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CHAPTER XXII.

AGRICULTURAL PRODUCTION.

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

§ 1. Introductory.

Chapter XXI, Agricultural Production, of Official Year Book No. 42, the latest statistics included were, in general, for the year 1953-54. In this issue, it has been possible in most cases, to provide details for the year 1955-56. Full details for 1954-55 have not been included owing to limitations of space, but these are available in the bulletin *Primary Industry Parts I and II* for 1954-55. Beginning with 1954-55, detailed information on Northern Territory agriculture has been available and, where applicable, this has been included in the tables and text of this chapter.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by approximately 250,000 farmers who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Northern Territory and the Australian Capital Territory. 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.

In 1955-56, the lists of land holdings used in the collection of agricultural and pastoral statistics in New South Wales were reconciled with lists of ratable land of one acre or more in extent recorded by country shires for rating purposes. After elimination of ratable lands not used for agricultural and pastoral purposes, this reconciliation led to the addition of 4,784 land holdings, totalling 3,131,462 acres, to the annual collection. As a high proportion of the additional holdings from which returns were obtained in 1955-56 were used for grazing, either full-time or part-time, and were on the whole lightly stocked, the only statistics appreciably affected were number and area of rural holdings, and persons engaged on rural holdings. For these statistics, the extent of the increase due to the inclusion of the additional land holdings is shown in § 28, Number and Area of Rural Holdings and Employment thereon. As regards other items, continuity of the series was not materially affected by the inclusion of the additional land holdings.

§ 2. Progress of Agriculture.

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

The following details of crops were collected in 1808:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

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

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

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000

acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860–61 and during each of the eleven seasons ended 1955–56, and on page 831 there is a graph showing the area of crops in Australia from 1860 onward.

AREA OF CROPS.

(’000 Acres.)

Season.	N.S.W.	Vic.	Q’land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1860–61 ..	246	387	4	359	25	153	..	..	1,174
1870–71 ..	385	693	52	802	55	157	..	..	2,144
1880–81 ..	606	1,549	114	2,087	64	141	..	..	4,561
1890–91 ..	853	2,032	225	2,093	70	157	..	..	5,430
1900–01 ..	2,447	3,114	458	2,370	201	224	..	..	8,814
1910–11 ..	3,386	3,952	667	2,747	855	287	..	..	11,894
1920–21 ..	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930–31 ..	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940–41 ..	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
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	3,693	291	(a)	6	19,683
1952–53 ..	4,837	4,286	2,422	3,581	4,816	303	(a)	6	20,251
1953–54 ..	5,425	4,480	2,361	3,778	4,633	330	(a)	6	21,013
1954–55 ..	5,394	4,394	2,593	3,895	5,112	301	1	5	21,695
1955–56 ..	5,660	4,542	2,604	3,972	5,342	326	1	7	22,454

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860–61 to 1915–16, when, as the result of a special effort to raise wheat during the 1914–18 War, 18.5 million acres were cultivated in Australia. 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 was reversed after 1948–49, largely as a result of the transfer of many primary producers from agricultural to pastoral production following on high prices for wool. In recent years, the area sown has again increased from 19.7 million acres in 1951–52 to 21.7 million acres in 1954–55 and 22.5 million acres in 1955–56. As the area under wheat in Australia constitutes a large proportion of the total area cropped (56 per cent. during the ten years ended 1954–55) 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 28.4 million acres in 1955–56.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters, held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Ministers for Primary Industry and for Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production and marketing; (iii) the improvement

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

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

§ 3. Distribution, Production and Value of Crops.

1. Area of Crops in States and Territories.—The following tables show the areas in the several States, the Northern Territory and the Australian Capital Territory of each of the crops for the seasons 1954-55 and 1955-56.

AREA OF CROPS, 1954-55.

(Acres.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for Grain—									
Barley—									
2 Row	26,382	261,206	72,383	969,138	55,300	6,909	..	..	1,391,318
6 Row	10,484	19,389	14,914	50,535	204,388	347	..	..	300,057
Maize	50,617	4,379	114,673	2	8	8	..	..	169,687
Oats	657,292	644,444	36,432	339,640	873,588	22,621	..	208	2,574,225
Panicum, Millet and Setaria .. .. .	..	1,231	45,842	..	..	..	..	..	47,073
Rice	38,688	..	2	..	..	..	..	..	38,690
Rye	2,164	21,880	308	37,891	6,345	355	..	..	68,943
Sorghum	13,069	..	202,532	..	30	..	57	..	215,688
Wheat	2,918,670	2,390,173	687,402	1,689,103	2,979,151	7,302	..	782	10,672,583
Hay	523,776	739,099	76,049	256,525	289,329	96,496	..	3,101	1,984,375
Green Fodder	934,395 (a)	77,135	649,607 (b)	360,359	639,086	70,945	32	988	2,732,547
Other Stock Fodder	7,462	16,803	11,845	38,319	6,027	27,522	1	..	107,979
Grass Seed—									
Lucerne	8,827	(c)	1,061	25,328	16	3	..	.. (d)	35,235
Clover	8,616	2,787	..	13,399	9,479	1,171	..	25	35,477
Other	3,613	9,143	6,836	6,613	623	1,966	..	20	28,814
Industrial Crops—									
Broom Millet	1,315	78	79	..	..	..	..	..	1,472
Canary Seed	340	..	23,294	..	..	..	..	..	23,634
Cotton .. .. .	..	..	8,377	..	..	..	..	..	8,377
Flax—									
For Fibre .. .. .	..	5,878	..	1,314	464	..	..	..	7,656
For Linseed	1,826	..	15,569	171	..	8	..	..	19,403
Hops .. .. .	..	384	..	..	(e)	1,367	..	.. (d)	1,751
Peanuts	769	..	37,971	..	(e)	..	780	.. (d)	39,520
Sugar-cane—									
For Crushing	6,566	..	367,640	..	..	..	..	..	374,206
Other (excluding fodder)	8,552	..	119,101	..	..	..	..	..	127,653
Sunflower Seed	119	77	2,886	..	..	..	10	..	3,092
Tobacco	635	2,471	5,135	..	1,418	..	2	..	9,661
Other	78	222	374	..	..	591	..	..	1,265
Vegetables for Human Consumption—									
Onions	285	3,970	2,807	512	390	21	..	9	7,994
Potatoes	13,897	44,075	9,621	6,037	7,563	26,209	5	71	107,478
Other Vegetables	44,599	31,225	30,893	9,030	7,490	12,196	78	72	135,583
Vineyards—									
Bearing	16,485	42,929	2,607	57,106	8,034	..	..	..	127,161
Not Bearing	1,720	2,828	289	3,506	981	..	..	..	9,324
Orchards and other Fruit Gardens—									
Bearing	74,163	52,468	29,219	23,868	18,937	22,349	39	104	221,147
Not Bearing	16,961	13,623	13,298	6,639	2,538	1,338	63	18	54,478
Nurseries and Cut Flowers	1,005	3,138	256	101	216	151	..	11	4,878
All other Crops	642	1,587	3,808	100	160	766	2	4	7,069
Total Area	5,394,012	4,394,481	2,593,110	3,895,236	5,111,561	300,641	1,069	5,413	21,695,493

(a) Excludes pasture land sown to lucerne and oats for grazing. (b) Excludes pasture land sown to lucerne for grazing. (c) Not available. Included in "All other Crops". (d) Incomplete. See footnotes to individual States. (e) Not available for publication. Included in "All other Crops".

AREA OF CROPS, 1955-56.

(Acres.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for Grain—									
Barley—									
2 Row	37,072	290,716	124,829	980,962	70,300	5,939	..	6	1,509,824
6 Row	17,116	18,395	20,697	60,844	266,666	381	..	..	384,099
Maize	55,678	3,333	108,146	6	6	65	3	2	167,441
Oats	902,192	871,068	35,638	425,026	1,090,901	28,675	..	313	3,353,813
Panicum, Millet and Setaria	33	894	49,508	..	..	..	..	..	50,435
Rice	41,182	..	..	..	..	..	..	..	41,182
Rye	3,447	20,043	797	37,418	6,662	798	..	..	69,165
Sorghum	23,697	..	155,527	24	..	..	50	..	179,298
Wheat	2,937,281	2,141,410	581,732	1,609,029	2,889,585	6,224	..	739	10,166,000
Hay	561,472	879,288	63,104	325,673	269,439	137,157	1	4,727	2,240,861
Green Fodder	826,789	(a) 75,815	689,469	(b) 334,957	666,398	54,401	..	970	2,648,799
Other Stock Fodder	4,990	16,996	10,765	38,520	5,418	24,789	..	5	101,483
Grass Seed—									
Lucerne	19,131	(c)	763	26,357	16	47	..	..	(d) 46,314
Clover	18,622	9,988	..	14,839	23,876	1,183	..	..	68,508
Other	7,211	17,147	7,041	6,530	3,878	4,728	..	95	46,630
Industrial Crops—									
Broom Millet	2,649	68	212	..	..	..	..	..	2,929
Canary Seed	840	..	73,469	6	..	..	..	..	74,315
Cotton .. ..	..	..	13,290	..	..	..	..	..	13,290
Flax—									
For Fibre .. ..	..	2,550	..	526	1,594	..	..	..	4,670
For Linseed	1,817	580	45,202	128	..	..	..	..	47,727
Hops .. ..	..	388	..	..	(e)	1,377	..	..	(d) 1,765
Peanuts	414	..	31,493	..	(e)	..	544	..	(d) 32,451
Sugar-cane—									
For Crushing	7,522	..	365,252	..	..	..	..	..	372,774
Other (excluding fodder)	9,398	..	116,893	..	..	..	..	..	126,291
Sunflower Seed	95	93	6,910	..	..	..	5	..	7,103
Tobacco	893	2,876	6,301	..	1,235	..	1	..	11,306
Other	69	301	339	45	..	666	..	..	1,420
Vegetables for Human Consumption—									
Onions	318	3,337	2,480	524	321	22	..	8	7,010
Potatoes	13,270	37,020	10,202	5,373	6,826	20,842	..	74	93,607
Other Vegetables	53,330	34,893	33,760	11,071	7,852	14,219	65	108	155,298
Vineyards—									
Bearing	16,626	42,295	2,614	57,328	8,269	..	..	..	127,132
Not Bearing	1,473	2,522	302	2,534	838	..	..	..	7,669
Orchards and other Fruit Gardens—									
Bearing	77,289	50,913	29,290	24,900	19,118	22,369	50	103	224,032
Not Bearing	16,193	14,301	11,963	8,098	2,825	1,426	54	15	54,875
Nurseries and Cut									
Flowers	935	2,670	226	183	266	151	..	11	4,442
All other Crops	957	1,994	5,446	736	300	876	16	7	10,332
Total Area	5,660,001	4,542,096	2,603,660	3,971,613	5,342,613	326,335	789	7,183	22,454,290

(a) Excludes pasture land sown to lucerne and oats for grazing. (b) Excludes pasture land sown to lucerne for grazing.
(c) Not available. Included in "All other Crops". (d) Incomplete. See footnotes to individual States.
(e) Not available for publication. Included in "All other Crops".

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the major crops cultivated in the various States and Territories to the total area of crops for the season 1955-56 is shown in the next table. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are green fodder, wheat, and sugar-cane, and in Tasmania, hay, green fodder, and oats.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing 45 per cent. of the total area of crops in 1955-56.

RELATIVE AREAS OF CROPS, 1955-56.

