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## CHAPTER XXII.

## AGRICULTURAL PRODUCTION.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. port of shipment, except where otherwise indicated.

## § 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by approximately 250,000 farmers who utilize one acre or more of land for agricultural or pastoral purposes and the latest figures available are those for the year 1957-58. The returns are collected on a substantially uniform basis in all States at 31st March, each year, and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjunction with the "census" returns. The statistics published in this chapter are therefore shown in "agricultural" years. For most purposes, there will be little error involved in considering them as applying to years ending on 30th June.

## § 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.

The following details of crops were collected in 1808:—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.

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.*)

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.

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 1860-61 and during each of the eleven seasons 1947-48 to 1957-58. On page 871 there is a graph showing the area of crops in Australia from 1900-01 onward.

## AREA OF CROPS.

('000 Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1860-61 ..	246	387	4	359	25	153	..	..	1,174
1870-71 ..	385	693	52	802	55	157	..	..	2,144
1880-81 ..	606	1,549	114	2,087	64	141	..	..	4,561
1890-91 ..	853	2,032	225	2,093	70	157	..	..	5,430
1900-01 ..	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11 ..	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21 ..	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31 ..	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41 ..	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1947-48 ..	7,168	5,023	1,849	3,852	4,026	342	(a)	11	22,271
1948-49 ..	5,711	4,645	1,953	3,757	4,215	345	(a)	10	20,636
1949-50 ..	5,670	4,480	2,057	3,617	4,399	368	(a)	10	20,601
1950-51 ..	4,761	4,351	2,077	3,676	4,650	290	(a)	6	19,811
1951-52 ..	4,704	4,271	2,022	3,696	4,693	291	(a)	6	19,683
1952-53 ..	4,837	4,286	2,422	3,581	4,816	303	(a)	6	20,251
1953-54 ..	5,425	4,480	2,361	3,778	4,633	330	(a)	6	21,013
1954-55 ..	5,394	4,394	2,593	3,895	5,112	301	1	5	21,695
1955-56 ..	5,660	4,542	2,604	3,972	5,342	326	1	7	22,454
1956-57 ..	5,789	3,637	2,469	3,979	5,232	288	1	5	19,400
1957-58 ..	5,000	4,051	2,600	3,907	5,615	292	1	5	21,471

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860-61 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18.5 million acres were cultivated in Australia. After the termination of hostilities, the area continued to expand and rose steadily to the record area of 25.2 million 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.

By 1938-39, the industry had recovered from the depression and the total area under cultivation reached the high level of 23.5 million acres. Thereafter, as a result of war-time man-power shortages and shipping difficulties, the area declined to less than 16 million acres in 1943-44. After 1943-44, production gradually increased again until, in 1947-48, 22.3 million acres were sown to crops. This upward trend was reversed after 1948-49, largely because, as a result of the high prices for wool, many primary producers transferred from agricultural to pastoral production. In recent years, the area sown increased from 19.7 million acres in 1951-52 to 22.5 million acres in 1955-56, but in 1956-57, due largely to excessively wet conditions in the Eastern States, the area sown dropped to 19.4 million acres. In 1957-58, the area increased again to 21.5 million acres. As the area under wheat in Australia constitutes a large proportion of the total area cropped (51 per cent. during the ten years ended 1957-58), 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 about 5.3 million acres in 1929-30 to about 33.7 million acres in 1957-58.

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 Ministers for Primary Industry and for Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production and marketing; (iii) the improvement

of the quality of agricultural products and the maintenance of high grade standards; (iv) to ensure, as far as possible, balance between production and available markets; and (v) organized marketing, etc.

In addition, a permanent Standing Committee on Agriculture was formed to advise the Council, to secure co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

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

1. Area of Crops in States and Territories.—The following table shows the areas in the several States, the Northern Territory and the Australian Capital Territory of each of the crops for the season 1957-58.

#### AREA OF CROPS, 1957-58.

(Acres.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas	N.T.	A.C.T.	Aust.
<b>Cereals for Grain—</b>									
Barley—									
2 Row .. ..	45,366	334,076	152,174	1,155,558	63,180	7,733	..	..	1,758,087
6 Row .. ..	23,489	17,668	20,470	56,204	244,224	651	..	..	362,706
Maize .. ..	57,513	4,278	122,245	(a)	20	..	..	6	(b) 184,062
Oats .. ..	715,489	622,245	19,144	427,366	1,153,492	20,711	..	54	2,958,501
Panicum, Millet and Setaria .. ..	298	1,040	61,040	..	..	..	..	..	62,378
Rice .. ..	46,774	..	..	..	(a)	..	(a)	..	(b) 46,774
Rye .. ..	3,898	17,807	987	38,955	8,868	464	..	..	70,979
Sorghum .. ..	47,017	..	166,979	..	69	..	377	..	214,442
Wheat .. ..	2,257,398	1,834,842	460,639	1,331,302	2,957,206	5,884	..	528	8,847,799
Hay .. ..	554,780	870,958	68,842	290,926	338,983	110,164	..	2,696	2,237,349
Green Fodder .. ..	993,039 (c)	85,095	714,048 (d)	421,242	770,739	54,094	4	1,032	3,039,293
Other Stock Fodder .. ..	13,623	23,052	11,083	40,434	3,932	24,416	..	..	116,540
<b>Grass Seed—</b>									
Lucerne .. ..	24,880	(e)	1,164	21,271	(a)	..	..	(e)	(b) 47,315
Clover .. ..	10,149	7,191	..	7,277	16,890	493	..	..	42,000
Other .. ..	1,753	7,672	8,182	3,013	6,548	507	..	55	27,730
<b>Industrial Crops—</b>									
Broom Millet .. ..	3,213	197	349	..	..	..	..	..	3,759
Canary Seed .. ..	2,240	..	53,045	115	(a)	..	..	..	(b) 55,400
Cotton .. ..	..	..	10,364	..	(a)	..	..	..	(b) 10,364
Flax—									
For Fibre .. ..	..	5,550	..	1,410	1,002	..	..	..	7,962
For Linseed .. ..	2,251	4,091	90,255	221	549	..	..	..	97,367
Hops .. ..	..	435	..	..	(a)	1,441	..	..	(b) 1,876
Peanuts .. ..	686	..	34,739	..	(a)	..	156	..	(b) 35,581
Sugar-cane—									
For Crushing .. ..	10,734	..	364,985	..	(a)	..	..	..	(b) 375,719
Other (excluding fodder) .. ..	9,961	..	120,370	..	..	..	..	..	130,331
Sunflower Seed .. ..	..	142	5,977	..	..	..	..	..	6,119
Tobacco .. ..	1,193	3,252	7,493	..	1,266	..	..	..	13,204
Other .. ..	2	505	258	130	..	253	..	..	1,148
<b>Vegetables for Human Consumption—</b>									
Onions .. ..	498	5,368	4,296	694	415	37	..	9	11,317
Potatoes .. ..	17,326	49,846	14,400	6,260	8,322	21,696	4	92	117,946
Other Vegetables .. ..	49,339	39,833	36,611	10,952	7,620	18,971	124	101	163,551
<b>Vineyards—</b>									
Bearing .. ..	16,243	42,089	2,518	55,411	8,268	..	3	..	124,532
Not Bearing .. ..	741	2,678	303	2,028	755	..	..	..	6,505
<b>Orchards and other Fruit Gardens—</b>									
Bearing .. ..	70,503	48,392	27,152	25,821	18,612	21,321	48	88	211,937
Not Bearing .. ..	17,667	17,829	13,704	9,474	3,574	1,692	33	5	63,978
<b>Nurseries and Cut Flowers .. ..</b>	953	2,661	315	226	272	128	..	12	4,567
<b>All other Crops .. ..</b>	1,643	2,457	5,620	246	599	936	..	9	11,510
<b>Total Area .. ..</b>	<b>5,000,659</b>	<b>4,051,249</b>	<b>2,599,751</b>	<b>3,906,536</b>	<b>5,615,405</b>	<b>291,592</b>	<b>749</b>	<b>4,687</b>	<b>21,470,628</b>

(a) Not available for publication. Included in "All other Crops", except in respect of rice in the Northern Territory which is excluded from "Total Area". (b) Incomplete. See footnotes to individual States. (c) Excludes lucerne and oats for grazing. (d) Excludes lucerne for grazing. (e) Not available. Included in "All other Crops".

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the major crops cultivated in the various States and Territories to the total area of crops for the season 1957-58 is shown in the next table. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland, the most extensive crops are green fodder, wheat, and sugar-cane, and in Tasmania, hay and green fodder.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing 41 per cent. of the total area of crops in 1957-58.

**RELATIVE AREAS OF CROPS, 1957-58.**  
(Per cent.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Wheat (Grain) ..	45.1	45.3	17.7	34.1	52.7	2.0	..	11.3	41.2
Green Fodder ..	19.9	a 2.0	27.5	b 10.8	13.7	18.5	0.5	22.0	14.2
Oats (Grain) ..	14.3	15.4	0.7	10.9	20.5	7.1	..	1.2	13.8
Barley (Grain) ..	1.4	8.7	6.6	31.0	5.5	2.9	..	..	9.8
Hay ..	11.1	21.5	2.6	7.4	6.0	37.8	..	57.5	10.4
Sugar-cane, Crushed ..	0.2	..	14.1	..	..	..	..	..	1.8
Total Orchards and Fruit Gardens ..	1.8	1.7	1.6	0.9	0.4	8.0	10.8	2.0	1.3
Sorghum ..	0.9	..	6.4	..	..	..	50.4	..	1.0
Maize (Grain) ..	1.2	0.1	4.7	..	..	..	..	..	0.8
Total Vineyards ..	0.3	1.1	0.1	1.5	0.2	..	0.4	..	0.6
Potatoes ..	0.3	1.2	0.6	0.2	0.1	7.4	0.5	2.0	0.5
All other ..	3.5	3.0	17.4	3.2	0.9	16.3	37.4	4.0	4.6
<b>Total ..</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes lucerne and oats for grazing.

(b) Excludes oats for grazing.

3. **Area of Principal Crops in Australia.**—The area of the principal crops during each of the five seasons ended 1957-58, compared with the average for the ten years ended 1938-39, is shown hereunder:—

**AREA OF PRINCIPAL CROPS: AUSTRALIA.**  
(’000 Acres.)

Crop.	Average, ten years ended 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
<b>Cereals for Grain—</b>						
Barley, 2 Row ..	428	1,482	1,391	1,510	1,705	1,758
Maize ..	295	179	170	168	182	184
Oats ..	1,393	2,137	2,574	3,354	2,556	2,959
Rice ..	22	39	39	41	50	47
Wheat ..	14,345	10,751	10,673	10,166	7,874	8,848
Hay ..	2,994	1,935	1,984	2,241	1,861	2,237
Green Fodder ..	1,272	2,415	2,733	2,649	2,685	3,039
<b>Vegetables for Human Consumption—</b>						
Onions ..	8	7	8	7	9	11
Potatoes ..	130	128	107	94	101	118
Other vegetables for human consumption ..	(a) 83	131	136	155	172	164
<b>Industrial Crops—</b>						
Cotton ..	43	9	8	13	11	10
Hops ..	1	2	2	2	2	2
Sugar-cane ..	332	482	502	499	499	506
Tobacco ..	12	8	10	11	12	13
Vineyards ..	118	138	136	135	132	131
Orchards ..	276	273	276	279	270	276
All other Crops ..	206	897	946	1,130	1,279	1,168
<b>Total ..</b>	<b>21,958</b>	<b>21,013</b>	<b>21,695</b>	<b>22,454</b>	<b>19,400</b>	<b>21,471</b>

(a) Incomplete. Market gardens and pulse only.

4. **Size Classification of Principal Crops.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1955–56 and published in full detail in a series of mimeographed bulletins, *Size Classification of Rural Holdings, 1955–56*. Condensed tables also appear in the bulletin *Primary Industries—Part I.—Rural Industries, No. 51*. The tables show a classification by size (area) of crop and size (area) of holding for wheat, oats, barley, sugar-cane, tobacco, potatoes, other vegetables for human consumption, vineyards, and orchard and non-orchard fruit.

5. **Weights and Measures.**—Details of the weights and measures used in recording production of agricultural commodities appear in the introduction to the bulletin *Primary Industries—Part I.—Rural Industries*.

6. **Production of Crops in States and Territories.**—The following table shows production of crops in the various States and Territories for the season 1957–58.

PRODUCTION OF CROPS, 1957-58.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Cereals for Grain—</b>										
Barley—										
2 Row .. ..	'000 bus.	441	5,201	2,662	17,091	758	251	..	..	26,404
6 Row .. ..	" "	244	246	294	461	2,798	19	..	..	4,062
Maize .. ..	" "	2,237	241	3,161	(a)	..	..	..	..	(b) 5,639
Oats .. ..	" "	3,944	9,528	256	3,423	13,793	482	..	..	31,426
Panicum, Millet and Setaria	" "	1	19	1,024	..	..	..	..	..	1,044
Rice .. ..	" "	5,658	..	..	..	(a)	..	(a)	..	(b) 5,658
Rye .. ..	" "	11	85	11	152	63	5	..	..	327
Sorghum .. ..	" "	521	..	3,886	..	..	..	1	..	4,408
Wheat .. ..	" "	10,603	32,134	6,657	14,914	33,100	153	..	5	97,566
Hay .. ..	" tons	535	1,413	122	304	386	205	..	4	2,969
<b>Grass Seed—</b>										
Lucerne .. ..	cwt.	12,260	(c)	493	14,687	..	..	..	..	(b)27,440
Clover .. ..	" "	23,913	11,888	..	11,009	30,313	545	..	..	77,668
Other .. ..	" "	2,033	8,614	16,366	4,886	15,665	1,725	..	9	49,298
<b>Industrial Crops—</b>										
Broom Millet—										
Fibre .. ..	" "	19,793	845	1,463	..	..	..	..	..	22,101
Grain .. ..	bus.	19,626	1,099	..	..	..	..	..	..	20,725
Canary Seed .. ..	'000 bus.	..	..	259	1	(a)	..	..	..	(b) 260
Cotton, Unginned	'000 lb.	..	..	3,390	..	(a)	..	..	..	(b) 3,390
<b>Flax—</b>										
Straw .. ..	ton	..	9,923	..	3,077	1,246	..	..	..	14,246
Linseed .. ..	" "	36	1,149	7,279	49	68	..	..	..	8,581
Hops (Dry Weight)	cwt.	..	7,089	..	..	(a)	25,621	..	..	(b)32,710
Peanuts .. ..	" "	8,014	..	366,518	..	(a)	..	302	..	b 374,834
Sugar-cane for Crushing	'000 tons	303	..	8,946	..	..	..	..	..	9,249
Sunflower Seed .. ..	cwt.	..	1,087	29,481	..	..	..	..	..	30,568
Tobacco, Dried Leaf	'000 lb.	1,235	3,684	5,618	..	1,031	..	..	..	11,568
<b>Vegetables for Human Consumption—</b>										
Onions .. ..	ton	2,343	40,678	18,653	5,945	4,149	186	..	76	72,030
Potatoes .. ..	" "	66,689	251,159	56,468	49,965	49,229	101,500	3	420	575,433
<b>Vineyards—</b>										
Grapes—										
For Drying .. ..	" "	45,128	238,298	..	56,455	8,988	..	..	..	348,869
Table .. ..	" "	4,765	7,722	2,357	1,018	2,274	..	7	..	18,143
Wine .. ..	" "	23,496	13,388	141	141,559	4,707	..	..	..	183,291

(a) Not available for publication.

(b) Incomplete; see footnotes to individual States.

(c) Not available.

7. **Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the five years ended 1957–58, and the average for the ten years ended 1938–39.

## PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
<b>Cereals for Grain—</b>							
Barley, 2 Row ..	'000 bus.	7,480	35,923	25,622	35,469	43,870	26,404
Maize .. ..	" "	7,228	5,079	5,076	4,755	5,494	5,639
Oats .. ..	" "	16,437	32,961	32,834	56,487	35,396	31,426
Rice .. ..	" "	2,005	4,069	5,080	4,725	4,262	5,658
Wheat .. ..	" "	169,398	197,960	168,617	195,443	134,455	97,566
Hay .. ..	" tons	3,490	3,049	2,856	3,625	3,043	2,969
<b>Vegetables for Human Consumption—</b>							
Onions .. ..	" "	43	46	49	40	54	72
Potatoes .. ..	" "	351	548	468	402	519	575
<b>Industrial Crops—</b>							
Cotton, Unginned ..	" lb.	15,667	5,132	3,597	5,359	3,809	3,390
Hops, (dry weight) ..	cwt.	18,989	(a)24,666	(a)34,075	(a)34,374	(a)25,230	(a)32,710
Sugar-cane for Crushing	'000 tons	4,588	9,014	10,087	8,901	9,272	9,249
Tobacco (Dried leaf) ..	" lb.	5,113	7,669	6,822	6,106	8,709	11,568
<b>Vineyards—</b>							
Grapes .. ..	" tons	381	529	460	379	495	550
Wine made(b) .. ..	" gals.	16,104	31,666	23,964	22,895	30,743	33,854
Dried Vine Fruits ..	" tons	70	90	81	59	80	91

(a) Excludes Western Australia. (b) Net factory and farm production of beverage and distillation wine excluding the liquid gallnage of spirits added in wine fortifying.

8. 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 1957-58 and the average for the ten years ended 1938-39.

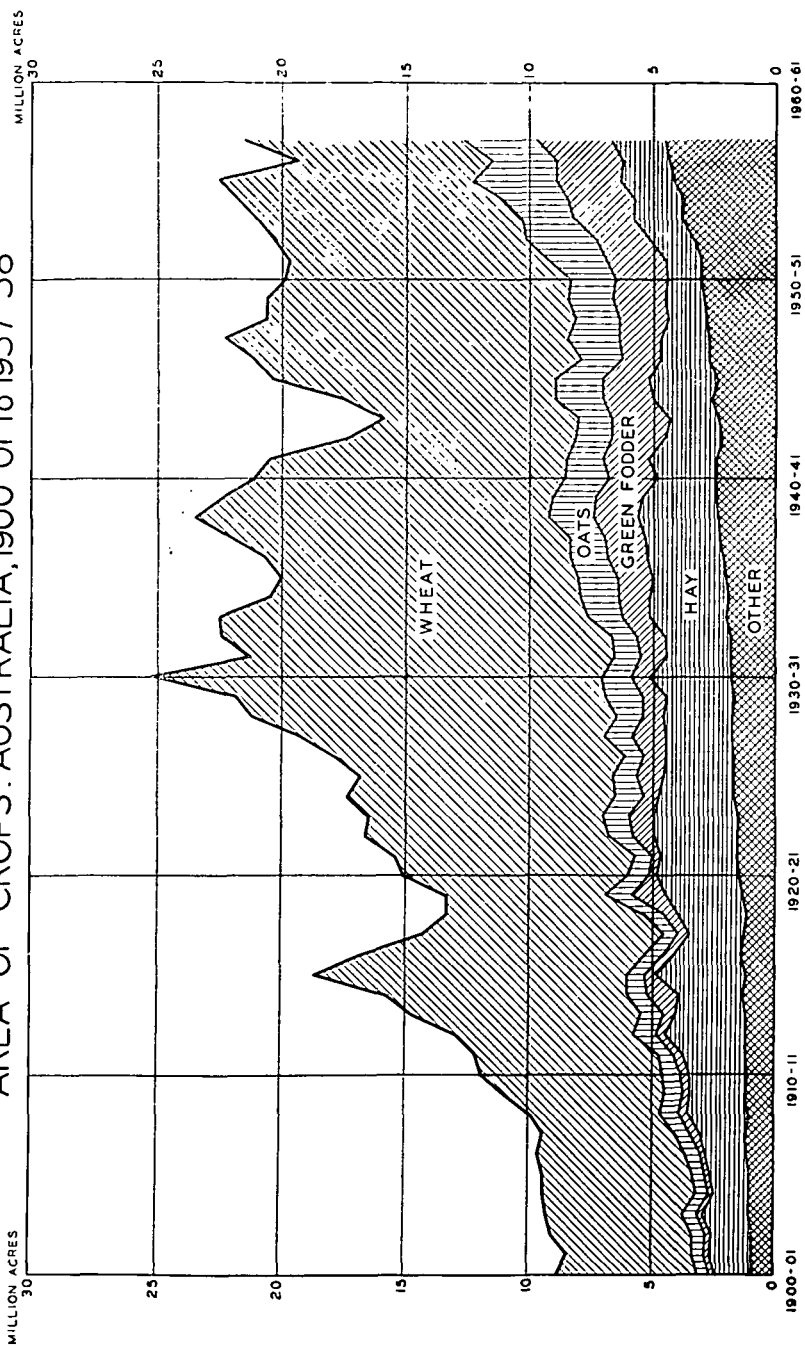
## YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
<b>Cereals for Grain—</b>							
Barley, 2 Row .. ..	bushel.	17.5	24.2	18.4	23.5	25.7	15.0
Maize .. ..	" "	24.5	28.4	29.9	28.4	30.3	30.6
Oats .. ..	" "	11.8	15.4	12.8	16.8	13.8	10.6
Rice .. ..	" "	93.0	104.6	131.3	114.7	84.4	121.0
Wheat .. ..	" "	11.8	18.4	15.8	19.2	17.1	11.0
Hay .. ..	" ton	1.17	1.58	1.44	1.62	1.63	1.33
<b>Vegetables for Human Consumption—</b>							
Onions .. ..	" "	5.54	6.29	6.13	5.69	5.78	6.36
Potatoes .. ..	" "	2.71	4.27	4.36	4.29	5.14	4.88
<b>Industrial Crops—</b>							
Cotton, Unginned ..	" lb.	366	572	429	403	336	327
Hops (dry weight)(a) ..	cwt.	17.88	15.18	19.87	20.22	13.97	17.73
Sugar-cane for Crushing(a)	" ton.	19.24	26.47	26.95	23.88	25.05	24.62
Tobacco (Dried leaf) ..	" lb.	463	930	706	540	716	876
<b>Vineyards—</b>							
Grapes(a) .. ..	" ton	3.45	4.15	3.61	2.97	3.98	4.42

(a) Per acre of productive crops.

9. Gross Value of Principal Crops in Australia.—The following table shows the gross value of principal crops at the principal markets in Australia for the five years ended 1957-58 and the average for the ten years ended 1938-39.

