	8,084	34,588	21,220	5,004	68,896
1943-44.. .. .	1,204	8,351	4,817	6,797	21,169
1944-45.. .. .	2,274	11,662	3,008	4,763	21,707
1945-46.. .. .	2,999	18,208	7,404	8,171	36,782
1946-47.. .. .	5,645	43,331	19,259	3,454	71,689
1947-48.. .. .	5,451	44,553	23,480	11,327	84,811
VALUES (£).					
Average 1934-35 to 1938-39	133,889	501,138	335,170	104,830	1,075,027
1943-44.. .. .	30,968	210,075	122,714	166,586	530,343
1944-45.. .. .	50,036	256,766	61,985	139,321	508,108
1945-46.. .. .	72,323	393,467	154,393	272,677	892,860
1946-47.. .. .	167,400	1,190,687	636,130	120,031	2,114,248
1947-48.. .. .	172,630	1,325,209	765,297	502,655	2,765,791

7. Marketing of Apples and Pears.—(i) *Apple and Pear Organization Act 1938-1948*. This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board for the purpose of organizing and controlling the export trade in fresh apples and pears.

The Board originally comprised sixteen members but by an amendment of the Act in 1947 the members were reduced to twelve, representative of the following interests :— one member to represent the Commonwealth Government ; seven members to represent growers of apples and pears on the basis of two for Tasmania and one each for the other States ; three members to represent exporters of apples and pears on the basis of one each for Tasmania and Western Australia and one for the other States ; and one member to represent the employees engaged in the apple and pear industry.

The Board has power to regulate the shipment of apples and pears from Australia by licensing exporters and issuing permits to export. Power is also given to determine export quotas and to allocate the consignments from each State. The Board may appoint persons to represent it overseas.

The Apple and Pear Publicity and Research Act 1938 and the related Apple and Pear Tax Acts, referred to in earlier issues of the Official Year Book, have now been repealed by the 1947 amendment to the Apple and Pear Organization Act. The latter Act was subject to a further minor amendment in 1948.

(ii) *Apple and Pear Export Charges Act 1938-1947*. This Act provides for the imposition of a levy on all apples and pears exported from Australia for the purpose of providing the funds necessary to meet the administrative and other expenses of the Board.

(iii) *Apple and Pear Acquisition*. Exports of apples and pears were seriously curtailed as a result of the war, and during the 1940 to 1948 seasons crops were acquired and marketed under the National Security (Apple and Pear Acquisition) Regulations and Regulations issued under the Defence (Transitional Provisions) Act 1946. During the 1940 season the scheme was supervised by a Marketing Committee attached to the Australian Apple and Pear Board with committees operating in each State, but from 1941

the operations of the Australian Apple and Pear Board were suspended and the Australian Apple and Pear Marketing Board was constituted under the National Security (Apple and Pear Acquisition) Regulations to handle and market all apples and pears acquired. The Regulations provided for the acquisition and orderly marketing of apple and pear crops, growers being paid guaranteed advances on fruit acquired. During the 1940, 1941 and 1942 seasons, the acquisition applied to all States but from 1943 to 1948 the scheme operated only in respect of crops grown in Tasmania and Western Australia. The following table gives details of the total quantity of fruit acquired and the amounts paid to growers as advances on the basis of "bare" fruit in the orchard for the seasons 1944 to 1948. All packing and marketing costs such as cases, packing, transport, cool storage, selling, etc. were paid by the Board :—

**APPLE AND PEAR ACQUISITION SCHEME : QUANTITY ACQUIRED AND AMOUNTS PAID.(a)**

State.	1944—No. 5 Acquisition.		1945—No. 6 Acquisition.		1946—No. 7 Acquisition.		1947—No. 8 Acquisition.		1948—No. 9 Acquisition.	
	Quantity.	Growers Ad-vances.	Quantity.	Growers Ad-vances.	Quantity.	Growers Ad-vances.	Quantity.	Growers Ad-vances.	Quantity.	Growers Ad-vances.
<b>APPLES.</b>										
	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
W. Aust. ..	1,567	339	1,297	240	1,543	223	2,497	405	1,112	349
Tas. ..	8,027	1,108	6,685	1,036	8,522	1,170	2,363	415	6,086	1,227
<b>Total ..</b>	<b>9,594</b>	<b>1,347</b>	<b>7,982</b>	<b>1,276</b>	<b>10,065</b>	<b>1,393</b>	<b>4,860</b>	<b>820</b>	<b>7,198</b>	<b>1,576</b>

**PEARS.**  
(Other than Canning.)

	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
W. Aust. ..	77	14	116	26	77	14	156	27	57	11
Tas. ..	534	104	636	105	521	97	481	93	558	97
<b>Total ..</b>	<b>611</b>	<b>118</b>	<b>752</b>	<b>131</b>	<b>598</b>	<b>111</b>	<b>637</b>	<b>120</b>	<b>615</b>	<b>108</b>

(a) Acquisition scheme did not apply to New South Wales, Victoria, Queensland and South Australia after 1942.

Following a decision of the Commonwealth Government towards the end of 1948 not to apply its acquisition powers any longer, the 1949 apple and pear crops in Tasmania and Western Australia were handled under State marketing schemes and the Australian Apple and Pear Marketing Board acted as the marketing agent for the State schemes. The actual arrangements for the 1949 season were much the same as previously except that control, instead of being vested in the Commonwealth, was taken under State legislation. The Commonwealth, however, guaranteed each State concerned against any financial loss on their respective marketing pools. In Western Australia a complete acquisition was implemented by the State on lines similar to the Commonwealth acquisition. In Tasmania a voluntary marketing pool was established in which growers participated by entering into an agreement with the State Minister for Agriculture to deliver their crop to the pool for marketing purposes.

**8. Overseas Marketing of Canned Fruit.**—(i) *The Canned Fruits Export Control Act 1926-1938.* This legislation was introduced at the request of canners and representative organizations of fruit-growers with the object of organizing the overseas marketing of canned fruit. The original Act referred to canned apricots, peaches and pears only, but canned pineapples and canned fruit salads consisting of not less than 75 per cent. of specified fruits were subsequently brought within the scope of the Board's operations.

The personnel of the Australian Canned Fruits Board consists of one representative each from proprietary and privately owned canneries, co-operative canneries, State-controlled canneries, pineapple interests and the Commonwealth Government. No canned fruits to which the Act applies are permitted to be exported except under a licence issued in accordance with conditions recommended by the Board. The system of marketing adopted by the Board, including the fixation of minimum selling prices overseas, the appointment of a London agency and the engaging in oversea trade publicity, has resulted in the satisfactory disposal of the annual exportable surplus of canned fruits. The distribution of canned fruits has been widened and the exporting side of the industry placed on a sounder basis through the Board's operations.

