CHAPTER XXI.

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 farmers (an average of 245,800 during the past ten years) who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Australian Capital Territory. Particulars for the Northern Territory have not been available in recent years. 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 to apply 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 and during each of the eleven seasons ended 1953–54, and on page 859 there is a graph showing the area of crops in Australia from 1860 onward.

AREA OF CROPS.
('000 Acres.)

Season.	N.S.W.	Victoria.	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
1943–44	4,797	3,463	1,757	2,761	2,782	335	(a)	7	15,902
1944–45	5,045	4,310	1,797	3,179	2,790	343	(a)	8	17,472
1945–46	6,087	5,327	1,822	3,824	2,945	412	(a)	9	20,426
1946–47	6,512	5,103	1,617	3,885	3,590	361	(a)	9	21,077
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

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915–16, when, as the result of a special effort to raise wheat during the 1914–18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to 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 has been reversed since 1948–49 largely as a result of the transfer of many primary producers from agricultural to pastoral production following on high prices for wool. Of recent years the area has fluctuated around a level of 20 million acres, 1952–53 being 20.4 million acres and 1953–54 0.7 million acres higher at 21.1 million acres. As the area under wheat in Australia constitutes a large proportion of the total area cropped (56 per cent. during the ten years ended 1953–54) 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 23.0 million acres in 1953–54.

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; secure co-operation and co-ordination in agricultural research; 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 and the Australian Capital Territory of each of the crops for the season 1953–54.

AREA OF CROPS, 1953–54.
(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—								
Barley—								
2 Row ..	21,487	344,346	48,039	1,026,543	32,812	8,942	..	1,482,169
6 Row ..	10,273	30,209	8,037	95,201	176,479	494	..	320,693
Maize	58,556	5,613	114,735	..	21	64	..	178,989
Oats	506,758	583,075	13,480	280,244	733,122	20,118	255	2,137,052
Panicum, Millet and Setaria ..	..	521	39,382	..	..	..	..	39,903
Rice	38,859	..	50	..	..	..	..	38,909
Rye	1,305	27,754	388	52,520	7,835	711	..	90,513
Sorghum ..	7,053	..	181,819	..	..	..	..	188,872
Wheat ..	3,356,888	2,389,304	579,969	1,528,377	2,885,114	9,600	1,566	10,750,908
Hay	450,243	807,223	70,451	262,006	219,171	123,249	3,023	1,935,366
Green Fodder ..	761,552	(b) 56,210	663,097	(c) 365,301	507,756	60,127	1,218	2,415,261
Other Stock Fodder	7,686	10,056	15,394	28,726	4,372	31,293	..	97,527
Grass Seed—								
Lucerne ..	6,148	(d)	626	15,079	6	53	..	(e) 21,912
Clover ..	4,975	1,695	..	11,958	14,518	626	..	33,782
Other	1,670	7,230	5,936	2,014	760	1,386	..	18,996
Industrial Crops—								
Broom Millet ..	2,229	139	160	..	3	..	..	2,531
Canary Seed ..	50	..	4,104	..	..	..	..	4,154
Cotton ..	..	..	8,965	..	..	..	..	8,965
Flax—								
For Fibre ..	..	9,550	..	3,040	3,105	..	..	15,695
For Linseed ..	1,400	1,226	3,647	70	..	..	..	6,343
Hops ..	..	344	..	..	(f)	1,350	..	(e) 1,694
Peanuts ..	1,525	..	36,617	..	(f)	..	..	(e) 38,142
Sugar-cane—								
For crushing ..	7,787	..	332,703	..	..	..	..	340,490
Other (excluding fodder) ..	7,337	..	133,775	..	..	..	..	141,112
Sunflower Seed ..	80	216	4,311	..	..	..	..	4,607
Tobacco ..	501	2,246	4,065	..	1,434	..	..	8,246
Other	90	250	350	..	..	412	..	1,102
Vegetables for Human consumption—								
Onions ..	270	3,641	2,497	471	375	18	7	7,279
Potatoes ..	16,513	52,745	9,382	7,023	8,068	34,524	112	128,367
Other Vegetables ..	43,656	30,243	31,653	7,565	6,774	11,013	63	130,967
Vineyards—								
Bearing ..	16,021	42,793	2,608	57,858	7,978	..	..	127,258
Not Bearing ..	2,107	2,984	276	4,263	1,224	..	..	10,854
Orchards and other Fruit Gardens—								
Bearing ..	72,848	52,519	26,205	23,131	18,808	23,539	81	217,131
Not Bearing ..	17,913	13,661	13,774	6,627	2,734	1,279	14	56,002
Nurseries and Cut Flowers ..	975	2,872	197	118	191	161	10	4,524
All Other Crops ..	586	993	4,130	112	155	741	18	6,645
Total Area ..	5,425,341	4,479,568	2,360,822	3,778,257	4,632,815	329,790	6,367	21,012,960

(a) Excludes Northern Territory, details for which are not available. (b) Excludes 38,351 acres of pasture land sown to lucerne and 219,194 acres sown to oats for grazing. (c) Excludes 256,003 acres of pasture land sown to lucerne for grazing. (d) Not available. Included in "All Other Crops". (e) Incomplete. *See* footnotes to individual States. (f) Not available for publication. Included in "All Other Crops".

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories to the total area of crops for the season 1953–54 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 wheat, green fodder and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing more than 50 per cent. of the total area of crops in 1953–54.

RELATIVE AREAS OF CROPS, 1953–54.
(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Wheat (Grain) ..	61.9	53.4	24.6	40.4	62.3	2.1	24.6	50.9
Green Fodder(b) ..	14.0	1.3	28.1	9.7	11.0	40.8	19.1	12.0
Oats (Grain) ..	9.3	13.0	0.6	7.4	15.8	4.4	4.0	10.1
Hay	8.4	18.0	3.0	6.9	4.7	27.1	47.5	9.2
Barley (Grain) ..	0.7	8.3	2.4	29.7	4.5	2.1	..	8.5
Sugar-cane, Crushed	0.3	..	19.8	..	..	..	..	2.3
Orchards and Fruit Gardens ..	1.7	1.5	1.7	0.8	0.5	5.5	1.5	1.3
Sorghum ..	..	..	7.7	..	..	..	..	0.9
Maize (Grain) ..	1.1	0.2	4.9	..	..	..	..	0.8
Vineyards ..	0.3	1.0	..	1.6	0.2	..	..	0.6
Potatoes ..	0.3	1.2	0.4	0.2	0.2	7.6	1.8	0.6
All other ..	2.0	2.1	6.8	3.3	0.8	10.4	1.5	2.8
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Excludes Northern Territory, details for which are not available. (b) Includes green forage except in Victoria and in South Australia where pasture land sown to lucerne is excluded.

3. **Area of Principal Crops in Australia.**—The area of the principal crops during each of the five seasons ended 1953–54, compared with the average for the decennium ended 1938–39 is shown hereunder :—

AREA OF PRINCIPAL CROPS : AUSTRALIA.
('000 Acres.)

Crop.	Average, ten years ended 1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Cereals for Grain—						
Barley, 2 Row	428	927	963	965	1,123	1,482
Maize	295	194	169	170	174	179
Oats	1,393	1,748	1,757	2,365	2,764	2,137
Rice	22	38	37	36	35	39
Wheat	14,345	12,240	11,663	10,384	10,209	10,751
Hay	2,994	1,605	1,377	1,549	1,761	1,935
Green Fodder	1,272	2,178	2,118	2,403	2,196	2,415
Vegetables for Human Consumption—						
Onions	8	8	8	9	8	7
Potatoes	130	134	127	118	135	128
Other vegetables for human consumption	(a) 83	155	156	162	152	131
Industrial Crops—						
Cotton	43	3	3	4	6	9
Hops	1	2	2	2	2	2
Sugar-cane	332	398	397	403	434	482
Tobacco	12	5	6	8	8	8
Vineyards	118	135	137	136	137	138
Orchards	276	280	275	271	271	273
All other Crops	206	551	616	698	836	897
Total	21,958	20,601	19,811	19,683	20,251	21,013

(a) Incomplete. Market gardens and pulse only.

4. **Weights and Measures.**—Details of the weights and measures used in recording production of Agricultural commodities appear in the introduction to *Primary Industries Bulletin* No. 48—*Part I.—Rural Industries.*

5. **Production of Crops in States and Territories.**—The following table shows production of crops in the various States and the Australian Capital Territory for the season 1953-54 :—

PRODUCTION OF CROPS, 1953-54.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—									
Barley—									
2 Row	'000 bus.	455	7,360	985	26,433	406	281	..	35,923
6 Row	,, ,,	225	572	151	2,059	2,327	15	..	5,349
Maize	,, ,,	1,737	293	3,042	..	..	2	..	5,079
Oats	,, ,,	8,533	9,832	199	4,321	9,590	461	5	32,961
Panicum, Millet and Setaria	,, ,,	..	10	556	..	..	..	..	566
Rice	,, ,,	4,069	..	..	..	..	..	..	4,069
Rye	,, ,,	14	201	4	325	47	16	..	607
Sorghum	,, ,,	129	..	4,040	..	..	..	..	4,169
Wheat	,, ,,	63,681	53,698	10,180	30,409	39,700	263	29	197,960
Hay	,, tons	639	1,360	140	369	294	242	5	3,049
Grass Seed—									
Lucerne	cwt.	5,184	..	819	9,976	3	53	..	16,035
Clover	,,	7,816	820	..	18,004	30,986	624	..	58,250
Other	,,	1,021	9,826	14,543	2,591	1,984	3,589	..	33,554
Industrial Crops—									
Broom Millet—									
Fibre	,,	12,980	698	775	..	30	..	..	14,483
Grain	bus.	9,954	225	..	..	..	..	..	10,179
Canary Seed ..	,,	804	..	29,427	..	..	..	..	30,231
Cotton, Unginned ..	'000 lb.	..	..	5,132	..	..	..	..	5,132
Flax—									
Straw	ton	..	12,984	..	4,647	4,470	..	..	22,101
Linseed	,,	256	202	359	5	..	..	..	822
Hops (Dry Weight) ..	cwt.	..	5,517	..	..	(b)	19,149	..	(c) 24,666
Peanuts	,,	14,369	..	357,375	..	(b)	..	..	c 371,694
Sugar-cane for Crushing	'000 tons	263	..	8,751	..	..	..	..	9,014
Sunflower Seed ..	cwt.	534	1,040	18,518	..	..	..	..	20,092
Tobacco, Dried Leaf ..	'000 lb.	588	2,154	4,015	..	912	..	..	7,669
Vegetables for human consumption—									
Onions	ton	1,325	22,783	11,957	4,975	4,626	87	14	45,767
Potatoes ..	,,	58,046	213,714	32,628	45,044	53,708	144,300	514	547,954
Vineyards—									
Grapes—									
For Drying ..	,,	35,408	222,821	..	79,722	10,200	..	..	348,151
Table	,,	4,268	5,834	2,352	841	2,187	..	..	15,482
Wine	,,	27,138	11,755	209	121,994	3,899	..	..	164,995

(a) Excludes Northern Territory, details for which are not available. (b) Not available for publication. (c) Incomplete.

6. **Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the five years ended 1953-54, and the average for the decennium ended 1938-39 :—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54.
Cereals for Grain—							
Barley, 2 Row ..	'000 bus.	7,480	17,569	20,811	19,476	29,633	35,923
Maize	,, ,,	7,228	5,006	4,729	4,018	4,967	5,079
Oats	,, ,,	16,437	27,391	25,128	34,506	43,623	32,961
Rice	,, ,,	2,005	3,783	4,118	3,048	3,964	4,069
Wheat	,, ,,	169,398	218,221	184,244	159,725	195,208	197,960
Hay	,, tons	3,490	2,430	2,063	2,345	2,765	3,049
Vegetables for human consumption—							
Onions	,, ,,	43	48	35	53	46	46
Potatoes ..	,, ,,	351	471	412	509	431	548
Industrial Crops—							
Cotton, Unginned ..	,, lb.	15,667	719	1,102	1,406	2,184	5,132
Hops, (dry weight) ..	cwt.	18,789	(a)22,993	(a)26,147	(a)17,914	(a)32,116	(a)24,666
Sugar-cane for Crushing	'000 tons	4,585	6,849	7,952	5,327	6,967	9,014
Tobacco (Dried leaf) ..	,, lb.	5,113	4,138	4,211	7,553	6,485	7,669
Vineyards—							
Grapes	,, tons	381	434	362	475	566	529
Wine made(b) ..	,, gals.	16,104	32,675	26,036	35,255	30,023	31,666
Dried Vine Fruits ..	,, tons	70	68	56	72	101	96

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

7. **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 1953–54 and the average for the decennium ended 1938–39.

YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Cereals for Grain—							
Barley, 2 Row	bushel.	17.5	19.0	21.6	20.2	26.4	24.2
Maize..	,,	24.5	31.0	27.9	23.7	28.5	28.4
Oats	,,	11.8	15.7	14.3	14.6	15.8	15.4
Rice	,,	93.0	100.8	111.5	85.5	114.8	104.6
Wheat	,,	11.8	17.8	15.8	15.4	19.1	18.4
Hay	ton	1.17	1.51	1.50	1.51	1.57	1.58
Vegetables for human consumption—							
Onions	,,	5.54	6.34	4.61	6.13	5.90	6.29
Potatoes	,,	2.71	3.52	3.24	4.31	3.18	4.27
Industrial Crops—							
Cotton, Unginned ..	lb.	366	267	373	314	372	572
Hops (dry weight) (a) ..	cwt.	17.88	14.76	16.32	10.79	19.31	15.18
Sugar-cane for Crushing(a)	ton	19.24	24.34	25.94	18.91	24.89	26.47
Tobacco (Dried leaf) ..	lb.	463	903	651	921	819	930
Vineyards—							
Grapes (a)	ton	3.45	3.53	2.91	3.78	4.49	4.15

(a) Per acre of productive crops.

8. **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 1953–54 and the average for the decennium ended 1938–39.

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

Crop.	Average, ten years ended 1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Cereals for Grain—						
Barley	1,214	10,709	13,339	17,739	27,512	21,011
Maize	1,537	2,806	3,048	3,809	4,030	3,868
Oats	1,937	8,254	10,293	19,005	15,301	12,345
Rice	392	1,653	2,171	2,108	3,338	3,198
Wheat (a)	30,125	148,596	124,740	120,734	154,656	138,135
Hay	11,413	17,770	17,931	26,193	29,249	33,230
Green Fodder	2,775	(b) 3,894	(b) 5,001	(b) 6,934	(b) 6,209	(b) 7,720
Vegetables for human consumption—						
Onions	245	1,058	1,086	2,019	1,106	1,662
Potatoes	2,314	9,142	10,265	15,982	14,706	12,075
Other vegetables for human consumption	(c) 2,203	14,835	20,200	27,123	24,543	22,915
Industrial Crops—						
Cotton, Unginned	(a) 298	26	54	127	107	316
Hops	157	(b) 465	(b) 620	(b) 517	(b) 1,021	(b) 802
Sugar-cane	7,895	18,581	19,046	19,635	30,495	39,619
Tobacco (Dried leaf) ..	474	1,146	1,622	2,379	2,578	3,816
Vineyards	3,907	8,886	10,125	14,084	15,751	13,488
Orchards	(a) 7,953	26,273	30,656	43,838	42,032	46,415
All other Crops	2,651	7,795	8,441	10,098	10,465	11,520
Total, Gross Value ..	77,490	281,889	278,638	332,324	383,108	372,135

(a) Includes Government assistance. (b) Incomplete, excludes Western Australia.
(c) Incomplete. Market gardens and pulse only.

9. **Value of Production and Indexes of Price and Quantum of Production.**—(i) *Gross and Net Values*, 1953–54. Values of agricultural production for each State are shown for 1953–54 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 XXIX.—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 stated are inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1953-54.
(£'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.	
New South Wales	93,735	17,410	76,325	4,995	(b) 2,988	68,342
Victoria	89,374	14,587	74,787	5,000	4,163	65,624
Queensland..	73,491	7,640	65,851	5,420	4,960	55,471
South Australia	57,872	9,312	48,560	3,341	3,519	41,700
Western Australia	43,267	5,593	37,674	2,572	6,983	28,119
Tasmania	14,223	3,258	10,965	1,232	(b) 529	9,204
Total	371,962	57,800	314,162	22,560	23,142	268,460

(a) No deduction has been made for depreciation and maintenance. (b) No allowance made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values*, 1929-30 *to* 1953-54. 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 1949-50 to 1953-54 in comparison with the averages for the decennial period ended 1938-39 :—

NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	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	47,268
1949-50	69,078	53,905	30,953	32,790	26,605	5,372	218,703
1950-51	44,402	53,465	32,001	36,402	33,126	8,644	208,130
1951-52	58,333	64,084	35,622	46,903	31,027	10,716	246,685
1952-53	66,623	65,067	53,684	51,244	28,977	10,803	276,398
1953-54	68,342	65,624	55,471	41,700	28,119	9,204	268,460
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	7 1 4
1949-50	21 19 2	24 15 9	26 7 8	47 4 2	48 16 1	19 11 5	27 6 2
1950-51	13 14 9	23 16 9	26 10 2	50 8 7	58 1 7	30 9 9	25 3 8
1951-52	17 12 3	27 15 0	28 14 6	63 2 0	52 11 11	36 10 8	29 1 3
1952-53	19 15 10	27 8 7	42 3 11	66 17 1	47 8 2	35 14 2	31 16 1
1953-54	20 1 4	27 1 8	42 13 1	53 1 1	44 11 8	29 14 11	30 6 4

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

(iii) *Quantum and Price Indexes of Agricultural Production.* Quantum and price indexes of agricultural production shown in the following table have been calculated by the fixed-base weighted aggregative method. Further details on weights used, &c., are to be found in Chapter XXIX.—Miscellaneous.