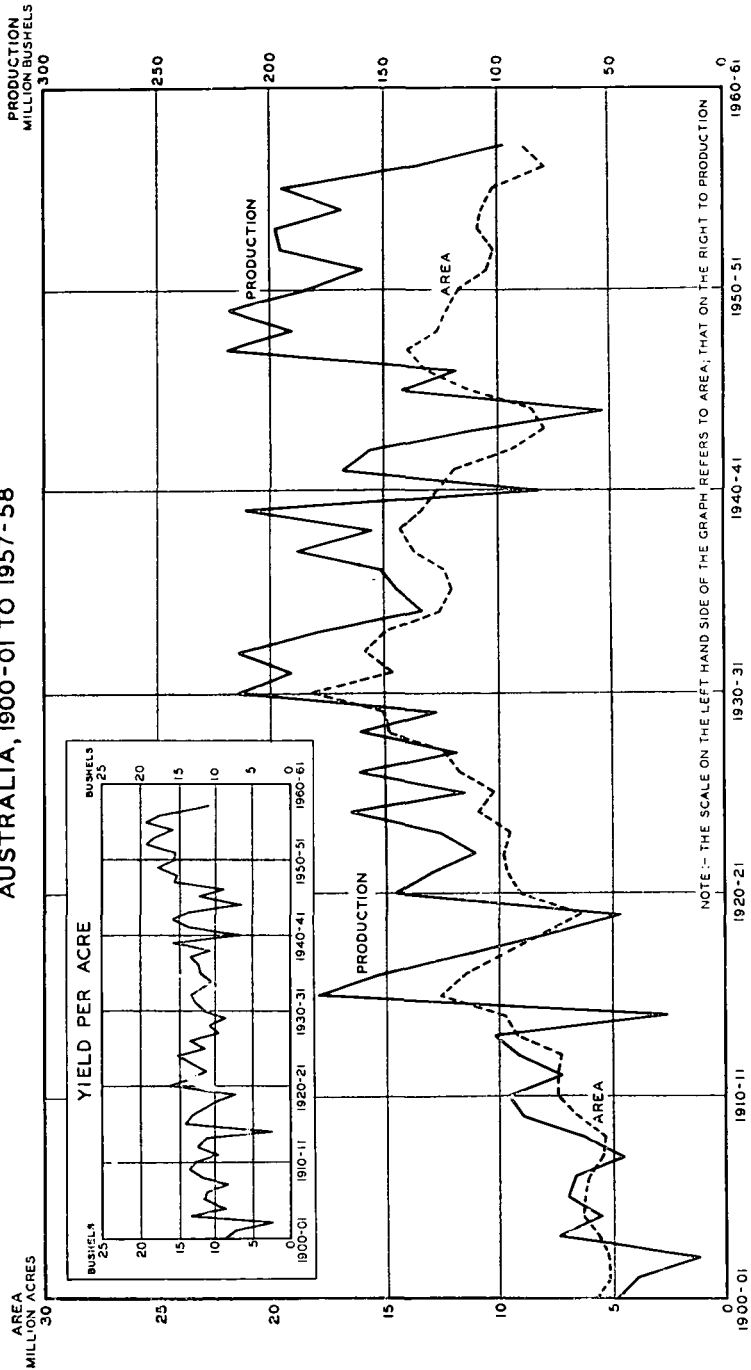
# AREA OF CROPS: AUSTRALIA, 1900-01 TO 1957-58



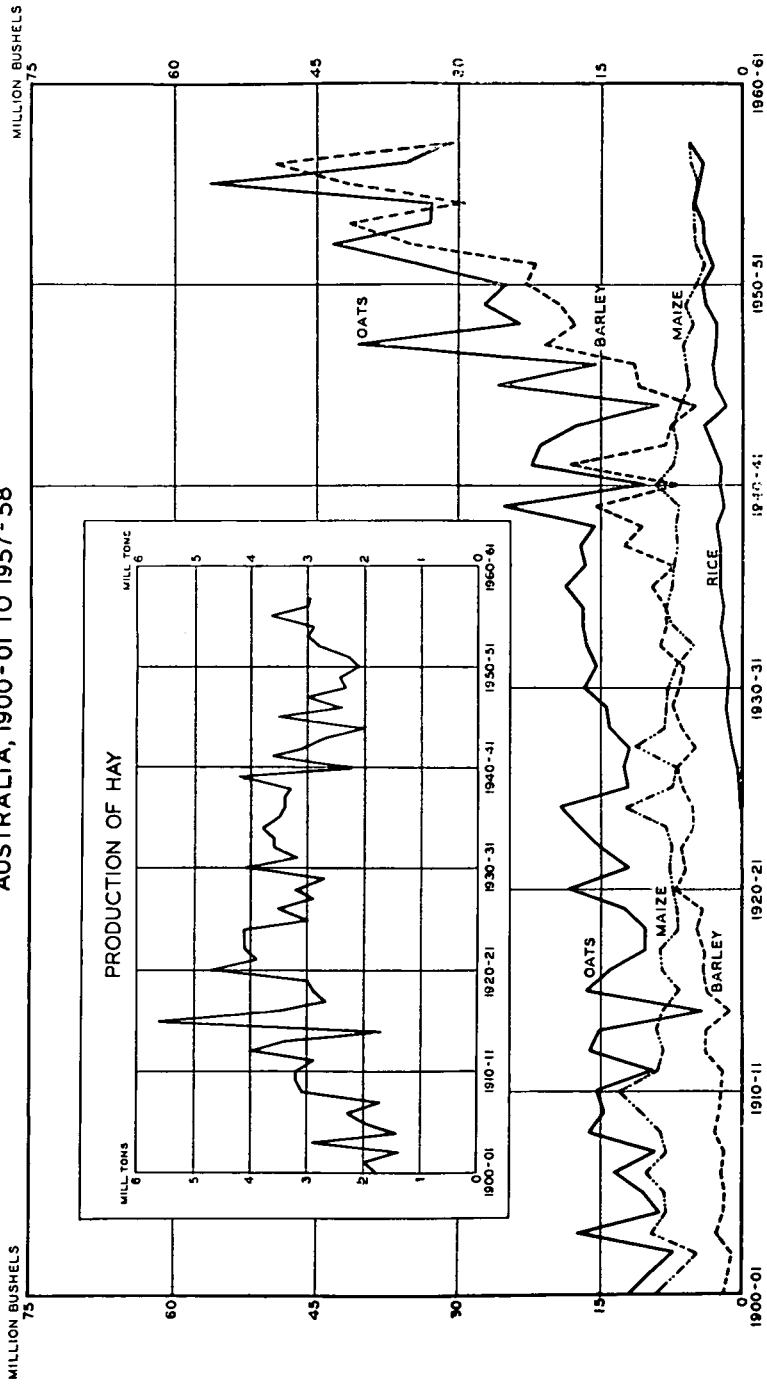


# WHEAT (GRAIN) : AREA, PRODUCTION AND YIELD PER ACRE

## AUSTRALIA, 1900-01 TO 1957-58



# PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY AUSTRALIA, 1900-01 TO 1957-58





GROSS VALUE OF PRINCIPAL CROPS : AUSTRALIA.(a)  
(£'000.)

Crop.	Average ten years ended 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58. (b)
<b>Cereals for Grain—</b>						
Barley .. .. .	1,214	21,011	18,257	20,994	24,896	17,022
Maize .. .. .	1,537	3,868	3,615	3,464	3,732	4,995
Oats .. .. .	1,937	12,343	14,066	19,373	12,239	15,951
Rice .. .. .	392	3,198	3,430	3,406	3,069	4,153
Wheat .. .. .	30,125	138,135	107,528	126,091	92,647	66,870
Hay .. .. .	11,413	33,230	30,878	34,807	30,524	39,277
Green Fodder .. .. .	2,775	(d) 7,720	(d) 6,436	(d) 5,950	(d) 5,897	(d) 8,571
<b>Vegetables for Human Consumption—</b>						
Onions .. .. .	245	1,662	1,586	1,973	2,516	1,274
Potatoes .. .. .	2,314	12,075	13,449	25,895	17,955	9,969
Other vegetables for human consumption .. .. .	(e) 2,203	22,915	23,385	27,993	30,190	25,359
<b>Industrial Crops—</b>						
Cotton, Unginned .. .. .	298	316	208	307	224	213
Hops .. .. .	157	(d) 802	(d) 1,106	(d) 1,102	(d) 857	(d) 1,137
Sugar-cane .. .. .	7,895	39,619	39,706	35,786	40,718	47,346
Tobacco (Dried leaf) .. .. .	474	3,816	3,823	3,200	4,503	6,202
Grapes .. .. .	3,907	13,488	12,293	10,511	15,406	18,266
Fruit and Nuts .. .. .	7,953	46,415	46,568	48,349	49,898	59,152
All other Crops .. .. .	2,651	11,520	13,301	15,736	16,877	14,474
<b>Total Gross Value .. .. .</b>	<b>77,490</b>	<b>372,135</b>	<b>339,635</b>	<b>384,937</b>	<b>352,148</b>	<b>340,231</b>

(a) Excludes Northern Territory prior to 1954-55. Includes amounts paid as bounty, relief, &c.  
 (b) Subject to revision. (c) Incomplete, excludes Northern Territory. (d) Incomplete, excludes Western Australia. (e) Incomplete. Market gardens and pulse only.

10. Value of Production and Indexes of Price and Quantum of Production.—(i) *Gross and Net Values, 1956-57 and 1957-58.* Values of agricultural production for each State are shown for 1956-57 and 1957-58 in the following table. 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 XXX.—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 figures are overstated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION.  
(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Value of Materials Used in Process of Production.		Net value of Production. (a)
				Seed used and Fodder for Farm Stock.	Value of other Materials used.	
1956-57.						
New South Wales .. .. .	67,455	13,643	53,812	2,703	(b) 2,684	48,425
Victoria .. .. .	86,141	13,194	72,947	4,853	4,292	63,802
Queensland .. .. .	81,014	8,598	72,416	2,631	9,658	60,127
South Australia .. .. .	64,997	9,446	55,551	2,487	3,376	49,688
Western Australia .. .. .	40,085	5,461	34,624	2,333	7,651	24,640
Tasmania .. .. .	12,244	2,144	10,100	1,520	(b) 602	7,978
Northern Territory .. .. .	58	..	58	..	..	58
Australian Capital Territory .. .. .	154	3	151	4	4	143
<b>Australia .. .. .</b>	<b>352,148</b>	<b>52,489</b>	<b>299,659</b>	<b>16,531</b>	<b>28,267</b>	<b>254,861</b>
1957-58.(c)						
New South Wales .. .. .	62,092	11,129	50,963	3,134	(b) 3,101	44,728
Victoria .. .. .	87,571	12,759	74,812	(d)	(d)	64,320
Queensland .. .. .	85,767	7,867	77,900	3,192	11,810	62,898
South Australia .. .. .	45,062	4,904	40,158	2,439	5,397	32,322
Western Australia .. .. .	43,639	5,421	38,218	2,751	8,169	27,298
Tasmania .. .. .	15,891	2,595	13,296	676	(b) 570	12,050
Northern Territory .. .. .	52	..	52	..	..	52
Australian Capital Territory .. .. .	157	2	155	1	5	149
<b>Australia .. .. .</b>	<b>340,231</b>	<b>44,677</b>	<b>295,554</b>	<b>(d)</b>	<b>(d)</b>	<b>243,817</b>

(a) No deduction has been made for depreciation and maintenance. (b) No allowance made for costs of power, power kerosene, petrol and other oils. (c) Subject to revision. (d) Not available separately.

(ii) *Net Values, 1929-30 to 1957-58.* In the following table, the net value of agricultural production and the net value per head of population are shown by States for the years 1953-54 to 1957-58 in comparison with the averages for the ten years ended 1938-39:—

## NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
NET VALUE.(a) (£'000.)									
Average, ten years 1929-30 to 1938-39	13,304	10,508	10,189	6,540	4,903	1,824	(b)	(b)	47,268
1953-54 .. .. .	68,342	65,624	55,471	41,700	28,119	9,204	(b)	(b)	268,460
1954-55 .. .. .	48,711	61,516	59,656	39,180	23,483	11,240	45	88	243,919
1955-56 .. .. .	63,647	66,465	55,361	41,271	37,350	15,170	42	149	279,455
1956-57 .. .. .	48,425	63,802	60,127	49,688	24,640	7,978	58	143	254,861
1957-58(c) .. .. .	44,728	64,320	62,898	32,322	27,298	12,050	52	149	243,817

## NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, ten years 1929-30 to 1938-39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	(b)	(b)	7 1 4
1953-54 .. .. .	20 1 4	27 1 8	42 13 1	53 1 1	44 11 8	29 14 11	(b)	(b)	30 6 4
1954-55 .. .. .	14 1 7	24 14 6	45 0 3	48 10 5	36 3 9	35 18 3	2 14 6	2 16 4	26 16 8
1955-56 .. .. .	18 1 2	25 18 3	40 18 7	49 9 2	55 16 6	47 10 6	2 8 1	4 8 7	29 19 11
1956-57 .. .. .	13 9 11	24 3 4	43 11 1	57 13 8	35 19 11	24 9 3	3 3 3	3 19 5	26 14 7
1957-58(c) .. .. .	12 4 6	23 15 2	44 16 5	36 9 8	39 1 7	36 1 4	2 14 8	3 15 10	25 0 4

(a) No deduction has been made for depreciation and maintenance. (b) Not available. (c) Subject to revision.

(iii) *Indexes of Quantum and Price of Agricultural Production.* Indexes of quantum and price of agricultural production are shown in the following table. The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1938-39. The price indexes relate to average "prices" of farm products realized at the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. Further details on weights used, &c., are to be found in Chapter XXX.—Miscellaneous.

## INDEXES OF QUANTUM(a) AND PRICE OF AGRICULTURAL PRODUCTION.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.(b)
Quantum Produced—					
Wheat .. .. .	120	102	119	82	59
Other Crops .. .. .	134	131	144	144	140
<i>Total, All Crops .. .. .</i>	<i>129</i>	<i>120</i>	<i>134</i>	<i>120</i>	<i>109</i>
Total per Head of Population	99	91	99	86	77
Price—					
Wheat .. .. .	349	319	319	347	349
Other Crops .. .. .	305	314	339	327	335
<i>Total, All Crops .. .. .</i>	<i>324</i>	<i>316</i>	<i>330</i>	<i>336</i>	<i>341</i>

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (1936-37 to 1938-39.) (b) 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.

**2. Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to inquire 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 the costs of 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 at that time was 6s. a 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.**—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941–42 to 1948–49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.

**4. Legislation relating to Wheat Industry.**—(i) *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 Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37, pages 1295–99.

(ii) *The Australian Wheat Board.* The Australian Wheat Board was constituted in September, 1939, under National Security (Wheat Acquisition) Regulations 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 as were necessary to give effect to the regulations.

The Board was reconstituted, with similar powers, under the Commonwealth Wheat Stabilization Act 1948, to administer the stabilization plan. The new Board commenced to function on 18th December, 1948.

(iii) *Wheat Stabilization Plan.* (a) 1947–48 to 1952–53. Details of the Wheat Stabilization Plan which operated during the seasons 1947–48 to 1952–53 inclusive were published in Official Year Book No. 40, pages 841 and 842, and previous issues.

(b) 1953–54 to 1957–58. Details of the plan which operated during the seasons 1953–54 to 1957–58 inclusive were published in Official Year Book No. 44, page 861, and previous issues.

(c) 1958–59 to 1962–63. Following negotiations during 1958, a new wheat industry stabilization plan was enacted by the Commonwealth and the States towards the end of that year. The new plan follows the lines of the two earlier ones. Details of the plan are as follows:—

- (i) *Period of the Plan.* The plan will operate for five years. It will commence with the 1958–59 wheat crop and will end with the marketing of the 1962–63 crop.
- (ii) *Commonwealth Guarantee.* The Commonwealth will guarantee a return of 14s. 6d. a bushel to growers on up to 100 million bushels of wheat exported from the crop in the first year of the plan. The guaranteed return of 14s. 6d. is based on the findings of the recent survey of the economic structure of the wheat industry conducted by the Bureau of Agricultural Economics. It will be adjusted in each of the following years of the plan on up to 100 million bushels in accordance with the movements in costs based on a cost index established from the survey. The first two five-years' Wheat Stabilization Plans each guaranteed a similar quantity of 100 million bushels exported.
- (iii) *Australian Wheat Board.* The Australian Wheat Board will be maintained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.
- (iv) *Stabilization Fund*—
  - (a) *Export Tax.* A tax will be collected on wheat exported which will be equivalent to the excess of the returns from export sales over the guaranteed return. However, the maximum rate of export tax will be 1s. 6d. a bushel.
  - (b) *Size of Fund.* The ceiling of the Stabilization Fund is established at £20 million; any excess beyond this figure will be returned to growers on the "first-in-first-out" principle.
  - (c) *Balance in Present Wheat Stabilization Fund.* The balance remaining in the Fund at the termination of the present plan will be carried forward to the new plan as the nucleus of a new stabilization fund.

- (d) *Use of the Stabilization Fund.* When the average export realizations fall below the guaranteed return, the deficiency will be made up first by drawing upon the stabilization fund in respect of up to 100 million bushels of wheat from each crop. When the fund is exhausted, the Commonwealth will meet its obligations under the guarantee.
- (v) *Home Consumption Price.* The home consumption base price for 1958–59, the first year of the plan, has been established as 14s. 6d. a bushel, bulk basis, f.o.r. ports plus 2d. a bushel loading to cover the cost of transporting wheat to Tasmania as outlined in (vi) below. There is provision in the plan for annual adjustments in the following years in accordance with the guaranteed price as outlined in (ii) above.
- (vi) *Freight on Wheat to Tasmania.* Provision is made for a loading on the price of all wheat sold for consumption in Australia to the extent necessary to cover the cost of transporting wheat from the mainland to Tasmania in each season of the plan.
- (vii) *Premium on Western Australian Wheat.* A premium will be paid from export realizations on wheat grown in Western Australia and exported from that State in recognition of the natural freight advantage enjoyed by Western Australia owing to its proximity to the principal overseas markets for wheat. The premium will be three pence a bushel.

By agreement between the parties concerned, the Australian Wheat Growers' Federation, the States and the Commonwealth, a poll of growers as to acceptance of the Plan was not considered necessary. The earlier plans had been approved by polls of growers.

(iv) *Wheat Industry Research.* In 1957, the Commonwealth Parliament passed legislation providing for a levy of a farthing a bushel on wheat handled by the Australian Wheat Board. This money, contributed by the growers, is to be spent by the Wheat Research Committees set up in the wheat growing States. These Committees, which consist of representatives of wheatgrowers, universities and State Departments of Agriculture, also received a total of £284,000 under the provisions of the Wheat Acquisition (Undistributed Moneys) Act 1958.

The Commonwealth Government has undertaken to supply additional funds for research (with a maximum of £1 for £1 against the growers' contribution) and has set up the Wheat Industry Research Council to make recommendations on the appropriate expenditure of the Commonwealth contribution.

The Council at its inaugural meeting in February, 1958, considered that possible avenues of research would include the breeding of better varieties, cereal chemistry, soil fertility, mechanization, the industry's cost structure and marketing problems.

The Council and the State Committees have allocated the expenditure of over £300,000 up to the end of June, 1959, including grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, Universities and Agricultural Colleges.

**5. Marketing of Wheat.**—(i) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1953–54 to 1957–58 harvests are shown in the following table:—

**AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1953-54 TO 1957-58.**

(\*000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
17 .. ..	1953-54	57,844	52,219	9,102	27,711	36,161	161	183,198
18 and 18A ..	1954-55	32,385	46,431	14,605	28,636	30,628	65	152,750
19 .. ..	1955-56	51,789	39,079	14,098	26,107	49,649	39	180,761
20 .. ..	1956-57	24,014	32,931	5,837	29,154	28,171	22	120,129
21 .. ..	1957-58	4,617	29,547	5,245	12,535	29,306	74	81,324

(b) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1954 to 1958, are shown in the following table:—

**AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1954 TO 1958.(a)**  
(<sup>'000 Bushels.</sup>)

Particulars.	1954.	1955.	1956.	1957.	1958.
Sold for export as wheat .. ..	40,547	63,171	95,399	66,972	34,399
Sold for export as flour .. ..	26,871	(b) 34,024	(b) 34,950	(b) 32,334	(b) 16,868
Sold for local consumption as flour .. ..	35,860	38,012	39,832	41,162	39,213
Sold for other purposes .. ..	20,261	18,560	17,090	21,459	16,894

(a) Years ended 30th November.

(b) Includes wheat equivalent of manufactured wheat product exported.

(ii) *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 and these provisions have been continued in the subsequent legislation.

**AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS, POOLS Nos. 17 to 21.**  
(£.)

Particulars.	No. 17 Pool.(a)	No. 18 Pool.(a)	No. 19 Pool.(a)	No. 20 Pool.(b)	No. 21 Pool.(b)
	(1953-54 Harvest.)	(1954-55 Harvest.)	(1955-56 Harvest.)	(1956-57 Harvest.)	(1957-58 Harvest.)
Paid to growers .. ..	99,892,850	83,328,200	98,223,364	68,797,590	48,615,764
Rail freight .. ..	12,737,501	10,010,374	12,455,382	7,725,397	4,900,985
Expenses .. ..	7,597,362	7,660,043	8,806,310	6,063,516	4,087,587
<i>Total Payments</i> .. ..	<i>120,227,713</i>	<i>100,998,617</i>	<i>119,485,056</i>	<i>82,586,503</i>	<i>57,604,336</i>
Value of sales delivered .. ..	c 129,388,146	d 100,810,092	e 118,475,473	f 84,384,005	g 57,529,697

(a) Complete. (b) Incomplete. (c) Includes £9,160,433 paid to Wheat Prices Stabilization Fund under Wheat Export Charge Act 1954. (d) Subject to addition of £188,525 withdrawn from Wheat Prices Stabilization Fund. (e) Subject to additional £1,009,583 withdrawn from Wheat Prices Stabilization Fund. (f) Includes £1,587,478 paid to Wheat Prices Stabilization Fund and £124,728 to Wheat Industry Research Fund. (g) Subject to additional £398,000 withdrawn from Wheat Prices Stabilization Fund and payment of £84,519 to Wheat Industry Research Fund.

NOTE.—Details of earlier pools will be found in previous issues of the Year Book.

(iii) *Advances to Growers.* Each year the size of the first advance to growers is announced by the Minister for Primary Industry before the commencement of the season. Additional payments are made as sufficient funds become available to the Board from sales realizations. Details of advances made to wheat growers in respect of the various pools are published in *Statistical Bulletin: The Wheat Industry, Australia*, last issued in April, 1959.

(iv) *Stabilization Fund.* Particulars of the most recent legislative provisions for this fund are given in para. 4 (iii) on page 877.

Amounts of £9,160,433 (equivalent to 1s. 5.4d. a bushel on all wheat exported) were paid into the Stabilization Fund from the Export Charge on exports from the 1953-54 harvest and £1,547,471 (equivalent to 6½d. a bushel) from the 1956-57 crop. There were withdrawals from the Fund in respect of both the 1954-55 and 1955-56 harvests—£188,525 (equivalent to 0.296d. a bushel on all wheat exported) and £1,035,833 (2.024d. a bushel) respectively—to raise export realizations in accordance with guarantee. The balance of the Fund plus interest from its investment, will first meet any payment needed for the 1957-58 wheat crop—the only Pool of the second Stabilization Plan not complete—and then the balance will form the nucleus of the Fund for the latest Plan.

6. *International Wheat Agreements.*—Details of the first and second International Wheat Agreements operative from 1st August, 1949, to 31st July, 1953, and from 1st August, 1953, to 31st July, 1956, respectively, were published in Official Year Book No. 42 (*see pp. 840-1*) and previous issues.

A new International Wheat Agreement covering a period of three years from 1st August, 1956, to 31st July, 1959, came into force on 1st August, 1956. The 1956 Agreement is identical in form with the 1949 and 1953 Agreements, although amendments have been made to many of the more important provisions.



The annual quota of 395 million bushels determined by the 1953 International Wheat Agreement was reduced in the new Agreement by almost a quarter to 303 million bushels.

As previously, 44 importing countries submitted figures for inclusion but many quotas were substantially less than those in the previous Agreement. The number of exporting countries was increased to six. Argentina and Sweden were the two additional exporting countries included and France was given a substantial quota instead of the nominal one it had in the 1953 Agreement.