(Per cent.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Wheat (Grain) ..	51.9	47.1	22.3	40.5	54.1	1.9	..	10.3	45.3
Green Fodder(a) ..	14.6	1.7	26.5	8.4	12.5	16.7	..	13.5	11.8
Oats (Grain) ..	15.9	19.2	1.4	10.7	20.4	8.8	..	4.4	14.9
Hay ..	9.9	19.3	2.4	8.2	5.0	42.0	0.1	65.8	10.0
Barley (Grain) ..	1.0	6.8	5.6	26.2	6.3	1.9	..	0.1	8.4
Sugar-cane, Crushed ..	0.1	..	14.0	..	..	..	..	..	1.7
Total Orchards and Fruit Gardens ..	1.7	1.4	1.6	0.8	0.4	7.3	13.2	1.6	1.2
Sorghum ..	0.4	..	6.0	..	..	..	6.3	..	0.8
Maize (Grain) ..	1.0	0.1	4.1	..	..	..	0.4	..	0.8
Total Vineyards ..	0.3	1.0	0.1	1.5	0.2	..	..	..	0.6
Potatoes ..	0.2	0.8	0.4	0.2	0.1	6.4	..	1.0	0.4
All other ..	3.0	2.6	15.6	3.5	1.0	15.0	80.0	3.3	4.1
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) 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 1955-56, 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Cereals for Grain—						
Barley, 2 Row ..	428	965	1,123	1,482	1,391	1,510
Maize ..	295	170	174	179	170	168
Oats ..	1,393	2,365	2,764	2,137	2,574	3,354
Rice ..	22	36	35	39	39	41
Wheat ..	14,345	10,384	10,209	10,751	10,673	10,166
Hay ..	2,994	1,549	1,761	1,935	1,984	2,241
Green Fodder ..	1,272	2,403	2,196	2,415	2,733	2,649
Vegetables for Human Consumption—						
Onions ..	8	9	8	7	8	7
Potatoes ..	130	118	135	128	107	94
Other vegetables for human consumption ..	(a) 83	162	152	131	136	155
Industrial Crops—						
Cotton ..	43	4	6	9	8	13
Hops ..	1	2	2	2	2	2
Sugar-cane ..	332	403	434	482	502	499
Tobacco ..	12	8	8	8	10	11
Vineyards ..	118	136	137	138	136	135
Orchards ..	276	271	271	273	276	279
All other Crops ..	206	698	836	897	946	1,130
Total ..	21,958	19,683	20,251	21,013	21,695	22,454

(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 the bulletin *Primary Industries—Part I.—Rural Industries*.

5. Production of Crops in States and Territories.—The following tables show production of crops in the various States and Territories for the seasons 1954-55 and 1955-56.

PRODUCTION OF CROPS.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1954-55.										
Cereals for Grain—										
Barley—										
2 Row	'000 bus.	355	4,609	2,139	17,703	626	190	..	..	25,622
6 Row	" "	146	337	434	673	2,179	9	..	..	3,778
Maize	" "	1,767	229	3,080	..	..	..	..	..	5,076
Oats	" "	7,667	10,021	597	4,508	9,585	452	..	4	32,834
Panicum, Millet and Setaria	" "	..	28	803	..	..	..	..	..	831
Rice	" "	5,080	..	..	(a)	..	..	..	(b)	5,080
Rye	" "	13	141	5	179	39	6	..	..	383
Sorghum	" "	272	..	5,083	..	..	..	1	..	5,356
Wheat	" "	37,718	48,484	16,478	31,463	34,300	159	..	15	168,617
Hay	" tons	680	1,208	171	330	305	158	..	4	2,856
Grass Seed—										
Lucerne	cwt.	4,304	..	1,055	14,693	4	1	..	..	20,057
Clover	" "	15,494	5,518	..	21,028	17,224	956	..	11	60,231
Other	" "	4,662	13,532	25,415	7,706	2,575	2,535	..	5	56,430
Industrial Crops—										
Broom Millet—										
Fibre	" "	7,691	372	336	..	..	..	..	..	8,399
Grain	bus.	7,584	198	..	..	..	..	..	..	7,782
Canary Seed	" "	1,800	..	377,706	..	..	..	..	..	379,506
Cotton, Unginned	'000 lb.	..	..	3,597	..	..	..	..	..	3,597
Flax—										
Straw	ton	..	7,799	..	1,888	500	..	..	..	10,187
Linseed	" "	355	358	4,705	28	..	2	..	..	5,448
Hops (Dry Weight)	cwt.	..	7,440	..	(a)	26,635	..	..	(b)	34,075
Peanuts	" "	6,916	..	280,019	..	..	..	2,708	..	289,643
Sugar-cane for Crushing	'000 tons	222	..	9,865	..	..	..	..	..	10,087
Sunflower Seed	cwt.	1,066	410	12,352	..	..	..	43	..	13,871
Tobacco, Dried Leaf	'000 lb.	618	868	4,332	..	1,003	..	1	..	6,822
Vegetables for Human Consumption—										
Onions	ton	1,340	26,091	12,243	4,790	4,322	107	..	71	48,964
Potatoes	" "	47,700	206,577	30,651	38,362	43,565	101,000	4	330	468,189
Vineyards—										
Grapes—										
For Drying	" "	34,144	216,344	..	55,794	9,300	..	..	..	315,582
Table	" "	3,627	4,838	2,878	1,104	2,380	..	..	..	14,827
Wine	" "	13,544	8,290	126	103,652	3,562	..	..	..	129,174
1955-56.										
Cereals for Grain—										
Barley—										
2 Row	'000 bus.	764	6,488	3,648	23,397	994	178	..	..	35,469
6 Row	" "	356	389	568	1,201	3,659	13	..	..	6,186
Maize	" "	1,868	176	2,710	..	..	1	..	..	4,755
Oats	" "	16,537	14,858	743	7,280	16,516	548	..	5	56,487
Panicum, Millet and Setaria	" "	..	6	747	..	..	..	..	..	753
Rice	" "	4,725	..	..	..	(a)	..	..	(b)	4,725
Rye	" "	34	111	10	193	54	14	..	..	416
Sorghum	" "	663	..	3,960	..	..	..	1	..	4,624
Wheat	" "	57,149	41,083	14,922	28,891	53,250	129	..	19	195,443
Hay	" tons	846	1,526	137	461	384	261	..	10	3,625
Grass Seed—										
Lucerne	cwt.	7,050	..	1,707	13,445	3	54	..	..	22,259
Clover	" "	37,467	15,370	..	21,691	52,603	988	..	..	128,119
Other	" "	4,527	26,825	20,627	8,586	9,945	6,921	..	17	77,448
Industrial Crops—										
Broom Millet—										
Fibre	" "	12,502	374	1,070	..	..	..	..	..	13,946
Grain	bus.	8,943	336	..	..	..	..	..	..	9,279
Canary Seed	" "	11,279	..	894,633	60	..	..	..	..	905,972
Cotton, Unginned	'000 lb.	..	..	5,359	..	..	..	..	..	5,359
Flax—										
Straw	ton	..	4,637	..	1,150	1,875	..	..	..	7,662
Linseed	" "	400	94	12,738	15	..	..	..	..	13,247
Hops (Dry Weight)	cwt.	..	6,084	..	(a)	28,290	..	..	(b)	34,374
Peanuts	" "	3,480	..	172,663	..	..	..	787	..	176,930
Sugar-cane for Crushing	'000 tons	285	..	8,616	..	..	..	..	..	8,901
Sunflower Seed	cwt.	655	274	33,501	..	..	..	37	..	34,467
Tobacco, Dried Leaf	'000 lb.	547	1,135	3,702	..	721	..	..	..	6,105
Vegetables for Human Consumption—										
Onions	ton	1,759	20,299	9,157	4,911	3,547	140	..	42	39,855
Potatoes	" "	44,162	163,239	37,561	36,460	42,079	77,930	..	439	401,870
Vineyards—										
Grapes—										
For Drying	" "	21,120	143,195	..	64,596	10,568	..	..	..	239,479
Table	" "	3,327	3,633	2,267	942	2,609	..	..	..	12,778
Wine	" "	14,371	7,544	143	100,446	4,141	..	..	..	126,645

(a) Not available for publication.

(b) Incomplete.

6. **Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the five years ended 1955-56, and the average for the decennium ended 1938-39:—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Cereals for Grain—							
Barley, 2 Row ..	'000 bus.	7,480	19,476	29,633	35,923	25,622	35,469
Maize	" "	7,228	4,018	4,967	5,079	5,076	4,755
Oats	" "	16,437	34,506	43,623	32,961	32,834	56,487
Rice	" "	2,005	3,048	3,964	4,069	5,080	4,725
Wheat	" "	169,398	159,725	195,208	197,960	168,617	195,443
Hay	" tons	3,490	2,345	2,765	3,049	2,856	3,625
Vegetables for Human Consumption—							
Onions	" "	43	53	48	46	49	40
Potatoes	" "	351	509	431	548	468	402
Industrial Crops—							
Cotton, Unginned ..	" lb.	15,667	1,406	2,184	5,132	3,597	5,359
Hops, (dry weight) ..	cwt.	18,989	(a)17,914	(a)32,116	(a)24,666	(a)34,075	(a)34,374
Sugar-cane for Crushing	'000 tons	4,588	5,327	6,967	9,014	10,087	8,901
Tobacco (Dried leaf) ..	" lb.	5,113	7,553	6,485	7,669	6,822	6,105
Vineyards—							
Grapes	" tons	381	475	560	529	460	379
Wine made(b)	" gals.	16,104	35,255	30,023	31,666	23,964	22,896
Dried Vine Fruits ..	" tons	70	72	101	90	81	59

(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 1955-56 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Cereals for Grain—							
Barley, 2 Row ..	bushel.	17.5	20.2	26.4	24.2	18.4	23.5
Maize	" "	24.5	23.7	28.5	28.4	29.9	28.4
Oats	" "	11.8	14.6	15.8	15.4	12.8	16.8
Rice	" "	93.0	85.5	114.8	104.6	131.3	114.7
Wheat	" "	11.8	15.4	19.1	18.4	15.8	19.2
Hay	" ton	1.17	1.51	1.57	1.58	1.44	1.62
Vegetables for Human Consumption—							
Onions	" "	5.54	6.13	5.90	6.29	6.13	5.69
Potatoes	" "	2.71	4.31	3.18	4.27	4.36	4.29
Industrial Crops—							
Cotton, Unginned ..	" lb.	366	314	372	572	429	403
Hops (dry weight)(a) ..	cwt.	17.88	10.79	19.31	15.18	19.87	20.22
Sugar-cane for Crushing(a)	" ton	19.24	18.91	24.89	26.47	26.95	23.88
Tobacco (Dried leaf) ..	" lb.	463	921	819	930	706	540
Vineyards—							
Grapes(a)	" ton	3.45	3.78	4.49	4.15	3.68	2.98

(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 1954-55 and the average for the decennium ended 1938-39.

GROSS VALUE OF PRINCIPAL CROPS: AUSTRALIA.

(£'000.)

Crop.	Average ten years ended 1938-39.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Cereals for Grain—						
Barley	1,214	13,339	17,739	27,512	21,011	18,257
Maize	1,537	3,048	3,809	4,039	3,868	3,615
Oats	1,937	10,293	19,005	15,301	12,345	14,066
Rice	392	2,171	2,108	3,338	3,198	3,430
Wheat(a)	30,125	124,740	120,734	154,656	138,135	107,528
Hay	11,413	17,931	26,193	29,249	33,230	30,878
Green Fodder	2,775	(b) 5,001	(b) 6,934	(b) 6,209	(b) 7,720	(b) 6,436
Vegetables for Human Consumption—						
Onions	245	1,086	2,019	1,106	1,662	1,586
Potatoes	2,314	10,265	15,982	14,706	12,075	13,449
Other vegetables for human consumption	(c) 2,203	20,200	27,123	24,543	22,915	23,385
Industrial Crops—						
Cotton, Unginned	(a) 298	54	127	107	316	208
Hops	157	(b) 620	(b) 517	(b) 1,021	(b) 802	(b) 1,106
Sugar-cane	7,895	19,046	19,635	30,495	39,619	39,706
Tobacco (Dried leaf)	474	1,622	2,379	2,578	3,816	3,823
Vineyards	3,907	10,125	14,084	15,751	13,488	12,293
Orchards	(a) 7,953	30,656	43,838	42,032	46,415	46,568
All other Crops	2,651	8,441	10,098	10,465	11,520	13,301
Total Gross Value	77,490	278,638	332,324	383,108	372,135	339,635

(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, 1954-55.* Values of agricultural production for each State are shown for 1954-55 in the following table. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXX.—Miscellaneous.