QUANTUM AND PRICE INDEXES OF AGRICULTURAL PRODUCTION.
(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantum Produced—					
Wheat	133	112	97	119	120
Other Crops	107	105	107	123	134
Total, All Crops ..	117	108	103	121	129
Total per Head of Population	100	89	83	95	99
Price—					
Wheat	341	338	378	397	345
Other Crops	218	255	338	337	305
Total, All Crops	272	291	355	364	323

§ 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 cost could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—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) *Financial Assistance to Wheat Growers.* Reference to financial assistance during 1952-53 and 1953-54 will be found in § 23, Financial Assistance to Primary Producers, hereafter. Information with respect to earlier years will be found in earlier issues of the Official Year Book.

(ii) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the permanent Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37 (pp. 1295-99).

(iii) *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 the 18th December, 1948.

(iv) *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, pp. 841 and 842, and previous issues. All contributions paid into the Fund established as a part of the plan have now been refunded.

(*b*) 1953–54 *to* 1957–58. Agreement was reached in July, 1954 at a conference of Premiers and Ministers for Agriculture on the terms of a new wheat industry stabilization plan. The plan was submitted to polls of wheat growers in the mainland producing States, 94 per cent. of growers voting in favour of the plan.

The necessary legislation was subsequently passed by Commonwealth and State Governments and the plan operated from the 1953–54 season.

The principal features of the plan are as follows :—

(i) The period of the Wheat Stabilization Plan to be five years, 1953–54 to 1957–58 inclusive.

(ii) The Australian Wheat Board will be the sole authority for marketing wheat within Australia and wheat and flour for export from Australia.

(iii) The Commonwealth Government will guarantee a return to growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia from each of the crops covered by the plan.

(iv) The home consumption price will not be less than the guaranteed price. Subject to this understanding, the home consumption price will be fixed at 14s. per bushel, bulk f.o.r. ports, but will vary downwards to conform with the International Wheat Agreement price current at the commencement of each season. If no international agreement is operating the home consumption price will vary downwards with the current export price fixed by the Wheat Board.

(v) A premium of 3d. per bushel on wheat grown in Western Australia and exported from that State will be paid in recognition of the natural freight advantage applying to that State.

(vi) The home consumption price will be loaded by an amount necessary to cover the cost of freight on wheat to Tasmania. For 1953–54 and 1954–55 this amount is 1½d. per bushel.

(vii) A Stabilization Fund will be established by means of an export tax of 1s. 6d. per bushel when wheat export prices exceed the costs of production by this amount or more, and by that portion of 1s. 6d. by which the export prices exceed the costs of production when the excess is less than 1s. 6d. per bushel.

(viii) The maximum amount of the Stabilization Fund will be £20 million. As the Fund accumulates beyond this figure, repayments will be made to the oldest contributing pool.

(ix) When average export realizations fall below costs of production, export returns will be raised, in respect of up to 100 million bushels, first by drawing upon the Stabilization Fund and when that Fund is exhausted the Commonwealth Government will make the necessary payments.

5. **Marketing of Wheat.**—(i) *Wheat Acquired and Disposed of.* (*a*) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1949–50 to 1954–55 harvests are shown in the following table :—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1949–50 TO 1954–55.

('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
13	1949–50	75,450	55,238	11,195	26,377	34,581	88	202,929
14, 14A and 14B	1950–51	37,292	49,430	7,712	29,523	46,088	60	170,105
15	1951–52	33,853	43,766	6,169	25,773	36,412	48	146,021
16	1952–53	51,608	47,460	16,776	32,171	31,703	87	179,805
17	1953–54	57,844	52,219	9,102	27,711	36,161	161	183,198
18 and 18A ..	1954–55	32,338	46,377	14,604	28,632	30,619	65	152,635

(*b*) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1950 to 1955 are shown in the following table :—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1950 TO 1955.(*a*)
('000 Bushels.)

Particulars.	1950.	1951.	1952.	1953.	1954.	1955.
Sold for export as wheat ..	80,931	85,227	46,192	59,517	40,547	63,171
Sold for export as flour ..	30,947	42,454	36,693	41,255	26,871	(*b*)34,024
Sold for local consumption as flour	35,484	37,577	39,049	39,108	35,860	38,012
Sold for other purposes ..	25,499	29,556	26,233	20,605	20,261	18,560

(*a*) Years ended 30th November. (*b*) Includes flour content of manufactured wheat products 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.

AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS, POOLS Nos. 13 to 17.
(£.)

Particulars.	No. 13 Pool.(*a*) (1949–50 Harvest).	Nos. 14, 14A and 14B Pools. (*a*) (1950–51 Harvest).	No. 15 Pool.(*a*) (1951–52 Harvest).	No. 16 Pool.(*a*) (1952–53 Harvest).	No. 17 Pool.(*b*) (1953–54 Harvest).
Paid to growers	129,469,276	105,633,151	100,000,768	127,177,779	98,807,867
Rail freight	6,300,839	6,063,658	7,620,657	11,154,989	12,732,106
Expenses	4,393,660	4,798,292	5,415,288	5,944,989	7,488,900
Total Payments ..	140,163,775	116,495,101	113,036,713	144,277,757	119,028,873
Value of sales delivered ..	(*c*) 140,163,775	(*d*) 116,495,101	(*e*) 113,036,713	144,277,757	(*f*)129,395,071

(*a*) Complete. (*b*) Incomplete. (*c*) Includes £15,244,895 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £394,285. (*d*) Includes £11,070,976 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £400,712. (*e*) Includes £9,166,550 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £282,291. (*f*) Includes £9,189,577 paid to Wheat Prices Stabilization Fund under Wheat Export Charge Act, 1954.

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

(iii) *Advances to Growers.* 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, 1956.

6. **International Wheat Agreement.**—Details of the International Wheat Agreement operative from 1st August, 1949 to 31st August, 1953 were published in Official Year Book No. 40, pp. 844–5, and previous issues.

A table showing guaranteed sales and purchases and actual transactions recorded during 1952–53, the last year of the Agreement, was published in Official Year Book No. 41, p. 752.

A further agreement covering a period of three years from 1st August, 1953 to 31st July, 1956 was signed in Washington in April, 1953. Sweden and the United Kingdom have failed to enter into the new agreement while Jordan, Korea, Vatican City and Yugoslavia have joined the new agreement. Australia's quota was fixed originally at 48 million bushels but this was subsequently adjusted to 45 million bushels.

Particulars of guaranteed sales and purchases and transactions actually recorded during 1953–54 are shown in the table below.

INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1953–54.(a)
(Million Bushels.)

Exporting Country.	Guaranteed Annual Sales.(b)	Sales Recorded 1953–54.	Importing Country.	Guaranteed Annual Purchases.(c)	Purchases Recorded 1953–54.
United States of America ..	193.7	106.2	Germany	55.1	37.5
Canada	150.8	90.9	Japan	36.7	36.9
Australia	14.4	27.8	India	36.7	2.6
France	0.3	0.3	Netherlands	24.8	17.2
			Belgium	23.9	15.2
			Remaining Importing Countries	212.0	115.8
Total	389.2	225.2	Total	389.2	225.2

(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.

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 1949–50 to 1953–54, 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
New South Wales ..	15,657	15,594	14,279	13,147	13,167	14,865
Victoria	12,393	11,491	11,203	10,076	10,049	10,900
Queensland.. ..	2,403	3,744	3,862	3,005	4,970	3,918
South Australia ..	12,255	9,346	8,416	8,345	8,432	8,473
Western Australia ..	8,859	7,808	7,814	7,766	7,751	7,786
Tasmania	269	58	79	51	95	149
Australia(a) ..	51,836	48,041	45,653	42,390	44,464	46,091

(a) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1949–50. The tabulations, which covered, *inter alia*, a series of size classifications of wheat farms, have been published in detail in *Primary Industries Bulletin*, 1949–50, No. 44. A similar tabulation was made for the year 1947–48, a summary of the results being published in *Production Bulletin* No. 42, *Part II.—Primary Industries* and Official Year Book No. 38, page 947.

8. Area, Production and Yield per Acre.—(i) *Area.* Wheat is the principal crop grown in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of 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.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area, production and yield per acre of wheat for grain in each State are shown below for the years 1949-50 to 1953-54 in comparison with the averages for the decennial periods ended 1938-39 and 1952-53 :—

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.
			AREA ('000 ACRES).					
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1949-50 ..	4,012	2,828	600	1,896	2,894	6	4	12,240
1950-51 ..	3,329	2,735	559	1,848	3,185	5	2	11,663
1951-52 ..	2,753	2,464	455	1,613	3,094	4	1	10,384
1952-53 ..	2,702	2,232	724	1,544	2,999	7	1	10,209
Average, 1943-44 to 1952-53 ..	3,566	2,717	466	1,918	2,515	6	2	11,190
1953-54 ..	3,357	2,389	580	1,528	2,885	10	2	10,751
			PRODUCTION ('000 BUSHELS).(a)					
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1949-50 ..	81,939	57,434	11,778	28,351	38,500	127	92	218,221
1950-51 ..	43,273	51,236	8,785	30,936	49,900	95	19	184,244
1951-52 ..	39,689	45,995	6,632	27,301	40,000	94	14	159,725
1952-53 ..	56,670	50,335	18,662	33,919	35,458	156	8	195,208
Average, 1943-44 to 1952-53 ..	52,434	40,286	9,182	25,804	31,181	117	45	159,049
1953-54 ..	63,681	53,698	10,180	30,409	39,700	263	29	197,960
			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
1949-50 ..	20.4	20.3	19.6	15.0	13.3	23.3	20.6	17.8
1950-51 ..	13.0	18.7	15.7	16.7	15.7	17.8	10.1	15.8
1951-52 ..	14.4	18.7	14.6	16.9	12.9	26.1	14.0	15.4
1952-53 ..	21.0	22.6	25.8	22.0	11.8	23.4	12.7	19.1
Average, 1943-44 to 1952-53 ..	14.7	14.8	19.7	13.5	12.4	20.5	17.9	14.2
1953-54 ..	19.0	22.5	17.6	19.9	13.8	27.2	18.5	18.4

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 859 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 appeared in Official Year Book No. 39, pp. 977-8. Similar maps showing the distribution of wheat areas in 1924-25 and 1938-39 appeared respectively in Official Year Book No. 22, p. 695, and in No. 34, p. 451.

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

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 ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to two-thirds of the crop is exported overseas.

Australia's wheat production in 1953-54 was 198.0 million bushels, representing an average yield of 18.4 bushels per acre. This was 39.0 million bushels more than the average for the ten years ended 1952-53 and 28.6 million bushels more than the average for the ten years ended 1938-39.

(iii) *Yield per Acre.* Short-term variations in yield per acre are due chiefly to the vagaries of the seasons. 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 (the record); and in 1953–54, 18.4 bushels.

(iv) *Decennial Averages,* 1861–70 *to* 1945–54. 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
1945–54	11,478	167,873	14.6

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, average yields per acre in the five decades since 1901 have shown a continued improvement.

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 since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which 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 the principal varieties grown during each season is restricted to about 40.

(ii) *States,* 1953. The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1953 were as follows:—New South Wales, Bencubbin (38.2), Gabo (15.8), Kendee (7.6); Victoria, Insignia (41.0), Quadrat (26.4), Pinnacle (21.4); Queensland, Gabo (15.4), Charter (14.9), Lawrence (13.8); South Australia, Gabo (22.9), Bencubbin (9.9); Western Australia, Bungulla (25.6), Bencubbin (21.8), Kondut (10.4). A detailed table of wheat varieties sown in these five States appears in *Primary Industries Bulletin* No. 48, *Part I.—Rural Industries.*

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

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper 1-litre scale chondrometer.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1954–55 season's crop was as follows (1953–54 details in parentheses)—New South Wales, 66½ lb. (64 lb.); Victoria, 62½ lb. (64¼ lb.); South Australia, 64½ lb. (63¾ lb.); and Western Australia, 63½ lb. (64¾ 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 is shown in the table below for the years indicated.

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

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

Particulars.	1950.(a)	1951.	1952.	1953.	1954.	1955.
For Flour	6 8	7 10	10 0	11 11	(b)14 1½	(b)14 1½
For Stock Feed	6 8	7 10	(c)12 0	(c)13 11	(b)14 1½	(b)14 1½

(a) Excludes 5d. per bushel subsidy paid by the Commonwealth Government, making the total return to growers 7s. 1d. per bushel, bulk basis. (b) Of this, 1½d. is to be used to meet freight charges incurred on wheat shipped to Tasmania. (c) Excludes subsidy of 4s. 1d. in 1952 and 2s. 2d. in 1953 paid by the Commonwealth Government. In Western Australia the price in 1952 was 10s., exclusive of subsidy.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.*—The Wheat Board basic export selling prices averaged 14s. 6d. for the season ended 31st July, 1955, 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 1953–56 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 as at 1st March, 1949 for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." Expressed in terms of Australian currency the maximum price for f.a.q. Australian wheat sold under the Agreement is approximately 18s. 5½d. per bushel while the minimum price is 13s. 10d. per bushel, though it may be higher or lower depending upon the differences in freight rates between Canada–the United Kingdom and Australia–the United Kingdom.

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. 41, p. 755, and *Statistical Bulletin: The Wheat Industry, Australia*, No. 88, of April, 1955, 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 season 1953–54 and the value per acre are shown below.

WHEAT FOR GRAIN : VALUE OF CROP(a), 1953–54.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	44,016	37,009	7,225	21,969	27,712	184	20	138,135
Value per acre ..	£13/2/3	£15/9/9	£12/9/2	£14/7/6	£9/12/1	£18/19/10	£12/17/8	£12/16/11

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

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, 1950 to 1954 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 *see* graph, p. 860).

WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

(Million Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1950.	1951.	1952.	1953.	1954.
Opening stocks (including flour as wheat)	10.2	19.0	43.8	19.4	16.9	37.7
Production	164.7	218.2	184.2	159.7	195.2	198.0
Total Available Supplies ..	174.9	237.2	228.0	179.1	212.1	235.7
Exports—						
Wheat	75.0	82.8	85.9	45.6	60.7	38.5
Flour as wheat(*a*)	30.6	36.9	41.7	36.1	41.4	27.9
Breakfast foods and other uses ..	(*b*)	0.8	2.0	1.2	0.8	0.8
Local Consumption—						
Flour as wheat	30.9	35.5	37.6	39.0	39.1	34.4
Stock feed	9.3	23.5	27.4	23.9	18.4	17.6
Seed..	14.6	11.6	10.5	10.3	10.8	10.8
Breakfast foods and other uses ..	(*b*)	2.2	2.3	2.6	2.2	1.6
Balance retained on farm (excluding seed)	(*c*)	3.7	3.7	3.4	4.6	4.0
Closing stocks (including flour as wheat)	14.5	43.8	19.4	16.9	37.7	94.9
Total Disposals	174.9	240.8	230.5	179.0	215.7	230.5
Excess (+) or Deficiency (—) of Disposals in respect of Available Supplies (*d*)	..	+3.6	+2.5	—0.1	+3.6	—5.2

(*a*) Includes wheatmeal from July 1951, and sharps from July, 1954. (*b*) Included with flour (local consumption). (*c*) Included with stock feed. (*d*) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. **Exports of Wheat and Flour.**—(NOTE : Statistics in this section 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 1949–50 to 1953–54 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. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900 : in 1902–3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914–15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1953–54 exports in terms of wheat averaged 102,580,000 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.	As Wheat. (a)				
	'000 bushels.	Tons. (2,000 lb.)	'000 bushels.	'000 bushels.			
Average, 1934–35 to 1938–39 ..	76,473	b 647,073	29,959	106,432	14,813	(b)5,058	19,871
1949–50.. ..	78,426	775,499	35,906	114,332	62,173	26,482	88,655
1950–51.. ..	86,782	886,533	41,046	127,828	74,151	33,022	107,173
1951–52.. ..	62,921	791,470	36,645	99,566	55,287	33,107	88,394
1952–53.. ..	59,508	871,096	40,331	99,839	51,970	37,471	89,441
1953–54.. ..	36,058	761,917	35,276	71,334	30,957	29,726	60,683

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat. (b) Excludes 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 1953–54 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
United Kingdom	45,195	9,435	20,017	17,932	21,956	11,520
India	1,662	35,254	16,742	7,372	10,767	7,038
New Zealand	1,537	5,756	4,863	9,649	5,808	7,752
Other British Countries ..	7,863	4,677	5,821	7,321	10,760	5,405
Egypt	503	6,511	17,075	3,980	..	..
Germany, Federal Republic of	(a)235	..	2,336	4,734	2,847	1,888
Italy	3,152	325	7,965	6,473	2,068	357
Other Foreign Countries ..	16,326	16,468	11,963	5,460	5,302	2,098
Total	76,473	78,426	86,782	62,921	59,508	36,058

(a) Pre-war Germany.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1953-54, and the average for the five years ended 1938–39.