As a result of the reduction in quantities submitted by importing countries and the participation of France, Argentina and Sweden, there has been a substantial reduction in the export quotas available for Australia, Canada and the United States. Australia's original quota was reduced from 45 million bushels under the 1953 Agreement to 30 million bushels.

In accordance with the terms of the Agreement, the original quotas allotted to exporting countries were reduced in conformity with the reduction in importers' quotas. The adjustment was made on the basis of ratifications as at 1st December, 1956. This pro rata adjustment gave Australia an export quota of 25.6 million bushels but this was increased to 29.3 million bushels when countries which had indicated their intention of doing so formally ratified the Agreement. The quota for 1957-58 and 1958-59 was set at 29.4 million bushels.

Particulars of guaranteed sales and purchases and transactions actually recorded during 1957-58 are shown in the following table.

**INTERNATIONAL WHEAT AGREEMENT : GUARANTEED SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1957-58.(a)**  
(Million Bushels.)

Exporting Countries.			Importing Countries.		
Country.	Guaranteed Sales.(b)	Sales Recorded.	Country.	Guaranteed Purchases.(c)	Purchases Recorded.
United States of America ..	128.5	90.4	Germany .. ..	55.1	55.2
Canada .. ..	100.1	78.1	Japan .. ..	36.7	36.9
Australia .. ..	29.4	12.9	Netherlands .. ..	25.7	25.5
France .. ..	16.1	10.3	Cuba .. ..	8.1	8.0
Argentina .. ..	14.3	..	India .. ..	7.4	7.5
Sweden .. ..	6.2	2.7	Remaining Importing Countries .. ..	161.6	61.3
<b>Total .. ..</b>	<b>294.6</b>	<b>194.4</b>	<b>Total .. ..</b>	<b>294.6</b>	<b>194.4</b>

(a) Wheat and wheat flour as wheat. (b) Quantities which exporting countries must sell if required by importing countries to do so at the maximum price. (c) Quantities which importing countries must buy if required to do so at the relevant minimum price.

In March, 1959, an international conference decided on a further three year agreement to replace that due to expire on 31st July, 1959. Under the proposed new agreement, the member importing countries undertook to buy each year from the member exporting countries a stated percentage of their total commercial import requirements. The member exporting countries would compete to supply at prices within the agreed price range, which is 190 cents (Canadian currency)—about 17s. Australian—to 150 cents—about 13s. 6d.—a bushel. These prices are on the basis of Canada's No. 1 Manitoba Northern Wheat in bulk in store Fort William—Port Arthur.

The United Kingdom, the world's largest importer of wheat has decided to rejoin the agreement.

Under the new agreement, the International Wheat Council would be empowered to make an annual review of the world wheat situation, including the international implications of national policies in respect of wheat production, stocks, and marketing, and the disposal of wheat surpluses on non-commercial terms.

The proposed agreement does not retain the provision in the third agreement by which individual exporting countries had separate guaranteed quantities that they could call upon the member importing countries to buy at the minimum price.

There is provision for a right of appeal against excessive discounts at the minimum price on the basis of differences in quality between the basic wheat—Canada's No. 1 Manitoba Northern Wheat—and the wheat supplied by the other member exporting countries.

**7. Wheat Farms.—(i) Number.** Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1953-54 to 1957-58, 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 20 ACRES AND UPWARDS OF WHEAT FOR GRAIN.**

State.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
New South Wales ..	15,657	14,865	13,784	14,086	10,197	12,111
Victoria ..	12,393	10,900	10,547	9,714	7,674	8,856
Queensland ..	2,403	3,918	4,570	4,186	3,131	3,665
South Australia ..	12,255	8,473	8,892	8,571	7,852	7,515
Western Australia ..	8,859	7,786	7,979	7,962	7,943	7,957
Tasmania ..	269	149	114	78	45	95
Australian Capital Territory ..	(a)	17	10	9	4	10
<b>Australia</b> ..	<b>51,836</b>	<b>46,108</b>	<b>45,896</b>	<b>44,606</b>	<b>36,846</b>	<b>40,209</b>

(a) Not available.

(ii) *Size Classifications of Wheat Holdings.*—A special series of tabulations relating to rural holdings in Australia was compiled for 1955-56 and published in full detail in a series of mimeographed bulletins, *Size Classification of Rural Holdings, 1955-56*. Condensed tables also appear in *Primary Industries, Part I.—Rural Industries, Bulletin No. 51*. The tables relating to wheat holdings show area under wheat for grain (classified by size), and the number of such holdings also under oats and barley and the number with sheep, beef cattle and pigs.

8. *Area, Production and Yield per Acre.*—(i) *Area.* Wheat is the principal crop grown in Australia, and its progress since 1860-61 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 superphosphates 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 area, production and yield per acre of wheat for grain in each State are shown below for the years 1953-54 to 1957-58 in comparison with the averages for the ten-year periods ended 1938-39 and 1956-57:—

**WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.**

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>AREA ('000 ACRES).</b>								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1953-54 ..	3,357	2,389	580	1,528	2,885	10	2	10,751
1954-55 ..	2,919	2,390	688	1,689	2,979	7	1	10,673
1955-56 ..	2,937	2,141	582	1,609	2,890	6	1	10,166
1956-57 ..	1,742	1,565	360	1,438	2,765	4	..	7,874
Average, 1947-48 to 1956-57 ..	3,283	2,497	562	1,760	2,932	6	2	11,042
1957-58 ..	2,257	1,835	461	1,331	2,957	6	1	8,848
<b>PRODUCTION ('000 BUSHELS).(a)</b>								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1953-54 ..	63,681	53,698	10,180	30,409	39,700	263	29	197,960
1954-55 ..	37,718	48,484	16,478	31,463	34,300	159	15	168,617
1955-56 ..	57,149	41,083	14,922	28,891	53,250	129	19	195,443
1956-57 ..	28,490	35,282	7,061	31,432	32,100	89	1	134,435
Average, 1947-48 to 1956-57 ..	56,854	47,957	11,950	30,136	39,396	139	37	186,469
1957-58 ..	10,603	32,134	6,657	14,914	33,100	153	5	97,566

WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE—*continued.*

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30								
to 1938-39 ..	13.0	12.5	14.9	9.8	11.3	21.7	20.6	11.8
1953-54 ..	19.0	22.5	17.6	19.9	13.8	27.2	18.5	18.4
1954-55 ..	12.9	20.3	24.0	18.6	11.5	21.7	19.4	15.8
1955-56 ..	19.5	19.2	25.7	18.0	18.4	20.7	25.5	19.2
1956-57 ..	16.4	22.5	19.6	21.9	11.6	22.7	11.1	17.1
Average, 1947-48								
to 1956-57 ..	17.3	19.2	21.3	17.1	13.4	22.0	19.5	16.9
1957-58 ..	4.7	17.5	14.5	11.2	11.2	26.1	8.9	11.0

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1900-01 appears on page 872 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1954-55 appeared on page 833 of Official Year Book No. 43. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39 and 1947-48 appeared respectively in Official Year Books No. 22, page 695, No. 34, page 451 and No. 39, pages 977-8.

(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, resulting in considerable year to year fluctuations in production.

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 wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to two-thirds of the crop is exported.

Australia's wheat production in 1957-58 was 97.6 million bushels, representing an average yield of 11.0 bushels per acre. Production was the lowest since 1944-45, owing to severe drought conditions in the eastern States.

(iii) *Yield per Acre.* Short-term variations in yield per acre are due chiefly to seasonal influences. The best yields per acre for single seasons since 1901 were obtained in 1920-21, 16.1 bushels; in 1942-43, 16.8 bushels; in 1949-50, 17.8 bushels; in 1952-53, 19.1 bushels; in 1953-54, 18.4 bushels and in 1955-56, 19.2 bushels (the record).

(iv) *Decennial Averages, 1861-70 to 1949-58.* The following table shows the average area, production and yield per acre for decennial periods since 1861.

## WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA.

Period.	Area.			Production.		Yield per Acre.
	'000 Acres.			'000 Bushels.		Bushels.
1861-70 .. ..	..	..	..	831	10,622	12.8
1871-80 .. ..	..	..	..	1,646	17,711	10.8
1881-90 .. ..	..	..	..	3,258	26,992	8.3
1891-1900 ..	..	..	..	4,087	29,934	7.3
1901-10 .. ..	..	..	..	5,711	56,058	9.8
1911-20 .. ..	..	..	..	8,928	95,480	10.7
1921-30 .. ..	..	..	..	11,291	135,400	12.0
1931-40 .. ..	..	..	..	14,176	177,758	12.5
1941-50 .. ..	..	..	..	11,358	145,599	12.8
1949-58 .. ..	..	..	..	10,539	174,214	16.5

It should be noted that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, the average yield per acre has shown a continued improvement in each decade since 1901.

9. *Varieties of Wheat Sown.*—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in better average yields, a greater uniformity of sample with which have 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 principal varieties grown during each season is restricted to about 45.

(ii) *States*.—1957-58. The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1957-58 were as follows:—New South Wales, Gabo (26.2), Bencubbin (19.2), Glenwarie (15.3); Victoria, Insignia (49.4), Pinnacle (23.4), Quadrat (9.9); Queensland, Festival (29.7), Gabo (13.4), Spica (12.4), Charter (12.3); South Australia, Gabo (22.8), Insignia (18.1), Dirk (16.3); Western Australia, Gabo (29.3), Bungulla (16.8), Bencubbin (13.0). A detailed table of wheat varieties sown in these five States appears in the annual bulletin *Primary Industries—Part I.—Rural Industries*.

10. *F.A.Q. Standard of Wheat*.—Until the 1957-58 season, the Chambers of Commerce in each of the four main wheat-producing States have determined the "f.a.q." (fair average quality) standard for each season's crop. This standard is used as a basis for sales of each crop and it varies from year to year and from State to State.

Samples of wheat are obtained each year by the Chambers of Commerce from the different wheat districts and mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper 1-litre scale chondrometer. Commencing with the 1958-59 season, the f.a.q. standard will be determined by State committees comprising representatives of the Australian Wheat Board, the silo authorities, the growers and State Departments of Agriculture. "F.a.q." is an Australian term, and the method of selling 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.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1958-59 season's crop was as follows:—New South Wales, North, 62 lb; South and West, 61½ lb.; Victoria, 64 lb.; Queensland, 65½ lb.; South Australia, semi-hard, 63½ lb., soft, 63½ lb.; and Western Australia 63 lb.

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 was as follows:—Year ended 30th November, 1955, 14s. 1½d.; 1956, 13s. 5½d.; 1957, 13s. 9½d.; 1958, 14s. 4d.; 1959, 14s. 8d. These prices include an amount used to meet freight charges incurred on wheat shipped to Tasmania (1½d. from 1955 to 1957; 2d. in subsequent years). The figure quoted for 1958 does not apply to New South Wales and Queensland where, because of the necessity of meeting the extra cost of importing wheat from Canada and Western Australia, the prices, during the greater part of the year, were 18s. 4½d. and 16s. 9½d. respectively

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price*.—The monthly average of the Wheat Board's basic export selling prices for f.a.q. bulk wheat f.o.b. basis was 13s. 5½d. for the season ended 31st July, 1957, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The maximum and minimum prices fixed under the 1956-59 International Wheat Agreement are expressed in terms of "Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." The maximum price was set at 200 cents a bushel and the minimum at 150 cents for f.a.q. wheat. Under the new agreement to operate after July, 1959 (see paragraph 6, page 879), the agreed price range is between 190 cents and 150 cents. Directly converted into Australian currency these limits are approximately 17s. and 13s. 6d. a bushel respectively.

Details of export wheat prices in previous years, including those received for wheat sold under the terms of the 1949-1953 International Wheat Agreement, are given in Official Year Book No. 40, pages 849-50, and Statistical Bulletin: *The Wheat Industry, Australia*, No. 95 of April, 1959, and in previous issues of these publications.

12. *Value of the Wheat Crop*.—The estimated gross value of the wheat crop in each State and in Australia during the seasons 1956-57 and 1957-58 and the value per acre are shown below.

WHEAT FOR GRAIN : VALUE OF CROP.(a)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1956-57—								
Aggregate value £'000	19,185	24,041	4,914	22,423	22,027	57	..	92,647
Value per Acre £	11.0	15.4	13.7	15.6	8.0	14.6	..	11.8
1957-58(b)—								
Aggregate value £'000	6,590	22,069	4,648	10,502	22,958	101	3	66,871
Value per Acre £	2.9	12.0	10.1	7.9	7.8	16.8	2.7	7.6

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. (b) Subject to revision.

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 years ended 30th November, 1954 to 1958, 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 yield from 1900–01 see graph, p. 872.)

**WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.**  
(Million Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1954.	1955.	1956.	1957.	1958.
Opening stocks (including flour as wheat)	10.2	37.7	94.9	95.0	84.2	41.5
Production .. .. .	164.7	198.0	168.6	195.4	134.5	97.6
Imports .. .. .	..	..	..	..	..	1.5
<i>Total Available Supplies</i> .. .. .	<i>174.9</i>	<i>235.7</i>	<i>263.5</i>	<i>290.4</i>	<i>218.7</i>	<i>140.6</i>
<b>Exports—</b>						
Wheat .. .. .	75.0	38.5	64.5	93.7	68.9	34.1
Flour as wheat(a) .. .. .	30.6	27.9	35.0	36.8	34.1	18.2
Breakfast foods and other products(b)	(c)	0.8	1.0	1.4	1.6	0.6
<b>Local Consumption—</b>						
Flour as wheat .. .. .	30.9	34.4	38.0	39.8	41.2	39.2
Stock feed .. .. .	9.3	17.6	16.5	15.3	19.6	15.0
Seed .. .. .	14.6	10.9	10.1	7.9	9.1	10.2
Breakfast foods and other products(b)	(c)	1.6	2.0	1.7	1.9	1.9
Balance retained on farm (excluding seed) .. .. .	(d)	3.9	5.8	6.7	5.3	6.1
Closing stocks (including flour as wheat)	14.5	94.9	95.0	84.2	41.5	16.5
<i>Total Disposals</i> .. .. .	<i>174.9</i>	<i>230.5</i>	<i>267.9</i>	<i>287.5</i>	<i>223.2</i>	<i>141.8</i>
<b>Excess (+) or Deficiency (–) of Disposals in respect of Available Supplies e</b> .. .. .	..	–5.2	+4.4	–2.9	+4.5	+1.2

(a) Includes wheatmeal from 1953, and sharps from July, 1954. (b) In terms of wheat.  
(c) Included with flour (local consumption). (d) Included with stock feed. (e) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. **Imports of Wheat.**—Due to drought conditions in 1957–58, wheat supplies, particularly in New South Wales, were insufficient for local requirements. As a result, 1,136,000 bushels were imported from Canada during March, April and May, 1958 and a further 349,000 bushels in July, 1958.

Wheat and flour have been imported in substantial quantities on only two previous 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.

15. **Exports of Wheat and Flour.**—(NOTE: Statistics in this paragraph relate to years ended 30th June). (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 1953–54 to 1957–58 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 46.3 bushels of grain. During the five years ended 1957–58, exports in terms of wheat averaged 91,666,000 bushels, compared with the average of 106,432,000 bushels for the five years ended 1938–39.

## WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.

Year.	Quantity.				Value. (£'000.)		
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour. (a)	As Wheat. (b)				
	'000 bushels.	Tons. (2,000 lb.)	'000 bushels.	'000 bushels.			
Average, 1934-35 to 1938-39 .. ..	76,473	647,073	29,959	106,432	14,813	(c)5,058	19,871
1953-54 .. ..	36,058	785,520	36,370	72,428	30,957	30,602	61,559
1954-55 .. ..	63,133	683,520	31,647	94,780	45,222	21,184	66,406
1955-56 .. ..	71,041	684,229	31,680	102,721	46,456	20,273	66,729
1956-57 .. ..	91,107	766,655	35,496	126,603	60,058	22,234	82,292
1957-58 .. ..	39,575	479,985	22,223	61,798	28,494	15,059	43,553

(a) White flour, sharps and wheatmeal for baking. (b) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat. (c) Excludes sharps and wheatmeal for baking.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1957-58 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.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
United Kingdom .. ..	45,195	11,520	19,134	20,442	26,699	9,792
India .. ..	1,662	7,038	17,416	5,562	23,274	434
New Zealand .. ..	1,537	7,753	7,979	9,067	10,915	9,680
Pakistan .. ..	(a)	1,274	..	..	6,195	4,720
Other Commonwealth Countries	7,863	4,131	6,738	6,235	5,727	6,843
Germany, Federal Republic of	(b) 235	1,888	5,084	8,189	7,950	..
Japan .. ..	6,472	227	2,034	11,261	3,427	6,762
Other Foreign Countries .. ..	13,509	2,227	4,748	10,285	6,920	1,344
Total .. ..	76,473	36,058	63,133	71,041	91,107	39,575

(a) Included with India.

(b) Pre-war Germany.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1957-58, and the average for the five years ended 1938-39. The figures relate to exports of white flour, sharps and wheatmeal for baking.

## FLOUR : EXPORTS FROM AUSTRALIA.

(Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
United Kingdom .. ..	142,912	65,659	80,832	67,136	80,735	43,156
Ceylon .. ..	16,915	222,512	112,484	115,899	181,137	51,613
Malaya, Federation of .. ..	63,309	72,376	88,546	81,740	71,963	70,299
Mauritius .. ..	10,992	32,192	20,102	12,659	27,660	17,411
Singapore .. ..	(b)	64,934	77,956	54,707	47,243	37,590
Other Commonwealth Countries	89,168	94,403	90,797	86,238	102,189	94,785
Indonesia .. ..	(c) 83,760	133,406	95,510	178,098	115,660	62,897
Sudan .. ..	12,181	5,777	20,580	14,415	28,762	11,258
Other Foreign Countries .. ..	227,836	94,261	96,713	73,337	111,306	90,976
Total .. ..	647,073	785,520	683,520	684,229	766,655	479,985

(a) Excludes sharps and wheatmeal for baking.  
(c) Netherlands East Indies.

(b) Included with Federation of Malaya

16. **Stocks of Wheat and Flour.**—Stocks of wheat and flour in terms of wheat held by each State at 30th November for the years 1939 and 1954 to 1958 are shown in the following table. These data relate to stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

**WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT) : STOCKS AT  
30th NOVEMBER.(a)  
(\*000 Bushels.)**

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1939 .. ..	6,674	4,702	549	6,134	2,513	241	20,813
1954 .. ..	26,458	26,937	2,487	15,413	23,499	125	94,919
1955 .. ..	17,483	28,434	4,049	18,470	26,278	256	94,970
1956 .. ..	21,365	22,821	1,973	15,223	22,534	265	84,181
1957 .. ..	8,982	13,304	203	13,732	5,056	215	41,492
1958 .. ..	4,420	6,172	116	3,262	2,260	222	16,452

(a) One ton of flour is treated as equivalent to 46.3 bushels of wheat.

17. **Bulk Handling and Storage of Wheat in Australia.**—(i) *Description and Development of the Bulk Handling System.* A detailed description of the bulk handling system including its advantages and disadvantages compared with other methods of handling appeared on pages 954–8 of Official Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but until recently no efforts were made to introduce such systems in the other States.

Late in 1953, it became clear that Australia could not clear its stocks of wheat as quickly as in past years and in April, 1954, the Commonwealth Government arranged to finance the construction of additional storage in New South Wales, Victoria and South Australia (Western Australia and Queensland were later included in the scheme). The Australian Wheat Board was authorized to control the expenditure of the money provided, amounting to £3½ million.

(ii) *Bulk Handling and Storage in the States.* Particulars of the operation of the bulk handling and storage systems and projected extensions in the States concerned are set out below:—

(a) *New South Wales.* Bulk handling facilities are operated by the Grain Elevators Board of New South Wales. The capacity of storages in the country for the 1958–59 season totalled 57,558,000 bushels and comprised 180 elevators (25,228,000 bushels), 4 sub-terminals (16,500,000 bushels), 71 bulkheads (7,130,000 bushels) and 12 bulk depots (8,700,000 bushels). In addition, port terminal facilities provided storage for 4,200,000 bushels at Newcastle and 7,500,000 bushels at Sydney, making a total capacity of 69,258,000 bushels for the State.

The Grain Elevators Board has advanced its plans for major works, i.e., for supplementary bins to the existing small capacity silos, as well as for new installations to replace temporary bulkheads in certain areas.

(b) *Victoria.* The Victorian Grain Elevators Board operates 184 elevators with a storage capacity of 26,697,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Storages for 18,000,000 bushels, adjacent to the permanent terminal, have been constructed at Geelong.

Temporary measures for extending bulk handling facilities have been adopted and sub-terminals constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of 22,000,000 bushels. Temporary bulkheads have also been used and in the 1958–59 season there were 32 available for use with a total capacity of 2,684,000 bushels.

In 1958–59, 98.4 per cent. of the total crop was received in elevators, compared with 98.5 per cent. in 1957–58 and 28.1 per cent. in 1939–40.

(c) *Queensland.*—Bulk storages in this State are controlled and operated by the State Wheat Board. The capacity in the country for the 1958–59 season totalled about 3,000,000 bushels.

Expansion of bulk facilities is proceeding. Several bagged wheat sheds are being converted into bulkhead type storages and a further 1,000,000 bushels capacity will be available in temporary steel mesh bins being erected.

A new terminal bulk storage is being erected at Pinkenba with a capacity of 1,300,000 bushels and is expected to be completed in July 1959.

(d) *South Australia.* Since the formation of the South Australian Co-operative Bulk Handling Ltd. in 1955, steady progress has been maintained in the expansion of the system.

The present capacity of bulk storages is 1,000,000 bushels at Ardrossan; 1,500,000 at Wallaroo; 1,250,000 at Port Lincoln and 6,460,000 in the country; a combined total of 10,210,000.

For the 1958-59 season, wheat was received in bulk at 15 installations in the country in addition to the terminals at Ardrossan, Wallaroo and Port Lincoln.

For the 1959-60 season, the South Australian Co-operative Bulk Handling Ltd. will have an initial capacity to handle 12,950,000 bushels of wheat in bulk.

(e) *Western Australia.* The bulk handling system is operated by Co-operative Bulk Handling Ltd., which is a company controlled by growers. In 1958-59, there were 280 sidings equipped with bulk handling facilities and 53,300,000 bushels, which comprised the whole of the marketable harvest, were received.

The system of storage at country stations in Western Australia comprises fixed installations of galvanized iron bins and iron and timber horizontal bulkheads. In addition, a type of temporary roofed bulkhead consisting of timber and iron is used. This latter type of storage can be transferred to suit operational requirements, and therefore lends flexibility to the system. Terminal installations comprise concrete silos and timber and iron horizontal bulkheads with the exception that one port is equipped with iron silos instead of concrete. Plans are in hand to increase the number of vertical concrete cell type storages at the main ports.

(f) *Tasmania.* In order to meet the change to bulk handling of wheat in the mainland exporting States, the Tasmanian Government has constructed grain elevators at Hobart and Launceston each with a capacity of 300,000 bushels for storage of bulk wheat shipments from the mainland. In addition an elevator is being constructed at Devonport with a capacity of 300,000 bushels.