In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant; consequently, the figures stated are inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1954-55.

(£'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	70,588	13,726	56,862	5,267	(b) 2,884	48,711
Victoria	84,305	14,005	70,300	4,290	4,494	61,516
Queensland	77,931	8,753	69,178	3,021	6,501	59,656
South Australia	52,457	7,287	45,170	2,684	3,306	39,180
Western Australia	38,582	5,470	33,112	2,471	7,158	23,483
Tasmania	15,607	2,773	12,834	1,082	(b) 512	11,240
Northern Territory	54	2	52	3	4	45
Australian Capital Territory	111	16	95	2	5	88
Australia	339,635	52,032	287,603	18,820	24,864	243,919

(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 1954-55.* 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 1950-51 to 1954-55 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.	N.T.	A.C.T.	Total.
NET VALUE.(a) (£'000.)									
Average, ten years 1929-30 to 1938-39	13,304	10,508	10,189	6,540	4,903	1,824	(b)	(b)	47,268
1950-51	44,492	53,465	32,001	36,402	33,126	8,644	(b)	(b)	208,130
1951-52	58,333	64,084	35,622	46,903	31,027	10,716	(b)	(b)	246,685
1952-53	66,623	65,067	53,684	51,244	28,977	10,803	(b)	(b)	276,398
1953-54	68,342	65,624	55,471	41,700	28,119	9,204	(b)	(b)	268,460
1954-55	48,711	61,516	59,656	39,180	23,483	11,240	45	88	243,919

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

Average, ten years 1929-30 to 1938-39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	(b)	(b)	7 1 4
1950-51	13 14 9	23 16 9	26 10 2	50 8 7	58 1 7	30 9 9	(b)	(b)	25 3 8
1951-52	17 12 3	27 15 0	28 14 6	63 2 0	52 11 11	36 10 8	(b)	(b)	29 1 3
1952-53	19 15 10	27 8 7	42 3 11	66 17 1	47 8 2	35 14 2	(b)	(b)	31 16 1
1953-54	20 1 4	27 1 8	42 13 1	53 1 1	44 11 8	29 14 11	(b)	(b)	30 6 4
1954-55	14 1 7	24 14 6	45 0 3	48 10 5	36 3 9	35 18 3	2 14 6	2 16 4	26 16 8

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

(b) Not available.

(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 XXX.—Miscellaneous.

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

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

Particulars.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
Quantum Produced—					
Wheat	112	97	119	120	102
Other Crops	105	107	123	134	131
<i>Total, All Crops</i>	<i>108</i>	<i>103</i>	<i>121</i>	<i>129</i>	<i>120</i>
Total per Head of Population	89	83	95	99	91
Price—					
Wheat	338	378	397	349	319
Other Crops	255	338	337	305	314
<i>Total, All Crops</i>	<i>291</i>	<i>355</i>	<i>364</i>	<i>324</i>	<i>316</i>

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

§ 4. Wheat.

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

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to inquire into and report upon:—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of costs could be established as an index to periodical variations in 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) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37 (pp. 1295-99).

(ii) *The Australian Wheat Board.* The Australian Wheat Board was constituted in September, 1939 under National Security (Wheat Acquisition) Regulations to purchase, sell, or dispose of, wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations.

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

(iii) *Wheat Stabilization Plan.* (a) 1947-48 to 1952-53. Details of the Wheat Stabilization Plan which operated during the seasons 1947-48 to 1952-53 inclusive were published in Official Year Book No. 40, pp. 841 and 842, and previous issues. All contributions paid into the Fund established as a part of the plan have now been refunded.

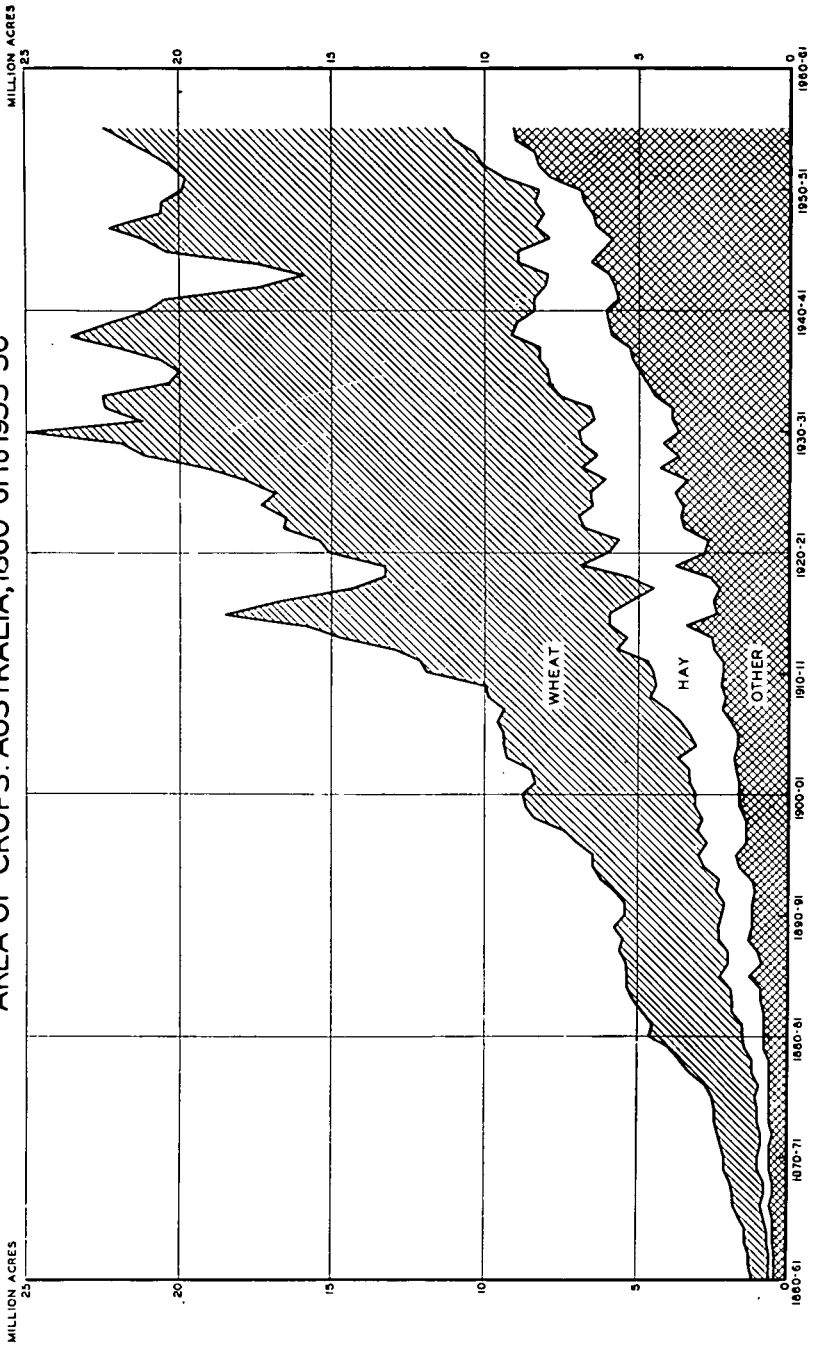
(b) 1953-54 to 1957-58. Agreement was reached in July, 1954, at a conference of Premiers and Ministers for Agriculture on the terms of a new wheat industry stabilization plan. The plan was submitted to polls of wheat growers in the mainland producing States, 94 per cent. of growers voting in favour of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

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

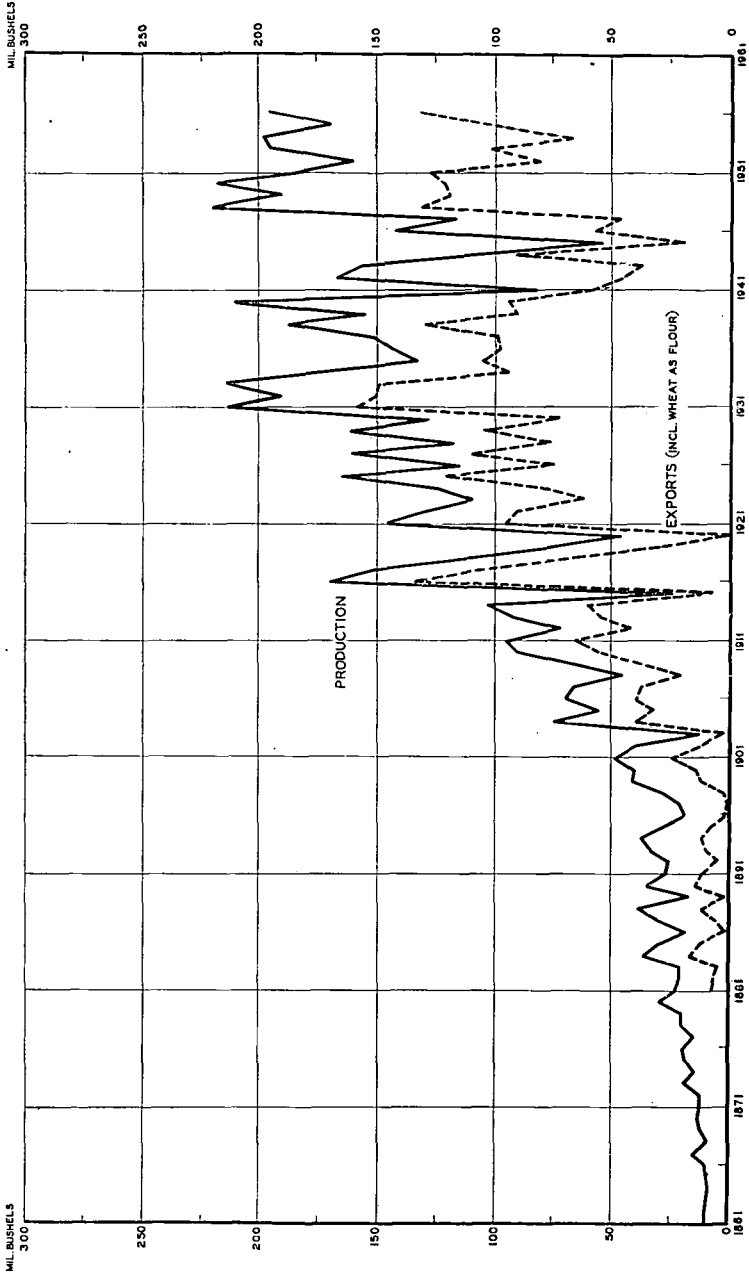
The principal features of the plan are as follows:—

- (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.
- (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.