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

Country to which Exported.	Average, 1934–35 to 1938–39. (a)	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
United Kingdom	142,912	35,236	112,953	96,432	139,941	65,659
Ceylon	16,915	131,348	190,674	187,134	261,845	222,479
India	2,732	188,358	54,609	83,142	79,921	19,880
Malaya, Federation of ..	63,309	78,372	79,930	60,030	65,074	70,829
Singapore	(b)	21,399	58,339	52,238	66,691	64,382
Other British Countries ..	109,609	174,706	120,173	88,195	92,122	97,257
Egypt	24,284	53,759	121,001	65,143	23,078	19,588
Indonesia, Republic of ..	..	4,472	62,890	62,322	90,774	133,406
Other Foreign Countries ..	287,312	87,849	85,964	96,834	51,650	68,437
Total	647,073	775,490	886,533	791,470	871,096	761,917

(a) Excludes wheatmeal for baking. (b) Included with Malaya, Federation of.

15. **Stocks of Wheat and Flour.**—Stocks of wheat and flour in terms of wheat held by each State at 30th November in each year 1939 and 1950 to 1954 are shown in the following table. These data are based on 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)

(Bushels.)

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1939	6,674,033	4,702,088	549,219	6,133,986	2,512,576	240,728	20,812,630
1950	16,875,191	12,596,836	1,880,457	6,658,635	5,556,227	221,856	43,789,202
1951	3,595,558	6,250,683	565,049	5,557,175	3,248,883	162,826	19,380,174
1952	5,880,929	4,432,261	5,000	4,253,930	2,107,632	187,226	16,866,978
1953	9,887,570	11,540,969	2,236,564	7,576,520	6,307,443	187,731	37,745,797
1954	26,457,427	26,936,944	2,486,847	15,413,380	23,499,253	125,200	94,919,051

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

16. **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 have been made to introduce such a system 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 space 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 system and projected extensions in the States concerned are set out below :—

(a) *New South Wales.* At the end of 1954 there were 180 elevators operated by Government Grain Elevators and situated at the more important wheat receiving stations throughout the State as well as terminal elevators at Sydney and Newcastle. The storage capacity of the country elevators is 25,422,000 bushels. In 1953–54, 61 per cent. of the total crop was handled compared with 76 per cent. in 1952–53 and 48 per cent. in 1940–41.

Additional storage capacity is being constructed at several country centres and the sub-terminals at Junee, Temora and Werris Creek are being enlarged to a total capacity of 4.5 million bushels each as part of the plan to meet the general shortage in storage capacity.

Temporary bulkheads have also been erected to meet shortages and in 1951–52.75 of these were used.

Further bulk handling facilities are in course of construction at Newcastle and numerous sidings in Northern and Western New South Wales. When completed these storages—which are being constructed with the State's portion of the Commonwealth loan of £3½m. mentioned above—will add a further 11,900,000 bushels to the total bulk storage available in N.S.W., but when they come into use a number of temporary bulkheads will be dismantled.

(*b*) *Victoria.* The Victorian Grain Elevators Board operates 148 elevators with a storage capacity of 17,034,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Storages for 18 million bushels, adjacent to the permanent terminal, have been constructed at Geelong.

Temporary measures for extending bulk handling facilities have been adopted and sub-terminals were constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of 22,000,000 bushels. Temporary bulkheads have also been used and in 1952–53 and 1953–54 there were 86 in use with a total storage for 6,885,000 bushels.

In 1953–54, 96 per cent. of the total crop was received in elevators, compared with 98 per cent. in 1952–53 and 24 per cent. in 1939–40.

(*c*) *Queensland.* In 1952–53 a temporary silo was provided at Pinkenba and a number of concrete silos and temporary bulkheads have subsequently been erected at country centres. Plans to extend this programme include the provision of a permanent bulk terminal at Pinkenba.

(*d*) *South Australia.* In 1951–52 a bulk terminal was erected by the Wheat Board at Ardrossan with a storage capacity of 1,000,000 bushels. Approximately 4,115,000 bushels were handled in 1952–53.

Additional storages are being constructed at Port Adelaide, Kadina, Gladstone and Cummins with a total capacity of 10,650,000 bushels.

(*e*) *Western Australia.* The system of storage in Western Australia differs from that in the eastern States in that horizontal storages made of timber and galvanized iron are used. These are relatively cheap and may be moved from place to place as required. These storages are operated by the Co-operative Bulk Handling Ltd. which is controlled and managed by wheat growers.

In 1953–54 there were 277 sidings equipped with bulk handling facilities and 36,138,000 bushels, comprising the whole of the marketed wheat crop, were received.

Extension of storage facilities in 1954–55 involved the erection of a storage for 5 million bushels at Midland Junction, which is now completed.

(*f*) *Tasmania.* Bulk handling of wheat has not been found necessary in this State but it is planned to erect installations at Hobart and Launceston to store wheat imported from the mainland.

17. **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 United States Office of Foreign Agricultural Service. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

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

Continent and Country.	Area.(*a*)			Production.			Yield per Acre.		
	Average 1935–39.	1953.	1954.(*b*)	Average 1935–39.	1953.	1954.(*b*)	Average 1935–39.	1953.	1954.(*b*)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,595	25,513	24,267	312,399	613,962	298,909	12.2	24.1	12.3
United States ..	57,293	67,661	53,712	758,629	1,169,484	969,781	13.2	17.3	18.1
Total(*c*) ..	84,170	94,860	79,850	1,086,000	1,809,000	1,300,000	12.9	19.1	16.3

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.	1953.	1954.(b)	Average 1935–39.	1953.	1954.(b)	Average 1935–39.	1953	1954.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Europe—									
France.. ..	12,560	10,430	11,100	286,505	330.000	388,220	22.8	31 6	35.0
Italy	12,577	12,100	12,100	278,366	332,800	266,800	22.1	27 5	22.0
Spain	(d)11,253	10,606	10,660	(d)157,986	125,000	180,000	d 14.0	11.8	16.9
Total(c) ..	74,850	71.400	72,880	1,600,000	1,725,000	1,720,000	21.4	24.2	23.6
U.S.S.R.	104,000	(f)	(f)	1,240,000	(f)	(f)	11.9	(f)	(f)
Africa—Total(c) ..	13,850	16,950	18,530	143,000	195,000	220,000	10.3	11.5	11.9
Asia—									
China	(e) 49,000	(f)	(f)	(e) 750,000	(f)	(f)	(e)15.3	(f)	(f)
India	(e) 25,460	24,286	26,310	262,100	275,590	293,920	10.3	11.3	11.2
Pakistan ..	(e) 9,305	9,510	10,650	117,000	105,000	137,500	12.6	11.0	12.9
Turkey ..	8,973	15,840	15,830	135,690	293,950	180,040	15.1	18.6	11.4
Total(c) ..	114,190	133,130	140,750	1,558,000	1,790,000	1,790,000	13.6	13 4	12.7
South America—									
Argentina ..	15,834	12,345	13,500	221,769	227,800	282,560	14.0	18 5	20.9
Total(c) ..	20,490	18,840	20,010	281,000	330,000	390,000	13.7	17.5	19.5
Oceania—									
Australia ..	13,128	10,751	10,499	169,744	197,960	166,610	12.9	18.4	15.9
Total(c) ..	13,349	10,865	10,609	176,873	202,740	171,210	13.2	18.7	16.1
World Total(c)	424,900	465,050	464,630	6,085,000	7,380,000	6,930,000	14.3	15.9	14.9

(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) Average of less than five years. (f) Not available. *See* footnote (c).

18. **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 1952 and 1953 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service.

While Australia's production of wheat averages about 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 1953 the proportion fell to 10 per cent., although the actual quantity shipped was only 2 per cent. lower

WHEAT(a): EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934–38.		1952.		1953.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada	175,294	27.6	395,619	38.9	340,214	34.9
Argentina	122,740	19.3	2,307	0.2	93,753	9 6
Australia	**102,406**	**16.1**	**83,120**	**8.2**	**100,430**	**10 3**
United States of America ..	46,274	7.3	418,194	41.0	276,238	28.3
U.S.S.R. (Russia)	26,631	4.2	(b)42,254	4.2	(b)27,557	2.8
France	18,316	2.9	14,565	1.4	18,801	1.9
All other	143,993	22.6	61,832	6.1	118,681	12.2
Total	635,654	100.0	1,017,891	100.0	975,674	100.0
World Production (c) (mil. bus.)	6,085		7,420		7,380	
Proportion of Australia's Production to World Production	% 2.8		% 2.7		% 2.7	

(a) Includes flour expressed in terms of wheat. (b) Unofficial. (c) Average 1935–39.

19. **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.		1952.		1953.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
United Kingdom	208,737	33.8	171,998	17.2	175,073	18.7
Brazil	36,387	5.9	46,491	4.6	60,924	6.5
Italy	26,043	4.2	49,787	5.0	43,041	4.6
Germany, Federal Republic of	(b)25,606	(b)4.1	79,332	7.9	68,055	7.3
Netherlands	22,593	3.7	31,562	3.2	35,821	3.8
Japan	11,552	1.9	61,515	6.1	63,198	6.8
India and Pakistan ..	1,826	0.3	104,637	10.5	107,352	11.5
Egypt	588	0.1	33,429	3.3	20,583	2.2
All other	283,950	46.0	422,508	42.2	361,073	38.6
Total	617,282	100.0	1,001,259	100.0	935,120	100.0

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

§ 5. Oats.

1. **Area, Production and Yield per acre.**—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1953–54 accounted for 50.9 per cent., oats grown for grain represented only 10.1 per cent. of the area of all crops. The area, production and yield per acre of oats for the years 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 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
1949–50 ..	375	483	21	261	585	23	..	1,748
1950–51 ..	332	527	17	271	586	24	..	1,757
1951–52 ..	596	676	21	387	657	27	1	2,365
1952–53 ..	730	756	57	369	832	20	..	2,764
Average, 1943–44 to 1952–53 ..	511	575	26	307	527	18	..	1,964
1953–54 ..	507	584	13	280	733	20	..	2,137
				PRODUCTION ('000 BUSHELS).(a)				
Average, 1929–30 to 1938–39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1949–50 ..	7,016	8,718	338	3,464	7,268	577	10	27,391
1950–51 ..	3,994	9,034	221	3,534	7,914	429	2	25,128
1951–52 ..	9,395	11,151	263	5,405	7,689	594	9	34,506
1952–53 ..	12,326	12,599	1,303	6,666	10,440	286	3	43,623
Average, 1943–44 to 1952–53 ..	7,303	8,322	461	3,668	6,127	410	6	26,297
1953–54 ..	8,533	9,852	199	4,321	9,590	461	5	32,961
				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
1949–50 ..	18.7	18.0	16.5	13.4	12.4	25.3	28.8	15.7
1950–51 ..	12.0	17.1	13.0	13.0	13.5	18.3	7.0	14.3
1951–52 ..	15.8	16.5	12.6	14.0	11.7	22.4	15.4	14.6
1952–53 ..	16.9	16.7	23.1	18.0	12.5	14.3	17.2	15.8
Average, 1943–44 to 1952–53 ..	14.3	14.5	18.1	12.0	11.6	22.5	13.4	14.5
1953–54 ..	16.8	16.9	14.8	15.4	13.1	22.9	18.6	15.4

(a) 40 lb. per bushel.

A graph showing the area sown to oats appears on page 859.

The principal oat-growing States are New South Wales, Victoria and Western Australia, which produce on the average more than 80 per cent. of the total quantity grown in Australia. South Australia also produces considerable quantities, but in Queensland and Tasmania the output is small.

During the five seasons ending 1953–54 an average of 8.7 million bushels were exported; 2.2 million bushels were used in factories for oatmeal; and 6.2 million bushels were used for seed purposes; leaving a balance of 15.3 million bushels for stock feed (principally unprocessed).

The largest yield per acre recorded for Australia in the ten years ended 1953–54 was that of the season 1947–48, amounting to 19.3 bushels per acre, this being the highest yield since 1920–21. The smallest yield per acre for the same period was that recorded in the abnormally dry season 1944–45, namely 4.4 bushels which is 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 1953–54 was 7s. 6½d. per bushel. This represents an increase of 3.1 per cent. on the price in 1952–53 (7s. 3¾d.) and an increase of 118.1 per cent. on the price in 1938–39 (3s. 5½d.).

3. **Value of Oat Crop.**—The estimated gross value of the oat crop in each State for the 1953–54 season and the value per acre were as follows :—

OATS : VALUE OF CROP, 1953–54.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value	£'000	3,946	3,609	84	1,572	2,925	207	2	12,345
Value per acre	..	£7/14/9	£6/3/9	£6/4/3	£5/12/2	£3/19/10	£10/6/3	£8/11/7	£5/15/6

4. **Imports and 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 1949–50 to 1953–54 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Quantity	'000 bus.	286	6,626	7,947	12,971	11,846	3,275
Value ..	£'000	36	2,394	3,529	8,001	4,851	1,219

The quantity of oats imported into Australia is usually not very large, although in 1945–46 imports exceeded exports by 802,000 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was 1927–28 (by 461,000 bushels), when New Zealand was the main supplier. In 1953–54 the principal countries of destination of the exports were the United Kingdom, Federal Republic of Germany, Singapore, Federation of Malaya, India and Ceylon.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1953–54 to 40,010 tons equivalent to about 2,241,000 bushels of oats, or about 6.8 per cent. of the total production.

6. **World Production.**—The world's production of oats for the year 1954, excluding production in the U.S.S.R., according to preliminary details released by the Food and Agriculture Organization of the United Nations, amounted to 2,745 million bushels, harvested from 91.7 million acres, representing an average yield of 29.9 bushels per acre. This compared with the production in the previous year of 2,673 million bushels from an area of 89.4 million acres also giving an average yield of 29.9 bushels per acre. The world's average production, including that of the U.S.S.R., 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. In comparison with the average return per acre for world production in 1954 that of Australia for the same period (15.4 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre.

§ 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 1953–54 season being 173,291 acres, or 97 per cent. of the total for Australia. In all States except South Australia the crop is grown to a greater or lesser 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 214,636 acres during the ten years ended 1952–53. Compared with the previous year, the area in 1953–54 increased by 4,915 acres but was considerably less than the comparatively large 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 necessitates a parallel development in the specialized industry of growing hybrid strains of seed.

The area, production and yield per acre of maize for grain in each State for the years 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales, Victoria and Queensland for 1953–54.

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

Season.	N.S.W.	Victoria.	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
1949–50 ..	72,872	5,136	115,550	..	20	10	3	193,591
1950–51 ..	52,674	4,089	112,467	..	107	2	..	169,339
1951–52 ..	54,216	4,115	111,181	..	8	18	2	169,540
1952–53 ..	60,647	5,175	108,230	..	13	9	..	174,074
Average, 1943–44 to 1952–53 ..	80,501	5,900	128,155	..	69	10	1	214,636
1953–54—								
Hybrid ..	31,951	4,238	33,884	..	21	64	..	178,989
Other ..	26,605	1,375	80,851					
			PRODUCTION ('000 BUSHELS).(a)					
Average, 1929–30 to 1938–39 ..	3,072	631	3,525	..	..	..	..	7,228
1949–50 ..	2,408	194	3,393	..	1	..	..	5,996
1950–51 ..	1,512	187	3,029	..	1	..	..	4,729
1951–52 ..	1,410	168	2,439	..	..	1	..	4,018
1952–53 ..	2,113	204	2,650	..	..	..	..	4,967
Average, 1943–44 to 1952–53 ..	2,255	232	3,162	..	1	..	..	5,650
1953–54—								
Hybrid ..	1,100	243	1,024	..	..	2	..	5,079
Other ..	638	55	2,017					
			YIELD PER ACRE (BUSHELS).(a)					
Average, 1929–30 to 1938–39 ..	26.7	34.3	21.8	29.8	10.0	..	8.5	24.5
1949–50 ..	33.1	37.8	29.4	..	22.1	20.5	10.0	31.0
1950–51 ..	28.7	45.7	26.9	..	14.3	12.5	..	27.9
1951–52 ..	26.0	40.8	21.9	..	13.9	34.8	3.0	23.7
1952–53 ..	34.8	39.3	24.5	..	22.6	12.0	..	28.5
Average, 1943–44 to 1952–53 ..	28.0	39.3	24.7	..	10.9	15.1	9.6	26.3
1953–54—								
Hybrid ..	34.4	57.3	30.2	..	12.9	29.6	..	28.4
Other ..	24.0	40.1	24.9					

(a) 56 lb. per bushel.

The average yield for Australia for the ten-year period was 26.3 bushels per acre. Among principal producing countries the United States of America during 1954 averaged 37.1 bushels per acre and Italy 34.5 bushels.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market in 1953-54 was 17s. 3¾d. per bushel compared with 20s. 8¼d. in 1952-53. In 1938-39 the comparable price for maize of similar quality was 5s. 2¼d.

4. **Value of Crop.**—The estimated gross value of the crop in each State for the 1953-54 season and the value per acre were as follows :—

MAIZE FOR GRAIN : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,557	270	2,037	..	1	3	3,868
Value per acre	£26/11/8	£48/2/11	£17/15/1	..	£28/12/5	£48/18/2	£21/12/2

5. **Exports of Maize and Maize Products.**—Details of exports of maize for the five years ended 1953-54 compared with the average of the five years ended 1938-39 are shown below.

MAIZE : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Quantity '000 bus.	57	1,201	1,189	188	782	504
Value .. £'000	9	614	786	149	703	353

In recent years only small quantities of maize have been imported.

Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1953-54 1,242,463 lb., valued at £72,136, 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 negligible.