18. **World Area and Production of Wheat.**—The details in the following table of the world area and production of wheat by principal countries and by 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 Foreign Agricultural Service of the United States Department of Agriculture. The harvests shown for countries in the Northern Hemisphere are those reaped during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

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

Continent and Country.	Area(a)			Production.			Yield per Acre.		
	Average 1935-39.	1956.	1957.(b)	Average 1935-39.	1956.	1957.(b)	Average 1935-39.	1956.	1957.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
<i>North America—</i>									
<i>Canada</i> ..	25,595	22,781	21,031	312,399	573,062	370,508	12.2	25.2	17.6
<i>United States</i> ..	57,293	49,784	43,664	758,629	1,004,272	947,102	13.2	20.2	21.7
<i>Total(c)</i> ..	84,170	74,970	67,140	1,086,000	1,624,000	1,364,000	12.9	21.7	20.3

See next page for footnotes.



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

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1956.	1957.(b)	Average 1935-39.	1956.	1957.(b)	Average 1935-39.	1956.	1957.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
<i>Europe—</i>									
France .. .. .	12,560	7,000	11,534	286,505	225,000	407,000	22.8	32.1	35.3
Italy .. .. .	12,577	12,350	12,375	278,366	318,930	310,000	22.1	25.8	25.1
Spain .. .. .	(d)11,253	10,638	(e)	(d)157,986	155,000	180,000	d 14.0	14.6	(e)
<i>Total(c)</i> .. .. .	<b>74,850</b>	<b>67,580</b>	<b>72,980</b>	<b>1,600,000</b>	<b>1,585,000</b>	<b>1,945,000</b>	<b>21.4</b>	<b>23.5</b>	<b>26.7</b>
<i>U.S.S.R</i> .. .. .	<b>104,000</b>	<b>153,000</b>	<b>170,000</b>	<b>1,240,000</b>	<b>2,000,000</b>	<b>1,800,000</b>	<b>11.9</b>	<b>13.1</b>	<b>10.6</b>
<i>Africa—Total(c)</i> .. .. .	<b>13,850</b>	<b>17,400</b>	<b>17,240</b>	<b>143,000</b>	<b>215,000</b>	<b>185,000</b>	<b>10.3</b>	<b>12.4</b>	<b>10.7</b>
<i>Asia—</i>									
China .. .. .	(f)49,000	(e)	(e)	(f)750,000	(e)	(e)	f 15.3	(e)	(e)
India .. .. .	(f)25,460	30,386	33,580	262,100	319,910	347,700	10.3	10.5	10.4
Pakistan .. .. .	(f) 9,305	11,298	11,807	117,000	123,760	142,000	12.6	11.0	12.0
Turkey .. .. .	8,973	18,125	17,878	135,690	215,000	250,000	15.1	11.9	14.0
<i>Total(c)</i> .. .. .	<b>114,190</b>	<b>146,890</b>	<b>146,630</b>	<b>1,558,000</b>	<b>1,860,000</b>	<b>1,915,000</b>	<b>13.6</b>	<b>12.7</b>	<b>13.1</b>
<i>South America—</i>									
Argentina .. .. .	15,834	13,324	10,840	221,769	261,980	213,500	14.0	19.7	19.7
<i>Total(c)</i> .. .. .	<b>20,490</b>	<b>20,840</b>	<b>18,670</b>	<b>281,000</b>	<b>368,000</b>	<b>323,000</b>	<b>13.7</b>	<b>17.7</b>	<b>17.2</b>
<i>Oceania—</i>									
Australia .. .. .	13,128	7,874	8,848	169,744	134,455	97,566	12.9	17.1	11.0
<i>Total(c)</i> .. .. .	<b>13,349</b>	<b>7,940</b>	<b>8,915</b>	<b>176,873</b>	<b>137,405</b>	<b>100,566</b>	<b>13.2</b>	<b>17.3</b>	<b>11.3</b>
<b>World Total(c)</b> .. .. .	<b>424,900</b>	<b>488,620</b>	<b>501,580</b>	<b>6,085,000</b>	<b>7,790,000</b>	<b>7,630,000</b>	<b>14.3</b>	<b>15.9</b>	<b>15.3</b>

(a) Figures refer to harvested areas as far as possible. (b) Preliminary. (c) Totals (estimates) include allowances for any missing data for countries shown and for other producing countries not shown. (d) 1935 only. (e) Not available. See footnote (c). (f) Average of less than five years.

**19. Exports—Principal Countries.**—The following table shows the quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1956 and 1957 based on statistics recently published by the Food and Agriculture Organization of the United Nations.

While Australia's production of wheat averages less than 3 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. During the five years 1934-38, Australia's share of world wheat exports was 16 per cent., but in 1957 the proportion had fallen to a little more than 7 per cent.

## WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934-38.		1956.		1957.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	million bushels.	%	million bushels.	%	million bushels.	%
Canada .. .. .	175.3	27.6	341.1	28.5	266.8	20.7
Argentina .. .. .	122.7	19.3	94.4	7.9	98.5	7.6
Australia .. .. .	102.4	16.1	135.8	11.3	94.5	7.3
United States of America .. .. .	46.3	7.3	470.9	39.3	483.2	37.4
U.S.S.R. (Russia) .. .. .	26.6	4.2	(b)	(b)	(b)	(b)
France .. .. .	18.3	2.9	52.6	4.4	50.6	3.9
All other .. .. .	144.0	22.6	102.3	8.6	297.7	23.1
<i>Total</i> .. .. .	<i>635.6</i>	<i>100.0</i>	<i>1,197.1</i>	<i>100.0</i>	<i>1,291.3</i>	<i>100.0</i>
World Production (mil. bus.) ..	(c) 6,085		7,790		7,630	
Proportion of Australia's Production to World Production	%	2.8	%	1.7	%	1.3

(a) Includes flour expressed in terms of wheat. (b) Included in "All Other." (c) Average 1935-39.

20. Imports—Principal Countries.—The principal importers of wheat, together with quantities imported, for the periods indicated, are shown in the following table:—

## WHEAT(a) : IMPORTS, PRINCIPAL COUNTRIES.

Importing Country.	Average, 1934-38.		1956.		1957.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	million bushels.	%	million bushels.	%	million bushels.	%
United Kingdom .. .. .	208.7	33.8	197.5	17.2	186.7	14.7
Brazil .. .. .	36.4	5.9	55.0	4.8	54.2	4.3
Italy .. .. .	26.0	4.2	23.7	2.1	19.6	1.5
Germany, Federal Republic of ..	(b) 25.6	(b) 4.1	109.1	9.5	106.6	8.4
Netherlands .. .. .	22.6	3.7	34.4	3.0	36.7	2.9
Japan .. .. .	11.6	1.9	86.0	7.5	85.2	6.7
India and Pakistan .. .. .	1.8	0.3	56.8	4.9	131.3	10.3
Egypt .. .. .	0.6	0.1	25.1	2.2	26.1	2.1
All other .. .. .	284.0	46.0	559.1	48.8	623.2	49.1
<i>Total</i> .. .. .	<i>617.3</i>	<i>100.0</i>	<i>1,146.7</i>	<i>100.0</i>	<i>1,269.6</i>	<i>100.0</i>

(a) Includes flour expressed in terms of wheat. (b) Pre-war Germany.

## § 5. Oats.

1. **Area, Production and Yield per Acre.**—Oats is usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1957–58 accounted for 41.2 per cent., oats grown for grain represented only 13.8 per cent. of the area of all crops. The area, production and yield per acre of oats for the years 1953–54 to 1957–58 and the averages for the ten-year periods ended 1938–39 and 1956–57 are shown in the following table:—

OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

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
1953–54 ..	507	584	13	280	733	20	..	2,137
1954–55 ..	657	644	36	340	874	23	..	2,574
1955–56 ..	902	871	36	425	1,091	29	..	3,354
1956–57 ..	420	613	28	427	1,051	17	..	2,556
Average, 1947–48								
to 1956–57 ..	551	634	27	336	744	21	..	2,313
1957–58 ..	716	622	19	427	1,154	21	..	2,959
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929–30								
to 1938–39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1953–54 ..	8,533	9,852	199	4,321	9,590	461	5	32,961
1954–55 ..	7,667	10,021	597	4,508	9,585	452	4	32,834
1955–56 ..	16,537	14,858	743	7,280	16,516	548	5	56,487
1956–57 ..	6,274	9,555	553	8,318	10,441	253	2	35,396
Average, 1947–48								
to 1956–57 ..	9,120	10,866	511	5,153	9,185	422	5	35,262
1957–58 ..	3,944	9,528	256	3,423	13,793	482	(b)	31,426
YIELD PER ACRE (BUSHELS).(a)								
Average, 1929–30								
to 1938–39 ..	15.7	12.0	12.8	7.9	10.8	28.2	22.4	11.8
1953–54 ..	16.8	16.9	14.8	15.4	13.1	22.9	18.6	15.4
1954–55 ..	11.7	15.3	16.4	13.3	11.0	20.0	20.4	12.8
1955–56 ..	18.3	17.1	20.8	17.1	15.1	19.1	17.1	16.8
1956–57 ..	14.9	15.6	20.1	19.5	9.9	15.3	12.5	13.8
Average, 1947–48								
to 1956–57 ..	16.6	17.1	18.9	15.3	12.3	20.1	15.2	15.2
1957–58 ..	5.5	15.3	13.4	8.0	12.0	23.3	7.4	10.6

(a) 40 lb. per bushel.

(b) Less than 500 bushels.

A graph showing the production of oats appears on page 873.

Due to the extremely wet conditions early in the season, which affected most crops in the Eastern States during 1956–57, the area and production of oats were markedly smaller than in 1955–56, particularly in New South Wales. In 1957–58, the drought conditions already referred to had a similar, and even more severe, effect on the crop in New South Wales and South Australia.

The production of oats for grain in Australia during 1955–56 was a record (56,487,000 bushels). Pre-war the average was approximately 16,000,000 bushels whilst the crop in 1957–58 was 31,425,591 bushels.

During the five seasons ending 1956–57, an average of 7.2 million bushels were exported; 1.9 million bushels were used in factories for oatmeal; and 7.3 million bushels were used for seed purposes; leaving a balance of 23.9 million bushels for stock feed (principally unprocessed) and carry-over.

The largest yield per acre recorded for Australia in the ten years ended 1956–57 was that of the season 1947–48, amounting to 19.3 bushels per acre, this being the highest yield since 1920–21. The yield per acre recorded in the abnormally dry season 1944–45, namely 4.4 bushels, was the lowest ever recorded for Australia.

2. **Price of Oats.**—The average wholesale price in the Melbourne market for oats of good milling quality in 1957–58 was 10s. 11½d. per bushel. This represents an increase of approximately 50 per cent. on the price in 1956–57 (7s. 4d.). The price in 1938–39 was 3s. 5½d.

3. Value of Oat Crop.—The estimated gross value of the oat crop in each State for the 1956-57 and 1957-58 seasons and the value per acre were as follows:—

OATS : VALUE OF CROP.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1956-57—								
Aggregate value	£'000 2,484	3,315	304	2,326	3,695	114	1	12,239
Value per acre	£ 5.9	5.4	11.0	5.4	3.5	6.9	6.9	4.8
1957-58(a)—								
Aggregate value	£'000 2,416	5,313	152	1,685	6,137	248	..	15,951
Value per acre	£ 3.4	8.5	8.0	3.9	5.3	11.8	5.4	5.4

(a) Subject to revision.

4. Exports.—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats exported from Australia during the years 1953-54 to 1957-58 compared with the average for the years 1934-35 to 1938-39 are shown hereunder:—

OATS : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
Quantity .. '000 bus.	286	3,275	2,872	9,608	8,165	2,296
Value.. .. £'000	36	1,219	1,376	3,578	2,972	1,064

In 1957-58, the principal countries of destination of the exports were the Federal Republic of Germany, the United Kingdom, the Netherlands and the Federation of Malaya. Imports of oats are not recorded separately.

5. Oatmeal, etc.—The production of oatmeal amounted in 1957-58 to 14,440 tons equivalent to about 1,617,000 bushels of oats, or about 5.1 per cent. of the total production.

6. World Production.—The world's production of oats for the year 1958, according to preliminary details released by the United States Department of Agriculture, amounted to 4,160 million bushels, harvested from 113.7 million acres, representing an average yield of 36.6 bushels per acre. This compared with the estimated production in the previous year of 3,995 million bushels from an area of 117.8 million acres giving an average yield of 33.9 bushels per acre. The world's average production for the years 1934 to 1938 amounted to 3,588 million bushels from 143 million acres giving an average yield of 25.09 bushels per acre.

§ 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 1957-58 season being 179,758 acres, or 98 per cent. of the total for Australia. In all States except South Australia, the crop is grown to some extent for green fodder, particularly in connexion with the dairying industry.

2. Area, Production and Yield per Acre.—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 180,894 acres during the ten years ended 1956-57. The area in 1957-58 was 184,062 acres, a slight increase over the previous year, but still considerably less than the comparatively larger areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

There has been a considerable increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize has led to a parallel development in the specialized industry of growing hybrid strains for seed.

The area, production and yield per acre of maize for grain in each State for the years 1953-54 to 1957-58 and the averages for the ten-year periods ended 1938-39 and 1956-57 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales, Victoria and Queensland for 1957-58.

## MAIZE FOR GRAIN : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1953-54 ..	58,556	5,613	114,735	..	21	64	..	178,989
1954-55 ..	50,617	4,379	114,673	..	8	8	..	169,687
1955-56 ..	55,678	3,535	108,146	2	6	65	2	167,441
1956-57 ..	53,225	2,727	125,606	(c)	6	10	..	181,570
Average, 1947-48 to 1956-57 ..	62,329	4,920	113,589	(c)	35	20	1	180,894
1957-58—								
Hybrid ..	38,655	3,459	62,066	} (c)	20	..	6	184,062
Other ..	18,858	819	60,179					
PRODUCTION ('000 BUSHEL). (b)								
Average, 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1953-54 ..	1,737	298	3,042	..	..	2	..	5,079
1954-55 ..	1,767	229	3,080	..	..	..	..	5,076
1955-56 ..	1,868	176	2,710	..	..	1	..	4,755
1956-57 ..	1,945	81	3,468	(c)	..	..	..	5,494
Average, 1947-48 to 1956-57 ..	1,959	212	2,975	(c)	..	1	..	5,147
1957-58—								
Hybrid ..	1,574	208	1,736	} (c)	..	..	..	5,639
Other ..	663	33	1,425					
YIELD PER ACRE (BUSHEL). (b)								
Average, 1929-30 to 1938-39 ..	26.7	34.3	21.8	29.8	10.0	..	8.5	24.5
1953-54 ..	29.7	53.1	26.5	..	12.9	29.6	..	28.4
1954-55 ..	34.9	52.3	26.9	15.0	9.8	21.6	..	29.9
1955-56 ..	33.5	49.7	25.1	12.5	15.0	19.4	80.0	28.4
1956-57 ..	36.6	29.6	27.6	(c)	12.0	30.0	..	30.3
Average, 1947-48 to 1956-57 ..	31.4	43.1	26.2	(c)	11.5	22.8	23.7	28.5
1957-58—								
Hybrid ..	40.7	60.3	28.0	} (c)	14.9	..	..	30.6
Other ..	35.1	40.7	23.7					

(a) Includes 3 acres in the Northern Territory. (b) 56 lb. per bushel. (c) Not available for publication.

The average yield for Australia for the ten-year period ended 1956-57 was 28.5 bushels per acre. Among principal producing countries during 1957, the United States of America averaged 46.8 bushels per acre and Italy 40.9 bushels.

3. Price of Maize.—The average wholesale price of maize in the Melbourne market in 1957-58 was 21s. 2½d. a bushel compared with 17s. 0½d. in 1956-57. In 1938-39, the comparable price for maize of similar quality was 5s. 2½d.

4. Value of Crop.—The estimated gross value of the crop in each State for the 1956-57 and 1957-58 seasons and the value per acre were as follows:—

## MAIZE FOR GRAIN : VALUE OF CROP.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1956-57—							
Aggregate value .. £'000.	1,508	67	2,157	..	..	..	3,732
Value per acre .. £	28.3	24.6	17.2	..	..	..	20.6
1957-58(a)—							
Aggregate value .. £'000	2,321	159	2,514	..	1	..	4,995
Value per acre .. £	40.4	37.2	20.6	..	29.7	..	27.1

(a) Subject to revision.

5. Exports of Maize and Maize Products.—Details of exports of maize for the five years ended 1957-58 compared with the average of the five years ended 1938-39 are shown below.

## MAIZE : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
Quantity .. '000 bus.	57	504	458	185	32	48
Value .. £'000	9	353	301	119	26	30

Imports of Maize are not recorded separately.

Exports of cornflour, which prior to the 1939-45 War were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1957-58, 1,499,600 lb., valued at £44,699, were exported, compared with an annual average of only 37,000 lb. during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are not recorded separately.

6. **World Production.**—According to preliminary details released by the United States Department of Agriculture, world production of maize in the year 1957 amounted to 6,470 million bushels, harvested from 230 million acres, giving an average yield per acre of 28.1 bushels. This compared with production in the previous year of 6,490 million bushels from 240 million acres, yielding an average per acre of 27.1 bushels. Production over the years 1934 to 1938 averaged 4,525 million bushels from 218 million acres, giving an average yield per acre of 21.0 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1957 the area sown to maize in that country averaged 76 million acres or 32 per cent. of the world total. During the same period, production averaged 3,359 million bushels or about 52 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals, as the area and an estimate of grain equivalent of maize used as green fodder are included. In recent years, maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

A graph showing the production of maize in Australia appears on page 873.

§ 7. Barley.

1. **Area, Production and Yield per Acre.**—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 in 1957-58 reached the record level of 2,121,000 acres. Victoria was originally the principal barley-growing State but since 1913-14 its place has been taken by South Australia which accounted for 57 per cent. of the Australian acreage in 1957-58. There has been a substantial increase in the acreage sown in most States in recent years particularly in Western Australia and Queensland. Small areas of barley are sown for hay, and larger quantities are sown for green forage but these are not included in this section. The production of barley for grain in Australia in 1957-58 was 30,466,000 bushels. The highest recorded production occurred in 1956-57 when 49,279,000 bushels were produced. The area, production and yield per acre of barley for grain in the several States for the years 1953-54 to 1957-58 and the averages for the ten-year periods ended 1938-39 and 1956-57 are shown in the following table:—

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	11	107	8	331	31	7	..	495
1953-54 ..	32	375	56	1,122	209	9	..	1,803
1954-55 ..	37	280	87	1,020	260	7	..	1,691
1955-56 ..	54	309	146	1,042	337	6	..	1,894
1956-57 ..	44	345	131	1,222	344	7	..	2,093
Average, 1947-48 to 1956-57 ..	26	254	61	889	157	7	..	1,394
1957-58	46	334	152	1,156	63	7	..	1,758
Malting (2-Row)	23	18	21	56	244	1	..	363
Other (6-Row)	23	18	21	56	244	1	..	363
Total ..	69	352	173	1,212	307	8	..	2,121

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE—*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELLS).(a)								
Average, 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	1	8,553
1953-54 ..	680	7,932	1,139	28,492	2,733	296	..	41,272
1954-55 ..	500	4,946	2,573	18,376	2,805	200	..	29,400
1955-56 ..	1,120	6,877	4,216	24,598	4,653	191	..	41,655
1956-57 ..	781	7,549	2,960	34,003	3,751	235	..	49,279
Average, 1947-48 to 1956-57 ..	483	5,217	1,557	20,512	1,999	193	..	29,961
1957-58—								
Malting (2-Row)	441	5,201	2,662	17,091	758	251	..	26,404
Other (6-Row)	244	246	294	461	2,798	19	..	4,062
Total ..	685	5,447	2,956	17,552	3,556	270	..	30,466
YIELD PER ACRE (BUSHELLS).(a)								
Average, 1929-30 to 1938-39 ..	16.6	18.4	16.7	17.3	11.9	25.2	18.9	17.3
1953-54 ..	21.4	21.2	20.3	25.4	13.1	31.4	..	22.9
1954-55 ..	13.6	17.6	29.5	18.0	10.8	27.5	..	17.4
1955-56 ..	20.7	22.2	29.0	23.6	13.8	30.2	15.0	22.0
1956-57 ..	17.7	21.9	22.5	27.8	10.9	33.2	..	23.5
Average, 1947-48 to 1956-57 ..	18.6	20.5	25.3	23.1	12.8	29.6	..	21.5
1957-58—								
Malting (2-Row)	9.7	15.6	17.5	14.8	12.0	32.5	..	15.0
Other (6-Row)	10.4	13.9	14.3	8.2	11.5	29.1	..	11.2
Total ..	10.0	15.5	17.1	14.5	11.6	32.2	..	14.4

(a) 50 lb. per bushel.

For Australia as a whole, 83 per cent. of the area of barley for grain in 1957-58 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 utilization of barley during the season 1956-57 was as follows:—exports, 27,925,000 bushels; malting and distilling, 8,041,000 bushels; pearl barley, 165,000 bushels; seed and stock feed, 9,795,000 bushels and addition to stocks, 3,353,000 bushels.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1953-54 to 1957-58 and the averages for the ten-year periods ended 1938-39 and 1956-57.

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

Season.	Area. ('000 Acres.)			Production. ('000 Bushels.)			Yield per Acre. (Bushels.)		
	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	17.5	16.0	17.3
1953-54 ..	1,482	321	1,803	35,923	5,349	41,272	24.2	16.7	22.9
1954-55 ..	1,391	300	1,691	25,622	3,778	29,400	18.4	12.6	17.4
1955-56 ..	1,510	384	1,894	35,470	6,185	41,655	23.5	16.1	22.0
1956-57 ..	1,705	388	2,093	43,870	5,408	49,278	25.7	13.9	23.5
Average, 1947-48 to 1956-57 ..	1,171	223	1,394	26,324	3,637	29,961	22.5	16.3	21.5
1957-58 ..	1,758	363	2,121	26,404	4,062	30,466	15.0	11.2	14.4

A graph showing the production of barley appears on page 873.

During the last ten-year period shown, the average area of barley of the malting, or 2-row, class was over five times the corresponding figure for barley of the 6-row, or feed, class. The yield per acre for malting barley was 38 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 whole 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 was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, 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 the smaller producing States after 1941-42, the pooling of barley in Queensland reverted to the control of the Queensland Barley Board (originally established in 1930) and in Western Australia, a State Barley Board was established to control marketing.

The Commonwealth Government ceased to acquire barley altogether 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 and subsequent crops of the two States. Details for the seasons from 1952-53 to 1957-58 are shown in the table below.

**AUSTRALIAN BARLEY BOARD : BARLEY RECEIVED, SOLD, ETC.**

Pool.	Quantity Received.	Quantity Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Net Payments to Growers.
	'000 bushels.	'000 bushels.	s. d.	£
No. 14 (1952-53 Crop) .. ..	29,087	29,103	16 2.01	21,359,168
" 15 (1953-54 " ) .. ..	34,430	34,586	10 4.101	15,417,374
" 16 (1954-55 " ) .. ..	20,679	20,709	12 10.92	11,953,430
" 17 (1955-56 " ) .. ..	29,357	29,454	10 3.441	12,990,173
" 18 (1956-57 " ) .. ..	39,029	39,102	10 2.541	16,965,609
" 19 (1957-58 " ) .. ..	18,102	17,445	(b) 10 9	8,199,461

(a) Includes surplus in out-turn. (b) As at 11th November, 1958. At that date it was estimated that the amount still to be paid to growers was 10.339d. per bushel.

3. Prices.—The average wholesale price for 2-row English malting barley in the Melbourne market during 1957-58 was 13s. 7½d. compared with 14s. 1d. in 1956-57 and 3s. 5½d. in 1938-39.