AREA OF CROPS: AUSTRALIA, 1860-61 to 1955-56



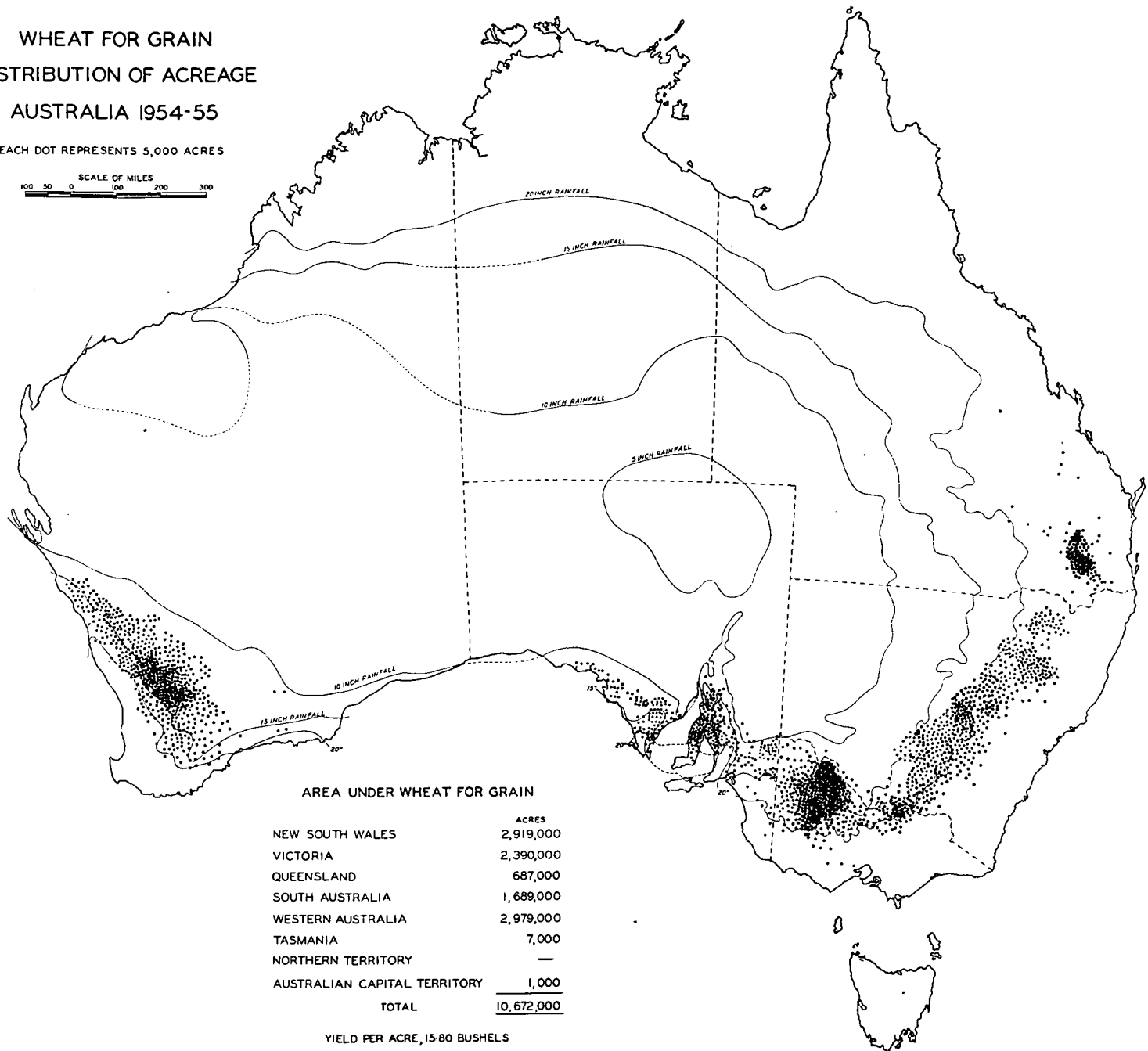
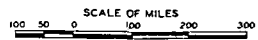
WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 to 1955-56

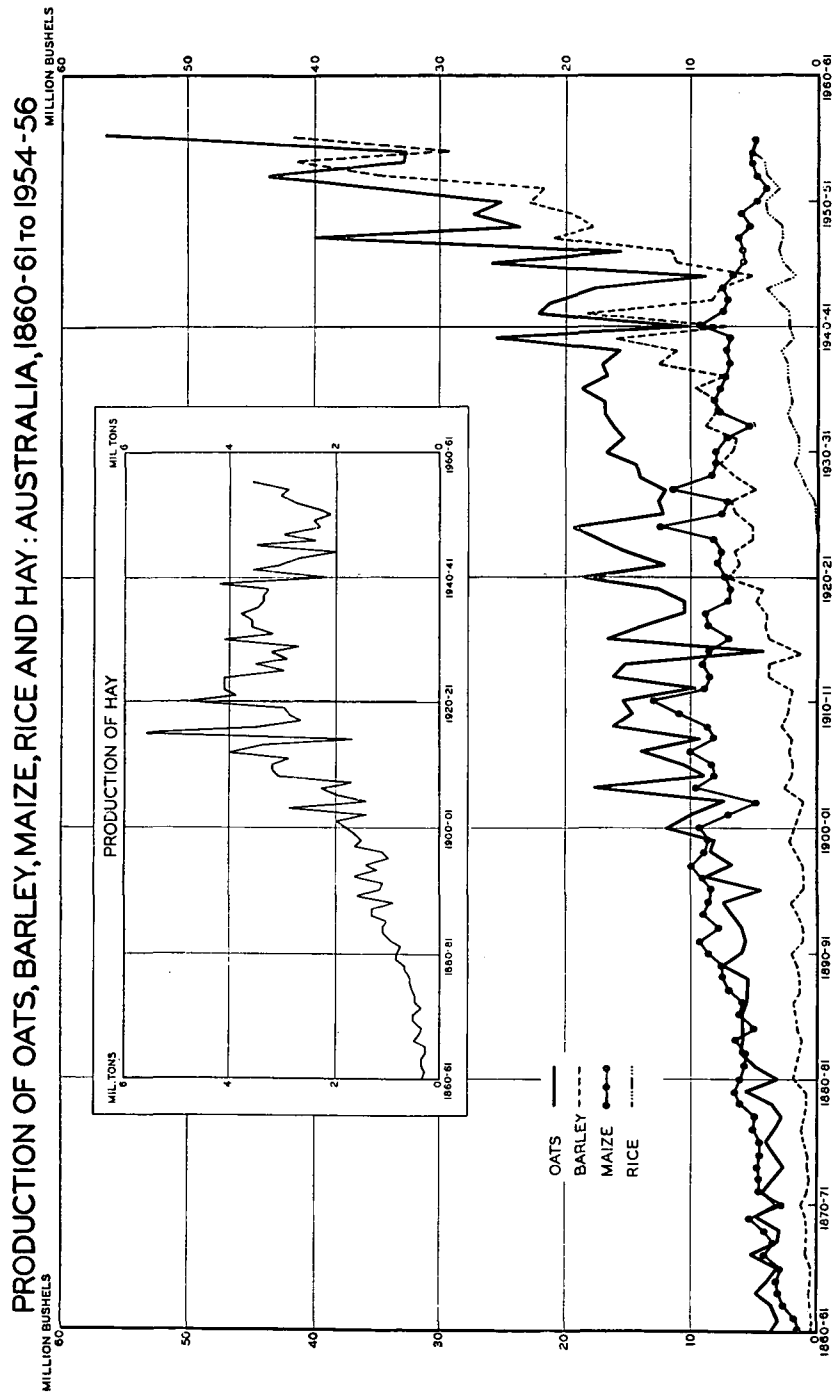


NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

WHEAT FOR GRAIN
DISTRIBUTION OF ACREAGE
AUSTRALIA 1954-55

EACH DOT REPRESENTS 5,000 ACRES





- (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 1950-51 to 1955-56 harvests are shown in the following table:—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1950-51 TO 1955-56.
(*000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
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	32,385	46,431	14,605	28,636	30,628	65	152,750
19	1955-56	51,789	39,079	14,098	26,107	49,649	39	180,761

(b) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1951 to 1956 are shown in the following table:—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1951 TO 1956.(a)
(*000 Bushels.)

Particulars.	1951.	1952.	1953.	1954.	1955.	1956.
Sold for export as wheat ..	85,227	46,192	59,517	40,547	63,171	95,399
Sold for export as flour ..	42,454	36,693	41,255	26,871	(b) 34,024	(b) 34,950
Sold for local consumption as flour	37,577	39,049	39,108	35,860	38,012	39,832
Sold for other purposes ..	29,556	26,233	20,605	20,261	18,560	17,090

(a) Years ended 30th November.

(b) Includes wheat equivalent 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. 15 to 19.
(£.)

Particulars.	No. 15 Pool.(a)	No. 16 Pool.(a)	No. 17 Pool.(a)	Nos. 18 and 18A Pools.(b)	No. 19 Pool.(b)
	(1951-52 Harvest.)	(1952-53 Harvest.)	(1953-54 Harvest.)	(1954-55 Harvest.)	(1955-56 Harvest.)
Paid to growers	100,000,768	127,177,779	99,892,850	81,047,474	81,673,674
Rail freight	7,620,657	11,154,989	12,734,561	10,028,470	12,383,167
Expenses	5,415,288	5,944,989	7,513,924	7,676,828	8,432,824
Total Payments ..	113,036,713	144,277,757	120,141,335	98,752,772	102,489,665
Value of sales delivered ..	c 113,036,713	144,277,757	d 129,334,473	99,777,691	103,020,419

(a) Complete. (b) Incomplete. (c) Includes £9,166,550 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £282,291. (d) Includes £9,165,517 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, 1957.

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

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

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

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

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

The new Agreement was to be ratified by both exporting and importing countries on 1st December, 1956. On that date, 37 importing countries had ratified and Iceland had joined the Agreement as an importer although not included in the original list. Of the remaining seven countries which submitted import quotas, four countries (Brazil, Lebanon, the Netherlands and Panama) have notified that they intend ratifying and three countries (Ceylon, Colombia and Jordan) will not ratify the Agreement. All six exporting countries have acceded.

In accordance with the terms of the Agreement, the original quotas allotted to exporting countries have been reduced in conformity with the reduction in importers' quotas. The adjustment has been made on the basis of ratifications as at 1st December, 1956. This pro rata adjustment has given Australia an export quota of 25.6 million bushels but this will probably be increased to 29.3 million bushels when countries which have indicated their intention of doing so have formally ratified the Agreement.

Particulars of guaranteed sales and purchases and transactions actually recorded during 1955-56 are shown in the following table.

INTERNATIONAL WHEAT AGREEMENT: GUARANTEED SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1955-56.(a)
(Million Bushels.)

Exporting Countries.			Importing Countries.		
Country.	Guaranteed Sales.(b)	Sales Recorded	Country.	Guaranteed Purchases.(c)	Purchases Recorded.
United States of America ..	196.5	134.1	Germany	55.1	46.8
Canada	153.1	75.6	Japan	36.7	36.3
Australia	45.0	44.9	India	36.7	19.3
France	0.4	0.4	Netherlands	24.8	15.9
			Belgium	23.9	12.6
			Remaining Importing Countries	217.8	124.1
Total	395.0	255.0	Total	395.0	255.0

(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 1951-52 to 1955-56, 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
New South Wales ..	15,657	13,147	13,167	14,865	13,784	14,035
Victoria ..	12,393	10,076	10,049	10,900	10,547	9,683
Queensland ..	2,403	3,005	4,970	3,918	4,570	4,199
South Australia ..	12,255	8,345	8,432	8,473	8,892	(a)
Western Australia ..	8,859	7,766	7,751	7,786	7,979	7,962
Tasmania ..	269	51	95	149	114	85
Australia(b) ..	51,836	42,390	44,464	46,091	45,886	(a)

(a) Not yet available.

(b) Excludes Australian Capital Territory.

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

8. *Area, Production and Yield per Acre.*—(i) *Area.* Wheat is the principal crop grown in Australia, and its progress since 1860-61 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

The area, production and yield per acre of wheat for grain in each State are shown below for the years 1951-52 to 1955-56 in comparison with the averages for the decennial periods ended 1938-39 and 1954-55:—

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
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
1953-54 ..	3,357	2,389	580	1,528	2,885	10	2	10,751
1954-55 ..	2,919	2,390	688	1,689	2,979	7	1	10,673
Average, 1945-46 to 1954-55 ..	3,640	2,801	532	1,924	2,793	7	2	11,699
1955-56 ..	2,937	2,141	582	1,609	2,890	6	1	10,166
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
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
1953-54 ..	63,681	53,698	10,180	30,409	39,700	263	29	197,960
1954-55 ..	37,718	48,484	16,478	31,463	34,300	159	15	168,617
Average, 1945-46 to 1954-55 ..	56,110	48,181	10,641	28,998	35,334	138	45	179,447
1955-56 ..	57,149	41,083	14,922	28,891	53,250	129	19	195,443

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

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30								
to 1938-39 ..	13.0	12.5	14.9	9.8	11.3	21.7	20.6	11.8
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
1953-54 ..	19.0	22.5	17.6	19.9	13.8	27.2	18.5	18.4
1954-55 ..	12.9	20.3	24.0	18.6	11.5	21.7	19.4	15.8
Average, 1945-46								
to 1954-55 ..	15.4	17.2	20.0	15.1	12.7	21.1	18.5	15.3
1955-56 ..	19.5	19.2	25.7	18.0	18.4	20.7	25.5	19.2

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860-61 appears on p. 831 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1954-55 appears on p. 833. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39 and 1947-48 appeared respectively in Official Year Books No. 22, p. 695, No. 34, p. 451 and No. 39, pp. 977-8.