(ii) *The Canned Fruits Export Charges Act 1926-1938.* This Act provides for the imposition of a levy on the export of canned fruits to meet the administrative and other commitments of the Board. The rate of the levy is fixed by regulation from time to time. An amendment in 1929 provided for certain exemptions from payment of the levy when recommended by the Board.

(iii) *War-time Contracts.* During 1940 and 1941 purchases of canned fruit were made by the British Ministry of Food at prices fixed on an f.o.b. basis, Australian ports. From 1942 to 1945 the requirements of the Defence Services and other Governmental orders necessitated official control of disposals, and commercial shipments of canned fruits virtually ceased, while quantities available for civilian consumption were considerably below normal requirements. In 1946 commercial shipments were resumed and approximately one million cases of canned fruits were exported to the United Kingdom under an official arrangement which was virtually on a merchant to Government basis. A similar arrangement has operated in respect of exports to the United Kingdom during 1947, 1948 and 1949.

## § 18. Vegetables for Human Consumption.

1. *Area and Production of Fresh Vegetables.*—The pre-war production of vegetables in Australia, which had been sufficient to meet the needs of the population was, generally speaking, supplied by growers whose holdings were adjacent to centres of consumption. These areas were classified for statistical purposes as market gardens and were tabulated as such. Details of the areas planted and production, respecting individual kinds of vegetables were not collected.

Following the outbreak of war in the Pacific in December, 1941 and the establishment of Australia as a base for Australian and Allied Services in the South-West Pacific Area it was evident that the production of fresh vegetables under the conditions then existing would be insufficient to meet the additional demand from the Services. Consequently extensive development of vegetable-growing in Australia was undertaken, resulting in an expansion from the peace-time need of about 100,000 acres to more than 200,000 acres exclusive of potatoes, onions, navy beans and blue peas, details of whose production are referred to in §§ 10, 11 and 12 of this Chapter.

This development was achieved by continuing supplies of vegetables to the civil population from the market gardens already established, by extending production to areas which previously had not grown these crops and by the mechanization of the industry. Farming operations were thus able to be undertaken in many cases on a scale larger than that normally adopted in Australia. In addition, the letting of contracts at guaranteed prices proved an attraction, and the vegetable-growing industry was able to produce the additional quantities necessary to meet the war-time needs of the services as well as those of the civil population. Since the close of the war there has been a considerable reduction in vegetable growing and the area of the crops dealt with in this section declined from the war-time peak of 240,282 acres in 1944-45 to 156,431 acres in 1947-48.

Details of the area and production of vegetables for the seasons 1945-46 to 1947-48 are given in the following table. Similar details for the years 1942-43 to 1943-44 were given in earlier issues of the Year Book (No. 36, p. 839 and No. 37, p. 956). Owing to the difference in collection already referred to, comparable figures prior to 1942-43 are not available.



## FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1945-46.		1946-47.		1947-48.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French ..	19,873	15,291	18,303	14,819	16,527	18,466
Beetroot ..	4,095	20,995	2,629	13,620	2,151	12,454
Cabbages and Brussels Sprouts ..	11,082	106,489	9,156	99,618	7,244	76,285
Carrots ..	7,044	46,870	5,809	38,723	4,794	30,880
Cauliflowers ..	7,107	77,757	7,099	90,866	6,942	79,103
Cucumbers ..	2,402	3,446	2,266	4,076	1,318	2,584
Lettuces ..	4,509	15,566	4,152	12,607	3,958	14,101
Parsnips ..	1,902	13,438	1,955	13,423	1,885	13,926
Peas, Green ..	60,918	30,697	60,131	31,905	51,058	34,850
Potatoes, Sweet ..	1,671	5,584	1,845	5,602	928	2,862
Pumpkins ..	31,227	78,621	29,467	68,447	23,120	60,024
Tomatoes ..	22,586	91,502	23,375	113,278	19,235	92,516
Turnips, Swede and White ..	9,641	38,367	7,486	30,390	5,828	25,039
All Other ..	12,466	..	12,184	..	11,443	..
<b>Total ..</b>	<b>196,523</b>	<b>..</b>	<b>185,857</b>	<b>..</b>	<b>156,431</b>	<b>..</b>

(a) Excludes potatoes, onions, blue peas and navy beans.

2. **Production of Canned Vegetables.**—As a corollary to the development mentioned above a considerable expansion occurred in the processing of vegetables. New canning factories were established in many parts of the Commonwealth, and a new industry for the processing of vegetables by the dehydration method was commenced. Since the close of hostilities there has been a sharp decline in the output of canned vegetables, but the quantities canned in 1947-48 and 1948-49 were considerably greater than in 1938-39.

The development in the vegetable canning industry is indicated in the table below :—

## PRODUCTION OF CANNED VEGETABLES : AUSTRALIA.

('000 lb.)

Vegetable.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49. (a)
Asparagus ..	2,150	2,752	2,555	2,178	2,568	2,327	2,826
Beans ..	2,491	6,137	12,590	10,058	12,224	11,306	14,805
Beetroot ..	(b)	7,734	16,203	10,903	2,593	764	3,021
Cabbages ..	(b)	13,278	1,009	1,919	1,022	112	177
Carrots ..	(b)	12,789	38,883	18,312	3,612	982	1,957
Cauliflower ..	198	201	(b)	(b)	(b)	(b)	493
Peas (Green) ..	1,861	9,353	16,751	23,033	21,787	22,650	14,779
Silver Beet ..	(b)	1,794	7,493	2,453	9	(b)	(b)
Tomatoes ..	1,578	7,124	7,417	4,097	5,385	3,029	3,933
Other (c) ..	(d) 1,977	34,192	(d) 16,248	(d) 34,009	(d) 9,086	(d) 5,161	(d) 4,622
<b>Total ..</b>	<b>10,255</b>	<b>95,354</b>	<b>119,149</b>	<b>106,962</b>	<b>58,286</b>	<b>46,331</b>	<b>46,613</b>

(a) Subject to revision. (b) Included in "Other Vegetables". (c) Includes Parsnips, Potatoes, Turnips, Sweet Corn, etc. (d) Includes particulars of vegetables marked (b).