4. Value of Barley Crop. The estimated gross value of the barley crop in each State for the 1956-57 and 1957-58 seasons and the value per acre are shown in the following table:—

**BARLEY FOR GRAIN : VALUE OF CROP.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1956-57—							
Aggregate value .. £'000	513	3,837	1,497	17,011	1,853	185	24,896
Value per acre .. £	11.6	11.1	13.1	13.9	5.4	26.1	11.9
1957-58(a)—							
Aggregate value .. £'000	503	3,280	1,913	9,786	1,878	195	17,553
Value per acre .. £	7.3	9.3	11.1	8.1	6.1	23.3	8.3

(a) Subject to revision.

5. Exports.—Exports of barley during the five years ended 1957-58 averaged 22,977,000 bushels. South Australia was the principal exporting State—Japan, the Federal Republic of Germany, the Netherlands and the United Kingdom were the principal countries to which barley was shipped. Particulars of Australian exports for the years 1953-54 to 1957-58 together with the average for the five years ended 1938-39 are shown in the following table:—

**BARLEY : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
Quantity .. '000 bus.	3,279	26,949	18,867	21,065	26,501	21,501
Value .. £'000	483	14,870	10,357	10,471	12,745	9,474

Imports of barley are not recorded separately.



In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1957-58 amounting to 171,974 lb., valued at £7,577, consigned mainly to Malaya.

6. Malt.—(i) *Production.* Details of the quantity of grain used and the production of barley malt are given in the following table:—

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

Particulars.	1938-39.	1952-53.	1953-54.	1954-55.	1955-56.	1956-57.
Grain used . . '000 bus.(a)	3,730	6,505	7,118	7,629	7,803	7,855
Malt produced '000 bus.(b)	3,621	6,620	7,078	7,517	7,782	7,895

(a) 50 lb. per bushel.

(b) 40 lb. per bushel.

(ii) *Exports.* Since 1952-53, the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports amounting to 748,598 bushels (value £764,630) and 988,549 bushels (value £947,845) were recorded in 1956-57 and 1957-58 respectively.

7. *World Production.*—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1957 were the United States of America, France and Canada. China is also normally a major producer, but details for 1957 are not available. Australian production in that year was slightly less than one per cent. of the world total.

According to preliminary results compiled by the United States Department of Agriculture, world production of barley in the year 1957 amounted to 3,155 million bushels harvested from 135.3 million acres, equivalent to a yield per acre of 23.3 bushels. This compared with the production of 3,370 million bushels in the previous year from 140 million acres, and a yield per acre of 23.9 bushels. Production over the years 1934-38 averaged 2,273 million bushels from 114.6 million acres, with an average yield of 19.8 bushels per acre.

## § 8. Rice.

The principal rice-growing areas of the world are confined almost entirely to Asia although limited quantities are grown in other countries. In Australia, rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25, when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Area until local requirements were met and a small surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

The area sown in New South Wales in 1957-58 was 46,774 acres, the previous year's area being a record at 50,477 acres. Production was 5,658,133 bushels in 1957-58, the highest ever recorded.

A graph showing the production of rice appears on page 873.

The bulk of Australia's exports of rice in 1957-58 was shipped to Papua and New Guinea, the Pacific Islands, the United Kingdom and New Zealand. During the years prior to 1938-39, exports were principally to the United Kingdom.

Details relating to area, production and exports for the years 1953-54 to 1957-58, 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)

Season.	No. of Holdings Growing Rice.(b)	Area.	Production (Paddy Rice).		Average Yield (Paddy) per Acre.	Exports.(d)	
			Quantity.	Gross Value. (c)		Un-cleaned.	Cleaned.
		Acres.	'000 Bushels. (e)	£'000.	Bushels. (e)	Cwt.	Cwt.
Average, 1934-35 to 1938-39 ..	(f) 313	22,823	2,274	450	99.7	8,354	242,724
1953-54 ..	539	38,909	4,069	3,197	104.6	16,748	692,222
1954-55 ..	573	38,690	5,080	3,430	131.3	55,867	552,065
1955-56 ..	620	41,182	4,725	3,406	114.7	179,297	678,929
1956-57 ..	652	50,477	4,262	3,069	84.4	177,123	408,634
1957-58 ..	(g) 46,774	46,774	5,658	(h) 4,153	121.0	211,426	430,928

(a) Until recently rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland and Western Australia. Production was commenced in the Northern Territory in 1956-57 but details, which are confidential, are not included in the table. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) Imports are not recorded separately. (e) 42 lb. per bushel. (f) 1938-39 figure, previous years not collected. (g) Not available. (h) Subject to revision.

In 1956, the Commonwealth Government entered into an agreement for the development of large scale rice-growing in the Northern Territory. The agreement, which was made with a company financed by American and Australian interests, granted a 30 year lease over 750,000 acres of sub-coastal plains east of Darwin and provided for the development of 500,000 acres of land for rice-growing within 15 years. Production of rice has commenced, but, as only one company is involved, details of area and production are confidential and not available for publication.

### § 9. Sorghum for Grain.

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 to the growing of sorghum and so far, development has been restricted mainly to these areas, and more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and has become an important source of supply for supplementing other coarse grains for the feeding of livestock. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM : AREA, PRODUCTION AND YIELD PER ACRE, AUSTRALIA.

Season.	Area.			Production.(a)			Yield per Acre.(a)		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	Acres.	Acres.	(b) Acres.	Bushels. (c)	Bushels. (c)	Bushels. (c)	Bushels. (c)	Bushels. (c)	Bushels. (d)
1939-40 ..		4,397	(d) 4,397		57,936	(d) 57,936		13.2	(d) 13.2
1953-54 ..	7,053	181,819	188,872	129,063	4,039,779	4,168,842	18.3	22.2	22.1
1954-55 ..	13,069	202,532	215,688	272,604	5,082,762	5,356,335	20.9	25.1	24.8
1955-56 ..	23,697	155,527	179,298	662,973	3,960,195	4,624,273	28.0	25.5	25.8
1956-57 ..	34,585	171,705	206,659	671,331	4,243,227	4,919,247	19.4	24.7	23.8
1957-58 ..	47,017	166,979	214,442	521,325	3,885,567	4,407,500	11.1	23.3	20.6

(a) 60 lb. per bushel. (b) Includes small areas sown and quantities produced in other States. (c) Not available. (d) Queensland only.

## § 10. Potatoes.

1. Area, Production and Yield per Acre.—Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and 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 areas sown in these three States accounted for 75 per cent. of the total for Australia in 1957–58.

The area sown, production and yield per acre of potatoes in each State during the years 1953–54 to 1957–58 and the averages for the ten-year periods ended 1938–39 and 1956–57 are shown hereunder:—

## POTATOES : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES).									
Average, 1929–30 to 1938–39 ..	19,199	54,658	11,039	5,042	4,953	34,684	(a)	30	129,605
1953–54 ..	16,513	52,745	9,382	7,023	8,068	34,524	(a)	112	128,367
1954–55 ..	13,897	44,075	9,621	6,037	7,563	26,209	5	71	107,478
1955–56 ..	13,270	37,020	10,202	5,373	6,826	20,842	..	74	93,607
1956–57 ..	14,959	39,706	12,925	5,677	8,558	19,125	..	100	101,050
Average, 1947–48 to 1956–57 ..	17,755	47,682	10,949	6,659	7,295	30,596	(a)	111	121,047
1957–58 ..	17,326	49,846	14,400	6,260	8,322	21,696	4	92	117,946
PRODUCTION (TONS).									
Average, 1929–30 to 1938–39 ..	44,122	150,238	18,100	20,202	23,410	94,500	(a)	63	350,635
1953–54 ..	58,046	213,714	32,628	45,044	53,708	144,300	(a)	514	547,954
1954–55 ..	47,700	206,577	30,651	38,362	43,565	101,000	4	330	468,189
1955–56 ..	44,162	163,239	37,561	36,460	42,079	77,930	..	439	401,870
1956–57 ..	54,459	227,307	49,499	43,665	53,741	89,700	2	601	518,974
Average, 1947–48 to 1956–57 ..	54,682	178,065	33,061	39,548	45,925	119,848	(a)	613	471,742
1957–58 ..	66,689	251,159	56,468	49,965	49,229	101,500	3	420	575,433
YIELD PER ACRE (TONS).									
Average, 1929–30 to 1938–39 ..	2.30	2.75	1.64	2.50	4.73	2.72	(a)	2.09	2.71
1953–54 ..	3.52	4.05	3.48	6.41	6.66	4.18	(a)	4.59	4.27
1954–55 ..	3.43	4.69	3.19	6.35	5.76	3.85	0.80	4.65	4.16
1955–56 ..	3.33	4.41	3.68	6.79	6.16	3.74	..	5.93	4.29
1956–57 ..	3.64	5.73	3.83	7.69	6.28	4.69	..	6.01	5.14
Average, 1947–48 to 1956–57 ..	3.08	3.73	3.02	5.94	6.30	3.92	(a)	5.52	3.90
1957–58 ..	3.85	5.04	3.92	7.98	5.92	4.68	0.75	4.57	4.88

(a) Not available.

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944–45. Areas sown in subsequent seasons were considerably less, however, and the figure for 1957–58 was 117,946 acres.

The average yield in Australia for 1957–58 was 4.88 tons per acre compared with the record of 5.14 tons in the previous year.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the 1956–57 and 1957–58 seasons and the value per acre are shown in the following table.

**POTATOES: VALUE OF CROP.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1956–57—								
Aggregate value £'000	2,334	5,862	4,034	1,879	1,982	1,847	17	17,955
Value per acre £	156	148	312	331	232	97	170	178
1957–58(a)—								
Aggregate value £'000	1,451	3,326	1,400	939	1,386	1,458	9	9,969
Value per acre £	84	67	97	150	166	67	91	85

(a) Subject to revision.

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1955–56 to 1957–58 amounted to 368,900 tons, 459,500 tons and 518,100 tons respectively, or 88.7 lb., 108.0 lb. and 119.1 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 53,000 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. **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.

Potato Marketing Boards were subsequently established in all States under separate State legislation. The Queensland Board was not extended when its term ended in 1954, and the New South Wales Board was voted out by growers in 1956. As the Victorian Board does not acquire the State crop, potato marketing is now conducted chiefly on an open marketing system.

5. **Exports.**—Prior to the 1939–45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. After the war, the export trade expanded considerably. It reached a peak in 1952–53 but then declined. Details showing exports for the years 1953–54 to 1957–58 and the annual average for the period 1934–35 to 1938–39 are given in the following table:—

**POTATOES: EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934–35 to 1938–39.	1953–54.	1954–55.	1955–56.	1956–57.	1957–58.
Quantity .. tons	1,884	4,010	3,473	3,478	3,958	7,410
Value .. £'000	17	155	109	225	263	227

Imports of potatoes are not recorded separately.

### § 11. Onions.

1. **Area, Production and Yield per Acre.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 47.4 per cent. of the total area and 56.4 per cent. of the quantity produced in 1957–58. Queensland was next with 38.0 per cent. of the area and 25.9 per cent. of the production, leaving a balance of 14.6 per cent. of area and 17.7 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. Details of the area, production and yield per acre are given in the following table for the years 1953–54 to 1957–58 together with averages for the ten-year periods ended 1938–39 and 1956–57.

## ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 .. ..	124	6,159	840	450	109	5	3	7,690
1953-54 .. ..	270	3,641	2,497	471	375	18	7	7,279
1954-55 .. ..	285	3,970	2,807	512	390	21	9	7,994
1955-56 .. ..	318	3,337	2,480	524	321	22	8	7,010
1956-57 .. ..	532	4,503	3,258	608	428	28	5	9,362
Average, 1947-48 to 1956-57 .. ..	350	4,458	2,636	531	399	28	6	8,408
1957-58 .. ..	498	5,368	4,296	694	415	37	9	11,317

PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 .. ..	354	35,431	2,548	3,414	814	20	11	42,592
1953-54 .. ..	1,325	22,783	11,957	4,975	4,626	87	14	45,767
1954-55 .. ..	1,340	26,091	12,243	4,790	4,322	107	71	48,964
1955-56 .. ..	1,759	20,299	9,157	4,911	3,547	140	42	39,855
1956-57 .. ..	2,669	26,811	14,279	5,611	4,606	114	32	54,122
Average, 1947-48 to 1956-57 .. ..	1,491	28,967	11,464	5,226	4,194	136	36	51,514
1957-58 .. ..	2,343	40,678	18,653	5,945	4,149	186	76	72,030

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
1953-54 .. ..	4.91	6.26	4.79	10.56	12.34	4.83	2.00	6.29
1954-55 .. ..	4.70	6.57	4.36	9.36	11.08	5.10	7.89	6.13
1955-56 .. ..	5.53	6.08	3.69	9.37	11.05	6.36	5.25	5.69
1956-57 .. ..	5.02	5.95	4.38	9.23	10.76	4.07	6.40	5.78
Average, 1947-48 to 1956-57 .. ..	4.26	6.50	4.35	9.84	10.51	4.86	6.00	6.13
1957-58 .. ..	4.70	7.58	4.34	8.57	10.00	5.03	8.44	6.36

2. **Gross Value of Onion Crop.**—The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1956-57 and 1957-58 seasons:—

## ONIONS : VALUE OF CROP, 1956-57.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1956-57—								
Aggregate value £'000	194	861	985	327	144	4	1	2,516
Value per acre £	365	191	302	538	336	159	264	269
1957-58(a)—								
Aggregate value £'000	78	637	295	154	100	8	2	1,274
Value per acre £	157	119	69	222	241	205	262	113.

(a) Subject to revision.

3. **Consumption.**—The annual consumption of onions in Australia averaged 55,082 tons or 12.9 lb. per head of population during the three years ended 1957-58, compared with 40,600 tons or 13.2 lb. per head during the three years ended 1938-39. These figures exclude an estimated wastage which averaged 3,000 tons and 2,100 tons respectively.

4. **Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1957–58, exports amounted to 4,562 tons, valued at £134,517, and were shipped mainly to Singapore, Canada, New Caledonia, Hong Kong and Mauritius. The quantity of exports in 1956–57 was 2,473 tons, valued at £114,106. Imports of onions are not recorded separately.

### § 12. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia in terms of area, is wheat grown for grain. Up to and including 1946–47, hay was next, but in recent years it has dropped in relative importance. In 1957–58, the areas planted to green fodder and oats for grain were larger than that sown to hay.

In 1957–58, the hay area represented 10.4 per cent. of the total area cropped. A graph showing the area sown to hay crops since 1900–01 appears on page 871. In most European countries, the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, lucerne and wheat. The area, production and yield per acre of hay of all kinds in the several States during the years 1953–54 to 1957–58 and the averages for the ten-year periods ended 1938–39 and 1956–57 are shown below:—

#### HAY : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929–30 to 1938–39 ..	757	1,111	68	541	432	83	2	2,994
1953–54 ..	450	807	71	262	219	123	3	1,935
1954–55 ..	524	739	76	257	289	96	3	1,984
1955–56 ..	562	879	63	326	269	137	5	2,241
1956–57 ..	367	782	45	299	242	123	3	1,861
Average, 1947–48 to 1956–57 ..	420	701	60	270	227	105	3	1,786
1957–58 ..	554	871	69	291	339	110	3	2,237
PRODUCTION ('000 TONS).								
Average, 1929–30 to 1938–39 ..	959	1,263	104	577	464	120	3	3,490
1953–54 ..	639	1,361	140	369	294	241	5	3,049
1954–55 ..	680	1,208	171	330	305	158	4	2,856
1955–56 ..	846	1,526	137	461	384	261	10	3,625
1956–57 ..	538	1,423	96	453	289	238	6	3,043
Average, 1947–48 to 1956–57 ..	602	1,168	123	381	282	187	5	2,748
1957–58 ..	535	1,413	122	304	386	205	4	2,969
YIELD PER ACRE (TONS).								
Average, 1929–30 to 1938–39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1953–54 ..	1.42	1.69	1.99	1.41	1.34	1.96	1.52	1.58
1954–55 ..	1.30	1.63	2.25	1.28	1.05	1.64	1.33	1.44
1955–56 ..	1.51	1.74	2.17	1.41	1.42	1.91	2.08	1.62
1956–57 ..	1.47	1.82	2.12	1.52	1.19	1.94	1.81	1.63
Average, 1947–48 to 1956–57 ..	1.43	1.66	2.05	1.41	1.24	1.78	1.66	1.54
1957–58 ..	0.96	1.62	1.77	1.05	1.14	1.86	1.39	1.33

For a number of reasons, particularly the variations 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 apt to fluctuate considerably. The area under hay in Australia during the season 1915–16, 3,598,000 acres, was the largest on record, whilst the average for the ten-years ended 1956–57 was 1,786,000 acres.

A graph showing the production of hay appears on page 873.

(ii) *Varieties Grown.* Information regarding areas cut for hay in 1957–58 is given in the following table.

**HAY : AREA UNDER VARIOUS KINDS GROWN, 1957-58.**  
(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales .. ..	209,198	105,799	164,604	75,179	554,780
Victoria .. ..	36,065	208,724	51,622	574,547	870,958
Queensland .. ..	18,528	3,609	39,851	6,854	68,842
South Australia .. ..	71,517	100,545	20,387	98,477	290,926
Western Australia .. ..	73,947	179,607	523	84,906	338,983
Tasmania .. ..	2,466	12,953	709	94,036	110,164
Australian Capital Territory ..	328	1,094	1,190	84	2,696
<b>Australia .. ..</b>	<b>412,049</b>	<b>612,331</b>	<b>278,886</b>	<b>934,083</b>	<b>2,237,349</b>

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1957-58 were 27 per cent. for oaten, 18 per cent. for wheaten, 13 per cent. for lucerne, and 42 per cent. for other hay. In that year, wheaten hay predominated in New South Wales, oaten hay in South Australia and Western Australia, lucerne in Queensland, and meadow and grass in the remaining States.

2. **Value of Hay Crop.**—The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1956-57 and 1957-58 seasons:—

**HAY : VALUE OF CROP.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1956-57—								
Aggregate value £'000	5,197	15,230	1,699	3,670	2,626	1,996	106	30,524
Value per acre £	14.2	19.5	37.3	12.3	10.8	16.2	33.5	16.4
1957-58(a)—								
Aggregate value £'000	8,887	17,890	3,038	3,991	3,735	1,628	108	39,277
Value per acre £	16.0	20.5	44.1	13.7	11.0	14.8	40.1	17.6

(a) Subject to revision.

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 1954 to 1958 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.
1954 ..	700,367	1,479,299	106,794	420,423	216,023	185,549	4,775	3,113,230
1955 ..	809,263	1,553,289	156,115	447,102	207,664	145,112	3,269	3,321,814
1956 ..	830,619	1,870,214	149,187	474,456	306,586	270,138	7,778	3,908,978
1957 ..	775,464	2,008,678	156,599	555,681	222,941	296,257	7,617	4,023,237
1958 ..	553,691	1,643,876	89,897	384,143	211,069	256,199	3,492	3,142,367

4. **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 exports of Australia. During 1957-58, exports amounted to 2,364 tons, valued at £55,604. Imports are not recorded separately.

### § 13. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. In the 1957-58 season, green fodder ranked second after wheat in area of crops throughout Australia. The areas recorded in respect of green fodder include areas of crops cut for feeding to live-stock as green fodder, or ensilage, together with areas 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 are also used in this way. In 1957-58, the area under green fodder (3,039,293 acres) consisted of oats (1,732,093 acres), lucerne (438,374 acres), wheat (186,663 acres), sorghum (101,824 acres), barley (171,852 acres), maize (44,573 acres), rye (26,788 acres), sugar-cane (3,659 acres) and other crops (333,467 acres). Particulars concerning the area of green fodder in the several States during each of the years 1953-54 to 1957-58 are given in the following table, together with the average for the period of ten years ended 1938-39.

**GREEN FODDER : AREA.**  
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	482,989	(a)	347,804	106,820	189,332	24,255	(a)	656	(a)
1953-54 ..	761,552	56,210	663,097	365,301	507,756	60,127	(a)	1,218	2,415,261
1954-55 ..	934,395	77,135	649,607	360,359	639,086	70,945	32	988	2,732,547
1955-56 ..	826,789	75,815	689,469	334,957	666,398	54,401	..	970	2,648,799
1956-57 ..	813,642	66,490	640,316	363,562	752,072	48,435	2	772	2,685,291
1957-58 ..	993,039	85,095	714,048	421,242	770,739	54,094	4	1,032	3,039,293

(a) Not available.

2. Value of Green Fodder Crops.—The value of these crops is variously estimated in the several States, but the Australian total, excluding Western Australia, may be taken as approximately £5,900,000 for the 1956-57 season and £8,500,000 for the 1957-58 season.

§ 14. Sugar-cane.

1. Area.—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (see No. 38, page 985). The area of sugar-cane in Australia for the seasons 1953-54 to 1957-58 and the averages for the ten-year periods ended 1938-39 and 1956-57 are shown in the following table. In 1957-58, the total area of sugar-cane (excluding areas cut for green fodder) was 506,050 acres, the highest ever recorded.

**SUGAR-CANE : AREA.(a)**  
(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
1953-54 ..	7,787	6,869	468	332,703	120,929	12,846	340,490	127,798	13,314	481,602
1954-55 ..	6,566	8,078	474	367,640	107,512	11,589	374,206	115,590	12,063	501,859
1955-56 ..	7,522	8,728	670	365,252	104,782	12,111	372,774	113,510	12,781	499,065
1956-57 ..	9,182	9,419	522	360,932	106,734	12,450	370,114	116,153	12,972	499,239
Average, 1947-48 to 1956-57 ..	7,683	8,058	381	298,446	107,402	12,259	306,129	115,460	12,640	434,229
1957-58 ..	10,734	9,241	720	364,985	107,424	12,946	375,179	116,665	13,666	506,050

(a) Excludes areas cut for green fodder.

2. Productive and Unproductive Cane.—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1957-58 amounted to 3,659 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.



3. **Production of Cane and Sugar.**—For Queensland, statistics of the production of sugar-cane are not available for seasons prior to 1897-98. In that season, the total for Australia was 1,073,883 tons, compared with 9,248,703 tons in the 1957-58 season. The record production was 10,086,517 tons in 1954-55.

The average production during the ten seasons ended 1956-57 was 7,459,362 tons of cane and 1,006,225 tons of raw sugar. Particulars of the total production of cane and sugar for the years 1953-54 to 1957-58 and the averages for the ten-year periods ended 1938-39 and 1956-57 are as follows:—

**SUGAR-CANE: PRODUCTION OF CANE AND SUGAR.**  
(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.(a)	Cane.	Sugar.(a)	Cane.	Sugar.(a)
Average, 1929-30 to						
1938-39 .. ..	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1953-54 .. ..	263,249	34,004	8,751,063	1,220,383	9,014,312	1,254,387
1954-55 .. ..	222,213	26,301	9,864,304	1,301,245	10,086,517	1,327,546
1955-56 .. ..	284,539	36,028	8,616,163	1,135,685	8,900,702	1,171,713
1956-57 .. ..	294,087	35,918	8,978,081	1,171,879	9,272,168	1,207,797
Average, 1947-48 to						
1956-57 .. ..	274,301	33,611	7,185,061	972,614	7,459,362	1,006,225
1957-58 .. ..	303,086	36,854	8,945,617	1,256,271	9,248,703	1,293,125

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1957-58 amounted to 1,293,125 tons manufactured from 9,248,703 tons of cane, compared with the record production of 1,327,546 tons in 1954-55.