6. **World Production.**—According to preliminary details released by the Food and Agriculture Organization of the United Nations, world production of maize, excluding that of the U.S.S.R., in the year 1954, amounted to 5,389 million bushels, harvested from 216 million acres, giving an average yield per acre of 25.0 bushels. This compared with production in the previous year of 5,693 million bushels from 214 million acres, yielding an average per acre of 26.6 bushels. Production (including that of the U.S.S.R.) 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 1954 the area sown to maize in that country averaged 80.5 million acres or 38 per cent. of the world total. During the same period production averaged 3,145 million bushels or about 57 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.

§ 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 1953–54 reached the record level of 1,803,000 acres. Victoria was originally the principal barley-growing State, but since 1913–14 its place has been taken by South Australia which accounted for 62 per cent. of the Australian acreage in 1953–54. Victoria was next in importance with 21 per cent., leaving a balance of about 17 per cent. distributed among the other States. The totals given here relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are sown for green forage. These, however, are not included in this section. The area, production and yield per acre of barley for grain in the several States for the years 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 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
1949–50 ..	13	236	25	694	68	4	..	1,040
1950–51 ..	8	218	26	765	59	3	..	1,079
1951–52 ..	11	186	28	832	57	4	..	1,118
1952–53 ..	18	235	72	937	107	8	..	1,377
Average, 1943–44 to 1952–53 ..	20	172	25	605	69	6	..	897
1953–54—								
Malting (2-Row)	22	344	48	1,026	33	9	..	1,482
Other (6-Row)	10	31	8	96	176	..	..	321
Total ..	32	375	56	1,122	209	9	..	1,803
				PRODUCTION ('000 BUSHELS).(a)				
Average, 1929–30 to 1938–39 ..	173	1,976	132	5,714	371	186	1	8,553
1949–50 ..	265	4,876	578	12,725	968	131	..	19,543
1950–51 ..	129	4,510	489	16,727	925	91	..	22,871
1951–52 ..	167	3,620	450	16,826	695	150	1	21,909
1952–53 ..	341	4,734	2,109	25,902	1,742	217	..	35,045
Average, 1943–44 to 1952–53 ..	285	3,037	584	12,388	885	154	1	17,334
1953–54—								
Malting (2-Row)	455	7,360	988	26,433	406	281	..	35,923
Other (6-Row)	225	572	151	2,059	2,327	15	..	5,349
Total ..	680	7,932	1,139	28,492	2,733	296	..	41,272
				YIELD PER ACRE (BUSHELS).(a)				
Average, 1929–30 to 1938–39 ..	16.6	18.4	16.7	17.3	11.9	25.2	18.9	17.8
1949–50 ..	20.6	20.7	23.1	18.3	14.2	30.1	..	18.8
1950–51 ..	15.6	20.8	18.7	21.9	15.6	27.8	..	21.2
1951–52 ..	15.0	19.4	16.0	20.2	12.3	35.3	26.1	19.6
1952–53 ..	19.4	20.2	29.3	27.6	16.3	27.0	..	25.5
Average, 1943–44 to 1952–53 ..	14.5	17.7	23.0	20.5	12.9	27.0	13.8	19.3
1953–54—								
Malting (2-Row)	21.2	21.4	20.6	25.7	12.4	31.4	..	24.2
Other (6-Row)	21.9	18.9	18.7	21.6	13.2	31.0	..	16.7
Total ..	21.4	21.2	20.3	25.4	13.1	31.4	..	22.9

(a) 50 lb. per bushel.

Taking Australia as a whole, about 82 per cent. of the area of barley for grain in 1953–54 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 consumption of barley during the season 1953–54 was as follows:—malt works, 7,118,000 bushels; flour and other grain mills, 297,000 bushels; distilleries, 63,000 bushels; exports, 28,216,000 bushels; leaving a balance of 5,927,000 bushels for feed, seed and other purposes.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53.

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
1949–50 ..	927	113	1,040	17,569	1,974	19,543	18.9	17.5	18.8
1950–51 ..	963	116	1,079	20,811	2,060	22,871	21.6	17.8	21.2
1951–52 ..	965	153	1,118	19,477	2,432	21,909	20.2	15.9	19.6
1952–53 ..	1,123	254	1,377	29,633	5,412	35,045	26.4	21.3	25.5
Average 1943–44 to 1952–53 ..	774	123	897	15,308	2,026	17,334	19.8	16.5	19.3
1953–54 ..	1,482	321	1,803	35,923	5,349	41,272	24.2	16.7	22.9

During the last ten-year period shown the average area of barley of the malting, or 2-row, class was more than six times the corresponding figure for barley of the 6-row, or feed, class. The yield per acre for malting barley was 20 per cent. higher than that for 6-row barley.

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

The Board 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 Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

The Commonwealth Government did not acquire barley after the 1947–48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948–49 and subsequent crops of the two States. Details of these acquisitions are shown in the table below.

AUSTRALIAN BARLEY BOARD: BARLEY ACQUIRED, SOLD, ETC.,

Pool.	Quantity Acquired.	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. 10 (1948–49 Crop)	13,986	14,087	(b) 7 11.9	5,377,137
„ 11 (1949–50 „)	16,250	16,336	(b) 10 2.2	7,905,902
„ 12 (1950–51 „)	19,976	20,152	(b) 11 2.488	10,721,180
„ 13 (1951–52 „)	19,340	19,488	15 8.28	14,563,936
„ 14 (1952–53 „)	29,087	29,103	16 2.01	21,359,168
„ 15 (1953–54 „)	34,430	34,586	10 4.101	15,417,374

(a) Includes surplus in out-turn. (b) Paid to growers in the northern part of South Australia. Growers in the south-east of South Australia and Victoria received an additional 2d. per bushel.

3. **Prices.**—The average wholesale price for 2-row English malting barley in the Melbourne market during 1953–54 was 15s. 7d. compared with 15s. 3d. in 1952–53 and 3s. 5¾d. in 1938–39.

4. **Value of Barley Crop.**—The estimated gross value of the barley crop in each State for the 1953–54 season and the value per acre are shown in the following table :—

BARLEY FOR GRAIN : VALUE OF CROP, 1953–54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Aggregate value .. £'000	443	4,164	530	14,402	1,266	206	21,011
Value per acre	£13/18/11	£11/2/4	£9/8/11	£12/16/9	£6/1/0	£21/17/5	£11/13/1

5. **Exports.**—Australian exports of barley during the five years ended 1953–54 averaged 16,832,000 bushels, South Australia being the principal exporting State and the United Kingdom, the Netherlands and Japan the principal countries to which barley was shipped. Particulars of Australian exports for the years 1949–50 to 1953–54 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Quantity '000 bus.	3,279	10,703	12,208	12,062	22,239	26,949
Value .. £'000	483	6,433	9,053	11,154	19,245	14,870

Imports of barley in recent years have been negligible.

In addition to exports of barley grain, there is also an export of Australian pearl and Scotch barley, the total for 1953–54 amounting to 452,746 lb., valued at £16,487, consigned mainly to Ceylon.

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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Grain used '000 bus.	3,730	5,294	5,543	6,063	6,505	7,118
Malt produced '000 bus. (*a*)	3,621	5,438	5,550	6,073	6,620	7,078

(*a*) 40 lb. per bushel.

(ii) *Imports and Exports.* The production of malt in Australia was sufficient to meet local requirements and to provide a margin for export until 1947–48 but from 1948–49 to 1951–52 imports exceeded exports by an increasing quantity, the net imports reaching 266,000 bushels in 1951–52. In 1952–53, there was a small net export amounting to 4,000 bushels valued at £7,000 and in 1953–54 this increased to 140,124 bushels valued at £177,415.

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1954 were Canada and the United States of America. China is also normally a major producer, but details for 1954 are not yet available. Australian production in that year was only a little more than one per cent. of the world total.

According to preliminary results compiled by the Food and Agriculture Organization of the United Nations, world production of barley in the year 1954, excluding that of the U.S.S.R., amounted to 2,434 million bushels harvested from 108.5 million acres, equivalent to a yield per acre of 22.4 bushels. This compared with the production of 2,430 million bushels in the previous year from 103 million acres, giving a yield per acre of 23.6 bushels. Production, including that of the U.S.S.R., over the years 1934–38 averaged 2,273 million bushels from 114.6 million acres, representing an average yield of 19.8 bushels per acre.

§ 8. Rice.

Rice-growing is 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 area sown is controlled, being limited by the quantity of water available.

The area sown reached a maximum in 1943–44 when 40,690 acres yielded 4,015,000 bushels. The highest production was recorded in 1950–51 when the yield was 4,117,600 bushels.

The bulk of Australia's exports of rice, which had gone to the United Kingdom in years prior to 1938–39, is shipped now to islands in the South-East Asia area.

Details relating to area, production and trade for the years 1949–50 to 1953–54, 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.	Imports.		Exports.	
			Quantity.	Gross Value. (c)		Uncleaned.	Cleaned.	Uncleaned.	Cleaned.
		Acres.	'000 Bushels. (c)	£'000.	Bushels. (d)	Centals.	Centals.	Centals.	Centals.
Average, 1934–35 to 1938–39 ..	(e) 313	22,823	2,274	450	99.7	2,124	38,272	9,357	271,851
1949–50 ..	444	37,540	3,783	1,653	100.8	..	6,685	225	597,759
1950–51 ..	462	36,945	4,118	2,171	111.5	1	63	2,065	657,267
1951–52 ..	452	35,664	3,048	2,108	85.5	3	18	4,140	559,395
1952–53 ..	496	34,519	3,964	3,338	114.8	136	2,223	2,126	532,828
1953–54 ..	530	38,070	4,060	3,107	104.6	(f)	(f)	18,758	775,489

(a) Rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland in recent seasons. (b) 20 acres or more in area. (c) Excludes the value of straw. (d) 42 lb. per bushel. (e) 1938–39 figure, previous years not collected. (f) Not available.

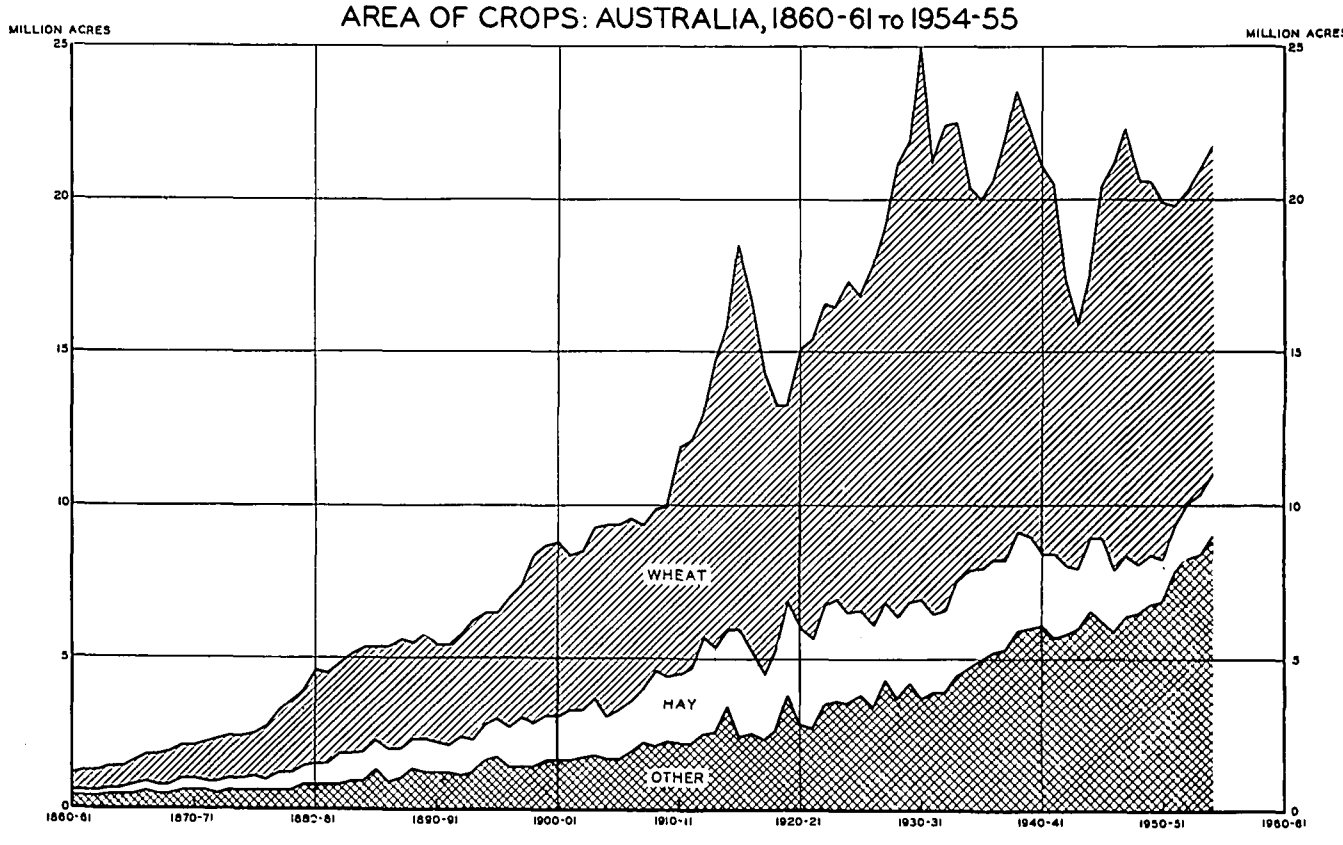
§ 9. Sorghum for Grain.

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 for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and is becoming 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.

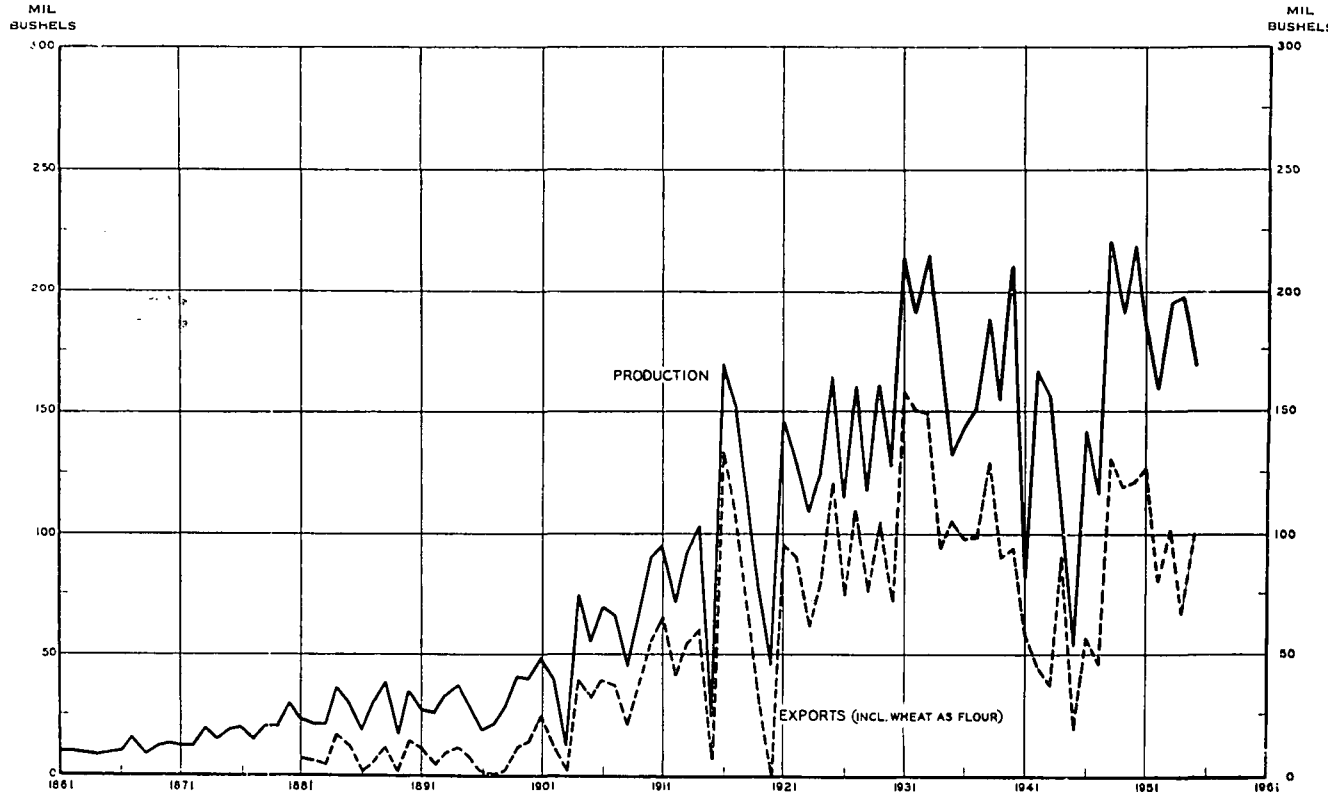
GRAIN SORGHUM : AREA, PRODUCTION AND YIELD PER ACRE, AUSTRALIA.