3. **Production of Dehydrated Vegetables.**—The dehydration of vegetables was not undertaken in Australia until after the outbreak of war in the Pacific towards the close of 1941. The demand for vegetables in this form by Australian and Allied Services made

this development a necessity and as a result 33 dehydration plants were erected in all States except Queensland, in areas where adequate supplies of suitable vegetables were assured. With the termination of Commonwealth contracts for dehydrated vegetables in October, 1946, a number of plants ceased to operate and output for commercial purposes in the remaining plants was drastically curtailed. Details of the quantities of fresh vegetables used for dehydration and the output of dehydrated vegetables during the years 1942-43 to 1946-47 were shown on page 957 of Official Year Book No. 37.

4. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1947-48 consisted of:—pulse, 11,284 tons, £530,272; onions, 18,230 tons, £352,771; potatoes, 30,008 tons, £622,379; other vegetables, 4,472 tons, £209,468. Imports totalled 6,363 tons, valued at £282,353, of which pulse comprised 6,111 tons, valued at £279,542.

In 1947-48 exports of vegetables preserved in liquid consisted of:—Peas, 4,285,705 lb., £168,392; tomatoes, 2,532,960 lb., £69,405; other vegetables, 25,835,288 lb., £666,232.

5. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for each of the three years ended 1948-49 are shown on pp. 1243 and 1245 of this Year Book.

### § 19. Minor Crops.

1. **General.**—There are many other crops which do not occupy so prominent a position as those already enumerated. Some of the more important of these are included under the headings—Tobacco, Hops, Flax, Peanuts, Cotton and Sorghum.

2. **Grass Seed.**—Particulars of the area of grass 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 1947-48 was:—clover, 35,319 cwt.; lucerne, 7,594 cwt.; other grass seed, 44,390 cwt.; a total of 87,303 cwt.

3. **Other Grains from Sorghums.**—In addition to the grass seed referred to in paragraph 2 above and grain sorghum in § 9, considerable expansion has occurred in the area sown to Japanese Millet, Panicum and Setaria. Particulars of the area and production for the years 1942-43 to 1947-48 are given in the table below.

**SORGHUMS : AREA AND PRODUCTION OF GRAIN, AUSTRALIA.**

Year.	Japanese Millet.(a)		Panicum, Millet and Setaria.(b)	
	Area.	Production.	Area.	Production.
	Acres.	Tons.	Acres.	Bus.
1942-43 .. .. .	496	149	9,319	116,282
1943-44 .. .. .	1,083	460	15,948	300,307
1944-45 .. .. .	2,948	964	16,570	178,612
1945-46 .. .. .	2,628	1,526	22,172	325,194
1946-47 .. .. .	1,393	678	39,372	407,482
1947-48 .. .. .	748	225	16,086	236,430

(a) Victoria only.

(b) Queensland only.

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.* The expansion of the tobacco-growing industry was hoped for as a war-time measure but, although the acreage planted increased slightly during the first three war years, it has since decreased considerably, being in 1947-48 only 34 per cent. of the annual average for the ten years ended 1938-39, and the production of dried leaf only 46 per cent. of the pre-war average. The area of 3,843 acres and production of 2,484,000 lb. represented a decrease on 1941-42 of 4,977 acres and of more than 4,556,000 lb.

In the following table particulars of the area and production of tobacco are given by States for each of the years 1943-44 to 1947-48, together with averages for the ten-year periods ended 1938-39 and 1947-48 :—

#### TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
<b>AREA (ACRES).</b>								
Average 1929-30 to 1938-39 ..	1,274	6,237	2,865	292	502	89	1	11,260
1943-44 ..	657	2,000	2,348	..	1,611	..	..	6,616
1944-45 ..	410	1,500	1,862	..	1,003	..	..	4,773
1945-46 ..	370	1,408	1,897	..	296	..	..	3,971
1946-47 ..	402	1,186	2,255	..	649	..	..	4,492
1947-48 ..	414	958	1,912	..	559	..	..	3,843
Average 1938-39 to 1947-48 ..	636	1,764	3,002	4	999	26	3	6,434
<b>PRODUCTION OF DRIED LEAF ('000 lb.).</b>								
Average 1929-30 to 1938-39 ..	860	2,393	1,590	83	361	56	..	5,343
1943-44 ..	515	1,544	1,779	..	795	..	..	4,633
1944-45 ..	348	575	1,314	..	607	..	..	2,844
1945-46 ..	365	431	1,411	..	298	..	..	2,505
1946-47 ..	399	1,087	1,969	..	539	..	..	3,994
1947-48 ..	338	130	1,581	..	435	..	..	2,484
Average 1938-39 to 1947-48 ..	546	1,002	1,980	(a) 1	757	8	1	4,295

(a) Average nine years.

(iii) *Australian Tobacco Board.* The Australian Tobacco Board was constituted in May, 1941 under the National Security (Australian Tobacco Leaf) Regulations for the purpose of controlling the marketing of Australian-grown tobacco leaf, which was required to be submitted to the Board for appraisalment. The Board ceased to function towards the end of 1948 and subsequent crops have been marketed at open auction in the respective States.

(iv) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into the industry in 1926, 1931 and 1940 and reports were issued.

(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 included that for 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 recommendation was adopted and the distribution was spread between the years 1934-1938 as follows :—£5,000 to the Council for Scientific and Industrial Research (now the Scientific and Industrial Research Organization), £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, which was increased by £11,250 in 1941, was allotted by the Commonwealth Government to be paid periodically between the years 1939 to 1943. The amount of £73,750 was allocated as follows:—Council for Scientific and Industrial Research, £25,000, and £10,000 annually among the States for the years 1939 and 1941 to 1943, and £8,750 for 1940. In August, 1946 the Commonwealth Cabinet approved a grant of £10,000 per annum for five years on a £ for £ basis to be allocated among producing States for experimental and demonstration work in connexion with tobacco leaf production; particularly in regard to control and elimination of diseases and pests. The annual grant of £10,000 has been allocated to States on the following basis:—Queensland, £3,750; New South Wales, £1,500; Victoria, £2,250; Western Australia, £2,500.

The Scientific and Industrial Research Organization is investigating diseases affecting the tobacco plant, including work on disease-resisting varieties, and is making tests of smoking quality. In spite of delays due to the war, the Organization 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 1947-48 the quantity of stemmed leaf used in tobacco factories in Australia amounted to 26.6 million lb. of which 2.9 million was of local origin the balance being imported, chiefly from the United States of America.

(vii) *Oversea Trade.* Imports of tobacco and manufactures thereof into Australia during 1947-48 were valued at £7,721,388, including 30,951,400 lb. of unmanufactured tobacco valued at £5,691,599. Exports of tobacco during 1947-48 were valued at £222,095.