Official annual data are not available regarding the total number of persons engaged in the sugar industry in New South Wales and Queensland. The number of separate holdings growing 5 acres or more of cane was 7,209 in 1957-58.

According to data obtained from the population census of 30th June, 1954, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 20,185 males and 431 females, a total of 20,616 persons, of whom 4,245 were employers and 5,118 were self-employed.

4. **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 made accurately 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 1956-57 were 35.70 tons for New South Wales, and 24.07 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.37 tons and 3.11 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1956-57 were 24.37 tons and 3.29 tons respectively, as compared with 19.73 tons and 2.76 tons for the ten years 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
1953-54 .. ..	33.81	4.37	7.74	26.30	3.67	7.17	26.47	3.68	7.19
1954-55 .. ..	33.84	4.01	8.45	26.83	3.54	7.58	26.95	3.55	7.60
1955-56 .. ..	37.83	4.79	7.90	23.59	3.11	7.59	23.88	3.14	7.60
1956-57 .. ..	32.03	3.91	8.19	24.87	3.25	7.66	25.05	3.26	7.68
Average, 1947-48 to									
1956-57 .. ..	35.70	4.37	8.16	24.07	3.11	7.75	24.37	3.29	7.41
1957-58 .. ..	28.24	3.43	8.22	24.51	3.44	7.12	24.62	3.44	7.15

5. **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 1956-57, it required on the average 7.41 tons of cane to produce one ton of sugar, or 13.5 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 since the turn of the century, when over 9 tons of cane were required to produce 1 ton of sugar. It is believed that it 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 and the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

6. **Production and Utilization.**—Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1952-53 to 1957-58 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 and include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

#### RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stocks.	Pro-duction.	Exports. (a)	Miscel-laneous 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	435.3	11.2	326.6	106.5
1953-54 .. ..	+40.8	1243.6	738.7	17.8	446.3	112.3
1954-55 .. ..	-27.1	1218.1	761.2	21.7	462.3	114.0
1955-56 .. ..	+40.5	1158.0	617.0	21.7	478.8	115.7
1956-57 .. ..	+18.6	1217.7	698.8	20.0	480.3	112.8
1957-58 .. ..	-23.3	1222.2	733.8	21.1	490.6	112.8

(a) Includes sugar content of manufactured products.  
(c) In refining.

(b) Includes industrial uses and losses

7. **Consumption in Factories.**—The quantity of sugar used in factories in 1956-57 amounted to 275,964 tons compared with 266,065 tons in 1955-56 and 123,883 tons in 1938-39. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1956-57, consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 73,789 tons and by those producing confectionery, ice cream, etc., amounted to 58,371 tons.

8. **Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. Details of prices are shown in para. 14 of this section (see page 907.)

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and a uniform price paid to mills.

Sugar production barely met local requirements in 1923 but increased rapidly until 1925 when approximately 44 per cent. of the production was exported. Steps were taken by the Government to restrict planting of new areas and production was fairly stable until 1929. In that year, the pool was reorganized and mills received the full pool price for sugar up to the amount of their previous maximum production, further output being acquired at export prices.

Between 1929 and 1939, production rose by more than 70 per cent. despite the restrictions above-mentioned and the fact that export prices were generally less than half the pool price.

In 1939, following the International Sugar Agreement, which limited exports, the Queensland Government limited the pool (mill peaks) to 737,000 tons in respect of Queensland production. Mill quotas were allotted on the understanding that mills would allot

quotas to individual growers. Mill peaks have been raised since 1939, following the negotiation of the Commonwealth Countries Sugar Marketing Agreement of 1949, which allowed the Queensland Government to initiate a planned expansion of the industry. In 1957, they were 1,203,900 tons and in 1958, 1,207,400 tons.

9. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37, pages 940–41, 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 current agreement operates for a five year period from 1st September, 1956 to 31st August, 1961.

10. **International Sugar Agreement.**—The International Sugar Agreement of 1937 was superseded by the International Sugar Agreement of 1953 which came into force on 1st January, 1954. Details of the 1937 Agreement were given in Official Year Book No. 40, pages 881 and 882, and previous issues.

The 1953 agreement, which was amended by protocol from 1st January, 1957, was for the five year period ended 31st December, 1958.

In October, 1958, a new agreement was negotiated at a conference held in Geneva under the auspices of the United Nations. The new agreement, which follows the lines of the 1953 agreement, is for five years commencing 1st January, 1959, with provision for a review during the third year. It is designed to assure supplies of sugar to importing countries and markets for sugar to exporting countries at equitable and stable prices, to facilitate a steady increase in the consumption of sugar and a corresponding increase in the supply of sugar, and in general, to further international co-operation in connexion with world sugar problems. Basic export quotas of exporting countries are established and provision is made for adjustment of quotas according to fluctuations in the world sugar price. A number of price levels are stipulated at which the International Sugar Council may or must take action. The Council has considerable discretion to adjust quotas during the quota year.

Under the 1953 agreement, the British Commonwealth, as a whole, was granted an export quota of 2,375,000 tons rising to 2,500,000 tons in 1958. Under the 1958 agreement, the quota remains at 2,500,000 tons for 1959 but is increased by 75,000 tons to 2,575,000 tons in 1960 and 1961. This quota is not subject to the fluctuations mentioned above. The allocation of the total quota among exporting members of the British Commonwealth is a matter for internal arrangement by those countries and territories themselves. Australia's quota for 1959 will be approximately 631,000 tons and will increase to about 650,000 tons in 1960 and 1961.

Details of the marketing arrangements for Australian sugar are given in paragraph 15 below.

11. **Net Return for Sugar Crop.**—Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1938–39 and 1953–54 to 1957–58 will be found in the following table:—

**RAW SUGAR(a) : NET RETURNS, AUSTRALIA.**

Year.	Proportion Exported. (b)	Net Value of Exports per Ton. (b)	Average Price per Ton for Whole Crop.		Estimated Value of Crop.
			£	s. d.	
1938–39 .. ..	55.78	£ 8 4 3	15 3 11	£'000.	12,806
1953–54 .. ..	58.39	38 13 9	42 10 8		52,572
1954–55 .. ..	59.11	37 8 0	41 6 11		53,984
1955–56 .. ..	53.46	38 11 4	42 9 0		53,244
1956–57 .. ..	56.01	41 6 5	46 14 3		57,686
1957–58 .. ..	57.44	45 5 11	49 7 6		(c)64,194

(a) 94 net titre.

(b) As supplied by the Queensland Sugar Board.

(c) Subject to revision.

The estimated value of the raw sugar produced has been based upon details 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 including concessions to the fruit industry and other rebates which in 1957-58 amounted to £364,951. The value thus obtained represents the net market value of all raw sugar sold, which is divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively.

12. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and for each year from 1953-54 to 1957-58 are as follows:—

## SUGAR : EXPORTS, AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
Quantity	tons	377,930	706,801	737,184	592,229	675,282	707,806
Value	£'000	3,481	31,592	31,148	24,723	28,780	34,996

13. **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 VI.—Manufacturing Industry.

Other by-products include industrial chemicals and building boards. These boards are made from the residue of crushed fibre after removal of the sugar content from sugar-cane and possess high insulating and sound-absorbing properties which make them particularly suitable for use in walls and ceilings.

14. **Sugar Prices.**—The prices of sugar in Australia from 1952 to 1957 in the case of raw sugar; and from 1952 to 1961 in the case of refined sugar (as determined under the Sugar Agreement in Australia—See para. 9 above) 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 Consump- tion.	Exports.(a)		Whole Crop. (a)				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	d.		
1952 ..	44 3 0	41 2 0	42 12 9	24.3.52 to 12.10.52	65 12 10	8		
1953 ..	47 18 6	38 13 9	42 10 8	13.10.52 to 13.5.56	73 16 11	9		
1954 ..	47 1 0	37 8 0	41 6 11	14.5.56 to 31.8.61	82 1 0	10		
1955 ..	46 18 0	38 11 6	42 9 0					
1956 ..	53 11 6	41 6 5	46 14 3					
1957 ..	54 3 0	45 5 11	49 7 6					

(a) Including "Excess" Sugar.

15. **Marketing Arrangements.**—From 1939 to 1952, the British Ministry of Food purchased Australia's surplus raw sugar at prices negotiated annually and varying from £ stg. 11 5s. in 1939 to £ stg. 38 10s. a ton in 1952 including tariff preference (for prices in other years see earlier issues of the Year Book).

On 1st January, 1953, the British Commonwealth Sugar Agreement became effective. This agreement, which has been extended to 1965, provides for Australia to export a maximum of 600,000 tons per annum. The United Kingdom agrees to take 300,000 tons at an annually negotiated price, the balance being sold at world prices, plus tariff preferences. The negotiated prices for 1957 and 1958 were £ stg. 42 3s. 4d. and £ stg. 43 16s. 8d. a ton, respectively.

— The Sugar Bill introduced into the House of Commons on 5th July, 1955, provided for the reversion of dealings in sugar in the United Kingdom to a trader to trader basis as

from 1st January, 1957. However, under the Bill, a Sugar Board was created which is responsible for the purchase of the negotiated price sugar which the United Kingdom Government has contracted to take under the British Commonwealth Sugar Agreement.

**16. Fruit Industry Sugar Concession Committee and Sugar Rebates.**—The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund contributed by the Queensland Government on behalf of the Sugar Industry.

A rebate of £2 4s. per ton of refined sugar used in processing approved fruit products is paid to Australian manufacturers provided they buy the fresh fruit at prices not lower than those declared by the Committee as reasonable.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for Australian sugar than the price for which the cheapest imported sugar could be landed duty free in Australia.

Under the Sugar Agreement 1956–1961, the Queensland Government contributes to the fund £120,000 annually and also reimburses the Committee for the actual expenditure on export sugar rebates. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for scientific research for the purpose of increasing the yield per acre of Australian fruit.

**17. Bulk Handling of Sugar.**—The conversion of the Australian sugar industry to bulk handling and mechanized loading and unloading of raw sugar is well advanced. Within the next few years 80 per cent. of raw sugar in Australia will be handled in bulk without being bagged at any stage.

Terminals for the bulk loading of sugar were opened at Mackay in 1957 and at Lucinda and Bundaberg in 1958; additional bulk terminals are in course of construction at Townsville and Mourilyan.

Bulk unloading facilities are in operation, or in the course of construction, at all Australian refineries.

## § 15. Vineyards.

**1. Progress of Cultivation.**—(i) *Area of Vineyards.* Since the early days of Australian settlement, the expansion of the cultivation of vines has been most rapid in Victoria and South Australia, the area under vineyards in the 1957 season in these two States comprising 78 per cent. of the total area. 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 1953–54 to 1957–58 and the averages for the ten-year periods ended 1938–39 and 1956–57 are shown in the following table.

### VINEYARDS: AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Aust.(a)
Average, 1929–30 to						
1938–39 .. ..	15,777	40,563	2,142	54,156	5,666	118,304
1952–53 .. ..	18,006	45,968	2,808	60,603	9,233	136,618
1953–54 .. ..	18,128	45,777	2,884	62,121	9,202	138,112
1954–55 .. ..	18,205	45,757	2,896	60,612	9,015	136,485
1955–56 .. ..	18,099	44,817	2,916	59,862	9,107	134,801
1956–57 .. ..	17,394	44,902	2,916	57,409	8,996	131,617
Average, 1947–48 to						
1956–57 .. ..	17,384	45,258	2,977	60,274	9,388	135,281
1957–58—						
Wine .. ..	7,133	4,553	345	43,432	2,941	58,404
Table .. ..	2,531	2,162	2,476	243	1,597	9,009
Drying .. ..	7,320	38,052	..	13,764	4,485	63,621
<b>Total .. ..</b>	<b>16,984</b>	<b>44,767</b>	<b>2,821</b>	<b>57,439</b>	<b>9,023</b>	<b>131,034</b>

(a) Excludes particulars for Australian Capital Territory and Northern Territory

(ii) *Wine Production, Bounties, etc.* The total production of wine (beverage and distillation) in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938-39 to 33.9 million gallons in 1957-58. In the same period, consumption of beverage wine in Australia has expanded from 4.5 million gallons (0.7 gallons per head of population) to 11.1 million gallons (1.14 gallons per head of population). For many years prior to the 1939-45 War, a bounty was paid on wine shipped overseas under the provisions of the Wine Export Bounty Act 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, page 992.

The quantity of wine produced in the several States during the 1953-54 to 1957-58 seasons, together with the averages for the ten-year periods ended 1938-39, and 1956-57, are shown in the following table:—

**WINE : PRODUCTION.(a)**  
(\*000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39 ..	2,099	1,449	36	12,127	393	16,104
1953-54.. ..	5,066	2,327	59	23,497	717	31,666
1954-55.. ..	2,271	1,612	61	19,208	812	23,964
1955-56.. ..	2,327	1,342	37	18,403	786	22,895
1956-57.. ..	3,412	2,369	38	24,038	886	30,743
Average, 1947-48 to 1956-57 ..	4,097	2,502	42	22,537	717	29,895
1957-58.. ..	4,150	2,583	21	26,400	700	33,854

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

2. Imports and Exports of Wine.—(i) *Imports.* Imports for 1957-58 amounted to 51,225 gallons valued at £115,519 compared with 33,505 gallons valued at £74,407 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938-39.

During 1957-58, Italy supplied 18,659 gallons valued at £21,634, France supplied 18,980 gallons valued at £60,769, and Spain supplied 5,068 gallons valued at £12,949. The bulk of the sparkling wines were obtained from France.

(ii) *Exports.* Exports in 1957-58 totalled 1,489,528 gallons, of which the United Kingdom received 1,106,240 gallons, New Zealand 44,037 gallons, Canada 279,009 gallons, and other countries 60,242 gallons.

Exports for the five years ended 1957-58 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
1953-54.. ..	4,842	1,390,118	1,394,960	16,631	886,228	902,859
1954-55.. ..	5,570	1,258,503	1,264,073	19,670	797,767	817,437
1955-56.. ..	5,997	1,197,995	1,203,992	19,833	714,235	734,068
1956-57.. ..	6,701	1,743,648	1,750,349	23,737	1,108,314	1,132,051
1957-58.. ..	4,872	1,484,656	1,489,528	18,194	978,616	996,810

3. **Oversea Marketing of Wine.**—(i) *The Wine Overseas Marketing Act 1929–1954.* This Act was introduced to place the oversea marketing of surplus wine on an orderly basis. The Australian Wine Board (formerly The Wine Overseas Marketing Board), consisting of representatives from wineries and distilleries, grape-growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board has a London agency which advises on marketing conditions.

During 1954, the Act was amended to enable the Board to engage in the sales promotion of wine in Australia in addition to overseas.

(ii) *The Wine Grapes Charges Act 1929–1957.* 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 States except Tasmania, but the area of this type is only about 7 per cent. of the productive area of vines. The quantities of table grapes produced during the season 1957–58 in each State are shown in § 3 of this chapter. (See p. 869).

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1953–54 to 1957–58 and the averages for the ten-year periods ended 1938–39 and 1956–57 are shown in the following table. Production in 1957–58 was 90,554 tons, compared with 79,857 tons in 1956–57.

#### RAISINS<sup>(a)</sup> 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
1953–54 . . . . .	8,261	591	51,073	4,669	16,451	6,326	259	2,284	76,044	13,870
1954–55 . . . . .	7,873	663	49,368	4,675	12,287	3,654	60	2,172	69,588	11,164
1955–56 . . . . .	4,313	725	29,417	5,150	11,699	5,009	95	2,463	45,524	13,347
1956–57 . . . . .	9,380	585	50,085	3,954	9,716	3,941	148	2,048	69,329	10,528
Average, 1947–48 to 1956–57 . . . . .	6,738	813	43,294	5,796	10,859	5,392	297	2,392	61,188	14,393
1957–58 . . . . .	10,608	674	56,742	4,153	11,306	4,824	111	2,136	78,767	11,787

(a) Including 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. Total production during the 1957–58 season amounted to 90,554 tons, whilst exports for the 12 months ended December, 1958, were 74,884 tons, leaving an estimated 15,670 tons available for Australian consumption. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the oversea exports of raisins and currants during each of the years 1953–54 to 1957–58 compared with the average for the five years ended 1938–39.

## RAISINS AND CURRANTS(a) : EXPORTS, AUSTRALIA.

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£'000.	Tons.	£'000.	Tons.	£'000.
Average, 1934-35 to 1938-39 ..	43,191	1,686	15,054	549	58,245	2,235
1953-54 ..	51,693	5,561	10,731	1,039	62,424	6,600
1954-55 ..	59,934	6,720	8,373	917	68,307	7,637
1955-56 ..	51,734	6,224	9,561	1,151	61,295	7,375
1956-57 ..	38,496	5,377	6,521	831	45,017	6,208
1957-58 ..	52,297	8,019	7,398	938	59,695	8,957

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, the quantities exported thereto in 1957-58 being 35,918 tons, 14,949 tons and 4,679 tons respectively.

6. *Post-war Contracts.*—Agreements were negotiated between the Governments of the United Kingdom and Australia for the purchase of Australian dried vine fruits during the period 1946-1953. Up to and including 1951, the quantity of fruit to be purchased was limited but in 1952 and 1953 there was no restriction. In April, 1953, it was agreed to extend the contract for one year but in August, 1953, the United Kingdom Government abolished all controls and on 1st December of that year exports reverted to a trader basis. The British Ministry of Food agreed, however, to subsidize returns from sales of fruit of the 1954 crop sold in the United Kingdom up to 31st May, 1955, if average returns were less than the level of prices agreed upon.

7. *Oversea Marketing of Dried Fruits.*—(i) *The Dried Fruits Export Control Act 1924-1953.* This Act was passed to organize oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of growers representatives, members with commercial experience and experience in marketing dried fruits and a Government representative, controls the sale and distribution of dried fruit exports and recommends the conditions under which export licences are issued.

In conjunction with its London agency, the Board has improved dried fruit marketing overseas by its system of appraisal, regulation of shipments and advertising.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for a levy on exports of dried fruits to defray costs and expenses incurred by the Board. Provision is made for exemption from the levy upon recommendation by the Board.

## § 16. Orchards and Fruit-gardens.

1. *Area.*—The largest area of orchards and fruit-gardens prior to the 1939-45 War was 281,899 acres which was attained in 1933-34. Since then, the acreage has varied but has not fallen below 260,000 acres. The peak was reached in 1947-48 when 290,000 acres were planted; in 1957-58 the area was 276,000 acres.

ORCHARDS AND FRUIT-GARDENS : AREA.  
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	84,025	76,643	32,437	29,365	20,703	32,627	(a)	69	275,869
1933-34 ..	90,761	66,180	39,979	29,758	21,542	24,818	(a)	111	273,149
1934-35 ..	91,124	66,091	42,517	30,507	21,475	23,687	102	122	275,625
1935-36 ..	93,482	65,214	41,253	32,998	21,943	23,795	104	118	278,907
1936-37 ..	87,920	63,319	39,561	33,998	22,040	22,994	94	113	270,039
1937-38 ..	88,170	66,221	40,856	35,295	22,186	23,013	81	93	275,915

(a) Not available.



2. **Varieties of Crops.**—The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics, to strawberries, raspberries and currants in 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 grown extensively. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, pineapples, apples, bananas, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to apples, oranges, apricots, plums, peaches and pears, almonds and olives are grown extensively. In Western Australia, apples, oranges, pears, plums, peaches, lemons, apricots and figs are the chief varieties. In Tasmania, apples occupy over three quarters of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberries are grown, extensively while the balance of the area is mainly taken up with pears, apricots and plums. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantities produced.

### ORCHARDS AND FRUIT-GARDENS, 1957-58.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AREA, BEARING AND NON-BEARING (ACRES).</b>									
Apples ..	15,408	20,524	10,134	5,495	12,892	18,062	..	80	82,595
Apricots ..	1,939	4,622	379	4,482	399	866	..	2	12,689
Bananas ..	20,951	..	5,645	..	357	..	28	..	26,981
Cherries ..	2,353	1,842	3	596	40	55	..	..	4,889
Citrus—									
Oranges ..	25,707	5,341	3,345	9,499	4,016	..	(a) 20	..	47,928
Mandarins ..	1,820	136	1,453	228	257	..	(b)	..	3,894
Lemons and Limes ..	2,384	1,590	379	357	579	..	6	..	5,295
Other ..	608	297	68	402	136	..	3	..	1,514
Nuts ..	330	615	200	3,448	194	..	..	2	4,789
Peaches ..	6,403	10,722	1,505	3,948	815	56	..	2	23,451
Pears ..	3,246	13,836	517	1,921	991	1,474	..	4	21,989
Pineapples ..	467	..	13,018	..	..	..	22	..	13,507
Plums and Prunes ..	4,617	2,440	1,313	1,326	1,010	108	..	2	10,816
Small Fruits ..	15	621	327	117	7	2,352	..	..	3,439
Other Fruits ..	1,922	3,635	2,570	3,476	493	40	2	1	12,139
<b>Total</b>	<b>88,170</b>	<b>66,221</b>	<b>40,856</b>	<b>35,295</b>	<b>22,186</b>	<b>23,013</b>	<b>81</b>	<b>93</b>	<b>275,915</b>

### PRODUCTION.

Apples '000 bus.	1,667	3,125	692	1,220	1,359	6,635	..	5	14,703
Apricots ..	233	692	13	506	41	90	..	..	1,575
Bananas ..	2,871	..	443	..	44	..	2	..	3,360
Cherries ..	137	75	..	49	1	5	..	..	267
Citrus—									
Oranges ..	2,870	797	365	1,726	440	..	(a) 1	..	6,199
Mandarins ..	135	16	166	33	22	..	(b)	..	372
Lemons and Limes, ..	266	159	69	51	128	..	1	..	674
Other ..	143	56	19	87	24	..	..	..	329
Nuts '000 lb.	140	268	60	2,042	41	..	..	..	2,551
Peaches '000 bus.	837	1,287	69	690	77	7	..	..	2,967
Pears ..	473	3,730	37	402	99	566	..	..	5,307
Pineapples ..	89	..	3,938	..	..	..	2	..	4,029
Plums and Prunes ..	334	186	56	142	80	30	..	..	828
Small Fruits '000 cwt.	..	16	13	2	..	86	..	..	117

(a) Includes mandarins.

(b) Included with oranges.

3. **Principal Fruit Crops.**—The area and production of the principal fruit crops and the gross value of production during the seasons 1953-54 to 1957-58, compared with the average for the ten seasons 1929-30 to 1938-39, are shown hereunder.

## PRINCIPAL FRUIT CROPS : AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION.

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
AREA, BEARING AND NON-BEARING (ACRES).							
Average, 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1953-54.. ..	80,684	12,881	28,799	57,479	23,685	21,040	11,546
1954-55.. ..	79,971	13,106	30,480	57,703	24,079	21,247	11,477
1955-56.. ..	82,336	13,087	29,331	59,271	23,454	22,030	10,915
1956-57.. ..	81,965	12,493	26,981	57,189	22,020	21,499	10,679
1957-58.. ..	82,595	12,689	26,981	58,631	23,451	21,989	10,816
PRODUCTION ('000 BUSHELS).							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
1953-54.. ..	12,469	1,744	3,322	7,445	3,335	4,442	996
1954-55.. ..	11,678	1,544	3,139	7,086	3,080	4,708	820
1955-56.. ..	13,464	1,383	4,736	8,212	2,582	4,206	842
1956-57.. ..	10,792	1,417	3,625	7,943	2,179	4,606	674
1957-58.. ..	14,703	1,575	3,360	7,574	2,967	5,307	828
GROSS VALUE OF PRODUCTION. (£'000.)							
Average, 1929-30 to 1938-39	2,677	326	1,072	1,808	679	559	286
1953-54.. ..	14,683	2,788	7,311	7,400	3,489	4,455	1,351
1954-55.. ..	13,969	2,010	7,350	8,639	3,606	4,628	1,220
1955-56.. ..	16,594	2,286	5,749	8,556	3,365	4,681	1,380
1956-57.. ..	15,188	2,731	7,288	8,367	3,724	5,483	1,398
1957-58(a) ..	19,211	2,400	9,121	10,708	3,854	6,635	1,478

(a) Subject to revision.