Season.	Area.			Production.(a)			Yield per Acre.(a)		
	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939–40 ..	(c)	4,397	(d) 4,397	(c)	57,936	(d) 57,936	(c)	13.2	(d) 13.2
1949–50 ..	3,575	99,362	102,937	67,809	2,157,717	2,225,526	19.0	21.7	21.6
1950–51 ..	4,466	166,311	170,778	73,773	3,683,286	3,757,064	16.5	22.2	22.0
1951–52 ..	7,101	169,558	176,660	41,487	2,651,799	2,693,289	5.8	15.6	15.3
1952–53 ..	4,982	190,619	195,601	88,905	3,239,133	3,328,038	17.9	17.0	17.0
1953–54 ..	7,053	181,819	188,872	129,062	4,039,779	4,168,842	18.3	22.2	22.1

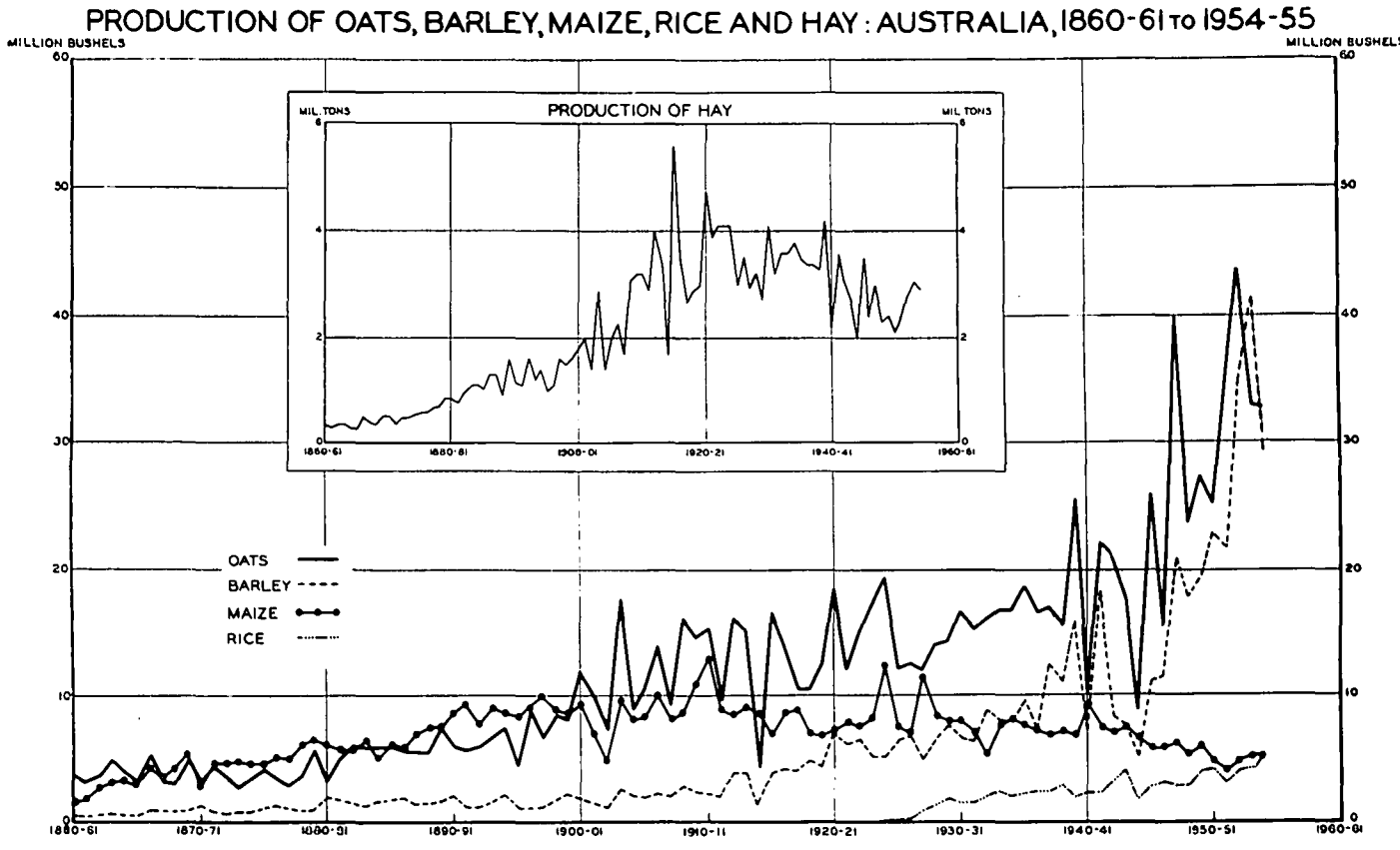
(a) 60 lb. per bushel. (b) Includes small areas sown and quantities produced in other States. (c) Not available. (d) Queensland only.


AREA OF CROPS: AUSTRALIA, 1860-61 TO 1954-55
MILLION ACRES
MILLION ACRES
25
20
15
10
5
0
WHEAT
HAY
OTHER
1860-61
1870-71
1880-81
1890-91
1900-01
1910-11
1920-21
1930-31
1940-41
1950-51
1960-61

WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 TO 1954-55



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


PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY : AUSTRALIA, 1860-61 TO 1954-55
MILLION BUSHELS
MILLION BUSHELS
PRODUCTION OF HAY
MIL. TONS
MIL. TONS
OATS
BARLEY
MAIZE
RICE
1860-61
1870-71
1880-81
1890-91
1900-01
1910-11
1920-21
1930-31
1940-41
1950-51
1960-61

§ 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 area for these three States accounted for 79 per cent. of the total for Australia in 1953-54.

The area sown, production and yield per acre of potatoes in each State during the years 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown hereunder :—

POTATOES : 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	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1949-50	23,369	50,651	11,624	7,245	6,895	34,110	108	134,002
1950-51	18,374	52,482	10,783	6,969	6,780	31,581	142	127,111
1951-52	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
1952-53	18,119	52,851	11,641	9,231	8,079	35,347	127	135,395
Average, 1943-44 to 1952-53	22,794	57,635	12,589	7,904	7,779	44,632	132	153,465
1953-54	16,513	52,745	9,382	7,023	8,068	34,524	112	128,367
Production (Tons).								
Average, 1929-30 to 1938-39	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1949-50	69,395	167,881	30,681	40,984	39,459	122,000	637	471,037
1950-51	43,102	139,391	24,725	35,935	43,887	124,000	660	411,720
1951-52	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
1952-53	51,132	133,148	35,051	43,880	52,759	114,500	663	431,133
Average, 1943-44 to 1952-53	61,176	194,693	30,083	39,641	43,162	175,534	733	545,022
1953-54	58,046	213,714	32,628	45,044	53,708	144,300	514	547,954
Yield Per Acre (Tons).								
Average, 1929-30 to 1938-39	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1949-50	2.97	3.31	2.64	5.66	5.72	3.58	5.00	3.52
1950-51	2.35	2.66	2.29	5.16	6.47	3.93	4.65	3.24
1951-52	2.73	4.24	2.88	6.30	7.25	4.78	6.05	4.31
1952-53	2.82	2.52	3.01	4.75	6.53	3.24	5.22	3.18
Average, 1943-44 to 1952-53	2.68	3.38	2.39	5.02	5.55	3.93	5.55	3.55
1953-54	3.52	4.05	3.48	6.41	6.66	4.18	4.59	4.27

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 showed a general decline to the figure for the 1953-54 season, 128,367 acres.

Compared with the yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1953-54 averaged 7.20 tons per acre from an area of about 22,000 acres, as compared with a record yield of 4.31 tons per acre in Australia in 1951-52, and 4.27 tons per acre in 1953-54.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the 1953–54 season and the value per acre are shown in the following table.

POTATOES : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	1,990	4,087	1,142	1,303	1,595	1,940	18	12,075
Value per acre ..	£121/10/6	£77/9/9	£121/14/5	£185/10/3	£197/13/11	£56/3/10	£157/7/2	£94/1/3

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1951–52 to 1953–54 amounted to 412,900 tons, 376,100 tons and 485,400 tons respectively, or 108.3 lb., 96.4 lb. and 122.2 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938–39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. **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. Boards now operate in five States only as the tenure of the Queensland Board was not continued when its term expired in March, 1954.

5. **Exports.**—Prior to the 1939–45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war the export trade has expanded considerably reaching a peak in 1952–53 but declining in 1953–54. Details showing exports for the years 1949–50 to 1953–54 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Quantity .. tons	1,884	15,183	6,231	12,468	37,570	4,010
Value .. £'000	17	341	190	437	1,237	155

Imports of potatoes are negligible.

§ 11. Onions.

1. **Area, Production and Yield per acre.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 50.0 per cent. of the total area and 49.8 per cent. of the quantity produced in 1953–54. Queensland came next with 34.3 per cent. of the area and 26.1 per cent. of the production, leaving a balance of 15.7 per cent. of area and 24.1 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 1949–50 to 1953–54 together with averages for the ten-year periods ended 1938–39 and 1952–53.

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
1949–50	225	4,093	2,371	435	371	28	3	7,526
1950–51	211	4,148	2,399	506	379	19	5	7,667
1951–52	401	4,745	2,527	620	334	50	5	8,682
1952–53	363	3,866	2,813	552	414	49	9	8,066
Average, 1943–44 to 1952–53 ..	496	5,781	2,341	556	406	39	6	9,625
1953–54	270	3,641	2,497	471	375	18	7	7,279
Production (Tons).								
Average, 1929–30 to 1938–39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1949–50	770	25,436	13,137	4,607	3,611	130	22	47,713
1950–51	539	18,182	7,256	5,242	4,033	89	26	35,367
1951–52	1,937	31,150	9,691	6,302	3,855	243	38	53,216
1952–53	1,171	23,690	11,542	5,500	5,409	196	55	47,563
Average, 1943–44 to 1952–53 ..	1,783	34,354	9,937	5,223	3,644	154	30	55,125
1953–54	1,325	22,783	11,957	4,975	4,626	87	14	45,767
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
1949–50	3.42	6.21	5.54	10.59	9.73	4.64	7.33	6.34
1950–51	2.55	4.38	3.02	10.36	10.64	4.68	5.20	4.61
1951–52	4.83	6.56	3.83	10.16	11.54	4.86	7.60	6.13
1952–53	3.23	6.13	4.10	9.96	13.07	4.00	6.11	5.90
Average, 1943–44 to 1952–53 ..	3.59	5.94	4.24	9.39	8.98	3.95	5.00	5.73
1953–54	4.91	6.26	4.79	10.56	12.34	4.83	2.00	6.29

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 1953–54 season:—

ONIONS: VALUE OF CROP, 1953–54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	62	769	508	174	145	3	1	1,662
Value per acre ..	£228/16/4	£211/4/3	£203/11/2	£368/19/2	£387/0/10	£169/8/11	£93/5/9	£228/5/9

3. **Consumption.**—The annual consumption of onions in Australia averaged 46,875 tons or 12.1 lb. per head of population during the three years ended 1953–54, 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 2,400 tons and 2,100 tons respectively.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia. In 1953–54 exports amounted to 3,317 tons, valued at £120,869, and were shipped mainly to Singapore and Canada. The quantity of exports in 1952–53 was 8,283 tons, valued at £249,000. There were no imports in 1952–53 and 1953–54, but 2,397 tons were imported in 1951–52, principally from New Zealand.

Details relating to fresh vegetables other than potatoes and onions are given in § 17.

§ 12. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Up to and including 1946–47 hay was next in importance in area but in 1947–48 gave place to oats (for grain). In the following year, 1948–49, green fodder replaced hay as the third most important crop and hay has since remained in fourth position.

In 1953–54 the hay area represented 9.2 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 859. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area, production and yield per acre of hay of all kinds in the several States during the years 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 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 (ACRES).				
Average, 1929–30 to 1938–39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1949–50 ..	339,091	606,525	55,108	294,590	216,320	91,335	2,271	1,605,240
1950–51 ..	238,931	557,454	44,934	260,856	176,090	96,388	1,609	1,377,162
1951–52 ..	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
1952–53 ..	387,823	752,932	66,249	213,852	227,082	110,140	3,237	1,761,315
Average, 1943–44 to 1952–53 ..	472,703	718,675	61,497	311,067	242,044	96,963	2,866	1,905,815
1953–54 ..	450,243	807,223	70,451	262,006	219,171	123,249	3,023	1,935,366
				PRODUCTION (TONS).				
Average, 1929–30 to 1938–39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,480,710
1949–50 ..	496,081	1,000,855	116,412	384,604	272,052	155,653	4,332	2,429,989
1950–51 ..	314,940	894,585	101,319	362,162	226,703	160,722	2,509	2,062,940
1951–52 ..	450,774	1,046,764	79,763	379,978	211,629	172,286	3,655	2,344,849
1952–53 ..	578,651	1,245,217	135,673	317,462	290,296	192,381	4,971	2,764,651
Average, 1943–44 to 1952–53 ..	579,366	1,026,067	116,890	387,865	276,691	155,560	3,863	2,546,302
1953–54 ..	638,702	1,360,662	140,097	369,296	293,936	241,582	4,588	3,048,863
				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
1949–50 ..	1.46	1.65	2.11	1.31	1.26	1.70	1.91	1.51
1950–51 ..	1.32	1.60	2.25	1.30	1.28	1.67	1.56	1.50
1951–52 ..	1.35	1.63	1.83	1.48	1.22	1.76	1.58	1.51
1952–53 ..	1.49	1.65	2.05	1.48	1.28	1.75	1.54	1.57
Average, 1943–44 to 1952–53 ..	1.23	1.43	1.90	1.25	1.14	1.60	1.35	1.34
1953–54 ..	1.42	1.69	1.99	1.41	1.34	1.96	1.52	1.58

Owing to various causes, particularly the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is apt to fluctuate considerably. The area under hay in Australia during the season 1915–1916, 3,597,771 acres, was the largest on record, whilst the average for the ten years ended 1952–53 was 1,905,815 acres.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1953–54 are given in the following table.

HAY : AREA UNDER VARIOUS KINDS GROWN, 1953-54.
(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales ..	145,689	114,302	122,462	67,790	450,243
Victoria	39,793	240,031	48,674	478,725	807,223
Queensland	6,279	3,868	51,626	8,678	70,451
South Australia	62,458	118,529	12,451	68,568	262,006
Western Australia ..	37,536	115,305	188	66,142	219,171
Tasmania	3,054	28,393	782	91,020	123,249
Australian Capital Territory	18	1,554	1,184	267	3,023
Total	294,827	621,982	237,367	781,190	1,935,366

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1953–54 were 32 per cent. for oaten, 15 per cent. for wheaten, 12 per cent. for lucerne, and 41 per cent. for other hay. In that year, oaten hay predominated in the States of South Australia and Western Australia, wheaten in New South Wales, lucerne in Queensland, and meadow and grass in Victoria and Tasmania.

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 1953-54 season :—

HAY : VALUE OF CROP, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000.	8,877	13,196	2,712	3,103	2,946	2,309	88	33,231
Value per acre ..	£19/14/4	£16/6/11	£38/9/10	£11/16/11	£13/8/10	£18/14/8	£29/3/0	£17/3/5

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 1950 to 1954 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.
1950 ..	680,498	1,014,747	101,222	341,888	188,167	116,549	2,530	2,445,601
1951 ..	608,416	940,537	102,487	321,873	154,094	112,887	1,774	2,242,068
1952 ..	500,596	1,129,163	29,766	418,734	142,711	129,893	2,702	2,353,565
1953 ..	628,977	1,347,363	97,492	402,477	186,523	145,375	5,119	2,813,326
1954 ..	700,367	1,479,299	106,794	420,423	216,023	185,549	4,775	3,113,230

4. **Imports and Exports.**—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1953–54 exports amounted to 2,955 tons, valued at £67,593.

§ 13. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. Consequently, green fodder ranks after wheat and oats (for grain) as the third most important crop, in area, grown in Australia. The areas recorded in respect of green fodder include areas of crops cut

for feeding to live-stock as green fodder, 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 also are so used. In 1953–54 the area under green fodder (2,541,028 acres) consisted of oats (1,494,316 acres), lucerne (263,935 acres), wheat (147,972 acres), sorghum (79,647 acres), maize (52,358 acres), barley (85,410 acres), rye (33,630 acres), sugar-cane (2,269 acres) and other crops (384,491 acres). Particulars concerning the area of green fodder in the several States during each of the years 1949–50 to 1953–54 are given in the following table, together with the average for the period of ten years ended in 1938–39.

GREEN FODDER : AREA.
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929–30 to 1938–39	482,989	(a)	347,804	106,820	189,332	24,255	656	(a)
1949–50	584,541	44,928	581,811	277,265	550,690	49,780	2,249	2,091,264
1950–51	528,214	41,279	583,304	340,727	566,312	57,331	1,214	2,118,381
1951–52	672,633	45,661	604,190	385,079	636,728	57,548	1,225	2,403,064
1952–53	661,767	40,303	572,212	285,857	574,790	60,142	1,108	2,196,179
1953–54	761,552	56,210	663,097	365,301	507,756	60,127	1,218	2,415,261

(a) Not available.

2. **Value of Green Fodder Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1953–54, excluding Western Australia, may be taken as approximately £7,720,000.

§ 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 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 are shown in the following table. In 1953–54 the total area of sugar-cane (excluding areas cut for green fodder) was again a record at 481,602 acres, an increase of 11.0 per cent. over the previous record area of 433,894 acres in 1952–53.

SUGAR-CANE : AREA.(a)
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total.
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
1949–50 ..	8,517	8,081	297	272,812	97,878	10,639	281,329	105,959	10,936	398,224
1950–51 ..	8,207	7,134	236	263,666	106,903	10,976	271,873	114,037	11,212	397,122
1951–52 ..	8,354	5,974	191	273,370	101,731	13,247	281,724	107,705	13,438	402,867
1952–53 ..	5,202	8,581	277	274,757	131,724	13,353	279,959	140,305	13,630	433,894
Average, 1943–44 to 1952–53 ..	7,430	7,842	283	244,764	95,608	12,500	252,194	103,450	12,783	368,427
1953–54 ..	7,787	6,869	468	332,703	120,929	12,846	340,490	127,798	13,314	481,602

(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 1953–54 amounted to 2,269 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 although this was not the case in 1953–54 when both area and production were at record levels.