5. *Hops.*—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1947-48 being 1,503 acres, of which 1,263 acres were in Tasmania, and 240 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1943-44 to 1947-48 in comparison with the average for the five years ended 1938-39.

#### HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries.
	Quantity.	Gross Value.				
	Cwt.	£	Cwt.	Cwt.	Cwt.	Cwt.
Average 1934-35 to 1938-39 .. ..	20,576	173,253	1,020	78	21,518	18,992
1943-44 .. ..	26,348	238,162	1,021	401	26,968	21,710
1944-45 .. ..	23,160	230,400	177	60	23,277	22,156
1945-46 .. ..	19,835	225,946	2,402	55	22,182	22,436
1946-47 .. ..	22,278	278,144	4,832	6	27,104	25,813
1947-48 .. ..	24,449	317,531	9,823	15	34,257	25,050

(a) Disregarding movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

6. Flax.—For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914-18 War there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government. Bounties were paid on production during the years 1907 to 1918 and again for each of the five years ended 1935. The amounts distributed as bounty during these periods totalled £2,376 and £2,839 respectively. However, the maximum area, which was sown in 1919-20, was only slightly more than 1,600 acres. The area subsequently declined to less than 200 acres in 1928-29. A further attempt to establish the industry was made in 1935 and as a result the area in Victoria had increased to 1,358 acres by 1938-39. Following the outbreak of the 1939-45 War the area sown increased rapidly, reaching over 54,000 acres in 1941-42 and over 61,000 acres in 1944-45. In 1945-46, however, the area sown fell by 32 per cent. to 41,413 acres. Victoria is the chief producing State, but South Australia, Western Australia and Tasmania have also contributed to this war-time expansion which was necessary to ensure Australia's supplies of flax and, in accordance with an agreement negotiated between the two Governments, to provide an export to assist in meeting the urgent needs of the United Kingdom. The arrangement concluded on 31st October, 1946, and the area under flax for fibre declined to 18,354 acres in 1946-47 and to 17,790 acres in 1947-48.

Details of the area under flax and the production of straw are given in the following table :—

#### FLAX FOR FIBRE : AREA AND PRODUCTION.

Year.	Victoria.	S. Australia.	W. Aust.	Tasmania.	Total.
AREA (ACRES).					
Average 1934-35 to 1938-39	1,021	..	..	..	(a) 1,030
1943-44.. ..	31,567	9,511	7,642	6,911	55,631
1944-45.. ..	38,459	10,537	8,278	3,803	61,077
1945-46.. ..	26,419	6,292	5,356	3,346	41,413
1946-47.. ..	12,041	2,599	2,940	774	18,354
1947-48.. ..	12,183	3,544	2,063	..	17,790
PRODUCTION (TONS OF STRAW).					
Average 1934-35 to 1938-39	61	..	..	..	61
1943-44.. ..	40,937	10,450	6,618	4,456	62,461
1944-45.. ..	17,035	3,315	3,907	4,088	28,345
1945-46.. ..	18,798	6,969	4,229	1,360	31,356
1946-47.. ..	13,858	4,009	2,108	627	20,602
1947-48.. ..	19,427	6,068	1,694	..	27,189

(a) Includes nine acres of unproductive flax in Queensland.

Although the growing of flax on a large scale was established as a war-time measure, it is proposed to continue the industry at a level sufficient to meet local requirements, providing that it can be efficiently maintained in competition with other countries.

The industry is under the control of the Flax Production Committee appointed under the Supply and Development (Flax Production) Regulations. The Committee has, amongst other things, organized the growing and harvesting of the crop, and the processing of the flax as well as disposing of the resultant products to spinners and others in Australia and overseas. In 1943-44 in the four producing States there were 31 mills under the control of the Committee. The number of flax mills operating in 1947-48 was sixteen.

Prior to 1948-49, the growing of flax for oil had not been developed extensively in Australia and in 1947-48 the area devoted to this purpose was only 1,844 acres from which 273 tons of linseed was obtained. Action is being taken to develop this industry, however, and in 1948-49 the area had risen to 14,516 acres. Up to the present, crops are mainly being held for seed purposes with a view to further expansion of the industry, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements.

The flax industry was the subject of two investigations, one in 1933 and the other in 1936 (*see* Official Year Book No. 32, p. 658).

7. **Peanuts.**—The production of peanuts, or groundnuts, in Australia is mainly confined to Queensland, although small quantities are grown in New South Wales and Western Australia. Details of the area and production are given in the table below.

**PEANUTS : AREA AND PRODUCTION, AUSTRALIA.**

Year.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Total. (a)	N.S.W.	Q'land.	W. Aust.	Total. (a)
Average 1929-30 to 1938-39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1943-44 ..	..	18,415	25	18,440	..	9,614	1	9,615
1944-45 ..	7	18,936	42	18,985	3	10,225	14	10,242
1945-46 ..	17	25,203	13	25,233	7	13,298	4	13,309
1946-47 ..	17	38,800	4	38,821	23	22,750	2	22,775
1947-48 ..	97	34,645	28	34,770	41	15,804	3	15,848
Average 1938-39 to 1947-48 ..	16	20,916	47	20,979	(c) 12	10,339	12	10,363

(a) Excludes Northern Territory.

(b) Average for five years.

(c) Average for seven years.

The gross value of the 1947-48 crop was £625,599.

In addition to the production shown above, considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes, but this has been suspended since January, 1946. Details of Australia's available supplies in terms of kernels are given for the years 1938-39 and 1944-45 to 1948-49.

**PEANUTS (IN TERMS OF KERNELS) : AVAILABLE SUPPLIES, AUSTRALIA.**

(Tons.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Production(a) ..	3,500	6,410	6,828	8,878	15,183	10,565
Imports ..	2,270	11,022	764	..	5	3
Total ..	5,770	17,432	7,592	8,878	15,188	10,568

(a) Crop harvested in April-May of the preceding year and available for consumption during year shown.

8. *Broom Millet*.—The total area devoted to broom millet in 1947-48 was 3,888 acres, of which 3,294 acres were in New South Wales, 422 in Victoria and 172 in Queensland. The total production from these areas was 15,239 bushels of grain and 25,499 cwt. of fibre.

9. *Nurseries*.—In all the States fairly large areas are occupied as nurseries. The acreages under flowers, fruit-trees, etc., in 1947-48 in the various States were as follows :—New South Wales, 1,086 acres; Victoria, 2,931 acres; Queensland, 198 acres; South Australia, 98 acres; Western Australia, 265 acres; Tasmania, 227 acres; and Australian Capital Territory, 5 acres; a total for Australia of 4,810 acres.