4. Production of Jams and Jellies and Preserved Fruit.—In Australia, considerable quantities of fruit are used in the production of jams and jellies and preserved fruit. During 1956-57, output of jams and jellies amounted to 92,208,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 280,248,000 lb. Production of preserved apples was 9,262,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 208,634 tons in 1956-57.

5. Consumption of Fruit and Fruit Products.—Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1957-58 are shown in Chapter XXX.—Miscellaneous, of this Year Book.

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

A considerable export trade in both fresh and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1957-58 amounted to £13,061,942 and £9,143,179 respectively. Apples constitute the bulk of the fresh fruit exported, although exports of pears and citrus fruit are considerable.

(ii) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1953-54 to 1957-58 and the average of the five years ended 1938-39 are shown in the following table:—

## FRESH AND FROZEN FRUIT: EXPORTS, AUSTRALIA.

Year.	Apples.		Pears.		Citrus.		Total.(a)	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
Average, 1934-35 to 1938-39 ..	4,591	1,396	632	268	533	234	5,865	1,981
1953-54 ..	4,728	6,089	1,209	2,045	533	809	6,596	9,384
1954-55 ..	4,265	5,444	1,407	2,183	525	783	6,283	8,771
1955-56 ..	5,023	6,513	1,012	1,470	585	869	6,689	9,138
1956-57 ..	3,969	5,582	1,020	1,731	613	926	5,670	8,585
1957-58 ..	5,892	9,076	1,448	2,755	572	882	7,961	13,062

(a) Total, including exports of all other fresh and frozen fruit.

(iii) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the years 1953–54 to 1957–58, 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.

**DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934–35 to 1938–39	12,225	80	4,315	117
1953–54 .. .. .	11,638	303	6,526	795
1954–55 .. .. .	(b) 13,176	(b) 373	6,576	804
1955–56 .. .. .	(b) 8,627	(b) 204	3,681	428
1956–57 .. .. .	(b) 7,052	(b) 158	2,887	378
1957–58 .. .. .	(b) 8,683	(b) 209	1,366	186

(a) Excludes raisins and currants referred to separately under Vineyards, (see p. 910).  
of dates and figs only.

(b) Imports

(iv) *Jams and Jellies.* Exports of jams and jellies reached large proportions immediately following the 1939–45 War and in 1946–47 amounted to 65,434,000 lb., compared with the average for the five years ended 1938–39 of 7,118,000 lb. Since 1949–50, when exports totalled 65,229,000 lb., there has been a marked decline and in 1957–58 exports amounted to only 9,418,836 lb., valued at £649,497. Imports of jams and jellies are negligible.

(v) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1957–58, was 1,513,310 lb. valued at £109,909. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938–39 amounting to £1,271,525. In 1957–58, the value of exports was £12,358,092. In addition, the exports of pulped fruits during 1957–58 amounted to 1,873,170 lb., valued at £196,801. The quantity of fruit preserved in liquid exported from Australia in 1957–58 amounted to 165,151,369 lb. compared with average exports of 68,896,000 lb. for the five years ended 1938–39. Exports in 1957–58 were principally made up of pears (74,220,088 lb.), peaches (48,167,514 lb.), apricots (20,553,822 lb.) and pineapples (12,657,602 lb.).

7. *Marketing of Apples and Pears.*—(i) *Apple and Pear Organization Act 1938–1953.* 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 comprising representatives of growers, exporters, employees and the Commonwealth Government. Oversea representatives may also be appointed by the Board.

The function of the Board is the organization and control of exports of fresh apples and pears and it has the power to regulate shipments, determine export quotas and allocate consignments from each State.

(ii) *Apple and Pear Export Charges Act 1938–1957.* This Act provides for an export levy to meet the expenses of the Board.

(iii) *Apple and Pear Acquisition.* Exports of apples and pears were seriously curtailed during the war and the 1940 to 1948 crops were acquired and marketed under National Security and Defence Regulations. Details of the acquisition scheme will be found on pages 1003 and 1004 of Official Year Book No. 38 and in earlier issues.

8. *Overseas Marketing of Canned Fruit.*—(i) *The Canned Fruits Export Control Act 1926–1956.* This legislation was introduced with the object of organizing the overseas marketing of canned fruit. The Australian Canned Fruits Board, comprising members representing the Commonwealth Government and canners of apricots, peaches, pears, pineapples and fruit salad, was appointed with functions mentioned above and also to recommend conditions under which export licences are issued.

The system of marketing adopted by the Board has resulted in the satisfactory disposal of the exportable surplus of canned fruits.

(ii) *The Canned Fruits Export Charges Act 1926–1956.* This Act provides for a levy on exports to meet the Board's expenses. Provision has been made for certain exemptions when recommended by the Board.

### § 17. Vegetables for Human Consumption.

1. **Area and Production of Fresh Vegetables.**—Details of the areas planted and production of individual kinds of vegetables, excluding potatoes and onions referred to in §§ 10 and 11 of this chapter, are shown below for the seasons 1955–56 to 1957–58.

#### FRESH VEGETABLES<sup>(a)</sup> FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1955–56.		1956–57.		1957–58.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Asparagus .. ..	4,140	4,994	4,098	4,601	3,788	5,300
Beans, French and Runner .. ..	15,609	21,722	18,000	26,064	17,517	23,217
Beans, Navy .. ..	1,022	90	999	273	1,728	266
Beetroot .. ..	2,134	12,580	2,264	13,917	2,102	13,967
Cabbages and Brussels Sprouts .. ..	6,444	65,949	7,413	77,938	6,447	69,426
Carrots .. ..	4,422	38,209	5,444	47,537	5,001	47,648
Cauliflowers .. ..	6,675	70,425	7,295	78,540	7,734	89,385
Celery <sup>(b)</sup> .. ..	590	7,527	648	8,509	653	9,949
Cucumbers <sup>(b)</sup> .. ..	1,461	5,205	1,538	5,255	1,616	5,822
Lettuces .. ..	4,228	15,412	4,393	16,114	4,595	17,017
Parsnips .. ..	1,391	11,006	1,619	12,631	1,530	12,426
Peas, Blue .. ..	5,887	3,760	8,325	5,090	7,323	3,860
Peas, Green .. ..	44,136	44,233	48,614	48,437	47,988	51,714
Tomatoes .. ..	17,082	92,095	19,908	146,800	17,096	119,964
Turnips, Swede and White .. ..	5,896	26,862	5,427	22,688	4,670	18,701
All Other .. ..	34,181	..	35,815	..	33,761	..
<b>Total .. ..</b>	<b>155,298</b>	<b>..</b>	<b>171,800</b>	<b>..</b>	<b>163,551</b>	<b>..</b>

(a) Excludes potatoes and onions.

(b) Incomplete; excludes New South Wales.

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1957–58 amounted to 86,729,000 lb., which was considerably higher than pre-war production, and approximately 73 per cent. of the peak war-time production of 119,149,000 lb. recorded in 1944–45. The principal canned vegetables produced in 1957–58 were green peas 30,144,000 lb., green beans 9,384,000 lb., baked beans (including pork and beans) 17,098,000 lb., tomatoes 2,998,000 lb. and asparagus 7,810,000 lb.

The production of dehydrated vegetables, which was initiated by the Commonwealth Government during the 1939–45 War, rose to a maximum of 22,000,000 lb. in 1945–46, but in 1956–57 it was only approximately 691,000 lb.

3. **Imports and Exports of Vegetables.**—The quantity and value of oversea exports of pulse and fresh vegetables during 1957–58 were respectively:—Pulse, 8,938 tons, £517,110; onions, 4,562 tons, £134,517; potatoes, 7,410 tons, £227,475; other vegetables, 1,604 tons, £184,988. Imports of pulse amounted to 3,869 tons, valued at £286,525, whilst imports of fresh vegetables in total were 675 tons, valued at £168,244.

In 1957–58, exports of vegetables preserved in liquid consisted of:—Asparagus, 998,200 lb. (£163,673); Beans (including baked), 439,572 lb. (£23,062); Peas, 320,307 lb. (£25,886); Tomatoes, 356,798 lb. (£17,373); Other Vegetables, 387,873 lb. (£46,146).

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1957–58 are shown in Chapter XXX.—Miscellaneous, of this Year Book.

### § 18. Tobacco.

1. **States, Area and Production.**—Tobacco has been grown in Australia for a considerable number of years. 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. Thereafter, the industry fluctuated for many years reaching a peak in 1932–33 when 26,272 acres were planted.

In 1957–58, the area planted was 13,270 acres which was 18 per cent. more than the average for the ten years ended 1938–39. Owing to improvement in average yields, however, the production of dried leaf in 1957–58 was 126 per cent. higher than the pre-war average.

In the following table, particulars of the area and production of tobacco are given by States for each of the seasons 1953-54 to 1957-58, together with averages for the ten-year periods ended 1938-39 and 1956-57:—

## TOBACCO : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
AREA (ACRES).							
Average, 1929-30 to 1938-39	1,274	6,237	2,865	292	502	89	11,259
1953-54.. .. .	501	2,246	4,065	..	1,434	..	8,246
1954-55.. .. .	635	2,471	5,135	..	1,418	..	9,661
1955-56.. .. .	893	2,876	6,301	..	1,235	..	11,306
1956-57.. .. .	1,031	2,935	7,029	..	1,176	..	12,172
Average, 1947-48 to 1956-57	546	1,753	4,231	..	1,082	..	7,612
1957-58.. .. .	1,193	3,252	7,493	..	1,266	..	13,204
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929-30 to 1938-39	860	2,354	1,400	83	361	56	5,114
1953-54.. .. .	587	2,155	4,015	..	912	..	7,669
1954-55.. .. .	618	868	4,332	..	1,003	..	6,821
1955-56.. .. .	547	1,135	3,702	..	721	..	6,106
1956-57.. .. .	805	2,741	4,344	..	819	..	8,709
Average, 1947-48 to 1956-57	481	1,225	3,238	..	815	..	5,759
1957-58.. .. .	1,235	3,683	5,618	..	1,031	..	11,567

(a) Includes small amounts produced in Northern Territory from 1954-55 onwards.

2. The Tobacco Industry.—(i) *Marketing.* In the early days, purchase of the leaf at the farms was the usual practice but towards the end of the 1930's the auction system was introduced by arrangement between the growers' associations and the manufacturers.

On 9th May, 1941, the Australian Tobacco Board was constituted under the National Security (Australian Tobacco Leaf) Regulations for the purpose of facilitating and regulating the marketing of Australian grown tobacco leaf. All leaf was under the control of the Board, the growers being paid on the valuation as appraised by the Board. The Board ceased to function on 24th September, 1948, and subsequent crops have been marketed at open auction in the respective States. Queensland has had its own Tobacco Leaf Marketing Board since 1948 and leaf sold in that State has a reserved price, determined by the Board's appraiser. Growers in New South Wales voluntarily submit their leaf to the Queensland Board. Leaf from Victoria is sold at auction in Melbourne for the Victoria Tobacco Growers' Association. In Western Australia the leaf is sold in Perth for the Western Australian Tobacco Growers' Association (Inc.).

(ii) *Central Tobacco Advisory Committee.* The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on its problems.

The Committee was reconstituted by the Agricultural Council during 1952-53 and its terms of reference are as follows:—

“To report annually to the Agricultural Council, through the Standing Committee on Agriculture and also to the Commonwealth Minister for Customs and Excise, through the Chairman of the Council, on the following:—

- (i) The percentage of Australian tobacco which should be incorporated in locally manufactured tobacco under Customs regulations, having regard to the anticipated volume of Australian production of usable leaf available for absorption by the manufacturing industry;
- (ii) The progress of the industry during the year with particular reference to—
  - (a) marketing problems encountered,
  - (b) a review of prices being paid to farmers in relation to quality of leaf,
  - (c) such other problems as may be retarding the progressive development of the industry, such as the volume of importation of manufactured tobacco and cigarettes.”

(iii) *Industry Inquiries.* The tobacco industry has been the subject of a number of investigations during the past 30 years. The Tariff Board inquired into the industry in 1923, 1926, 1931 and 1940 and reports were issued in respect of the last three inquiries.

(iv) *Commonwealth Grants.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, were given in Official Year Book No. 40, pages 895, 896 and in previous issues.

(v) *Research and Investigations.* The Commonwealth Scientific and Industrial Research Organization has been investigating many fundamental problems connected with tobacco culture. One of the major achievements of this organization was the development in the mid-1930's of a technique to control blue mould in the seed bed. Investigations are now being made into the control of this disease in the field. State Departments of Agriculture are also carrying out investigations over a wide range of problems, being concerned mainly with variety trials, irrigation, disease and pest control, crop rotation and cultural practices.

In 1955, the Central Tobacco Advisory Committee formulated a programme for increased research and advisory activities. The capital costs of establishing this programme are estimated at £168,000 of which the Commonwealth Government and tobacco manufacturers have each agreed to contribute half. It has been estimated that to maintain the programme, it will cost approximately £63,000 per annum, of which the Commonwealth Government is contributing £21,000, tobacco growers £14,000 and tobacco manufacturers £28,000 per annum. A Tobacco Industry Trust Account has been established to receive these contributions. This programme commenced in 1956.

During the first two years of the operation of the Trust Account, £342,529 was allocated to State and Commonwealth departments.

(vi) *War Service Land Settlement.* Tobacco growing under the War Service Land Settlement Scheme commenced in 1949 and is being carried out on 67 farms in Queensland. Each farm is designed to have a minimum of 40 acres of suitable land to permit of ten acres being cropped annually on a one in four rotation.

Due to technical difficulties in certain districts in Western Australia, tobacco growing under the War Service Land Settlement Scheme has been considerably curtailed.

(vii) *Tobacco Factories.* Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages rose from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946, to 15½ per cent. and 16½ per cent. respectively from 1st July, 1958. The percentages to apply from 1st July, 1959, when most of the 1958 tobacco crop will be used in manufacture, are 22 per cent. and 23.5 per cent. respectively. In 1957-58, the quantity of cured leaf used in tobacco factories in Australia amounted to 48.8 million lb. of which 7.6 million lb. was of local origin. The balance was imported, chiefly from the United States of America.

3. *Oversea Trade.*—Imports of tobacco and manufactures thereof into Australia during 1957-58 were valued at £15.5 million, including 43.0 million lb. of unmanufactured tobacco valued at £14.6 million. Exports of tobacco and manufactures thereof during 1957-58 were valued at £704,116.

### § 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1956-57 being 1,876 acres, of which 1,441 acres were in Tasmania, and 435 acres in Victoria. A small area was also under hops 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 1953-54 to 1957-58 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.	£'000.				
Average, 1934-35 to 1938-39	20,576	173	1,020	78	21,518	18,992
1953-54	24,666	802	14,675	59	39,282	43,525
1954-55	34,075	1,106	10,311	..	44,386	42,976
1955-56	34,374	1,102	16,880	..	51,254	43,638
1956-57	25,230	857	3,074	..	28,978	40,250
1957-58	32,710	1,137	4,502	..	37,212	(b)

(a) Disregards movements in stocks.

(b) Not yet available.

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

## § 20. Flax.

1. **Flax for Fibre.**—During the 1914–18 and 1939–45 Wars, there was an acute shortage of flax fibre and the expansion of production was encouraged by the Commonwealth Government, the area sown reaching a maximum of more than 61,000 acres in 1944–45.

The growing of flax for fibre is now confined to the States of Victoria, South Australia and Western Australia. In Victoria and South Australia, production is directed and controlled by the Flax Commission which took over the Commonwealth flax undertakings from the Flax Production Committee on 1st November, 1954. In Western Australia, the industry is carried on by a Co-operative Company.

Following on the Tariff Board's Report on Flax Fibre dated 5th August, 1954, the Government introduced a bounty on flax fibre for a period of two years to permit the modernization of plant and machinery. The amount of the bounty is related to the difference between oversea prices and local production costs and it came into operation on 1st November, 1954. The Tariff Board conducted a further inquiry into flax fibre in 1956 and in its report dated 8th February, 1957, recommended the continuance of bounty payments for a further period of three years. The Government decided, however, in May 1957, that a complete examination should be made of the possible future of the industry, from the economic, defence and other viewpoints. It decided that bounty payments should continue until 31st October, 1957, while the enquiry was proceeding.

In November, 1957, the Government approved a three year extension of bounty assistance to flax producers and decided that the Commonwealth should withdraw from the field of flax fibre production by selling or closing the mills operated by the Flax Commission, as and when this was practicable.

One important factor which influenced the Government in making this decision was the view expressed by the defence authorities that the industry no longer has the same defence significance as it had when the Flax Commission was first established.

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

## FLAX FOR FIBRE: AREA AND PRODUCTION.

Season.	Victoria.	S. Aust.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934–35 to 1938–39 .. ..	1,021	..	..	(a) 1,030
1953–54 .. .. .	9,550	3,040	3,105	15,695
1954–55 .. .. .	5,878	1,314	464	7,656
1955–56 .. .. .	2,550	526	1,594	4,670
1956–57 .. .. .	2,196	1,864	1,757	5,817
1957–58 .. .. .	5,550	1,410	1,002	7,962
PRODUCTION (TONS OF STRAW).				
Average, 1934–35 to 1938–39 .. ..	61	..	..	61
1953–54 .. .. .	12,984	4,647	4,470	22,101
1954–55 .. .. .	7,799	1,888	500	10,187
1955–56 .. .. .	4,637	1,150	1,875	7,662
1956–57 .. .. .	4,013	4,606	2,051	10,670
1957–58 .. .. .	9,923	3,077	1,246	14,246

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

2. **Flax for Linseed.**—Prior to 1948–49, the growing of flax for linseed oil had not been developed extensively in Australia. Since then however, action has been taken to develop this industry, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements. Development of the industry proceeded rapidly until 1951–52 when the record total of 53,741 acres was sown. In 1952–53, there was a decline in the acreage and a further decline in 1953–54 when 6,343 acres only were sown. Since then an increase to £70 per ton, f.o.r. ports, in the guaranteed price notified to growers by the crushers early in each season has led to an increase in the area sown to 19,403 acres in 1954–55, 90,102 acres in 1956–57 and 96,465 acres in 1957–58.

The question of assistance to the industry was investigated by the Commonwealth Tariff Board in 1953 and their conclusions are contained in their Report on *Linseed and Linseed Products* dated 23rd October, 1953.

Details of the area and production of flax for linseed are shown in the following table for the seasons 1953-54 to 1957-58.

**FLAX FOR LINSEED: AREA AND PRODUCTION.**

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
1953-54 .. ..	1,400	1,226	3,647	70	..	..	6,343
1954-55 .. ..	1,826	1,829	15,569	171	..	8	19,403
1955-56 .. ..	1,817	580	45,202	128	..	..	47,727
1956-57 .. ..	2,404	1,143	86,265	290	..	..	90,102
1957-58 .. ..	2,251	4,091	90,255	221	549	..	97,367
PRODUCTION (TONS OF LINSEED).							
1953-54 .. ..	256	202	359	5	..	..	822
1954-55 .. ..	355	358	4,705	28	..	2	5,448
1955-56 .. ..	400	94	12,738	15	..	..	13,247
1956-57 .. ..	622	306	17,644	76	..	..	18,648
1957-58 .. ..	36	1,149	7,279	49	68	..	8,581

**§ 21. Peanuts.**

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

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

Season.	Area (Acres).					Production (Tons).				
	N.S.W.	Qld.	W.A.	N.T.	Aust.	N.S.W.	Qld.	W.A.	N.T.	Aust.
Average, 1929-30 to 1938-39 ..	29	8,320	100	(a)	8,449	(b) 11	3,715	24	(a)	3,750
1953-54 .. ..	1,525	36,617	(c)	(a)	d 38,142	718	17,866	(c)	(a)	d 18,584
1954-55 .. ..	769	37,971	(c)	780	d 39,520	346	14,001	(c)	135	d 14,482
1955-56 .. ..	414	31,493	(c)	544	d 32,451	174	8,633	(c)	40	d 8,847
1956-57 .. ..	419	25,017	(c)	208	d 25,644	234	8,676	(c)	17	d 8,927
1957-58 .. ..	686	34,739	(c)	156	d 35,581	401	18,326	(c)	15	d 18,742

(a) Not available.

(b) Average for five years.

(c) Not available for publication.

(d) Excludes Western Australia.

The gross value of the 1956-57 crop (excluding the small crop in Western Australia) was £962,000 which was approximately £74,000 more than in 1955-56.

Formerly, considerable quantities of peanut kernels were imported, chiefly from India, for the extraction of oil. These imports were suspended from 1946 to 1949, but have since been resumed on an increasing scale. Total supplies available for consumption in Australia in 1957-58, 16,485 tons (shell equivalent), consisted of 8,927 tons grown locally in the 1956-57 season and 7,558 tons imported.

**§ 22. Cotton.**

1. **General.**—The production of cotton in Australia is restricted to Queensland, where cultivation began in 1860. Details of areas sown for years prior to 1930 and of Government financial assistance to growers up to 1940 appear in Official Year Book No. 39 and earlier issues.

Australia produces only a small part of its requirements of raw cotton, the balance being obtained in 1956-57 chiefly from the United States of America, Mexico, Pakistan, Brazil and India. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods, and payment of bounties, but so far have not met with much success. Production increased very considerably during the early years of the 1939-45 War, reaching a peak of 17,550,000 lb. unginned cotton in 1939-40, but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter VI.—Manufacturing Industry.



The Raw Cotton Bounty Act 1940 provided an extension, until 31st December, 1946, of assistance previously granted by way of bounty. 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. It was superseded by the Cotton Bounty Act 1951, which guaranteed a net average return of 9½d per lb. of seed cotton for five years from 1st January, 1951. The 1951 Act was amended in 1952 to provide for a guaranteed return of 14d. per lb. of seed cotton for the 1953 crop, and for variation by regulation of the guaranteed return, in succeeding seasons, with a minimum of 9½d. per lb. The Act, as amended in 1952 and 1957, was extended in 1958 to cover production up to 31st December, 1963. The guaranteed return has remained at 14d. per lb. of seed cotton since the 1953 season and the Government has announced that the guaranteed return for 1957 and 1958 seasons will not be less than 14d. per lb.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1953 to 1957 are shown hereunder together with the average for the period of ten years ended 1939. Details of the production of ginned cotton are derived from published statistics of the Queensland Cotton Marketing Board.

#### COTTON: AREA AND PRODUCTION IN QUEENSLAND.

Season ended December—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned— Equivalent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
		Acres.	'000 lb.	£'000.	'000 lb.	Bales.	lb.
Average, 1930 to 1939	58,436	16,617	291	5,564	11,181	284	95
1953 .. ..	8,965	5,132	316	2,068	4,229	572	231
1954 .. ..	8,377	3,597	208	1,365	2,819	429	163
1955 .. ..	13,290	5,359	307	2,164	4,386	403	163
1956 .. ..	11,338	3,809	224	1,460	3,046	336	129
1957 .. ..	10,364	3,390	213	1,341	2,845	327	129

(a) Bales of approximately 500 lb.