(ii) *Production*. Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season 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.

Australia's wheat production in 1955-56 was 195.4 million bushels, representing an average yield of 19.2 bushels per acre. This was 16.0 million bushels more than the average for the ten years ended 1954-55 and 26.0 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; in 1953-54, 18.4 bushels and in 1955-56, 19.2 bushels (the record).

(iv) *Decennial Averages, 1861-70 to 1947-56*. 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
1947-56	.. ..	11,573	184,750	16.0

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 principal varieties grown during each season is restricted to about 40.

(ii) *States, 1955.* The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1955 were as follows:—New South Wales, Bencubbin (33.3), Gabo (20.3); Glenwarie (6.3); Victoria, Insignia (49.3), Pinnacle (24.7), Quadrat (15.4); Queensland, Spica (15.4), Charter (15.0), Festival (13.2); South Australia, Gabo (22.4), Insignia 49 (12.8); Western Australia, Bungulla (21.8), Bencubbin (18.8), Gabo (16.5). A detailed table of wheat varieties sown in these five States appears in the annual bulletin *Primary Industries—Part I.—Rural Industries*.

10. *F.A.Q. Standard of Wheat.*—The Chambers of Commerce in each of the four main wheat States each year determine the "f.a.q." standard for the State. In the case of New South Wales as from 1956–57, two f.a.q. standards will be determined—one for the Northern Zone and one for the Southern Zone. "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 1955–56 season's crop was as follows (1954–55 details in parentheses)—New South Wales, 62 lb. (61½ lb.); Victoria, 63½ lb. (62½ lb.); South Australia, 64 lb. (64½ lb.); and Western Australia, 64 lb. (63½ 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 1953 to 1957.

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

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

Particulars.	1953.	1954.	1955.	1956.	1957.
For Flour	11 11	(a) 14 1½	(a) 14 1½	(a) 13 5½	(a) 13 9½
For Stock Feed	(b) 13 11	(a) 14 1½	(a) 14 1½	(a) 13 5½	(a) 13 9½

(a) Of this, 1½d. is to be used to meet freight charges incurred on wheat shipped to Tasmania.
 (b) Excludes subsidy of 2s. 2d. in 1953 paid by the Commonwealth Government.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.*—The monthly average of the Wheat Board's basic export selling prices for f.a.q. bulk wheat f.o.b. basis was 13s. 4d. for the season ended 31st July, 1956, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The maximum and minimum prices fixed under the 1956–59 International Wheat Agreement are expressed in terms of "Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." Expressed in terms of Australian currency the maximum price for f.a.q. Australian wheat sold under the Agreement is approximately 18s. per bushel. The direct currency conversion of the minimum price is 12s. but this price will vary according to movements in transportation costs.

Details of export wheat prices in previous years, including those received for wheat sold under the terms of the 1949–1953 International Wheat Agreement, are given in *Official Year Book No. 40*, pp. 849–50, and *Statistical Bulletin: The Wheat Industry, Australia*, No. 92, of April, 1957, 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 1954-55 and the value per acre are shown below.

WHEAT FOR GRAIN : VALUE OF CROP(a), 1954-55.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	23,582	30,516	10,697	20,796	21,827	100	10	107,528
Value per acre ..	£8 1 7	£12 15 4	£15 11 3	£12 6 3	£7 6 6	£13 13 8	£12 2 1	£10 1 6

(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, 1952 to 1956 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 1860-61 see graph, p. 832.)

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

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1952.	1953.	1954.	1955.	1956.
Opening stocks (including flour as wheat)	10.2	19.4	16.9	37.7	94.9	95.0
Production	164.7	159.7	195.2	198.0	168.6	195.4
<i>Total Available Supplies</i>	<i>174.9</i>	<i>179.1</i>	<i>212.1</i>	<i>235.7</i>	<i>263.5</i>	<i>290.4</i>
Exports—						
Wheat	75.0	45.6	60.7	38.5	64.8	94.0
Flour as wheat(a)	30.6	36.1	41.4	27.9	35.0	36.9
Breakfast foods and other products(b)	(c)	1.2	0.8	0.8	1.0	1.4
Local Consumption—						
Flour as wheat	30.9	39.0	39.1	34.4	38.0	39.8
Stock feed	9.3	23.9	18.4	17.6	16.5	15.3
Seed	14.6	10.3	10.8	10.8	10.9	10.1
Breakfast foods and other products(b)	(c)	2.6	2.2	1.6	2.0	1.7
Balance retained on farm (excluding seed)	(d)	3.4	4.6	4.0	5.0	4.5
Closing stocks (including flour as wheat)	14.5	16.9	37.7	94.9	95.0	84.2
<i>Total Disposals</i>	<i>174.9</i>	<i>179.0</i>	<i>215.7</i>	<i>230.5</i>	<i>268.2</i>	<i>287.9</i>
Excess (+) or Deficiency (–) of Disposals in respect of Available Supplies e	..	–0.1	+3.6	–5.2	+4.7	–2.5

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

14. **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 1951-52 to 1955-56 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 1955-56, exports in terms of wheat averaged 93,233,000 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	647,073	29,959	106,432	14,813	(b)5,058	19,871
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
1954-55	63,133	656,605	30,401	93,534	45,222	20,357	65,579
1955-56	71,041	667,773	30,918	101,959	46,456	19,743	66,199

(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 1955-56 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
United Kingdom	45,195	17,932	21,956	11,520	19,134	20,442
India	1,662	7,372	10,767	7,038	17,416	5,562
New Zealand	1,537	9,649	5,808	7,753	7,979	9,067
Other British Countries	7,863	7,322	10,760	5,405	6,738	6,235
Egypt	503	3,980	..	..	3	..
Germany, Federal Republic of	(a) 235	4,734	2,847	1,888	5,084	8,189
Italy	3,152	6,473	2,068	357	..	..
Other Foreign Countries	16,326	5,459	5,302	2,097	6,779	21,546
Total	76,473	62,921	59,508	36,058	63,133	71,041

(a) Pre-war Germany.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1955-56, 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
United Kingdom	142,912	96,432	139,941	65,659	80,832	67,080
Ceylon	16,915	187,134	261,845	222,479	112,466	115,737
India	2,732	83,142	79,921	19,880	47	89
Malaya, Federation of	63,309	60,030	65,074	70,829	87,281	81,484
Singapore	(b)	52,238	66,691	64,382	77,738	54,312
Other British Countries	109,609	88,195	92,122	97,257	115,731	98,179
Egypt	24,284	65,143	23,078	19,588	9,830	2,689
Indonesia, Republic of .. .. .	..	62,322	90,774	133,406	95,509	177,724
Other Foreign Countries	287,312	96,834	51,650	68,437	77,171	69,580
Total	647,073	791,470	871,096	761,917	656,605	666,874

(a) Excludes wheatmeal for baking.

(b) Included with Federation of Malaya.

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 1952 to 1956 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)
(*000 Bushels.)**

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1939	6,674	4,702	549	6,134	2,513	241	20,813
1952	5,881	4,432	5	4,254	2,108	187	16,867
1953	9,888	11,550	2,237	7,576	6,307	188	37,746
1954	26,458	26,937	2,487	15,413	23,499	125	94,919
1955	17,483	28,434	4,049	18,470	26,278	256	94,970
1956	21,365	22,821	1,973	15,223	22,534	265	84,181

(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 p.p. 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 1955, there were 180 elevators operated by the Grain Elevators Board (formerly the 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 1955–56, 82 per cent. of the total marketable crop was handled compared with 85 per cent. in 1954–55 and 61 per cent. in 1953–54.

Additional storage capacity has been constructed at several country centres and sub-terminals at Junee, Temora and Werris Creek were enlarged to hold 4.5 million bushels each as part of the plan to meet the general shortage in storage capacity.

Temporary bulkheads were also erected to meet shortages and in 1955–56, 80 of these were used.

The State's portion of the Commonwealth loan of £3½ million, mentioned above, was used to construct additional bulk storages totalling 11,900,000 bushels; in many instances these new storages—of which 11 were in use for 1955–56—will replace temporary bulkheads which will then be dismantled.

(b) *Victoria.* The Victorian Grain Elevators Board operates 148 elevators with storage capacity totalling 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 have been adopted and sub-terminals were constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of

22 million bushels. Temporary bulkheads have also been used but most of these will be replaced by the construction of a total of 99 steel annex bins (many of which were completed in 1955) with total capacity of 6,435,000 bushels and 47 steel elevators, each of 100,000 bushels, to be constructed in 1956 and 1957.

In 1955-56, 98 per cent. of the total marketable crop was received as bulk wheat compared with 97 per cent. in 1954-55 and 96 per cent. in 1953-54.

(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 storage capacity for 1,000,000 bushels. Approximately 6,645,000 bushels were shipped through that facility during the 1954-55 season.

In 1955, the South Australian Co-operative Bulk Handling Ltd. was formed, as a grower-controlled organization, to receive, store and handle bulk wheat on behalf of the Wheat Board. The Company purchased the Ardrossan terminal from the Board and commenced its programme of country bulk storage constructions, completing one storage, at Paskeville, in time to receive wheat of 1955-56 harvest. The company's plans provide not only for the expansion of bulk receival facilities in country areas but also the construction of further shipping terminals at Wallaroo, Port Lincoln and other ports.

(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 galvanised iron are used. These are relatively cheap and can be moved from place to place as required. These storages are operated by Co-operative Bulk Handling Ltd. which is controlled and managed by wheat growers.

In 1955-56, there were 281 sidings equipped with bulk handling facilities and 49,627,000 bushels, comprising the whole of the marketable crop, were received.

Extension of storage facilities in 1954-55, financed from the Commonwealth loan of £3½ million, involved the erection of a storage for 5 million bushels at Midland Junction.

(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.	1954.	1955.(b)	Average 1935-39.	1954.	1955.(b)	Average 1935-39.	1954.	1955.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada	25,595	24,267	21,506	312,399	308,909	494,140	12.2	12.7	23.0
United States	57,293	54,356	47,255	758,629	983,900	936,761	13.2	18.1	19.8
<i>Total(c)</i>	84,170	80,610	70,660	1,086,000	1,325,000	1,464,000	12.9	16.4	20.7

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.	1954.	1955.(b)	Average 1935-39.	1954.	1955.(b)	Average 1935-39.	1954.	1955.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Europe—									
France ..	12,560	11,100	11,900	286,505	388,220	380,890	22.8	35.0	33.7
Italy ..	12,577	12,100	12,300	278,366	267,600	349,260	22.1	22.1	28.4
Spain ..	(d)11,253	10,670	10,536	(d)157,986	180,000	150,000	d 14.0	16.9	14.2
<i>Total(c)</i>	74,850	72,570	72,630	1,600,000	1,705,000	1,810,000	21.4	23.4	24.9
U.S.S.R. ..	104,000	(e)	(e)	1,240,000	(e)	(e)	11.9	(e)	(e)
Africa— <i>Total(c)</i>	13,850	18,580	16,990	143,000	221,000	193,000	10.3	11.9	11.4
Asia—									
China ..	(f)49,000	(e)	(e)	(f)750,000	(e)	(e)	(f)15.3	(e)	(e)
India ..	(f)25,460	26,394	27,517	262,100	294,560	327,710	10.3	11.2	11.9
Pakistan ..	(f) 9,305	10,650	10,660	117,000	137,500	118,420	12.6	12.9	11.1
Turkey ..	8,973	15,830	17,790	135,690	180,040	260,880	15.1	11.4	14.7
<i>Total(c)</i>	114,190	136,420	138,310	1,558,000	1,860,000	1,885,000	13.6	13.6	13.6
South America—									
Argentina ..	15,834	13,500	9,735	221,769	282,560	192,900	14.0	20.9	19.8
<i>Total(c)</i>	20,490	19,780	16,510	281,000	387,000	303,000	13.7	19.6	18.4
Oceania—									
Australia ..	13,128	10,673	10,166	169,744	168,617	195,443	12.9	15.8	19.2
<i>Total(c)</i>	13,349	10,774	10,239	176,873	172,720	198,500	13.2	16.0	19.4
World <i>Total(c)</i> ..	424,900	460,730	475,260	6,085,000	7,010,000	7,405,000	14.3	15.2	15.6

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

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 1954 and 1955 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 1955 the proportion fell to 10 per cent. The actual quantity shipped in 1955 was 10 per cent. lower than the average for 1934-38.

WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934-38.		1954.		1955.	
	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	253,589	29.2	228,652	24.8
Argentina	122,740	19.3	111,816	12.9	131,687	14.3
Australia	102,406	16.1	72,509	8.4	92,335	10.0
United States of America	46,274	7.3	231,474	26.7	270,943	29.4
U.S.S.R. (Russia)	26,631	4.2	(b)27,928	3.2	(b)22,046	2.4
France	18,316	2.9	62,456	7.2	107,546	11.6
All other	143,993	22.6	107,363	12.4	69,040	7.5
<i>Total</i>	<i>635,654</i>	<i>100.0</i>	<i>867,135</i>	<i>100.0</i>	<i>922,249</i>	<i>100.0</i>
World Production (mil. bus.) ..	(c) 6,085		7,010		7,405	
Proportion of Australia's Production to World Production	% 2.8		% 2.4		% 2.6	

(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.		1954.		1955.	
	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	147,986	17.5	186,067	20.2
Brazil	36,387	5.9	60,486	7.2	68,121	7.4
Italy	26,043	4.2	9,763	1.2	27,998	3.0
Germany, Federal Republic of ..	(b)25,606	(b) 4.1	123,423	14.6	89,469	9.7
Netherlands	22,593	3.7	29,593	3.5	30,901	3.4
Japan	11,552	1.9	81,805	9.7	85,721	9.3
India and Pakistan	1,826	0.3	12,720	1.5	16,314	1.8
Egypt	588	0.1	2,881	0.3	514	0.1
All other	283,950	46.0	376,432	44.5	415,307	45.1
<i>Total</i>	<i>617,282</i>	<i>100.0</i>	<i>845,089</i>	<i>100.0</i>	<i>920,412</i>	<i>100.0</i>

(a) Includes flour expressed in terms of wheat.

(b) Pre-war Germany.

§ 5. Oats.

1. **Area, Production and Yield per Acre.**—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1955–56 accounted for 45.3 per cent., oats grown for grain represented only 14.9 per cent. of the area of all crops. The area, production and yield per acre of oats for the years 1951–52 to 1955–56 and the averages for the ten-year periods ended 1938–39 and 1954–55 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
1951–52 ..	596	676	21	387	657	27	1	2,365
1952–53 ..	730	756	57	369	832	20	..	2,764
1953–54 ..	507	584	13	280	733	20	..	2,137
1954–55 ..	657	644	36	340	874	23	..	2,574
Average, 1945–46 to 1954–55 ..	536	583	27	313	611	20	..	2,090
1955–56 ..	902	871	36	425	1,091	29	..	3,354
PRODUCTION ('000 BUSHEL). ^(a)								
Average, 1929–30 to 1938–39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
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
1953–54 ..	8,533	9,852	199	4,321	9,590	461	5	32,961
1954–55 ..	7,667	10,021	597	4,508	9,585	452	4	32,834
Average, 1945–46 to 1954–55 ..	8,043	9,805	472	4,189	7,263	430	6	30,208
1955–56 ..	16,537	14,858	743	7,280	16,516	548	5	56,487
YIELD PER ACRE (BUSHEL). ^(a)								
Average, 1929–30 to 1938–39 ..	15.7	12.0	12.8	7.9	10.8	28.2	22.4	11.8
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
1953–54 ..	16.8	16.9	14.8	15.4	13.1	22.9	18.6	15.4
1954–55 ..	11.7	15.5	16.4	13.3	11.0	20.0	20.4	12.8
Average, 1945–46 to 1954–55 ..	15.0	16.8	17.7	13.4	11.9	21.4	14.1	14.5
1955–56 ..	18.3	17.1	20.8	17.1	15.1	19.1	17.1	16.8

(a) 40 lb. per bushel.

A graph showing the production of oats appears on pp. 834.

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. The production of oats for grain in Australia in 1955–56 amounted to 56,487,000 bushels which was a record. This compares with 32,834,000 bushels in 1954–55. The previous record was 43,623,000 bushels in 1952–53.

During the five seasons ending 1955–56, an average of 8.4 million bushels were exported; 1.9 million bushels were used in factories for oatmeal; and 7.5 million bushels were used for seed purposes; leaving a balance of 22.3 million bushels for stock feed (principally unprocessed) and carry-over.

The largest yield per acre recorded for Australia in the ten years ended 1955–56 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 1955–56 was 6s. 9½d. per bushel. This represents a decrease of 20.6 per cent. on the price in 1954–55 (9s. 3d.) and an increase of 96.4 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 1954-55 season and the value per acre were as follows:—

OATS : VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	3,993	4,415	351	1,944	3,093	268	2	14,066
Value per acre	£6 1 6	£6 17 0	£9 12 7	£5 14 6	£3 10 10	£11 16 7	£10 12 4	£5 9 3

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 1951-52 to 1955-56 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Quantity .. '000 bus.	286	12,971	11,846	3,275	2,872	9,608
Value.. .. £'000	36	8,001	4,851	1,219	1,376	3,578

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 in which imports exceeded exports was 1927-28 (by 461,000 bushels), when New Zealand was the main supplier. In 1955-56, the principal countries of destination of the exports were the United Kingdom, the Federal Republic of Germany, New Zealand, Italy and the Netherlands.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1955-56 to 20,013 tons equivalent to about 2,241,000 bushels of oats, or about 4.0 per cent. of the total production.

6. **World Production.**—The world's production of oats for the year 1955, according to preliminary details released by the United States Department of Agriculture, amounted to 4,435 million bushels, harvested from 127.0 million acres, representing an average yield of 34.9 bushels per acre. This compared with the production in the previous year of 4,275 million bushels from an area of 132.5 million acres giving an average yield of 32.3 bushels per acre. The world's average production, for the years 1934 to 1938 amounted to 3,588 million bushels from 143 million acres giving an average yield of 25.09 bushels per acre. In comparison with the average return per acre for world production in 1955 that of Australia for the same period (16.8 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 1955-56 season being 163,824 acres, or 98 per cent. of the total for Australia. In all States except South Australia, the crop is grown to some extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Yield per Acre.**—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 195,539 acres during the ten years ended 1954-55. Compared with the previous year, the area in 1955-56 decreased by 2,246 acres and was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

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 1951-52 to 1955-56 and the averages for the ten-year periods ended 1938-39 and 1954-55 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales, Victoria and Queensland for 1955-56.

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

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30								
to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
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
1953-54 ..	58,556	5,613	114,735	..	21	64	..	178,989
1954-55 ..	50,617	4,379	114,673	2	8	8	..	169,687
Average, 1945-46								
to 1954-55 ..	71,683	5,785	118,006	1	49	14	1	195,539
1955-56—								
Hybrid ..	35,511	2,730	47,353	}	6	65	2	a 167,441
Other ..	20,167	805	60,793					
PRODUCTION ('000 BUSHELS).(b)								
Average, 1929-30								
to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1951-52 ..	1,410	168	2,439	..	..	1	..	4,018
1952-53 ..	2,113	204	2,650	..	..	..	..	4,967
1953-54 ..	1,737	298	3,042	..	..	2	..	5,079
1954-55 ..	1,767	229	3,080	..	..	..	..	5,076
Average, 1945-46								
to 1954-55 ..	2,085	253	2,937	..	1	..	..	5,276
1955-56—								
Hybrid ..	1,310	149	1,357	}	..	1	..	4,755
Other ..	558	27	1,353					
YIELD PER ACRE (BUSHELS).(b)								
Average, 1929-30								
to 1938-39 ..	26.7	34.3	21.8	29.8	10.0	..	8.5	24.5
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
1953-54 ..	29.7	53.1	26.5	..	12.9	29.6	..	28.4
1954-55 ..	34.9	52.3	26.9	..	9.8	21.6	..	29.9
Average, 1945-46								
to 1954-55 ..	29.1	43.7	24.9	5.0	10.3	23.8	7.0	27.0
1955-56—								
Hybrid ..	36.9	54.7	28.7	}	12.5	15.0	19.4	80.0
Other ..	27.7	32.9	22.3					

(a) Includes 3 acres in the Northern Territory.

(b) 56 lb. per bushel.

The average yield for Australia for the ten-year period ended 1954-55 was 27.0 bushels per acre. Among principal producing countries during 1955 the United States of America averaged 40.6 bushels per acre and Italy 38.0 bushels.

3. Price of Maize.—The average wholesale price of maize in the Melbourne market in 1955-56 was 16s. 5d. per bushel compared with 16s. 6d. in 1954-55. In 1938-39, the comparable price for maize of similar quality was 5s. 2½d.

4. Value of Crop.—The estimated gross value of the crop in each State for the 1954-55 season and the value per acre were as follows:—

MAIZE FOR GRAIN: VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,495	177	1,943	..	..	..	3,615
Value per acre	£29 10 8	£40 8 7	£16 18 9	..	..	..	£21 6 1

5. Exports of Maize and Maize Products.—Details of exports of maize for the five years ended 1955-56 compared with the average of the five years ended 1938-39 are shown below.

MAIZE: EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Quantity .. '000 bus.	57	188	782	504	458	185
Value £'000	9	149	703	353	301	119

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

Exports of cornflour, which prior to the 1939-45 War were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1955-56, 1,050,100 lb., valued at £32,745, 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 1955, amounted to 6,275 million bushels, harvested from 250 million acres, giving an average yield per acre of 25.1 bushels. This compared with production in the previous year of 5,635 million bushels from 225 million acres, yielding an average per acre of 25.0 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 1956 the area sown to maize in that country averaged 79 million acres or 32 per cent. of the world total. During the same period production averaged 3,246 million bushels or about 52 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals as the area, and an estimate of grain equivalent, of maize used as green fodder are included. In recent years, maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

A graph showing the production of maize in Australia appears on p. 834.

§ 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 1955-56 reached the record level of 1,894,000 acres. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 55 per cent. of the Australian acreage in 1955-56. There has been a substantial increase in the acreage sown in most States in recent years particularly in Western Australia and Queensland. Small areas of barley are sown for hay, and more considerable quantities are sown for green forage but these are not included in this section. The production of barley for grain in Australia in 1955-56, at 41,655,000 bushels was the highest ever recorded. The area, production and yield per acre of barley for grain in the several States for the years 1951-52 to 1955-56 and the averages for the ten-year periods ended 1938-39 and 1954-55 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
1951-52 ..	11	186	28	832	57	4	..	1,118
1952-53 ..	18	235	72	937	107	8	..	1,377
1953-54 ..	32	375	56	1,122	209	9	..	1,803
1954-55 ..	37	280	87	1,020	260	7	..	1,691
Average, 1945-46 to 1954-55 ..	22	216	37	757	102	7	..	1,141
1955-56—								
Malting (2-Row)	37	291	125	981	70	6	..	1,510
Other (6-Row)	17	18	21	61	267	..	..	384
Total ..	54	309	146	1,042	337	6	..	1,894

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

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	1	8,553
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
1953-54 ..	680	7,932	1,139	28,492	2,733	296	..	41,272
1954-55 ..	500	4,946	2,573	18,376	2,805	200	..	29,400
Average, 1945-46 to 1954-55 ..	353	4,181	898	16,250	1,278	179	..	23,139
1955-56—								
Malting (2-Row)	764	6,488	3,648	23,398	994	178	..	35,470
Other (6-Row)	356	389	568	1,200	3,659	13	..	6,185
Total ..	1,120	6,877	4,216	24,598	4,653	191	..	41,655
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	17.3
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
1953-54 ..	21.4	21.2	20.3	25.4	13.1	31.4	..	22.9
1954-55 ..	13.6	17.6	29.5	18.0	10.8	27.5	..	17.4
Average, 1945-46 to 1954-55 ..	16.3	19.3	24.3	21.5	12.5	27.5	..	20.3
1955-56—								
Malting (2-Row)	20.6	22.3	29.2	23.9	14.1	29.9	..	23.5
Other (6-Row)	20.8	21.1	27.4	19.7	13.7	34.4	..	16.1
Total ..	20.7	22.2	29.0	23.6	13.8	30.2	..	22.0

(a) 50 lb. per bushel.