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, as against the record production of 9,014,312 tons in the 1953–54 season. Prior to 1953–54 the previous record production was 7,051,555 tons in 1950–51.

The average production of cane during the ten seasons ended 1952–53 was 5,435,120 tons, and of raw sugar 751,236 tons. Particulars of the total production of cane and sugar for the years 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 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
1949–50	330,738	40,706	6,518,042	896,413	6,848,780	937,119
1950–51	359,849	41,258	6,691,706	879,844	7,051,555	921,102
1951–52	321,388	41,060	5,005,172	704,341	5,326,560	745,401
1952–53	125,714	14,272	6,841,536	934,614	6,967,250	948,886
Average, 1943–44 to 1952–53	264,502	32,871	5,170,618	718,365	5,435,120	751,236
1953–54	263,249	34,004	8,751,063	1,220,383	9,014,312	1,254,387

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1953–54 amounted to 1,254,387 tons manufactured from 9,014,312 tons of cane, compared with the previous record production of 948,886 tons in 1952–53.

Official annual data are not available regarding the total number of persons engaged in the sugar industry in New South Wales and Queensland other than the number of separate holdings of 5 acres or more growing cane (7,033 in 1953–54).

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 1952–53 were 35.60 tons for New South Wales, and 21.12 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.42 tons and 2.93 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1952–53 were 21.55 tons and 2.98 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
1949–50	38.83	4.78	8.13	23.89	3.29	7.27	24.34	3.33	7.31
1950–51	43.85	5.03	8.72	25.38	3.34	7.61	25.94	3.39	7.66
1951–52	38.47	4.92	7.83	18.31	2.58	7.11	18.91	2.65	7.15
1952–53	24.17	2.74	8.81	24.90	3.40	7.32	24.89	3.39	7.34
Average, 1943–44 to 1952–53.. ..	35.60	4.42	8.05	21.12	2.93	7.20	21.55	2.98	7.23
1953–54	33.81	4.37	7.74	26.30	3.67	7.17	26.47	3.68	7.19

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 1952–53 it required on the average 7.23 tons of cane to produce 1 ton of sugar, or 13.83 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 this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation 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 1949–50 to 1953–54 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include 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.	Production.	Exports. (a)	Miscellaneous Uses. (b)	Consumption in Australia. (a)	
					Total. (c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936–37 to 1938–39	+ 6.2	779.3	435.3	11.2	326.6	106.5
1949–50	−10.4	902.5	483.4	19.5	410.0	114.1
1950–51	+ 5.8	906.9	433.3	21.8	446.0	120.2
1951–52	+24.7	702.2	206.1	23.8	447.6	117.6
1952–53	+ 3.8	948.3	500.8	18.6	425.1	109.0
1953–54	+41.3	1243.6	738.7	17.8	445.8	112.2

(a) Includes sugar content of manufactured products. (b) Includes industrial uses and losses in refining. (c) In terms of refined sugar.

7. **Consumption in Factories.**—The quantity of sugar used in factories in 1953-54 amounted to 240,974 tons compared with 241,846 tons in 1952-53 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 1953-54 consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 06,201 tons and by those producing confectionery, ice cream, etc., amounted to 47,180 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. On 1st September, 1946, a Sugar Agreement Act came into operation fixing wholesale and retail prices of sugar and in June, 1951 a new agreement was signed to cover the period to 31st August, 1956. Details of prices are shown in para. 14 of this section (*see* page 873).

The Queensland Government acquires the whole of the sugar production of that State and 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 full pool price for sugar up to the amount of their previous maximum production, further supplies being acquired at export prices.

Between 1929 and 1939 production rose by more than 70 per cent. despite the restrictions mentioned above 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 to 942,300 tons in 1950, 1,045,000 tons in 1953 and 1,170,900 tons in 1954. These latter increases followed the negotiation of the Commonwealth Countries Sugar Marketing Agreement of 1949, which allowed the Queensland Government to initiate a planned expansion of the industry.

9. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 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. A new agreement operating from 7th July, 1951 covers the period up to 31st August, 1956. Some of the terms of the 1951 Agreement (in particular, those relating to sugar prices), were amended in 1952, and incorporated in the Sugar Agreement Act 1954.

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

The new agreement, which was negotiated by 38 countries, is designed to assure supplies of sugar to importing countries and markets to exporting countries at stable and equitable prices. It is also aimed at increasing world consumption of sugar. Basic export quotas have been allocated with provision for reductions or increases to maintain prices within a specified range.

The British Commonwealth, as a whole, has been granted an export quota of 2,375,000 tons, rising to 2,450,000 tons in 1956, which is not subject to the fluctuations mentioned above. The allocation of this total between exporting members of the British Commonwealth is a matter for the countries and territories themselves, Australia's share being fixed at 600,000 tons. Details of the marketing arrangements for Australian sugar are given in para. 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 1949–50 to 1953–54 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.
	Per cent.	£ s. d.	£ s. d.	£'000.
1938–39	55.78	8 4 3	15 3 11	12,806
1949–50	46.92	29 7 6	26 13 8	25,362
1950–51	43.73	32 16 6	28 3 4	26,132
1951–52	21.12	36 15 6	34 7 0	24,912
1952–53	49.66	41 2 0	42 12 9	40,781
1953–54	58.39	39 18 0	42 10 8	52,572

(*a*) 94 net titre. (*b*) As supplied by the Queensland Sugar Board.

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 1953–54 amounted to £249,622. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

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 1949–50 to 1953–54 are as follows :—

SUGAR : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934–35 to 1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Quantity tons	377,930	432,711	387,841	167,431	459,370	706,801
Value £'000	3,481	14,147	14,792	6,896	21,655	31,592

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 IX.—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 1949 to 1953 in the case of raw sugar, and from 1947 to 1956 in the case of refined sugar, are shown in the following table.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per Ton.	Retail Price per lb
	Home Consumption.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1949 ..	24 6 0	29 7 6	26 13 8	4.12.47 to 28.10.49	37 6 8	4½
1950 ..	24 11 0	32 16 6	28 3 4	29.10.49 to 6.7.51	41 9 4	5
1951 ..	33 14 0	36 15 6	34 7 0	7.7.51 to 23.3.52..	53 6 8	6½
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	39 18 0	42 10 8	13.10.52 to 31.8.56	73 16 11	9

(a) Including "Excess" Sugar.

15. **Marketing Arrangements.**—Since 1939 the British Ministry of Food has purchased Australia's surplus raw sugar at prices negotiated annually and varying from £ stg. 11 5s. in 1939 to £ stg. 40 15s. in 1955 including tariff preference (for prices in other years *see* earlier issues of the Year Book). From 1953 the negotiated price applies to 314,000 tons of exports annually, the balance of exports being sold at world prices.

In December, 1949, the United Kingdom Government undertook to find a market for Australia's sugar exports until the end of 1952 when a new British Commonwealth Sugar Agreement came into operation. The new arrangement, as extended annually, provides for Australia to export a maximum of 600,000 tons annually from 1953 to 1962. The United Kingdom Government agreed to take 314,000 tons at annually negotiated prices, the balance to be sold at world prices, plus preference if sold in the United Kingdom or Canada.

The Sugar Bill introduced into the House of Commons on 5th July, 1955, proposes that dealings in sugar in the United Kingdom will revert to a trader to trader basis. However, under the Bill, a Sugar Board is created which will be 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 to which the Queensland Government contributes £216,000 annually on behalf of the Sugar Industry (contributions were suspended temporarily whilst funds exceeded £500,000).

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.

Any money remaining may be used 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 fruits.

17. **Sugar Inquiry Committee**—The Sugar Inquiry Committee was constituted in March, 1952, to investigate the sugar industry and in particular the Sugar Agreement between the Commonwealth and Queensland Governments. As a result of its findings the wholesale and retail prices of sugar were increased from 13th October, 1952 by £8 per ton and 1d. per lb. respectively.

Other amendments were also made, and incorporated in the Sugar Agreement Act, 1954.

18. **Bulk Handling of Sugar.**—Bulk handling facilities are being established at the ports of Mackay and Lucinda Point following successful tests and consideration of two independent reports by the Sugar Board. These are expected to be completed by 1957 and 1958 respectively. Proposals have also been made for installations at other sugar ports.

§ 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 1954 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 1949-50 to 1953-54 and the averages for the ten-year periods ended 1938-39 and 1952-53 are shown in the following table.

VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.(*a*)
Average, 1929-30 to 1938-39	15,777	40,563	2,142	54,156	5,666	118,304
1949-50 ..	16,931	45,386	3,135	60,253	9,676	135,381
1950-51 ..	16,917	45,313	3,045	61,971	9,258	136,504
1951-52 ..	17,047	45,267	2,819	61,214	9,358	135,705
1952-53 ..	18,006	45,968	2,808	60,603	9,233	136,618
Average, 1943-44 to 1952-53	16,622	44,274	3,014	59,258	9,721	132,889
1953-54—						
Wine ..	8,273	5,831	317	42,750	2,770	59,941
Table ..	2,637	1,956	2,567	285	1,423	8,868
Drying ..	7,218	37,990	..	19,086	5,009	69,303
Total ..	18,128	45,777	2,884	62,121	9,202	138,112

(*a*) Excludes particulars for Australian Capital 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 31.7 million gallons in 1953-54. 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 12.4 million gallons (1.4 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 1949–50 to 1953–54 seasons, together with the averages for the ten-year periods ended 1938–39 and 1952–53, is 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
1949–50 ..	5,185	3,230	45	23,702	513	32,675
1950–51 ..	4,372	2,358	43	18,611	652	26,036
1951–52 ..	5,465	3,472	33	25,495	790	35,255
1952–53 ..	4,250	2,267	42	22,733	731	30,023
Average, 1943–44 to 1952–53	4,088	2,447	34	20,758	639	27,966
1953–54 ..	5,066	2,327	59	23,497	717	31,666

(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.* The principal countries of origin of wine imported into Australia were, before the 1939–45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war wine imports have been obtained from France. Imports for 1953–54 amounted to 40,374 gallons valued at £84,088 compared with 7,683 gallons valued at £16,350 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938–39.

(ii) *Exports.* Before the 1939–45 War practically all wine exported was sent to the United Kingdom, only about 200,000 gallons per annum being sent elsewhere. Exports in 1953–54 totalled 1,394,960 gallons, of which the United Kingdom received 926,814 gallons, New Zealand 72,236 gallons, Canada 300,772 gallons, and other countries 95,138 gallons.

Exports for the five years ended 1953–54 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
1949–50 ..	6,093	1,097,225	1,103,318	6,323	509,516	515,839
1950–51 ..	3,651	1,219,258	1,222,909	7,121	627,741	634,862
1951–52 ..	6,685	1,155,610	1,162,295	18,983	711,554	730,537
1952–53 ..	7,373	1,160,088	1,167,461	21,277	742,649	763,926
1953–54 ..	4,842	1,390,118	1,394,960	16,631	886,228	902,859

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* 1929–1954. This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 6 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes produced during the season 1953–54 in each State are shown in § 3 of this chapter. (*See* p. 835)

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1949–50 to 1953–54 and the averages for the ten-year periods ended 1938–39 and 1952–53 are shown in the following table. Production in 1953–54 was 89,914 tons, 10,819 tons less than the preceding year (100,733 tons), which was the second highest production on record.

RAISINS(*a*) AND CURRANTS : PRODUCTION.

(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929–30 to 1938–39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1949–50 ..	5,721	898	42,194	6,930	5,895	4,244	289	1,685	54,099	13,757
1950–51 ..	4,419	971	28,007	6,081	7,870	5,830	402	2,547	40,698	15,429
1951–52 ..	7,005	537	44,834	3,858	7,999	4,730	301	2,522	60,319	11,647
1952–53 ..	9,551	990	55,098	6,589	18,486	7,256	302	2,461	83,437	17,296
Average, 1943–44 to 1952–53 ..	6,270	985	41,513	6,888	10,859	5,961	545	2,751	59,187	16,585
1953–54 ..	8,261	591	51,073	4,669	16,451	6,326	259	2,284	76,044	13,870

(*a*) Sultanas and lexias.

5. **Production and Disposal of Dried Vine Fruit.**—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export. The quantities disposed of in Australia and overseas, as recorded by the Commonwealth Dried Fruits Control Board for the season ended December, 1954, totalled 89,573 tons, Australian consumption amounting to 17,729 tons and oversea exports 71,844 tons. 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 1949–50 to 1953–54 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
1949–50 ..	28,558	1,819	7,063	409	35,621	2,228
1950–51 ..	27,122	2,586	7,231	717	34,353	3,303
1951–52 ..	32,669	3,961	5,003	646	37,672	4,607
1952–53 ..	58,886	6,395	10,387	1,053	69,273	7,448
1953–54 ..	51,693	5,561	10,731	1,039	62,424	6,600

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1953–54 being 44,683 tons, 4,397 tons and 11,985 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 to trader basis.

The British Ministry of Food agreed 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. The support prices under this arrangement were : Currants 1 and 2 crown, £87 10s. per ton, Currants 3 and 4 crown, £93 15s. ; Sultanas 1 crown and upwards, £100 ; Lexias 4 and 5 crown seeded, £112 10s., unseeded, £100.

Details of contract prices for the years 1946 to 1953 will be found on page 783 of Official Year Book No. 41.

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 and Government representatives and members with commercial experience and experience in marketing dried fruits, controls the sale and distribution of dried fruit exports and recommends the conditions under which export licences will be issued.

In conjunction with its London agency the Board has improved dried fruit marketing overseas by its system of appraisement, 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 recommendations 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. From that year until 1942–43, when 260,384 acres were under fruit, there was a gradual decline. In each subsequent

year there was a continuous upward movement to 1947–48 when the area reached a new peak of 290,320 acres. Subsequently there was a continuous decline to about 271,000 acres in 1951–52 and 1952–53. In 1953–54 there was a slight increase to 273,000 acres. The total area of orchards and fruit-gardens in the several States during the years 1949–50 to 1953–54 compared with the average for the ten seasons 1929–30 to 1938–39 is shown in the following table :—

ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929–30 to 1938–39	84,025	76,643	32,437	29,365	20,703	32,627	69	275,869
1949–50	94,725	71,046	35,986	26,858	22,744	28,471	98	279,928
1950–51	91,477	69,911	35,241	28,686	22,013	27,130	103	274,561
1951–52	89,362	68,715	35,049	29,375	21,710	26,552	110	270,882
1952–53	90,131	67,234	37,280	28,649	21,492	26,075	92	270,953
1953–54	90,761	66,180	39,979	29,758	21,542	24,818	95	273,133

2. **Varieties of Crops.**—The varieties grown differ in various parts of the States, ranging from such fruits as pineapples, papaws and mangoes of the tropics, to strawberries, raspberries and currants of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, bananas, pineapples, apples, 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 extensively grown. In Western Australia, apples, oranges, lemons, pears, plums, peaches, apricots and figs are the chief varieties. In Tasmania, apples occupy over two-thirds of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberries are extensively grown, 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 quantity and value of fruit produced.