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 1½d. 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 1½d. 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 until 31st December, 1946. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947.

The Tariff Board carried out an investigation into the cotton-growing industry in 1945.

(iii) *Expansion of the Cotton-growing Industry*. Australia produces only portion of its requirements of raw cotton, the balance being obtained chiefly from the United States of America and India. Efforts have been directed towards increasing production by an extension of area and the introduction of irrigation methods, but the results so far have not met with much success. Production was increased during the war years but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV. "Manufacturing Industry".

The area under cultivation and the production in Queensland for the years 1944 to 1948 are shown hereunder together with the averages for the periods of ten years ended 1938-39 and 1947-48 :—

## COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned- Equiva- lent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£	'000 lb.	Bales.	lb.	lb.
Average 1930 to 1939 ..	58,436	16,617	291,106	5,564	11,181	284	95
1944(b) ..	17,424	8,508	186,085	2,946	6,055	488	169
1945 ..	7,698	1,819	41,818	651	1,305	236	85
1946 ..	7,902	3,022	65,552	1,139	2,372	382	144
1947 ..	8,460	2,064	46,213	762	1,531	244	90
1948 ..	6,222	1,821	47,918	713	1,439	293	115
Average 1939 to 1948 ..	28,972	8,636	173,036	3,042	6,173	335	105

(a) Bales of approximately 500 lb. (b) Includes 7,221 lb. of unginned cotton and the equivalent of ginned cotton grown in New South Wales.

(iv) *Consumption of Raw Cotton.* The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938-39.

## RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption in Cotton Mills.
Average 1936-37 to 1938-39..	5,180	9,882	15,062	12,523
1943-44 ..	3,346	20,805	24,151	30,955
1944-45 ..	2,946	28,567	31,513	27,753
1945-46 ..	651	26,494	27,145	25,329
1946-47 ..	1,139	34,341	35,480	30,132
1947-48 ..	762	34,114	34,876	31,401

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 1947-48 only 2 acres with a production of 2,373 lb. were recorded.



12. **Other Crops.**—Miscellaneous small crops grown in Australia include chicory, cut flowers, herbs, ginger, liquorice and vegetable seeds.

## § 20. Bounties, etc.

1. **Bounties.**—The bounties paid by the Commonwealth Government during the year ended 30th June, 1948 amounted to £43,988. 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 1943-44 to 1947-48 are as follows :—

### BOUNTIES : AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid. (£)				
			1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Wire Netting Bounty Acts 1939-1944	9s. 7d. per ton ..	23rd Oct., 1947	447	496	349	633	321
Traffor Bounty Act 1939-1947	According to capacity, £32-£72	23rd Oct., 1951	5,652	13,317	10,095	22,955	19,978
Wine Export Bounty Act 1947	1s. per gallon from 1st March, 1940 (a)	28th Feb., 1947	22,506	34,613	53,649	65,246	13,894
Raw Cotton Bounty Act 1940-1946		31st Dec., 1951	..	..	a 11,887	a 5,732	8,868
Papua and New Guinea Bounties Act 1937—Cocoa Beans ..	1½d. per lb. ..	31st Dec., 1947	..	..	136	199	927
Bamboos and Rattans (Unmanufactured)	£4 per ton ..	" "	..	..	..	..	..
Manila, Sisal and Other Hemp Fibres	£6 " ..	" "	..	..	..	..	..
Coin Fibre	£3 " ..	" "	..	..	..	..	..
Kapok .. ..	2d. per lb. ..	" "	..	..	..	..	..
Total .. ..	.. ..	..	28,605	48,426	76,116	94,765	43,988

(a) Rates subject to variation as prescribed.

2. **Other Financial Assistance to Primary Producers.**—(i) *General.* 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.

Details of payments made prior to 1938-39 are given on page 847 of Official Year Book No. 36, while particulars for the years 1939-40 to 1943-44 will be found on page 965 of Official Year Book No. 37.

# AMOUNTS PAID BY THE COMMONWEALTH GOVERNMENT AS ASSISTANCE FOR RELIEF OF PRIMARY PRODUCERS.

(£.)

Amounts paid to—	Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
Wheat-growers as—									
Assistance ..	1938-39	558,489	307,564	70,824	398,559	421,296	(a)51,961	..	1,808,693
" " "	1944-45	644,034	104,420	231,717	378,621	113,386	(a)50,561	..	2,584,739
Relief (Drought)	"	475,000	725,000	..	330,000	40,000	..	..	1,570,000
Assistance ..	1945-46	1,132,251	602,938	183,518	448,553	(b)630,228	(a)68,914	..	3,075,402
Relief (Drought)	"	Or. 1,146	70,000	..	101,115	..	..	..	169,964
Assistance ..	1946-47	334,996	560,244	47,108	417,590	(b)340,968	(a)50,026	..	1,750,932
Relief (Drought)	"	315,092	150,000	..	66,847	..	..	..	531,939
Assistance ..	1947-48	305,414	261,260	38,842	180,474	(b)155,385	379	..	941,754
Relief (Drought)	"	494,955	50,000	..	—35	..	..	..	544,920
Assistance (Special Payment)	1948-49	..	..	..	..	..	7,875	..	7,875
Relief (Drought)	"	43	..	..	..	..	..	..	43
Total 1931-32 to 1948-49	..	12,623,699	8,515,816	1,299,590	8,518,209	8,923,356	694,799	2,954	40,578,423
Fruit-growers—									
Total 1933-34 and 1934-35(c)	..	20,763	58,620	2,581	18,374	25,631	134,031	..	260,000
Primary Producers (other than wheat-growers)—Artificial Fertilizer subsidy									
" " "	1938-39	18,290	76,500	19,020	36,400	43,260	12,460	90	206,020
" " "	1944-45	303,506	697,955	41,435	456,968	569,003	145,521	..	2,214,388
" " "	1945-46	398,953	935,304	70,661	699,967	1,028,642	152,916	..	3,286,443
" " "	1946-47	431,702	952,257	108,271	646,546	880,191	155,080	..	4,317,047
" " "	1947-48	461,505	1,217,784	104,089	637,464	1,048,650	151,273	..	6,362,765
" " "	1948-49	435,078	1,201,640	152,068	634,263	1,013,737	100,132	..	7,353,918
Total 1932-33 to 1948-49	..	2,593,571	6,550,584	699,491	3,929,824	5,606,936	935,865	370	20,316,641
Dairying Industry									
" " "	1944-45	1,495,196	2,716,807	1,878,759	314,606	260,287	146,542	..	96,812,197
" " "	1945-46	1,523,680	2,383,696	1,743,454	322,503	273,763	224,415	..	6,373,511
Relief (Drought)	1946-47	1,069,987	2,353,084	1,111,112	322,149	238,453	128,684	..	15,223,469
Dairying Industry	"	143,800	23,803	24,999	4,322	333	..	..	197,257
Relief (Drought)	1947-48	2,531,646	3,284,270	1,533,734	787,879	481,569	247,903	..	18,867,001
Dairying Industry	"	11,116	..	..	..	..	..	..	11,116
Relief (Drought)	1948-49	1,829,902	1,338,411	825,280	384,938	275,283	149,137	..	74,802,951
Total 1942-43 to 1948-49	..	10,714,723	15,144,460	9630,617	2,524,193	1,857,231	948,704	..	40,819,928
Grand Total 1931-32 to 1948-49	..	25,952,756	30,269,480	11,632,279	14,990,600	16,413,154	2,713,399	3,324	101,974,992