3. **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 of Raw Cotton in Spinning.
Average, 1936–37 to 1938–39 ..	5,180	9,882	15,062	12,523
1952–53 .. ..	755	24,796	25,551	31,128
1953–54 .. ..	2,068	44,203	46,271	43,994
1954–55 .. ..	1,365	43,218	44,583	47,098
1955–56 .. ..	2,164	37,614	39,778	45,262
1956–57 .. ..	1,460	47,805	49,265	46,699

### § 23. Financial Assistance to Primary Producers.

NOTE.—See also Chapter XXI.—Public Finance, page 796.

Direct financial assistance to primary producers by the Commonwealth Government takes the form of bounties, subsidies and other financial assistance. Brief details of some of the more important payments are given below:—

(i) *Cotton Bounty.* The Cotton Bounty Act provides for payment of a bounty on seed cotton delivered by growers to processors. The present rate of bounty is designed to give growers an average return of 14d. per lb. The total payment in 1957–58 was £64,702 in respect of 3,474,828 lb. of cotton. In 1956–57, the total payment was £150,665 in respect of 6,300,685 lb.

(ii) *Dairy Products Bounty.* Under the provisions of the Dairy Industry Act 1952, a subsidy was paid to dairymen to ensure them a return equal to the average cost of production for a specified quantity equal to local consumption plus twenty per cent. The Dairy Industry Act 1957 provided for continuation of the scheme for a further five years. A new feature, however, was that any subsidy made available under the scheme would be determined before the commencement of each season and would be on the basis of a fixed amount in any dairying year. In 1957-58, total payments amounting to £13,500,000, the same as in 1956-57.

(iii) *Flax Fibre Bounty.* From 1954 to 1958, a bounty was paid on scutched flax fibre produced from flax grown in Australia. In 1957, the Act was amended to provide for the calculation of the bounty payable on the basis of fibre sold, in lieu of fibre produced. In 1957-58, payments amounted to £62,348. Expenditure in 1956-57 was £49,823.

Other forms of financial assistance to primary producers include payments for Cattle Tick Control, the Dairy Industry Extension Grant, Flood, Drought and Bush Fire Relief, Food Production, Expansion of Agricultural Advisory Services and Assistance to the Tobacco Industry.

## § 24. 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 and the relevant Commonwealth authorities, such as the Bureau of Agricultural Economics and the Commonwealth Scientific and Industrial Research Organisation, 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. During the last few years, the application of fertilizers from aircraft, particularly to pastures, has become a feature of modern farm technique, and has enabled the artificial fertilization of some areas which would not be readily accessible to ground machinery. For further details, see § 25 below.

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 are given in Official Year Book No. 12, page 378.

2. *Imports and Exports.*—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate and is sufficient for local requirements.

The chief sources of Australia's supplies of rock phosphate are Nauru, Christmas Island (Indian Ocean) and the Gilbert and Ellice Islands. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1957-58, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

ARTIFICIAL FERTILIZERS: IMPORTS INTO AUSTRALIA.

Fertilizer.	Average, 1934-35 to 1938-39.	1953-54.	1954-55.	1955-56.	1956-57.	1957-58.
Ammonium Sulphate tons	26,090	11,187	35,056	9,466	28,251	20,945
	£'000	215	242	764	228	624
Potash Salts tons	10,641	22,234	27,403	39,099	38,246	53,570
	£'000	82	397	489	652	638
Rock Phosphate tons	635,097	1,143,330	1,086,884	1,418,527	1,321,607	1,273,766
	£'000	776	2,432	2,166	2,828	2,804
Sodium Nitrate tons	7,199	6,948	11,714	14,102	11,219	14,430
	£'000	63	183	250	323	252
Other .. tons	3,430	6,935	399	506	785	4,619
	£'000	8	151	14	16	20
Total .. tons	682,457	1,190,634	1,161,456	1,481,700	1,400,108	1,367,330
	£'000	1,144	3,405	3,683	4,047	4,338

Exports of fertilizers (practically all of which are manufactured locally) amounted to 2,646 tons valued at £57,701 in 1957-58 compared with 16,622 tons valued at £380,000 in 1956-57 and 4,826 tons valued at £34,000 for the average of the five years ended 1938-39.

3. **Quantities Used Locally.**—Information regarding the area treated with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1957-58 season is given in the following table. Details of the area fertilized with natural manure (stableyard, etc.) are no longer collected.

#### AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1957-58.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales .. ..	1,994	4,645	6,639	91,004	246,861	337,865
Victoria .. ..	3,690	9,684	13,374	190,966	548,356	739,322
Queensland .. ..	487	18	505	113,070	1,611	114,681
South Australia .. ..	3,463	4,005	7,468	182,248	236,291	418,539
Western Australia .. ..	5,492	5,451	10,943	275,743	263,449	539,192
Tasmania .. ..	151	999	1,150	24,400	74,642	99,042
Northern Territory .. ..	..	..	..	156	..	156
Australian Capital Territory .. ..	3	52	55	249	2,940	3,189
<b>Total</b> .. ..	<b>15,280</b>	<b>24,854</b>	<b>40,134</b>	<b>877,836</b>	<b>1,374,150</b>	<b>2,251,986</b>

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1953-54 to 1957-58, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used for the topdressing of pasture lands.

#### QUANTITY OF ARTIFICIAL FERTILIZERS USED. (Tons.)

Season.	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	(a)	276	966,724
1953-54 ..	251,440	592,403	96,358	325,085	405,012	71,015	(a)	2,304	1,743,617
1954-55 ..	273,548	635,290	91,700	350,351	450,823	75,748	54	2,672	1,880,186
1955-56 ..	307,608	653,591	99,075	380,783	468,108	82,967	67	2,982	1,995,181
1956-57 ..	292,261	644,830	103,915	389,952	481,981	89,598	54	2,805	2,005,396
1957-58 ..	337,865	739,322	114,681	418,539	539,192	99,042	156	3,189	2,251,986

(a) Not available.

4. **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 1956-57 was 52, made up as follows:—New South Wales, 15; Victoria, 8; Queensland, 8; South Australia, 8; Western Australia, 6; and Tasmania, 7. The production of superphosphate in Australia during 1957-58 amounted to 2,219,000 tons.

#### § 25. Aerial Agriculture.

During recent years, aircraft have been used in agriculture for topdressing and seeding (principally of pastures) and for spraying and dusting of crops and pastures. During the year ended 31st March, 1958, the total area treated by aircraft was 2,031,715 acres—1,552,502 acres were topdressed and/or seeded, 459,213 acres were sprayed or dusted with insecticides, fungicides or herbicides and 20,000 acres were treated with poison baits for dingoes. For the previous year (the first year for which data are available), the total area treated was 1,465,959 acres. The following table shows details of area treated and materials used for each State for the year ended 31st March, 1958. The information was collected by the Department of Civil Aviation.

**AERIAL AGRICULTURE: OPERATIONS DURING 1957-58.**

Item.	Unit.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Total (a)
<i>Topdressing and Seeding—</i>								
Area treated with—								
Superphosphate	Acres.	959,955	252,311	493	55,182	45,472	70,805	1,384,218
Seed .. .. .	..	141,926	35,500	71,458	4,917	26,047	7,625	287,473
Other .. .. .	..	48,520	..	503	..	..	..	49,023
<i>Total (b)</i> .. .. .	..	1,049,076	253,596	72,454	60,099	46,472	70,805	1,552,502
<i>Materials used—</i>								
Superphosphate	Tons.	51,854	17,065	25	3,239	2,309	4,673	79,165
Seed .. .. .	lbs.	190,387	7,240	129,425	50,090	57,072	13,600	447,814
<i>Spraying and Dusting—</i>								
Area treated with—								
Insecticides ..	Acres.	5,145	51,813	93,660	23,821	66,832	1,150	242,421
Fungicides ..	..	..	2,200	2,290	1,797	..	..	6,287
Herbicides ..	..	6,657	32,713	17,006	5,954	150,844	100	213,274
<i>Total(b)</i> .. .. .	..	11,802	85,423	111,934	31,572	217,232	1,250	459,213
<b>Total Area Treated ..</b>	..	<b>1,080,878</b> (c)	<b>339,019</b>	<b>184,388</b>	<b>91,671</b>	<b>263,704</b>	<b>72,055</b>	<b>2,031,715</b> (c)

(a) Includes Australian Capital Territory.  
in one operation are counted once only.

(b) Areas treated with more than one type of material  
(c) Includes 20,000 acres treated with poison baits for dingoes.

**§ 26. Ensilage.**

1. Government Assistance.—The several State Governments devote a considerable amount of attention to the education of the farming community with 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 and Stocks Held on Farms.—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1956, 1957 and 1958 are given in the following table.

**ENSILAGE: PRODUCTION AND FARM STOCKS.**  
(Tons.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<i>Production during—</i>								
1955-56 season ..	86,125	127,878	36,191	35,457	12,312	47,282	395	345,640
1956-57 .. .. .	106,521	187,220	46,255	50,900	12,644	60,454	210	464,204
1957-58 .. .. .	91,486	194,850	41,367	23,230	27,988	52,125	58	431,104
<i>Farm Stocks, as at—</i>								
31st March, 1956 ..	101,179	(a)	43,155	26,664	8,918	42,863	415	(a)
.. .. . 1957 ..	135,302	(a)	74,705	41,338	8,466	67,153	580	(a)
.. .. . 1958 ..	134,895	(a)	77,972	20,605	16,501	52,263	205	(a)

(a) Not available.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and in the following seasons 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 of ensilage made since 1914 have fluctuated

considerably, but the output increased up to 1939-40 in which year the production was 303,495 tons. During subsequent seasons, output declined to the extremely low level of 94,744 tons during the drought year 1944-45, rising to 180,622 tons in 1947-48 but decreasing again in succeeding years to 110,474 tons in 1951-52. Since then production has increased substantially. In 1956-57, a record quantity of 464,184 tons was made and in 1957-58 production amounted to 431,104 tons.

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

Agricultural colleges have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and livestock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree, they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying, etc., according to the course undertaken.

Experimental farms have been set up by State Departments of Agriculture in all States. They are primarily concerned with agricultural research and experimentation, each farm concentrating on problems specific to the district in which it is located. The results of the work undertaken are passed on to farmers at field days, which are held at regular intervals, through publication in various agricultural or scientific journals and through the agricultural extension officers of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes research jointly with the appropriate State authorities. It also has a number of regional laboratories throughout the country. These laboratories conduct research into agronomic problems as they occur in each particular region. The most recently established laboratory which is concerned with all aspects of the culture and production of tobacco is at Mareeba, Northern Queensland. The State Departments of Agriculture study problems of particular significance within their own boundaries. The universities also carry out valuable research work on their own experimental farms.

### § 28. Tractors on Rural Holdings.

The growth of mechanization in agriculture is indicated by the increase in the number of tractors on rural holdings from 41,943 in 1939 to 224,681 in 1958.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled and crawler type tractors for the five years ended 1958.

#### TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
WHEELED TYPE TRACTORS.									
1954 .. ..	41,195	41,953	32,535	18,228	16,577	5,111	(a)	163	155,762
1955 .. ..	45,619	45,824	35,024	20,074	17,832	5,699	(a)	172	170,244
1956 .. ..	50,005	49,584	37,443	21,155	18,537	6,272	70	193	183,259
1957 .. ..	52,477	52,275	39,627	22,826	19,352	6,967	83	191	193,798
1958 .. ..	55,648	55,090	41,072	23,952	20,086	7,395	82	188	203,513
CRAWLER OR TRACK TYPE TRACTORS.									
1954 .. ..	3,221	1,214	4,547	2,614	3,093	547	(a)	7	15,243
1955 .. ..	3,479	1,430	4,945	3,036	3,334	660	(a)	9	16,893
1956 .. ..	4,001	1,645	5,313	3,190	3,654	745	32	10	18,590
1957 .. ..	4,232	1,621	5,180	3,186	3,556	843	31	8	18,657
1958 .. ..	4,605	1,825	6,506	3,336	3,877	974	38	7	21,168
TOTAL TRACTORS.									
1939(b) ..	12,926	8,802	8,541	5,969	5,680	(a)	(a)	25	(c) 41,943
1954 .. ..	44,416	43,167	37,082	20,842	19,670	5,658	(a)	170	171,005
1955 .. ..	49,098	47,254	39,969	23,110	21,166	6,359	(a)	181	187,137
1956 .. ..	54,006	51,229	42,756	24,345	22,191	7,017	102	203	201,849
1957 .. ..	56,709	53,896	44,807	26,012	22,908	7,810	114	199	212,455
1958 .. ..	60,253	56,915	47,578	27,288	23,963	8,369	120	195	224,681

(a) Not available.

(b) At commencement of year.

(c) Excludes Tasmania.

### § 29. Number and Area of Rural Holdings and Employment Thereon.

NOTE.—In New South Wales, in 1955–56, the lists of rural holdings used in the collection of agricultural and pastoral statistics were reconciled with lists of ratable land of one acre or more in extent recorded by country shires for rating purposes. This reconciliation led to the addition of a number of holdings to the annual collection.

The only items of agricultural and pastoral statistics which were materially affected by the inclusion of the additional land holdings were:—number of holdings, area of holdings, persons engaged on rural holdings and wages and salaries paid. To permit continuity of comparison of the relevant statistics, the effects of the additions to the collection were set out in detail in Official Year Book No. 44, pages 911–912.

1. **Number and Area.**—A holding in Australia has been defined by statisticians on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate 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 livestock or the products of livestock.

There are considerable fluctuations from time to time in the numbers of very small holdings and it is very difficult to determine in some cases whether or not they are rural holdings within the definition.

In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied under short-term lease or other arrangement and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some states which are also occasionally occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1938–39 and 1953–54 to 1957–58.

#### RURAL HOLDINGS : NUMBER AND AREA.

Season	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.(a)
NUMBER OF RURAL HOLDINGS.									
1938–39 ..	75,365	72,452	41,503	31,280	21,052	11,680	(b)	204	253,536
1953–54 ..	73,371	69,392	42,850	29,220	20,132	11,818	(b)	213	246,996
1954–55 ..	73,759	69,551	43,284	28,092	20,876	11,743	(b)	212	247,517
1955–56 ..	73,071	69,528	43,459	28,585	21,323	11,647	229	222	248,064
	(c)77,855								c 252,848
1956–57 ..	77,812	69,509	43,292	27,936	21,385	11,538	230	223	251,925
1957–58 ..	78,120	69,590	43,457	27,971	21,593	11,389	230	225	252,575

#### TOTAL AREA OF RURAL HOLDINGS. (‘000 ACRES.)

1938–39 ..	174,660	40,791	317,782	144,682	211,720	6,778	(b)	371	896,784
1953–54 ..	168,996	37,546	361,520	150,314	221,805	6,511	(b)	391	947,083
1954–55 ..	169,444	37,814	362,200	149,379	228,883	6,604	(b)	390	954,714
1955–56 ..	169,124	37,857	367,464	149,965	229,734	6,628	160,153	389	1,121,314
	c 172,255								(c) 1,124,445
1956–57 ..	172,411	37,659	368,689	149,932	232,689	6,508	168,447	390	1,136,725
1957–58 ..	173,278	37,822	368,833	152,045	236,667	6,547	167,210	392	1,142,794

(a) Excludes Northern Territory prior to 1955–56.  
See NOTE at beginning of § 29.

(b) Not available.

(c) New series.

2. *Special Tabulation Relating to Rural Holdings.*—(i) *Classification by Size of Holding.* Some of the information obtained from the 1955–56 Agricultural and Pastoral Census was classified by size of rural holding, and the results of these tabulations are shown in detail in *Primary Industries Part I—Rural Industries*, Bulletin No. 51, and in summarized form in Official Year Book No. 44, page 913.

(ii) *Classification by Type.* An experimental classification of holdings by type was carried out for New South Wales for 1955–56 in conjunction with the classification by size referred to above. An outline of the methods used and the results obtained were shown on page 914 of Official Year Book No. 44. This was the first attempt at a detailed classification of this kind in Australia although a very simple classification into the three categories—agricultural, pastoral or dairying (on the basis of main activity)—had been performed in some earlier years. It is probable that the methods used in the 1955–56 experimental classification will serve as the basis for an Australia-wide classification in later years.

3. *Employment on Rural Holdings.*—The following table shows, for each State of Australia, the recorded number of persons working on rural holdings as at 31st March, 1958. Additional 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 previous issues. Similar details for later years are not available.

**PERSONS ENGAGED ON RURAL HOLDINGS AT 31st MARCH, 1958.**

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
<i>Permanent—</i>									
Owners, Lessees or Share-farmers									
Males	72,088	69,848	45,554	24,839	20,087	8,524	155	152	241,247
Females	1,062	4,937	10,703	1,718	226	376	29	6	19,057
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary									
Males	7,802	5,348	4,289	2,406	1,530	130	15	15	21,535
Females	5,761	1,440	5,664	472	449	29	17	13	13,845
Employees, including Managers and Relatives working for wages or salary									
Males	31,074	18,019	19,971	7,950	8,936	4,694	529	135	91,308
Females	957	1,504	3,502	470	156	206	51	15	6,861
<i>Total Permanent—</i>									
Males	110,964	93,215	69,814	35,195	30,553	13,348	699	302	354,090
Females	7,780	7,881	19,869	2,660	831	611	97	34	39,763
<i>Persons</i>	<i>118,744</i>	<i>101,096</i>	<i>89,683</i>	<i>37,855</i>	<i>31,384</i>	<i>13,959</i>	<i>796</i>	<i>336</i>	<i>393,853</i>
<i>Temporary—</i>									
Males	26,211	19,012	19,112	16,160	5,037	5,986	1,572	52	93,142
Females	2,082	1,843	1,439	3,923	332	2,870	491	6	12,986
<i>Persons</i>	<i>28,293</i>	<i>20,855</i>	<i>20,551</i>	<i>20,083</i>	<i>5,369</i>	<i>8,856</i>	<i>2,063</i>	<i>58</i>	<i>106,128</i>
<i>Total Persons</i> ..	<i>147,037</i>	<i>121,951</i>	<i>110,234</i>	<i>57,938</i>	<i>36,753</i>	<i>22,815</i>	<i>2,859</i>	<i>394</i>	<i>499,981</i>

(a) 1,426 male and 488 female full-blood aboriginals employed are included as temporary employees.

The next table shows for Australia as a whole the number of persons working full-time on rural holdings as at 31st March of the five years 1954 to 1958.

## PERSONS ENGAGED ON RURAL HOLDINGS, AUSTRALIA.

Particulars.	As at 31st March—				
	1954.(a)	1955(a).	1956.	1957.	1958.
<b>Permanent—</b>					
<b>Males—</b>					
Owners, Lessees or Share-farmers ..	241,149	240,879	245,621	244,111	241,247
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary ..	22,736	23,529	21,232	21,734	21,535
Employees, including managers and relatives working for wages or salary ..	93,748	91,479	89,334	90,599	91,308
<b>Total, Males .. ..</b>	<b>357,633</b>	<b>355,887</b>	<b>356,187</b>	<b>356,444</b>	<b>354,090</b>
" Females .. ..	49,782	46,656	42,104	41,373	39,763
<b>Total Permanent .. ..</b>	<b>407,415</b>	<b>402,543</b>	<b>398,291</b>	<b>397,817</b>	<b>393,853</b>
<b>Temporary—</b>					
<b>Total, Males .. ..</b>	<b>86,644</b>	<b>87,400</b>	<b>84,607</b>	<b>86,267</b>	<b>93,142</b>
" Females .. ..	8,365	9,238	9,638	11,324	12,986
<b>Total Temporary .. ..</b>	<b>95,009</b>	<b>96,638</b>	<b>94,245</b>	<b>97,591</b>	<b>106,128</b>
<b>Grand Total .. ..</b>	<b>502,424</b>	<b>499,181</b>	<b>492,536</b>	<b>495,408</b>	<b>499,981</b>

(a) Excludes Northern Territory.

4. Salaries and Wages Paid to Employees on Rural Holdings.—Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings have been collected uniformly in all States from 1949–50. Details are set out below for each State for the year 1957–58, and for Australia as a whole for the years 1953–54 to 1957–58.

**RURAL HOLDINGS: SALARIES AND WAGES(a) PAID TO EMPLOYEES,  
1957-58.  
(£'000.)**

Particulars.	N.S.W. (b)	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Permanent—Males ..</b>	20,899	14,185	13,770	5,263	5,770	3,001	373	136	63,397
Females ..	317	779	1,363	182	50	68	28	6	2,793
<b>Temporary(c)—Males ..</b>	17,295	9,793	20,162	4,826	5,670	1,841	297	98	59,982
Females ..	382	382	261	273	49	252	56	1	1,656
<b>Total .. ..</b>	<b>38,893</b>	<b>25,139</b>	<b>35,556</b>	<b>10,544</b>	<b>11,539</b>	<b>5,162</b>	<b>754</b>	<b>241</b>	<b>127,828</b>

(a) Including value of keep.  
paid to contractors.

(b) See Note at beginning of § 29.

(c) Includes amounts

**RURAL HOLDINGS: SALARIES AND WAGES(a) PAID TO EMPLOYEES,  
AUSTRALIA.  
(£'000.)**

Particulars.	1953–54.(b)	1954–55.(b)	1955–56.	1956–57.	1957–58.
<b>Permanent—Males ..</b>	52,240	53,951	55,752	58,707	63,397
Females ..	2,406	2,468	2,456	2,456	2,793
<b>Temporary(c)—Males ..</b>	51,282	53,855	53,200	54,431	59,982
Females ..	1,190	1,323	1,476	1,498	1,656
<b>Total .. ..</b>	<b>107,118</b>	<b>111,597</b>	<b>112,884</b>	<b>117,092</b>	<b>127,828</b>

(a) Including value of keep.  
to contractors.

(b) Excludes Northern Territory.

(c) Includes amounts paid



5. **Persons (of all ages) Residing Permanently on Holdings.**—Particulars of persons (of all ages) residing permanently on rural holdings have been collected by all States at the annual Agricultural and Pastoral Census each year since 1954. Details for each State as at 31st March, 1958, and for Australia as a whole for the years 1954–58 are shown below.

**RURAL HOLDINGS : PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON HOLDINGS AT 31st MARCH, 1958.**

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males ..	172,765	143,607	108,221	58,061	47,874	28,234	904	530	560,196
Females ..	147,736	125,706	85,752	50,901	38,496	24,945	347	450	474,333
<b>Total ..</b>	<b>320,501</b>	<b>269,313</b>	<b>193,973</b>	<b>108,962</b>	<b>86,370</b>	<b>53,179</b>	<b>1,251</b>	<b>980</b>	<b>1,034,529</b>

**RURAL HOLDINGS : PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON HOLDINGS, AUSTRALIA.**

Particulars.	As at 31st March—				
	1954.	1955.	1956.	1957.	1958.
Males .. ..	543,740	549,734	557,274	563,894	560,196
Females .. ..	453,503	462,163	469,805	475,587	474,333
<b>Total .. ..</b>	<b>997,243</b>	<b>1,011,897</b>	<b>1,027,079</b>	<b>1,039,481</b>	<b>1,034,529</b>