For Australia as a whole, about 80 per cent. of the area of barley for grain in 1955-56 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 1955-56 was as follows:—malt works, 7,829,000 bushels; flour and other grain mills, 592,000 bushels; distilleries, 42,000 bushels; exports, 28,246,000 bushels; leaving a balance of 4,946,000 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 1951-52 to 1955-56 and the averages for the ten-year periods ended 1938-39 and 1954-55.

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
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
1953-54 ..	1,482	321	1,803	35,923	5,349	41,272	24.2	16.7	22.9
1954-55 ..	1,391	300	1,691	25,622	3,778	29,400	18.4	12.6	17.4
Average 1945-46 to 1954-55 ..	976	165	1,141	20,404	2,735	23,139	20.5	16.6	20.3
1955-56 ..	1,510	384	1,894	35,470	6,185	41,655	23.5	16.1	22.0

A graph showing the production of barley appears on p. 834.

During the last ten-year period shown, the average area of barley of the malting, or 2-row, class was nearly six times the corresponding figure for barley of the 6-row, or feed, class. The yield per acre for malting barley was 23 per cent. higher than that for 6-row barley.

2. **Australian Barley Board.**—Following the outbreak of war in 1939, the Australian Barley Board, representative of the whole industry, was formed, and the Commonwealth

Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, appointed licensed receivers to receive grain on its behalf and to act as agents for all local and overseas 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 the acquisitions from 1950-51 to 1955-56 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. 12 (1950-51 Crop)	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
„ 16 (1954-55 „)	20,679	20,709	12 10.92	11,953,430
„ 17 (1955-56 „)	29,357	29,438	(c) 9 6	11,835,364

(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. (c) As at 30th April 1957. At that date it was estimated that the amount still to be paid to growers was 9.441d. per bushel.

3. Prices.—The average wholesale price for 2-row English malting barley in the Melbourne market during 1955-56 was 14s. 7½d. compared with 14s. 6½d. in 1954-55 and 3s. 5½d. in 1938-39.

4. Value of Barley Crop.—The estimated gross value of the barley crop in each State for the 1954-55 season and the value per acre are shown in the following table:—

BARLEY FOR GRAIN : VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Aggregate value .. £'000	333	3,155	1,427	11,622	1,554	166	18,257
Value per acre	£9 0 9	£11 4 10	£16 7 0	£11 7 11	£5 19 8	£22 18 7	£10 15 11

5. Exports.—Australian exports of barley during the five years ended 1955-56 averaged 19,532,000 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 1951-52 to 1955-56 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Quantity .. '000 bus.	3,279	12,062	22,239	26,949	18,867	17,539
Value .. £'000	483	11,154	19,245	14,870	10,357	10,471

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 1955-56 amounting to 356,142 lb., valued at £11,961, consigned mainly to Malaya.

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

BARLEY MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.

Particulars.	1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Grain used . . '000 bus.	3,730	6,063	6,505	7,118	7,629	7,803
Malt produced '000 bus.(a)	3,621	6,073	6,620	7,078	7,517	7,782

(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 and net exports have increased steadily since. In 1954-55 and 1955-56, no malt was imported and exports amounting to 368,247 bushels valued at £372,177 in 1954-55 and 451,687 bushels valued at £502,046 in 1955-56 were recorded.

7. *World Production.*—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1955 were the United States of America and Canada. China is also normally a major producer, but details for 1955 are not 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 1955, excluding that of the U.S.S.R., amounted to 2,562 million bushels harvested from 112.2 million acres, equivalent to a yield per acre of 22.8 bushels. This compared with the production of 2,465 million bushels in the previous year from 110 million acres, giving a yield per acre of 22.4 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.

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

In 1956, the Commonwealth Government entered into an agreement for the development of large scale rice-growing in the Northern Territory. The agreement, which was made with a company financed by American and Australian interests, granted a 30 year lease over 750,000 acres of sub-coastal plains east of Darwin and provided for the development of 500,000 acres of land for rice-growing within 15 years.

The area sown in 1955-56 was a record at 41,182 acres, the previous highest area being 40,690 acres in 1943-44. Production was 4,725,000 bushels in 1955-56 which was 355,000 bushels less than the record production of 5,080,000 bushels in 1954-55.

A graph showing the production of rice appears on p. 834.

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 1951-52 to 1955-56, 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)		Un-cleaned.	Cleaned.	Un-cleaned.	Cleaned.
			'000 Bushels. (d)	£'000.		Bushels. (d)	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
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 ..	539	38,909	4,069	3,197	104.6	(f)	(f)	18,758	775,489
1954-55 ..	573	38,690	5,080	3,430	131.3	(f)	(f)	62,571	618,313
1955-56 ..	620	41,182	4,725	3,405	114.7	(f)	(f)	200,813	760,400

(a) Rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland, Western Australia and the Northern Territory in recent seasons. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) Forty-two 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 so far, development has been restricted mainly to these areas, and more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and has become an important source of supply for supplementing other coarse grains for the feeding of livestock. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). Particulars of the area and production of sorghum grown for grain are given in the following table.

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

Season.	Area.			Production.(a)			Yield per Acre.(a)		
	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)
	Acres. (c)	Acres.	Acres. (d)	Bushels. (c)	Bushels.	Bushels. (d)	Bushels. (c)	Bushels.	Bushels. (d)
1939-40 ..	7,101	4,397	11,498	41,487	57,936	99,423	5.8	13.2	13.2
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	129,063	4,039,779	4,168,842	18.3	22.2	22.1
1954-55 ..	13,069	202,532	215,688	272,604	5,082,762	5,356,335	20.9	25.1	24.8
1955-56 ..	23,697	155,527	179,298	662,973	3,960,195	4,624,273	28.0	25.5	25.8

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

§ 10. Potatoes.

1. Area, Production and Yield per Acre.—Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, and the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area of these three States accounted for 76 per cent. of the total for Australia in 1955–56.

The area sown, production and yield per acre of potatoes in each State during the years 1951–52 to 1955–56 and the averages for the ten-year periods ended 1938–39 and 1954–55 are shown hereunder:—

POTATOES : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES).									
Average, 1929–30 to 1938–39 ..	19,199	54,658	11,039	5,042	4,953	34,684	(a)	30	129,605
1951–52 ..	19,034	42,108	11,465	6,971	6,885	31,514	(a)	168	118,145
1952–53 ..	18,119	52,851	11,641	9,231	8,079	35,347	(a)	127	135,395
1953–54 ..	16,513	52,745	9,382	7,023	8,068	34,524	(a)	112	128,367
1954–55 ..	13,897	44,075	9,621	6,037	7,563	26,209	5	71	107,478
Average, 1945–46 to 1954–55 ..	19,349	51,950	11,212	7,058	7,431	36,546	(a)	116	133,662
1955–56 ..	13,270	37,020	10,202	5,373	6,826	20,842	..	74	93,607
PRODUCTION (TONS).									
Average, 1929–30 to 1938–39 ..	44,122	150,238	18,100	20,202	23,410	94,500	(a)	63	350,635
1951–52 ..	52,020	178,399	33,001	43,898	49,930	150,500	(a)	1,017	508,765
1952–53 ..	51,132	133,148	35,051	43,880	52,759	114,500	(a)	663	431,133
1953–54 ..	58,046	213,714	32,628	45,044	53,708	144,300	(a)	514	547,954
1954–55 ..	47,700	206,577	30,651	38,362	43,565	101,000	4	330	468,189
Average, 1945–46 to 1954–55 ..	57,127	184,463	29,975	37,967	44,715	143,760	(a)	619	498,626
1955–56 ..	44,162	163,239	37,561	36,460	42,079	77,930	..	439	401,870
YIELD PER ACRE (TONS).									
Average, 1929–30 to 1938–39 ..	2.30	2.75	1.64	2.50	4.73	2.72	(a)	2.09	2.71
1951–52 ..	2.73	4.24	2.88	6.30	7.25	4.78	(a)	6.05	4.31
1952–53 ..	2.82	2.52	3.01	4.75	6.53	3.24	(a)	5.22	3.18
1953–54 ..	3.52	4.05	3.48	6.41	6.66	4.18	(a)	4.59	4.27
1954–55 ..	3.43	4.69	3.19	6.35	5.76	3.85	0.80	4.65	4.36
Average, 1945–46 to 1954–55 ..	2.95	3.55	2.67	5.38	6.02	3.93	(a)	5.34	3.73
1955–56 ..	3.33	4.41	3.68	6.79	6.16	3.74	..	5.93	4.29

(a) Not available.

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944–45. Areas sown in subsequent seasons were considerably less, however, and showed a general decline to the figure for the 1955–56 season, 93,607 acres.

Compared with the yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, averaged 6.74 tons per acre in 1954–55 from an area of about 20,000 acres, as compared with a record yield of 4.36 tons per acre in Australia in 1954–55, and 4.29 tons per acre in 1955–56.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the 1954–55 season and the value per acre are shown in the following table.

POTATOES : VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	914	5,840	766	675	1,175	4,073	6	13,449
Value per acre £ s. d.	65 15	2,132 9 9	79 12 11	111 14	1'155 6 10	155 8 4	89 3	1,125 2 7

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1953–54 to 1955–56 amounted to 485,400 tons, 417,100 tons and 373,400 tons respectively, or 122.2 lb., 102.8 lb. and 89.8 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 55,000 tons annually over this period. Consumption during the three years ended 1938–39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

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

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

5. **Exports.**—Prior to the 1939–45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. After the war, the export trade expanded considerably. It reached a peak in 1952–53 but then declined. Details showing exports for the years 1951–52 to 1955–56 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.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
Quantity .. tons	1,884	12,468	37,570	4,010	3,473	3,478
Value .. £'000	17	437	1,237	155	109	225

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 47.6 per cent. of the total area and 50.9 per cent. of the quantity produced in 1955–56. Queensland came next with 35.4 per cent. of the area and 23.0 per cent. of the production, leaving a balance of 17.0 per cent. of area and 26.1 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 1951–52 to 1955–56 together with averages for the ten-year periods ended 1938–1939 and 1954–55.

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
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
1953-54	270	3,641	2,497	471	375	18	7	7,279
1954-55	285	3,970	2,807	512	390	21	9	7,994
Average, 1945-46 to 1954-55	380	5,137	2,466	521	405	31	6	8,946
1955-56	318	3,337	2,480	524	321	22	8	7,010
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39	354	35,431	2,548	3,414	814	20	11	42,592
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
1953-54	1,325	22,783	11,957	4,975	4,626	87	14	45,767
1954-55	1,340	26,091	12,243	4,790	4,322	107	71	48,964
Average, 1945-46 to 1954-55	1,513	31,714	10,723	5,129	4,007	137	32	53,255
1955-56	1,759	20,299	9,157	4,911	3,547	140	42	39,855
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
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
1953-54	4.91	6.26	4.79	10.56	12.34	4.83	2.00	6.29
1954-55	4.70	6.57	4.36	9.36	11.08	5.10	7.89	6.13
Average, 1945-46 to 1954-55	3.98	6.17	4.35	9.84	9.89	4.42	5.33	5.95
1955-56	5.53	6.08	3.69	9.37	11.05	6.36	5.25	5.69

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 1954-55 season:—

ONIONS : VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	58	841	352	194	134	4	3	1,586
Value per acre £ s. d.	203 6	0 211 17	10 125 7	11 378 17	11 344 5	8 188 11	5 341 4	5 198 9 1

3. **Consumption.**—The annual consumption of onions in Australia averaged 44,600 tons or 11.0 lb. per head of population during the three years ended 1955-56, 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 2,300 tons and 2,100 tons respectively.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1955–56, exports amounted to 981 tons, valued at £54,944, and were shipped mainly to New Caledonia, Singapore, Papua and Hong Kong. The quantity of exports in 1954–55 was 2,706 tons, valued at £104,440. There were no imports in 1954–55 and 1955–56.