(a) Includes special grant to Tasmania. (b) Includes Wheat Acreage Restriction Grant. (c) Growers of apples, pears and mandarins. (d) Includes subsidy payments of £186,649 on nitrogenous fertilizers. (e) Includes subsidy payments of £129,683 on nitrogenous fertilizers. (f) Includes subsidy payments of £163,313 on nitrogenous fertilizers. (g) Includes payment of £1,659,325 recovered in London. (h) Includes £3,484,729 recovered from the United Kingdom Government. (i) Includes £1,849,115 recovered from the United Kingdom Government. (j) Includes £150,000 recovered from the United Kingdom Government.

NOTE.—Minus sign (—) denotes an adjustment due to overpayment in previous years.

(ii) *Wheat-growers.* Details of payments made prior to 1938-39 will be found in Official Year Book No. 36. In 1938-39 a sum of £1,808,693, collected through the medium of a flour tax, was allocated for distribution as relief to wheat-growers.

Allocations to the States for the same purpose during the years 1944-45 to 1948-49 were £1,995,775 in 1944-45, £1,779,238 in 1945-46, £1,747,383 in 1946-47, £985,327 in 1947-48 and £1,319 in 1948-49. The rate of flour tax has been nil since December, 1947.

In addition to the foregoing amounts paid from flour tax, compensation was paid to wheat-growers in Western Australia, where acreage restrictions applied in respect of the 1942-43 to 1945-46 harvests. The amounts so paid during each year 1942-43 to 1947-48 were £535,000, £599,348, £586,964, £243,828, £2,619 and £97 respectively.

(iii) *Artificial Fertilizers Subsidy.* Prior to the 1939-45 War, assistance was given to primary producers, other than wheat-growers, in the form of a subsidy on artificial fertilizers generally: subject to certain provisions, 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.

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, payable to manufacturers, who were required to adjust their prices so that consumers received the full benefit of the subsidy. From July, 1942 to September, 1948 a revised basis of subsidy payments operated under which payment was made to manufacturers under a system designed to stabilize the price of superphosphate in the face of rising costs and to return to producers a reasonable margin of profit. In September, 1948 a flat rate system was re-introduced, the rates of subsidy being £2 15s. per ton in Western Australia, £2 10s. per ton in Eyre Peninsula and £2 5s. 6d. per ton elsewhere. Subsidy has also been paid on nitrogenous fertilizers from 1943-44. From that year proceeds from sales under the equalization scheme, under which these fertilizers are handled, have been less than expenditure incurred by the equalization pool, and the deficiency in each year has been met by Commonwealth subsidy.

Details of the amounts paid in respect of subsidy on both superphosphate and nitrogenous fertilizers are shown in the table above.

(iv) *Dairy Industry.* The war-time demand for butter, cheese and processed milk products was such as to necessitate production being increased to the limit of existing resources. With this object in view the Commonwealth has subsidized production and so encouraged dairy farmers to maintain output at the highest level possible. The amounts paid since the introduction of the subsidy are shown above. These do not include the subsidies paid on the production of whole milk which is consumed directly and which amounted to £319,000 in 1943-44, £1,786,000 in 1944-45, £2,520,000 in 1945-46, £2,249,000 in 1946-47, £2,157,000 in 1947-48 and £564,000 in 1948-49. This subsidy was discontinued from 30th September, 1948.

(v) *Farmers' Debt Adjustment.* 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 was allocated in the same proportion, and was subject to review at a later date.

## § 21. 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 very 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 fertilizers, 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 output of prepared fertilizers is derived chiefly from imported rock phosphates and is sufficient for local requirements.

The chief sources of Australia's normal supplies of rock phosphate were Nauru and the Gilbert Islands group. The war in the Pacific interrupted supplies from these sources and the bulk of the imports since 1941-42 have come from Algeria, Egypt and the Makatea Islands. During 1948-49, however, supplies from pre-war sources have been resumed on a large scale. Sodium nitrate is obtained chiefly from Chile.

The imports of manures during the five years ended 1947-48, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table :—

**FERTILIZERS : IMPORTS INTO AUSTRALIA.**

Fertilizer.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Ammonium sulphate						
cwt.	521,804	27	113,459	647,110	551,730	376,689
£	214,509	198	98,880	458,823	458,858	337,470
Potash salts						
cwt.	212,813	66,590	90,547	145,049	126,941	216,977
£	82,220	61,132	88,122	155,940	147,022	206,231
Rock phosphate						
cwt.	12,701,938	6,042,101	9,468,506	13,285,672	14,520,198	14,032,030
£	775,840	550,889	1,214,143	1,898,373	2,089,026	1,862,846
Sodium nitrate						
cwt.	143,985	673,028	327,426	..	92,159	129,175
£	63,464	362,741	169,746	..	60,049	68,085
Other ..						
cwt.	68,603	68,452	4,942	106,938	6,074	54,854
£	7,657	38,942	8,364	18,997	11,307	38,259
Total						
cwt.	13,649,143	6,850,198	10,004,880	14,184,769	15,297,102	14,809,725
£	1,143,690	1,013,902	1,579,255	2,532,133	2,766,262	2,512,891

4. **Exports.**—The following table shows the exports of fertilizers (practically all of which are manufactured locally) during the same periods :—