ORCHARDS AND FRUIT-GARDENS, 1953-54.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA, BEARING AND NON-BEARING (ACRES).								
Apples ..	15,089	19,252	8,482	6,802	12,332	18,625	86	80,668
Apricots ..	2,027	4,912	307	4,176	409	1,050	..	12,881
Bananas ..	20,714	..	7,529	..	556	..	..	28,799
Cherries ..	2,436	1,706	11	934	37	81	..	5,205
Citrus—								
Oranges ..	26,473	5,332	3,681	6,678	3,784	..	..	45,948
Mandarins ..	1,940	98	1,482	114	217	..	..	3,851
Lemons and Limes ..	3,098	1,659	436	316	549	..	..	6,058
Other ..	735	330	103	302	152	..	..	1,622
Nuts ..	495	771	213	3,022	214	..	..	4,715
Peaches ..	6,693	12,001	1,488	2,522	793	94	4	23,685
Pears ..	3,373	12,857	370	1,676	1,025	1,737	2	21,040
Pineapples ..	461	..	11,675	..	..	..	..	12,136
Plums and Prunes	4,598	3,015	1,304	1,529	888	209	3	11,546
Small Fruits ..	10	518	147	283	11	2,975	..	3,974
Other Fruits ..	2,619	3,609	2,751	1,404	575	47	..	11,005
Total ..	90,761	66,180	39,979	29,758	21,542	24,818	95	273,133

ORCHARDS AND FRUIT-GARDENS, 1953–54—*continued.*

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION.								
Apples bus.	1,764,750	2,338,903	499,699	1,380,053	1,170,030	5,304,000	11,098	12,468,533
Apricots ,,	322,664	583,695	15,587	700,058	48,140	70,587	..	1,743,731
Bananas ,,	2,747,717	..	532,810	..	4,757	..	..	3,322,284
Cherries ,,	148,522	81,834	90	62,503	1,220	8,720	..	302,889
Citrus—								
Oranges ,,	3,234,190	678,064	325,469	1,367,946	443,373	..	..	6,049,042
Mandarins ,,	183,134	16,623	143,718	30,369	21,599	..	..	395,443
Lemons and Limes ,,	365,514	151,022	54,521	58,995	94,912	..	..	724,964
Other ,,	131,697	52,289	18,349	48,623	24,499	..	..	275,457
Nuts .. lb.	179,793	252,095	70,891	1,703,856	33,398	..	..	2,240,033
Peaches bus.	1,046,430	1,804,896	81,980	317,686	72,736	11,612	60	3,335,400
Pears ,,	456,069	3,152,432	33,804	338,797	99,807	360,833	90	4,441,832
Pineapples ,,	75,006	..	3,187,648	..	..	..	..	3,262,654
Plums and Prunes ,,	455,962	208,904	71,470	155,123	81,211	23,515	12	996,197
Small Fruits cwt.	172	9,371	4,849	2,821	155	101,278	..	118,646
GROSS VALUE OF PRODUCTION. (£'000.)								
Apples ..	3,552	2,222	901	1,503	1,767	4,715	23	14,683
Apricots ..	887	642	61	1,067	78	53	..	2,788
Bananas ..	6,145	..	978	..	188	..	..	7,311
Cherries ..	634	184	1	167	14	11	..	1,011
Citrus—								
Oranges ..	3,097	659	355	1,436	449	..	..	5,996
Mandarins ..	212	21	248	44	32	..	..	557
Lemons and Limes ..	361	128	81	26	54	..	..	650
Other ..	95	41	20	21	22	..	..	199
Nuts	20	37	5	170	4	..	..	236
Peaches ..	1,270	1,489	140	453	129	8	..	3,489
Pears ..	565	2,837	46	424	167	416	..	4,455
Pineapples ..	93	..	2,255	..	..	..	.	2,348
Plums and Prunes	713	124	127	235	143	9	..	1,351
Small Fruits ..	3	73	54	30	4	356	..	520
Other Fruits ..	252	60	336	111	60	2	..	821
Total ..	17,899	8,517	5,608	5,687	3,111	5,570	23	46,415

3. **Principal Fruit Crops.**—The area, production and gross value of the principal fruit crops during the periods 1949–50 to 1953–54 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
1949–50..	81,744	13,277	29,669	57,367	27,318	21,579	12,226
1950–51..	80,086	13,302	27,515	57,266	26,197	21,737	12,163
1951–52..	80,206	13,282	26,021	58,419	25,603	20,957	11,841
1952–53..	80,194	12,899	27,724	57,605	23,755	21,404	11,485
1953–54.. . ..	80,668	12,881	28,799	57,470	23,685	21,040	11,546

PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION—*continued.*

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
	PRODUCTION ('000 BUSHELS).						
Average, 1929–30 to 1938–39	10,013	1,014	2,270	5,011	1,984	2,130	948
1949–50..	9,225	1,463	3,428	6,394	2,303	2,861	806
1950–51..	9,711	1,309	3,224	7,645	2,435	3,549	940
1951–52..	10,743	1,492	2,749	6,168	2,822	3,534	845
1952–53..	9,231	1,265	2,244	6,064	2,677	3,513	913
1953–54..	12,469	1,744	3,322	7,445	3,335	4,442	996
	GROSS VALUE OF PRODUCTION. (£.000)						
Average, 1929–30 to 1938–39	2,677	326	1,072	1,808	679	559	286
1949–50..	7,710	1,328	3,880	5,350	1,687	2,108	786
1950–51..	9,105	1,464	4,532	5,936	2,068	2,927	1,107
1951–52..	13,346	2,307	6,742	8,355	3,274	3,752	1,379
1952–53..	11,939	2,003	6,171	8,050	3,305	3,911	1,586
1953–54..	14,683	2,788	7,311	7,402	3,489	4,455	1,351

4. **Production of Jams and Jellies and Preserved Fruit.**—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia. In 1953–54 output of jams and jellies amounted to 85,687,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 324,677,000 lb. Production of preserved apples was 13,885,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 224,505 tons in 1953–54.

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 1954–55 are shown in Chapter XXIX.—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 oversea countries. The values of the shipments in 1953–54 amounted to £9,384,000 and £7,395,000 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruit and pears are fairly considerable. Shipments of raisins and currants have increased greatly since 1914–15 and are mainly responsible for the growth in the dried fruit exports, although dried tree fruit also figures amongst the exports.

(ii) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1949–50 to 1953–54 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
1949–50 ..	3,010	2,438	572	639	563	650	4,225	3,934
1950–51 ..	3,263	3,393	885	1,301	619	761	4,854	5,727
1951–52 ..	3,263	4,285	808	1,492	432	779	4,601	6,895
1952–53 ..	4,696	6,740	937	1,675	433	742	6,181	9,560
1953–54 ..	4,728	6,089	1,209	2,045	533	809	6,596	9,384

(*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 1945–50 to 1953–54, 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.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934–35 to 1938–39	12,225	80	4,315	117	−7,910	37
1949–50 ..	10,125	212	10,218	661	93	449
1950–51 ..	11,666	285	24,336	1,366	12,670	1,081
1951–52 ..	12,680	293	4,520	414	−8,160	121
1952–53 ..	5,851	142	3,966	403	−1,885	261
1953–54 ..	11,638	303	6,526	795	−5,112	492

(*a*) Excludes raisins and currants referred to separately under Vineyards, § 15, par. 5.

NOTE.—Minus sign (−) denotes net 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 1953–54 exports amounted to only 6,315,000 lb., valued at £372,000. 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 1953–54, was 534,000 lb. valued at £32,000. 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 1953–54 the value of exports had increased to £14,186,203. In addition, the exports of pulped fruits during 1953–54 amounted to 13,005,000 lb., valued at £1,441,000. Quantities of fruit preserved in liquid exported from Australia in 1953–54 amounted to 199,242,000 lb. compared with average exports of 68,896,000 lb. for the five years ended 1938–39. Exports in 1953–54 were principally made up of peaches (57,009,000 lb.), pears (59,070,000 lb.), apricots (44,797,000 lb.) and pineapples (32,292,000 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 comprised of 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* 1938–1947. 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. **Oversea Marketing of Canned Fruit.**—(i) *The Canned Fruits Export Control Act* 1926–1953. This legislation was introduced with the object of organizing the oversea marketing of canned fruit. The Australian Canned Fruits Board, comprising members representing canneries, pineapple interests and the Commonwealth Government, 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* 1926–1938. 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 1951–52 to 1953–54.

FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1951–52.		1952–53.		1953–54.	
	Area Sown.	Production.	Area Sown.	Production	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French and Runner(b) ..	15,111	19,469	14,556	19,748	13,269	19,109
Beans, Navy ..	2,185	446	2,068	533	2,468	631
Beetroot	2,440	16,345	2,075	12,429	1,855	11,242
Cabbages and Brussels Sprouts	8,160	81,321	7,347	78,126	6,676	69,174
Carrots	5,396	41,761	4,589	33,038	3,992	33,399
Cauliflowers ..	7,506	76,910	7,868	79,713	7,362	79,837
Lettuces	3,644	13,838	4,084	15,341	4,012	15,809
Parsnips	1,677	13,445	1,631	12,469	1,450	12,055
Peas, Blue ..	7,668	5,332	3,567	1,977	5,365	3,053
Peas, Green ..	41,056	36,231	42,213	41,360	33,191	32,444
Pumpkins	29,522	76,754	25,524	72,359	20,168	60,105
Tomatoes	17,339	102,092	18,443	101,292	13,136	76,683
Turnips, Swede and White	6,977	26,435	5,037	19,268	5,151	24,075
All Other	13,142	..	12,889	..	12,872	..
Total ..	161,823	..	151,891	..	130,967	..

(a) Excludes potatoes and onions. (b) Excludes french beans harvested dry; these are included in "All Other".

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1953–54 amounted to 40,265,000 lb., which was considerably higher than pre-war production, but only approximately 56 per cent. of the peak war-time production. The principal canned vegetables produced in 1953–54 were green peas 12,114,000 lb., green beans 827,292 lb., baked beans (including pork and beans) 11,755,500 lb., tomatoes 471,773 lb. and asparagus 6,276,312 lb.

The production of dehydrated vegetables, which was initiated during the 1939–45 War by the Commonwealth Government, rose to a maximum of 22 million lb. in 1945–46. but in 1953–54 had declined to approximately 400,000 lb.

3. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1953–54 consisted of :—Pulse, 17,053 tons, £878,000 ; onions, 3,317 tons, £121,000 ; potatoes, 4,010 tons, £155,000 ; other vegetables, 2,617 tons, £227,000. Imports of pulse amounted to 8,403 tons, valued at £525,000, whilst imports of fresh vegetables were negligible.

In 1953–54 exports of vegetables preserved in liquid consisted of :—Peas, 3,961,000 lb., £255,000 ; tomatoes, 3,435,000 lb., £204,000 ; other vegetables, 1,704,000 lb., £130,000.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1954–55 are shown in Chapter XXIX.—Miscellaneous, of this Year Book.

§ 18. Tobacco.

1. **States, Area and Production.** Tobacco-growing promised years ago to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888–89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. Thereafter the industry fluctuated for many years reaching a peak in 1932–33 when 26,272 acres were planted.

In 1953–54 the acreage planted was 8,246 acres which was 73 per cent. of the average for the ten years ended 1938–39. Owing to improvement in average yields, however, the production of dried leaf in 1953–54 was 50 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 1949–50 to 1953–54, together with averages for the ten-year periods ended 1938–39 and 1952–53 :—

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
1949–50	327	919	2,677	..	661	..	4,584
1950–51	342	1,071	4,142	..	967	..	6,472
1951–52	432	1,500	5,038	..	1,229	..	8,199
1952–53	445	1,613	4,339	..	1,525	..	7,922
Average, 1943–44 to 1952–53 ..	423	1,310	2,814	..	912	..	5,459
1953–54	501	2,246	4,065	..	1,434	..	8,246

(a) Excludes Northern Territory.

TOBACCO : AREA AND PRODUCTION—*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929–30 to 1938–39 ..	860	2,354	1,400	83	361	56	5,114
1949–50	299	668	2,540	..	631	..	4,138
1950–51	184	911	2,144	..	972	..	4,211
1951–52	518	1,381	4,667	..	988	..	7,554
1952–53	514	1,472	3,431	..	1,068	..	6,485
Average, 1943–44 to 1952–53 ..	388	899	2,246	..	693	..	4,226
1953–54	587	2,155	4,015	..	912	..	7,669

(a) Excludes Northern Territory.

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

On the 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 the 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.

(ii) *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 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 were as follows :—

"To report annually to the Agricultural Council, through the Standing Committee on Agriculture and also to the Commonwealth Minister for Trade and Customs, 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 of a technique to control " Field Blue Mould " and 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.

The Tobacco Advisory Committee has 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 has agreed to contribute £84,000 and tobacco manufacturers the remaining £84,000. 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.

(vi) *War Service Land Settlement.* A development of considerable interest in the history of tobacco growing in Australia was the inclusion of tobacco farming within the framework of the present war service land settlement scheme. In 1948 the Government approved of projects submitted by Queensland and Western Australia for the settlement of ex-servicemen on tobacco farms.

(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 6 per cent. and 12½ per cent. respectively from 1st July, 1954. The percentages were further increased to 7½ per cent. and 17½ per cent. respectively from 1st July, 1955. In 1953–54 the quantity of cured leaf used in tobacco factories in Australia amounted to 37.9 million lb. of which 4.9 million was of local origin, the balance being imported, chiefly from the United States of America.

3. **Oversea Trade.**—Imports of tobacco and manufactures thereof into Australia during 1953–54 were valued at £17.8 million, including 37.3 million lb. of unmanufactured tobacco valued at £12.4 million. Exports of tobacco and manufactures thereof during 1953–54 were valued at £281,000.

§ 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1953–54 being 1,694 acres, of which 1,350 acres were in Tasmania, and 344 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901–2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883–84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1949–50 to 1953–54 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.	Cwt.	Cwt.	Cwt.	Cwt.
Average, 1934–35 to 1938–39	20,576	173	1,020	78	21,518	18,992
1949–50	22,993	465	12,047	..	35,040	31,997
1950–51	26,147	620	20,596	11	46,732	36,011
1951–52	17,914	517	24,592	..	42,506	38,012
1952–53	32,116	1,021	12,512	11	44,617	40,845
1953–54	24,666	802	14,675	59	39,282	43,525

(a) Disregards movements in stocks.

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

§ 20. Flax.

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

During the 1914–18 and 1939–45 Wars there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government, the area sown reaching a maximum of more than 61,000 acres in 1944–45. Government assistance was again provided in 1950 and a bounty on scutched flax fibre used was paid during the period July, 1950 to March, 1953, when increased customs duties were introduced. Following recent Tariff Board inquiries the Government has decided to reintroduce the 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 Government has also decided to proceed with the establishment of a Flax Commission to direct and control Commonwealth flax undertakings previously handled by the Flax Production Committee.

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. Australia.	W. Aust.	Australia.
	AREA (ACRES).			
Average, 1934–35 to 1938–39	1,021	..	..	(a) 1,030
1949–50	5,261	1,753	2,441	9,455
1950–51	3,633	1,198	1,957	6,788
1951–52	2,821	1,599	1,965	6,385
1952–53	2,840	1,618	2,423	6,881
1953–54	9,550	3,040	3,105	15,695

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

FLAX FOR FIBRE : AREA AND PRODUCTION—*continued.*

Season.	Victoria.	S. Australia.	W. Aust.	Australia.
PRODUCTION (TONS OF STRAW).				
Average, 1934–35 to 1938–39.. ..	61	..	..	61
1949–50	6,925	1,511	2,629	11,065
1950–51	5,071	1,365	2,264	8,700
1951–52	4,065	2,214	1,573	7,852
1952–53	4,379	2,967	2,856	10,202
1953–54	12,984	4,647	4,470	22,101

Prior to 1948–49, the growing of flax for linseed oil had not been developed extensively in Australia. Action has since been taken to develop this industry, however, 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 of 14% to 46,338 acres and in 1953–54 a further decline of 78% leaving the total area sown in 1953–54 at only 6,343 acres. This sudden decline in areas sown was due primarily to the fall in the price paid to the growers for linseed which in turn reflected the decline in world prices for linseed oil.

In Australia linseed is usually grown on land suitable for other grains so that a price differential in favour of linseed is necessary before any expansion will occur in the areas sown. In addition the differential must be sufficient to overcome the higher cost factors involved in growing linseed than in growing other grains. In 1953–54 in particular this price differential was not maintained at the same level as in previous years and many growers reverted to the growing of other grains.

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 1949–50 to 1953–54.

FLAX FOR LINSEED : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
1949–50	6,085	8,148	9,533	3,737	899	453	28,855
1950–51	14,630	9,370	14,986	8,161	543	146	47,836
1951–52	15,785	4,431	28,580	4,853	12	80	53,741
1952–53	15,439	1,063	25,875	3,961	..	..	46,338
1953–54	1,400	1,226	3,647	70	..	..	6,343
PRODUCTION (TONS OF LINSEED).							
1949–50	1,602	1,449	2,249	885	55	153	6,393
1950–51	1,163	1,724	3,561	1,438	36	32	7,954
1951–52	1,617	705	4,174	857	1	39	7,393
1952–53	2,678	176	6,526	551	..	..	9,931
1953–54	256	202	359	5	..	..	822

§ 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.	Q'land.	W. Aust	Australia. (a)	N.S.W.	Q'land.	W. Aust.	Australia. (a)
Average, 1929–30 to 1938–39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1949–50	133	17,697	27	17,857	52	7,907	9	7,968
1950–51	225	16,656	92	16,973	103	5,312	18	5,433
1951–52	374	13,312	15	13,701	222	4,535	9	4,766
1952–53	789	18,920	10	19,719	409	8,438	7	8,854
1953–54	1,525	36,617	(c)	d 38,142	718	17,866	(c)	d 18,584

(a) Excludes Northern Territory. (b) Average for five years. (c) Not available for publication. (d) Excludes Western Australia for which details are not available for publication.

The gross value of the 1953–54 crop was £2,169,940 which was approximately £1.3 million greater than in 1952–53. This increase was largely the result of the high level of production at 18,584 tons, the highest since 1946–47 when 22,774 tons were produced, and reflected the higher area of 38,142 acres sown in 1953–54 compared with 19,719 acres in 1952–53.

Considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes. 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 1953–54 of 12,727 tons (shell equivalent) consisted of 8,854 tons grown locally in the 1952–53 season and 3,873 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 portion of its requirements of raw cotton, the balance being obtained in 1953–54 chiefly from Pakistan, the United States of America, Egypt, India and Brazil. 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 was increased very considerably during the early war years—it reached 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 IX.—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 Cotton Bounty Act extended the period of the guaranteed return for three years to 31st December, 1958. The guaranteed return has remained at 14d. per lb. of seed cotton since the 1953 season and the Government has announced that this guaranteed return will apply to the 1956 season's crop.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1949 to 1953 are shown hereunder together with the average for the period of ten years ended 1939 :—

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.	lb.
Average, 1930 to 1939	58,436	16,617	291	5,564	11,181	284	95
1949	2,688	719	26	255	522	267	95
1950	2,952	1,102	54	402	806	373	136
1951	4,480	1,406	127	549	1,124	314	123
1952	5,866	2,184	107	755	1,483	372	129
1953	8,965	5,132	316	2,115	4,229	572	236

(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
1949–50	255	28,357	28,612	33,823
1950–51	402	45,201	45,603	40,907
1951–52	549	43,296	43,845	39,030
1952–53	755	24,796	25,551	31,128
1953–54	2,115	44,203	46,318	43,994

§ 23. Financial Assistance to Primary Producers.

NOTE.—*See also* Chapter XX.—Public Finance, pages 775-776.

Direct financial assistance to primary producers by the Commonwealth Government takes the form of bounties, subsidies and other financial assistance, which in 1953-54 amounted to £17,469,000 compared with £13,576,000 in 1952-53 and £22,377,000 in 1951-52.