**FERTILIZERS : EXPORTS FROM AUSTRALIA.**

Fertilizer.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Ammonium sulphate						
cwt.	3,267	423	4,636	3,484	2,471	2,640
£	1,130	397	4,469	6,125	1,996	1,961
Bone-dust ..						
cwt.	2,789	..	..	9	..	..
£	1,550	..	..	7	..	..
Rock phosphate						
cwt.	..	375	27	..	..	..
£	..	804	65	..	..	..
Sodium nitrate						
cwt.	18	100	84	11,243	104	80
£	24	141	85	12,927	374	137
Superphosphate						
cwt.	35,962	975	990	951	4,946	10,359
£	6,209	565	634	570	2,061	5,012
Other ..						
cwt.	54,489	10,008	4,582	3,198	10,674	1,286
£	25,498	13,566	6,581	6,389	7,076	1,269
Total						
cwt.	96,525	11,881	10,319	18,885	18,195	14,365
£	34,411	15,473	11,834	26,018	11,507	8,379

5. Quantities Locally Used.—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the year 1947-48 is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

#### AREA FERTILIZED AND QUANTITY OF FERTILIZERS USED, 1947-48.

State or Territory.	Area Fertilized (Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales .. ..	4,075,233	879,343	4,954,576	130,198	41,509	171,707
Victoria .. ..	3,769,125	4,461,025	8,230,150	157,817	244,826	402,643
Queensland .. ..	260,518	1,338	261,856	54,337	96	54,433
South Australia .. ..	3,377,126	1,390,858	4,767,984	152,357	71,896	224,253
Western Australia .. ..	3,900,493	2,004,612	5,905,105	190,840	101,883	292,723
Tasmania .. ..	185,061	322,477	507,538	23,032	18,913	41,945
Australian Capital Territory ..	7,747	9,795	17,542	373	497	870
Total .. ..	15,575,303	9,069,448	24,644,751	708,954	479,620	1,188,574

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the years 1943-44 to 1947-48, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

The serious diminution in the output of superphosphate during the war caused by the interruption of imports of rock phosphate necessitated the introduction of a system of rationing of supplies which adversely affected the yields from those crops which are mainly dependent upon the use of superphosphate.

#### QUANTITY OF ARTIFICIAL FERTILIZERS USED.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Total.
Average 1934-35 to 1938-39	148,277	305,969	50,651	200,566	230,713	30,272	1	276	966,725
1943-44 ..	82,200	163,690	33,677	86,456	114,572	25,306	..	290	506,191
1944-45 ..	79,432	186,458	41,162	102,970	137,211	36,199	..	235	583,667
1945-46 ..	106,008	248,025	46,833	147,147	190,639	34,220	..	318	773,190
1946-47 ..	141,388	321,092	54,274	194,216	252,532	37,062	..	517	1,001,081
1947-48 ..	171,707	402,643	54,433	224,253	292,723	41,945	..	870	1,188,574

As mentioned in § 20 the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers.

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 1947-48 was 47, made up as follows:—New South Wales 14; Victoria, 8; Queensland, 7; South Australia, 7; Western Australia, 6; and Tasmania, 5. The production of superphosphate in Australia during 1947-48 amounted to 1,186,062 tons, the largest producing States being Victoria, Western Australia and South Australia.

## § 22. 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 each of the seasons 1944-45 to 1947-48, together with respective averages for the five years ended 1938-39, is given in the following table:—

ENSILAGE MADE.

State.	Average 1934-35 to 1938-39.		1944-45.		1945-46.		1946-47.		1947-48.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
New South Wales ..	1,321	109,278	(a)	39,830	1,110	73,598	788	51,783	1,670	119,453
Victoria ..	527	30,594	454	19,993	(a)	31,576	504	24,644	449	21,873
Queensland ..	172	10,291	(a)	11,519	258	12,775	(a)	13,146	(a)	15,635
South Australia ..	122	8,493	(a)	2,749	(a)	4,664	(a)	4,739	(a)	6,531
Western Australia ..	354	15,779	(a)	19,328	(a)	13,888	(a)	8,809	(a)	13,267
Tasmania ..	26	1,114	(a)	1,325	(a)	2,567	(a)	2,890	(a)	3,514
Australian Capital Ter- ritory ..	..	..	(a)	..	(a)	1,465	(a)	5	(a)	349
Australia ..	2,522	175,549	(a)	94,744	(a)	140,533	(a)	106,016	(a)	180,622

(a) Not available.

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 accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output has declined noticeably and reached the extremely low level of 94,744 tons during the drought year 1944-45.

3. **Stocks Held on Farms.**—Details of farm stocks of ensilage, which were collected for the first time as at 31st March, 1943, are shown in the following table as at 31st March, 1944 to 1948:—

ENSILAGE : FARM STOCKS.

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1944 ..	100,859	24,319	18,676	4,944	6,634	882	890	157,204
1945 ..	54,268	15,226	14,688	2,151	5,591	899	155	92,978
1946 ..	73,371	27,675	16,926	3,186	3,832	3,925	1,740	130,655
1947 ..	60,348	30,662	11,298	2,658	2,916	3,930	100	111,912
1948 ..	109,681	29,649	18,116	5,265	3,987	4,379	491	171,568

### § 23. Agricultural Colleges and Experimental Farms.

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.

### § 24. Employment in Agriculture.

Particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and also in previous issues. Similar details for later years are not available, but statistics of permanent employment on rural holdings may be found in § 25 following.

### § 25. Number and Area of Rural Holdings and Permanent Employment Thereon.

1. General.—The statistical data included in the chapters relating to agricultural, pastoral and dairying activities 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 in each State for the years 1938-39 and 1943-44 to 1947-48.

## RURAL HOLDINGS : NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Total.
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## NUMBER OF RURAL HOLDINGS.

1938-39 ..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1943-44 ..	73,074	70,961	42,457	27,826	18,345	11,438	202	244,303
1944-45 ..	74,566	70,856	42,615	27,867	18,737	12,173	201	247,015
1945-46 ..	74,173	70,652	42,511	27,635	18,400	11,991	221	245,583
1946-47 ..	74,671	70,750	42,173	28,040	19,064	11,980	217	246,895
1947-48 ..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758

## TOTAL AREA OF RURAL HOLDINGS.

('000 ACRES.)

1938-39 ..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1943-44 ..	171,878	41,275	348,830	144,526	204,030	6,393	363	917,295
1944-45 ..	170,080	40,830	348,648	137,386	207,987	6,664	382	911,977
1945-46 ..	169,380	40,523	354,944	142,505	206,001	6,479	376	920,208
1946-47 ..	169,498	40,056	357,551	146,173	211,589	6,401	374	931,642
1947-48 ..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801

3. **Analysis of Holdings.**—(i) *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.

(ii) *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 71,165 holdings so classified in New South Wales during 1945-46. Of this number 10,447 described their main purposes as agricultural only, 21,590 as pastoral only, 12,157 dairying only, 3,973 as poultry, pig or bee farming, while the main purpose of the remaining 22,998 holdings was 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 3,008 during 1945-46.



4. Special Tabulation Relating to Rural Holdings, 1947-48.—With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1947-48. The tabulations, which covered a series of size tabulations of all rural holdings, holdings growing wheat for grain and those carrying live stock, have been published in detail in the *Production Bulletin* No. 42, 1947-48, Part II.—*Primary Industries and Total Recorded Production*. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

### RURAL HOLDINGS : NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1947-48.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
NUMBER OF HOLDINGS.								
1- 19..	9,419	9,031	2,464	3,628	3,100	1,557	19	29,218
20- 49..	5,659	8,087	2,442	3,005	1,124	1,612	17	21,946
50- 99..	5,313	7,692	4,215	2,162	674	2,086	11	22,153
100- 199..	8,394	11,521	8,149	2,139	1,540	2,708	7	34,458
200- 299..	5,365	6,356	4,359	1,396	999	1,241	8	19,724
300- 399..	3,876	5,251	3,543	1,146	668	628	7	15,119
400- 499..	3,138	3,233	2,046	1,228	486	384	5	10,520
500- 599..	2,744	2,635	1,365	1,131	402	229	4	8,510
600- 699..	2,818	3,252	1,500	1,107	335	172	10	9,194
700- 799..	1,916	1,895	770	807	293	121	1	5,803
800- 899..	1,898	1,487	577	768	343	100	9	5,182
900- 999..	1,687	1,447	533	740	475	74	5	4,961
1,000- 1,999..	9,721	5,995	2,762	4,243	3,611	408	56	26,796
2,000- 4,999..	7,697	2,345	2,205	2,930	3,822	314	44	19,357
5,000- 9,999..	2,540	445	1,166	769	654	133	7	5,714
10,000-19,999..	1,135	144	1,190	286	115	45	3	2,918
20,000-49,999..	822	70	1,587	178	50	34	2	2,743
50,000-99,999..	346	15	626	78	43	6	..	1,114
100,000 and over	181	9	571	160	407	..	..	1,328
Total ..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758

### AREA OF HOLDINGS.

('000 ACRES.)

1- 19..	74	88	22	34	24	14	..	256
20- 49..	184	254	81	94	34	53	1	701
50- 99..	383	556	313	155	47	150	1	1,605
100- 199..	1,198	1,636	1,195	306	220	373	1	4,929
200- 299..	1,295	1,544	1,057	341	243	296	2	4,778
300- 399..	1,322	1,784	1,196	396	225	212	2	5,137
400- 499..	1,394	1,445	910	550	215	168	2	4,684
500- 599..	1,494	1,436	737	618	217	123	2	4,627
600- 699..	1,813	2,084	958	712	214	110	6	5,897
700- 799..	1,425	1,416	570	602	218	89	1	4,321
800- 899..	1,603	1,252	484	649	289	83	8	4,368
900- 999..	1,598	1,376	502	702	453	70	5	4,706
1,000- 1,999..	13,561	8,251	3,763	6,007	5,217	562	77	37,438
2,000- 4,999..	23,762	6,712	6,777	8,798	11,324	969	120	58,462
5,000- 9,999..	17,096	2,981	8,156	5,205	4,207	908	52	38,605
10,000-19,999..	15,402	2,005	17,212	4,129	1,536	593	35	40,912
20,000-49,999..	25,990	2,155	49,425	5,484	1,496	993	53	85,596
50,000-99,999..	23,837	918	43,305	5,548	3,161	417	..	77,186
100,000 and over	35,767	1,452	221,958	102,063	179,353	..	..	540,593
Total ..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801

(a) Excludes Northern Territory.

5. Permanent Employment on Rural Holdings.—The following table shows for each State of Australia the number of persons permanently engaged full-time on rural holdings as at 31st March, 1948.

**RURAL HOLDINGS: PERMANENT FULL-TIME EMPLOYMENT AS AT  
31st MARCH, 1948.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>MALES.</b>								
Owners, Lessees or Sharefarmers .. ..	73,400	66,606	44,007	27,225	18,355	11,249	150	240,992
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary ..	9,074	7,542	5,412	2,423	2,379	1,322	19	28,171
Employees, including Managers and Relatives working for wages or salary .. ..	30,578	18,030	20,116	8,419	9,107	4,136	116	90,502
<b>Total .. ..</b>	<b>113,052</b>	<b>92,178</b>	<b>69,535</b>	<b>38,067</b>	<b>29,841</b>	<b>16,707</b>	<b>285</b>	<b>359,665</b>

<b>FEMALES.</b>								
Owners, Lessees, etc. } Relatives of Owner, Lessee etc. ..	9,341	6,150	12,142	5,005	5,984	1,328	40	39,990
Employees, including Managers and Relatives working for wages or salary .. ..	1,530	1,203	2,753	818	931	270	14	7,519
<b>Total .. ..</b>	<b>10,871</b>	<b>7,353</b>	<b>14,895</b>	<b>5,823</b>	<b>6,915</b>	<b>1,598</b>	<b>54</b>	<b>47,509</b>

**TOTAL PERSONS ENGAGED.**

Owners, Lessees, etc. } Relatives of Owner, Lessee, etc. ..	91,815	80,298	61,561	34,653	26,718	13,899	209	309,153
Employees, including Managers and Relatives working for wages or salary .. ..	32,108	19,233	22,869	9,237	10,038	4,406	130	98,021
<b>Total .. ..</b>	<b>123,923</b>	<b>99,531</b>	<b>84,430</b>	<b>43,890</b>	<b>36,756</b>	<b>18,305</b>	<b>339</b>	<b>407,174</b>

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the six years 1943 to 1948 for which this information was collected.

## RURAL HOLDINGS: PERMANENT FULL-TIME EMPLOYMENT, AUSTRALIA.

Particulars.	As at 31st March—					
	1943.	1944.	1945.	1946.	1947.	1948.
Males—						
Owners, Lessees or Sharefarmers .. ..	205,906	220,013	227,796	233,593	240,753	240,992
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary ..	33,552	34,980	37,760	34,241	32,233	28,171
Employees, including managers and relatives working for wages or salary .. ..	75,698	75,040	73,816	82,582	84,300	90,502
Total, Males ..	315,156	330,033	339,372	350,416	357,286	359,665
,, Females (a) ..	68,000	60,142	58,979	54,513	48,844	47,509
Total Persons engaged	383,156	390,175	398,351	404,929	406,130	407,174

(a) Total permanently engaged full-time.