Brief details of some of the more important payments are given below :—

(i) *Wheat Bounty.* The Wheat Bounty Act 1951 provided for the payment of a bounty on wheat sold for stock feed purposes during the two-year period which expired on 30th November, 1953. Expenditure during the financial year 1953-54 was £1,010,000, which represented the balance of the bounty payable under the Act. In 1952-53 the expenditure on the bounty was £2,759,000.

(ii) *Cotton Bounty.* The Cotton Bounty Act 1951-52 provides for payment of a bounty on seed cotton delivered by growers to processors before 31st December, 1955. The present rate of bounty is designed to give growers an average return of 14d. per lb. The total payment in 1953-54 was £17,650 in respect of 5,400,000 lb. of cotton. There was no payment of cotton bounty in 1952-53.

(iii) *Tractor Bounty.* Under the Tractor Bounty Act 1939-1953, bounties are payable on tractors produced and sold for use in Australia up to 24th October, 1955. The rates of bounty, which were increased by 150 per cent. by the amending Act of 1953, vary between £80 and £240 per tractor, according to belt horse power of the engine. Payments in 1953-54 amounted to £145,000 on 643 tractors as compared with £38,000 on 320 tractors in 1952-53.

(iv) *Dairy Products Bounty.* Under the provisions of the Dairy Industry Assistance Act 1952, a subsidy is paid to dairymen to ensure them a return equal to the average cost of production of their produce. In 1953-54 the rate of subsidy on butter was 89s. 10d. per cwt. and on cheese 32s. per cwt., total payments amounting to £15,400,000. The respective rates in 1952-53 were 85s. and 32s. per cwt. and total payments £15,719,000.

(v) *Artificial Fertilizers.* Prices charged to primary producers for superphosphate and nitrogenous fertilizers (other than sulphate of ammonia produced locally as a by-product on which a surcharge is fixed) have been less than cost, the balance being met by the surcharge on sulphate of ammonia and by Commonwealth subsidy. Total subsidy payments in 1953-54 were £175,000 as compared with £289,000 in 1952-53.

Other forms of financial assistance to primary producers include payments for Cattle Tick Control, the Dairy Industry Extension Grant, Flood and Bush Fire Relief, Food Production, Expansion of Agricultural Advisory Services, Assistance to the Tobacco Industry and Wheat shipped to Tasmania—Freight Subsidy. In 1953-54 payments to primary producers for these purposes totalled £721,000.

§ 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, 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.

In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

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, Gilbert Islands Group and Christmas Island. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1953–54, 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.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
Ammonium Sulphate	tons	26,090	27,259	42,756	40,848	384	11,187
	£'000	215	662	1,050	1,016	10	242
Potash Salts	tons	10,641	12,924	14,605	15,978	14,467	22,234
	£'000	82	266	336	369	314	397
Rock Phosphate	tons	635,097	1,185,402	1,101,678	1,014,100	1,271,130	1,143,330
	£'000	776	2,559	2,217	2,258	2,478	2,432
Sodium Nitrate	tons	7,199	13,416	5,679	15,802	7,848	6,948
	£'000	63	273	130	363	185	183
Other ..	tons	3,430	673	1,369	2,735	1,837	6,935
	£'000	8	25	47	120	15	151
Total ..	tons	682,457	1,239,674	1,166,087	1,089,463	1,295,675	1,190,634
	£'000	1,144	3,785	3,780	4,126	3,002	3,405

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,803 tons valued at £30,000 in 1953-54 compared with 1,511 tons valued at £33,000 in 1952-53 and 4,826 tons valued at £34,000 for the average of the five years ended 1938-39. Superphosphate is the principal fertilizer exported and amounted to 1,605 tons in 1953-54.

3. **Quantities Used Locally.**—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1953–54 season is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1953–54.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales	2,698	2,908	5,606	104,625	146,815	251,440
Victoria	3,556	7,555	11,111	170,168	422,235	592,403
Queensland	415	11	426	95,518	840	96,358
South Australia	3,336	2,826	6,162	171,458	153,627	325,085
Western Australia	4,511	3,863	8,374	226,101	178,911	405,012
Tasmania	191	678	869	25,756	45,259	71,015
Australian Capital Territory ..	5	36	41	286	2,018	2,304
Total	14,712	17,877	32,589	793,912	949,705	1,743,617

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1949–50 to 1953–54, compared with the average for the five years ended 1938–39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILIZERS USED.
(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934–35 to 1938–39 ..	148,277	305,969	50,651	200,566	230,713	30,272	276	966,724
1949–50 ..	174,171	550,020	72,298	243,768	357,632	53,874	1,098	1,452,861
1950–51 ..	160,871	563,086	73,761	255,781	377,083	56,224	822	1,487,628
1951–52 ..	177,120	579,022	72,610	270,046	399,304	56,719	1,033	1,555,854
1952–53 ..	196,124	619,327	82,222	284,226	409,959	64,439	1,554	1,657,851
1953–54 ..	251,440	592,403	96,358	325,085	405,012	71,015	2,304	1,743,617

As mentioned in § 23 (v) the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers. In 1953–54 subsidy was paid only on nitrogenous fertilizers.

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 1953–54 was 51, made up as follows:—New South Wales, 14; Victoria, 9; Queensland, 8; South Australia, 7; Western Australia, 5 and Tasmania, 8. The production of superphosphate in Australia during 1953–54 amounted to 1,771,000 tons.

§ 25. Ensilage.

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

2. **Quantity Made and Stocks Held on Farms.**—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1952, 1953 and 1954 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.
Production during—								
1951–52 season	47,920	24,591	7,654	8,234	11,433	10,638	4	110,474
1952–53 ,,	85,135	45,643	12,808	11,670	14,103	17,861	9	187,229
1953–54 ,,	84,465	69,830	18,513	13,755	12,070	22,459	..	221,092
Farm Stocks, as at—								
31st March, 1952	74,042	(a)	5,973	5,580	2,235	10,289	101	(a)
,, ,, 1953	102,812	(a)	12,980	11,186	3,530	13,588	84	(a)
,, ,, 1954	101,262	(a)	18,907	11,497	4,324	19,811	25	(a)

(a) Not available.

The drought of 1902–3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939–40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output 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. Production increased in 1952–53 and again in 1953–54 to 221,092 tons.

§ 26. Agricultural Colleges and Experimental Farms.

Agricultural colleges, administered by State Departments of Agriculture, 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 live stock 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 joint research with the appropriate State authorities. In general, however, the Commonwealth Scientific and Industrial Research Organization concentrates on fundamental research, except when otherwise specifically invited, while 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.

§ 27. 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 170,905 in 1954 or by 307 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 244 per cent., and crawler types by 109 per cent.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled type and crawler tractors for the five years ended 1954.

TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
WHEELED TYPE TRACTORS.								
1950 ..	25,533	23,235	20,616	11,184	10,323	2,464	84	93,439
1951 ..	30,061	28,132	24,406	13,562	12,331	3,056	107	111,655
1952 ..	35,302	33,678	27,084	15,396	14,579	3,857	142	130,038
1953 ..	39,229	37,484	28,822	16,729	15,381	4,550	158	143,353
1954 ..	41,195	41,953	32,535	18,228	16,577	5,111	163	155,762
CRAWLER OR TRACK TYPE TRACTORS.								
1950 ..	1,831	884	3,111	2,525	1,796	201	8	10,356
1951 ..	2,145	926	3,388	2,566	2,223	264	6	11,518
1952 ..	2,828	1,187	3,810	2,788	2,498	342	6	13,459
1953 ..	3,179	1,271	4,176	3,021	2,932	442	8	15,029
1954 ..	3,221	1,214	4,547	2,514	3,093	547	7	15,143
TOTAL TRACTORS.								
1939(b) ..	12,926	8,802	8,541	5,969	5,680	(c)	25	(d) 41,943
1950 ..	27,364	24,119	23,727	13,709	12,119	2,665	92	103,795
1951 ..	32,206	29,058	27,794	16,128	14,554	3,320	113	123,173
1952 ..	38,130	34,865	30,894	18,184	17,077	4,199	148	143,497
1953 ..	42,408	38,755	33,998	19,750	18,313	4,992	166	158,382
1954 ..	44,416	43,167	37,082	20,742	19,670	5,658	170	170,905

(a) Excludes Northern Territory. (b) At commencement of year. (c) Not available. (d) Excludes Tasmania.

§ 28. Number and Area of Rural Holdings and Employment Thereon.

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 live stock or the products of live stock.

There is considerable fluctuation from time to time in 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 season. Similarly, there are rugged areas in the mountain country of some States which are also sporadically occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1938–39 and 1949–50 to 1953–54.

RURAL HOLDINGS: NUMBER AND AREA.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Australia. (a)
				NUMBER OF RURAL HOLDINGS.				
1938–39..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1949–50..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267
1950–51..	73,195	69,698	41,499	28,248	19,289	11,468	229	243,626
1951–52..	73,122	69,298	41,641	28,698	19,515	11,414	226	243,914
1952–53..	72,940	69,353	42,382	28,832	19,655	11,812	213	245,187
1953–54..	73,371	69,392	42,850	29,220	20,132	11,818	213	246,996
				TOTAL AREA OF RURAL HOLDINGS. ('000 ACRES.)				
1938–39..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1949–50..	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606
1950–51..	168,375	38,108	359,606	151,731	213,362	6,476	395	938,053
1951–52..	168,250	37,935	358,320	151,785	215,386	6,438	395	938,509
1952–53..	167,907	37,868	358,332	152,689	215,858	6,559	394	939,607
1953–54..	168,996	37,546	361,520	150,314	221,805	6,511	391	947,083

(a) Excludes Northern Territory.

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

An approximate classification was, however, made for New South Wales for 1945–46 and details may be found on page 1018 of Official Year Book No. 39.

2. **Special Tabulation Relating to Rural Holdings, 1949–50.**—With the co-operation of State Statisticians, the second series of special tabulations relating to rural holdings was undertaken for all States for the 1949–50 season. These tabulations have been published in detail in Primary Industries Bulletin No. 44, 1949–50. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1949–50.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
				NUMBER OF HOLDINGS.				
Under 3	941	408	214	317	463	157	..	2,500
3– 4.. ..	1,391	967	239	432	469	178	1	3,677
5– 9.. ..	3,160	2,445	634	927	1,036	437	14	8,653
10– 24.. ..	4,563	6,916	1,596	2,690	1,569	977	9	18,320
25– 49.. ..	4,080	5,520	1,852	2,192	761	1,168	15	15,588
50– 99.. ..	5,209	7,676	4,060	2,182	663	2,048	9	21,847
100– 149.. ..	4,627	6,816	3,733	1,187	745	1,662	4	18,774
150– 249 ..	6,656	8,742	6,720	1,732	1,279	1,708	6	26,843
250– 499.. ..	9,034	11,118	7,386	2,969	1,699	1,472	16	33,694
500– 749 ..	6,478	7,047	3,380	2,650	898	510	18	20,981
750– 999 ..	4,657	3,794	1,527	1,897	887	226	16	13,004
1,000– 1,499.. ..	6,695	4,128	1,957	2,631	1,905	288	33	17,636
1,500– 2,499 ..	5,925	2,881	1,549	2,584	3,083	256	46	16,324
2,500– 4,999.. ..	5,559	1,401	1,523	1,991	2,718	229	21	13,442
5,000– 9,999.. ..	2,517	424	1,185	806	746	134	7	5,819
10,000–19,999.. ..	1,107	123	1,200	311	143	59	2	2,945
20,000–49,999 ..	832	61	1,640	173	52	32	3	2,793
50,000–99,999 ..	369	11	608	78	37	7	..	1,110
100,000 and over ..	187	8	557	151	412	..	..	1,315
Total	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267

(a) Excludes Northern Territory.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES 1949-50—*continued.*

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
	AREA OF HOLDINGS. ('000 ACRES.)							
Under 3	2	1	..	..	1	..	..	4
3- 4.. ..	5	3	1	1	2	1	..	13
5- 9.. ..	20	16	4	6	7	3	..	56
10- 24.. ..	71	113	25	45	24	16	..	294
25- 49.. ..	148	197	68	77	26	43	..	559
50- 99.. ..	375	555	301	157	47	148	..	1,583
100- 149.. ..	561	824	457	144	90	197	..	2,273
150- 249.. ..	1,292	1,680	1,264	339	246	324	1	5,146
250- 499.. ..	3,249	3,931	2,633	1,112	595	502	6	12,028
500- 749.. ..	3,976	4,345	2,060	1,630	549	308	11	12,879
750- 999.. ..	4,050	3,288	1,315	1,647	796	194	14	11,304
1,000- 1,499.. ..	8,173	5,021	2,362	3,205	2,302	345	41	21,449
1,500- 2,499.. ..	11,374	5,410	3,009	4,876	6,048	496	93	31,306
2,500- 4,999.. ..	19,090	4,677	5,301	6,793	9,275	811	69	46,016
5,000- 9,999.. ..	16,932	2,809	8,349	5,470	4,810	904	56	39,330
10,000-19,999.. ..	14,918	1,672	17,274	4,344	1,869	763	25	40,865
20,000-49,999.. ..	26,454	1,756	51,240	5,406	1,879	899	87	87,721
50,000-99,999.. ..	25,780	685	42,108	5,502	2,711	457	..	77,243
100,000 and over ..	33,557	1,359	218,032	105,809	179,780	..	..	538,537
Total	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606

(a) Excludes Northern Territory.

3. **Employment on Rural Holdings.**—The following table shows, for each State of Australia, the recorded number of persons permanently and temporarily working on rural holdings as at 31st March, 1954. 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.

RURAL HOLDINGS: PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT AS AT 31st MARCH, 1954.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
Permanent—								
Owners, Lessees or Share-farmers Males	71,465	69,264	43,579	27,335	19,726	9,610	170	241,149
Females	1,687	4,236	11,934	3,705	1,129	245	8	22,944
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary Males	7,416	5,692	5,907	1,413	1,796	500	12	22,736
Females	6,163	1,302	7,925	974	2,128	101	15	18,608
Employees, including Managers and Relatives working for wages or salary Males	33,497	17,367	20,718	9,069	8,281	4,672	144	93,748
Females	1,348	1,358	3,855	886	498	261	24	8,230
Total Permanent Males	112,378	92,323	70,204	37,817	29,803	14,782	326	357,633
Females	9,198	6,896	23,714	5,565	3,755	607	47	49,782
Persons	121,576	99,219	93,918	43,382	33,558	15,389	373	407,415
Temporary— Males	27,726	16,245	20,382	12,904	4,147	5,205	35	86,644
Females	1,671	1,403	737	2,804	179	1,560	11	8,365
Persons	29,397	17,648	21,119	15,708	4,326	6,765	46	95,009
Total Persons ..	150,973	116,867	115,037	59,090	37,884	22,154	419	502,424

(a) Excludes Northern Territory.

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 six years 1949 to 1954.

RURAL HOLDINGS : PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT, AUSTRALIA.(a)

Particulars.	As at 31st March—					
	1949.	1950.	1951.	1952.	1953.	1954.
Permanent—						
Males—						
Owners, Lessees or Share-farmers	236,467	235,302	237,251	236,330	241,368	241,149
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	25,195	25,889	24,676	24,589	23,157	22,736
Employees, including managers and relatives working for wages or salary	91,177	90,924	91,226	88,264	91,864	93,748
Total, Males	352,839	352,115	353,153	349,183	356,389	357,633
„ Females	47,933	53,348	52,346	46,603	48,234	49,782
Total Permanent ..	400,772	405,463	405,499	395,786	404,623	407,415
Temporary—						
Total, Males	(b)	83,227	83,190	88,356	91,656	86,644
„ Females	(b)	8,862	8,663	8,576	8,037	8,365
Total Temporary ..	(b)	92,089	91,853	96,932	99,693	95,009
Grand Total ..	(b)	497,552	497,352	492,718	504,316	502,424

(a) Excludes Northern Territory. (b) Not available.

4. **Salaries and Wages Paid to Employees on Rural Holdings.**—Particulars of salaries and wages paid to permanent and temporary employees (including amounts paid to contractors) working full-time on rural holdings have been collected uniformly in all States from 1949–50. Details for each State are set out below for the year 1953–54 and for Australia as a whole for the years 1950–51 to 1953–54.

RURAL HOLDINGS : SALARIES AND WAGES (a) PAID TO PERMANENT AND TEMPORARY EMPLOYEES, 1953–54.

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(b)
Permanent—Males ..	19,059	9,231	11,688	5,018	4,599	2,530	115	52,240
Females ..	338	385	1,246	234	139	58	6	2,406
Temporary(c)—Males ..	16,031	8,114	17,415	3,591	4,685	1,370	76	51,282
Females..	388	225	143	213	62	156	3	1,190
Total	35,816	17,955	30,492	9,056	9,485	4,114	200	107,118

(a) Including value of keep. (b) Excludes Northern Territory. (c) Includes amounts paid to contractors.

RURAL HOLDINGS: SALARIES AND WAGES (a) PAID TO PERMANENT AND TEMPORARY EMPLOYEES, AUSTRALIA.(b)

(£'000.)

Particulars.	1950–51.	1951–52.	1952–53.	1953–54.
Permanent—Males	34,022	41,328	47,623	52,240
Females	1,749	2,046	2,270	2,406
Temporary(c)—Males	29,317	39,735	44,715	51,282
Females	773	910	1,151	1,190
Total	65,861	84,019	95,759	107,118

(a) Including value of keep. (b) Excludes Northern Territory. (c) Includes amounts paid to contractors.