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, it 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 1955–56, the hay area represented 10.0 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on p. 831. 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 1951–52 to 1955–56 and the averages for the ten-year periods ended 1938–39 and 1954–55 are shown below:—

HAY : AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929–30 to 1938–39 ..	757	1,111	68	541	432	83	2	2,994
1951–52 ..	334	640	44	257	174	98	2	1,549
1952–53 ..	388	753	66	214	227	110	3	1,761
1953–54 ..	450	807	71	262	219	123	3	1,935
1954–55 ..	524	739	76	257	289	96	3	1,984
Average, 1945–46 to 1954–55 ..	458	709	63	289	232	99	3	1,853
1955–56 ..	562	879	63	326	269	137	5	2,241
PRODUCTION ('000 TONS).								
Average, 1929–30 to 1938–39 ..	959	1,263	104	577	464	120	3	3,490
1951–52 ..	451	1,047	80	380	211	172	4	2,345
1952–53 ..	579	1,245	136	318	290	192	5	2,765
1953–54 ..	639	1,361	140	369	294	241	5	3,049
1954–55 ..	680	1,208	171	330	305	158	4	2,856
Average, 1945–46 to 1954–55 ..	601	1,116	123	385	271	166	4	2,666
1955–56 ..	846	1,526	137	461	384	261	10	3,625
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
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
1953–54 ..	1.42	1.69	1.99	1.41	1.34	1.96	1.52	1.58
1954–55 ..	1.30	1.63	2.25	1.28	1.05	1.64	1.33	1.44
Average, 1945–46 to 1954–55 ..	1.31	1.57	1.96	1.33	1.17	1.67	1.44	1.44
1955–56 ..	1.51	1.74	2.17	1.41	1.42	1.91	2.08	1.62

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 1915–16, 3,597,771 acres, was the largest on record, whilst the average for the ten-years ended 1954–55 was 1,852,509 acres.

A graph showing the production of hay appears on p. 834.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1955–56 are given in the following table.

HAY : AREA UNDER VARIOUS KINDS GROWN, 1955-56.
(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales	84,487	102,173	195,204	179,608	561,472
Victoria	33,003	198,873	69,305	578,107	879,288
Queensland	5,197	4,134	49,946	3,827	63,104
South Australia	61,524	139,325	20,932	103,892	325,673
Western Australia	58,005	133,082	552	77,800	269,439
Tasmania	2,737	23,668	1,276	109,476	137,157
Australian Capital Territory ..	191	1,922	1,306	1,308	4,727
Australia	245,144	603,177	(a)338,522	1,054,018	a 2,240,861

(a) Includes one acre in the Northern Territory.

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1955-56 were 27 per cent. for oaten, 11 per cent. for wheaten, 15 per cent. for lucerne, and 47 per cent. for other hay. In that year, oaten hay predominated in the States of South Australia and Western Australia, lucerne in New South Wales and 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 1954-55 season:—

HAY : VALUE OF CROP, 1954-55.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	9,228	11,842	2,393	2,861	2,781	1,715	58	30,878
Value per acre ..	£17 12 4	£16 0 6	£31 9 3	£11 3 1	£9 12 3	£17 15 6	£18 17 1	£15 11 3

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 1952 to 1956 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.
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
1955 ..	809,263	1,553,289	156,115	447,102	207,664	145,112	3,269	3,321,814
1956 ..	830,619	1,870,214	149,187	474,456	306,586	270,138	7,778	3,908,978

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 1955-56, exports amounted to 2,064 tons, valued at £43,222.

§ 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, or ensilage, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting

for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live-stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1955-56, the area under green fodder (2,648,799 acres) consisted of oats (1,558,256 acres), lucerne (400,486 acres), wheat (120,835 acres), sorghum (71,514 acres), maize (41,569 acres), barley (130,298 acres), rye (30,583 acres), sugar-cane (1,683 acres) and other crops (293,575 acres). Particulars concerning the area of green fodder in the several States during each of the years 1951-52 to 1955-56 are given in the following table, together with the average for the period of ten years ended 1938-39.

GREEN FODDER : AREA.
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	482,989	(a)	347,804	106,820	189,332	24,255	(a)	656	(a)
1951-52 ..	672,633	45,661	604,190	385,079	636,728	57,548	(a)	1,225	2,403,064
1952-53 ..	661,767	40,303	572,212	285,857	574,790	60,142	(a)	1,108	2,196,179
1953-54 ..	761,552	56,210	663,097	365,301	507,756	60,127	(a)	1,218	2,415,261
1954-55 ..	934,395	77,135	649,607	360,359	639,086	70,945	32	988	2,732,547
1955-56 ..	826,789	75,815	689,469	334,957	666,398	54,401	..	970	2,648,799

(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 1954-55, excluding Western Australia, may be taken as approximately £6,440,000.

§ 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, p. 985). The area of sugar-cane in Australia for the seasons 1951-52 to 1955-56 and the averages for the ten-year periods ended 1938-39 and 1954-55 are shown in the following table. In 1955-56, the total area of sugar-cane (excluding areas cut for green fodder) was 499,065 acres which was slightly below the record area of 501,859 acres in 1954-55.

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

Season.	New South Wales.			Queensland.			Australia.			Total.
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	
Average, 1929-30 to 1938-39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
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
1953-54 ..	7,787	6,869	468	332,703	120,929	12,846	340,490	127,798	13,314	481,602
1954-55 ..	6,566	8,078	474	367,640	107,512	11,589	374,206	115,590	12,063	501,859
Average, 1945-46 to 1954-55 ..	7,364	7,958	322	270,740	101,803	12,348	278,104	109,761	12,670	400,535
1955-56 ..	7,522	8,728	670	365,252	104,782	12,111	372,774	113,510	12,781	499,065

(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 1955-56 amounted to 1,683 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

3. **Production of Cane and Sugar.**—For Queensland, statistics of the production of sugar-cane are not available for seasons prior to 1897-98. In that season, the total for Australia was 1,073,883 tons, compared with 8,900,702 tons in the 1955-56 season. The record production was 10,086,517 tons in 1954-55.

The average production of cane during the ten seasons ended 1954-55 was 6,516,573 tons, and of raw sugar 890,048 tons. Particulars of the total production of cane and sugar for the years 1951-52 to 1955-56 and the averages for the ten-year periods ended 1938-39 and 1954-55 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
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
1953-54	263,249	34,004	8,751,063	1,220,383	9,014,312	1,254,387
1954-55	222,213	26,301	9,864,304	1,301,245	10,086,517	1,327,546
Average, 1945-46 to						
1954-55	264,006	32,515	6,252,567	857,533	6,516,573	890,048
1955-56	284,539	36,028	8,616,163	1,135,685	8,900,702	1,171,713

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1955-56 amounted to 1,171,713 tons manufactured from 8,900,702 tons of cane, compared with the record production of 1,327,546 tons in 1954-55.

Official annual data are not available regarding the total number of persons engaged in the sugar industry in New South Wales and Queensland. The number of separate holdings of 5 acres or more growing cane was 7,224 in 1955-56.

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 1954-55 were 35.85 tons for New South Wales, and 23.09 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.42 tons and 3.17 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1954-55 were 23.43 tons and 3.20 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
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
1953-54	33.81	4.37	7.74	26.30	3.67	7.17	26.47	3.68	7.19
1954-55	33.84	4.01	8.45	26.83	3.54	7.58	26.95	3.55	7.60
Average, 1945-46 to									
1954-55	35.85	4.42	8.12	23.09	3.17	7.29	23.43	3.20	7.32
1955-56	37.83	4.79	7.90	23.59	3.11	7.59	23.88	3.14	7.60

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 1954-55 it required on the average 7.32 tons of cane to produce 1 ton of sugar, or 13.7 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 1951-52 to 1955-56 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; and include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stocks.	Pro-duction.	Exports. (a)	Miscel-laneous Uses.(b)	Consumption in Australia.(a)	
					Total.(c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to						
1938-39	+ 6.2	779.3	435.3	11.2	326.6	106.5
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	+40.8	1243.6	738.7	17.8	446.3	112.2
1954-55	-24.1	1218.1	761.2	21.7	462.9	114.0
1955-56	+42.1	1158.0	617.0	18.0	480.9	115.7

(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 1955-56 amounted to 266,065 tons compared with 252,012 tons in 1954-55 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 1955-56, consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 71,056 tons and by those producing confectionery, ice cream, etc., amounted to 52,784 tons.

8. **Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. Details of prices are shown in para. 14 of this section (*see* p. 863.)

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 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. A further amendment in May, 1956, again increased the price of sugar.

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 1951–52 to 1955–56 will be found in the following table:—

RAW SUGAR(a) : NET RETURNS, AUSTRALIA.

Year.	Proportion Exported. (b)	Net Value of Exports per Ton. (b)		Average Price per Ton for Whole Crop.	Estimated Value of Crop.
		£	s. d.	£ s. d.	
1938–39	55.78	8	4 3	15 3 11	12,806
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	38	13 9	42 10 8	52,572
1954–55	59.11	37	8 0	41 6 11	53,984
1955–56	53.46	38	11 4	42 9 0	51,744

(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 1955-56 amounted to £356,689. The value thus obtained represents the net market value of all raw sugar sold, which is divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively.

12. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and for each year from 1951-52 to 1955-56 are as follows:—

SUGAR : EXPORTS, AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Quantity	tons	377,930	167,431	459,370	706,801	592,018	737,108
Value	£'000	3,481	6,896	21,655	31,592	24,703	31,138

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 VII.—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 1951 to 1955 in the case of raw sugar, and from 1951 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 Consump- tion.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
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	38 13 9	42 10 8	13.10.52 to 13.5.56	73 16 11	9
1954 ..	47 1 0	37 8 0	41 6 11	14.5.56 to 31.8.61	82 1 0	10
1955 ..	46 18 0	38 11 6	42 9 0			

(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 1956 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 1964. The United Kingdom Government agreed to take 300,000 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, provided for the reversion of dealings in sugar in the United Kingdom to a trader to trader basis as

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

16. Fruit Industry Sugar Concession Committee and Sugar Rebates.—The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund to which the Queensland Government contributes £216,000 annually on behalf of the Sugar Industry (contributions were suspended temporarily while 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.—Terminals for loading raw sugar in bulk are under construction at the ports of Mackay and Lucinda Point. Designs are being prepared for additional terminals at Townsville and Bundaberg. These facilities in Queensland are being constructed under a general scheme laid down in the Queensland Harbours Act, 1955.

Bulk unloading facilities are in operation at Pymont refinery, Sydney. The three raw sugar mills in New South Wales despatch all their raw sugar production in bulk.

§ 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 1956 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 1951–52 to 1955–56 and the averages for the ten-year periods ended 1938–39 and 1954–55 are shown in the following table.

VINEYARDS : AREA.
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Aust.(a)
Average, 1929–30 to						
1938–39	15,777	40,563	2,142	54,156	5,666	118,304
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
1953–54	18,128	45,777	2,884	62,121	9,202	138,112
1954–55	18,205	45,757	2,896	60,612	9,015	136,485
Average, 1945–46 to						
1954–55	17,066	44,865	2,989	60,113	9,522	134,555
1955–56—						
Wine	7,673	4,680	314	42,096	2,814	57,577
Table	2,684	2,727	2,602	287	1,593	9,893
Drying	7,742	37,410	..	17,479	4,700	67,331
Total	18,099	44,817	2,916	59,862	9,107	134,801

(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 22.9 million gallons in 1955-56. 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 10.9 million gallons (1.2 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, p. 992.

The quantity of wine produced in the several States during the 1951-52 to 1955-56 seasons, together with the averages for the ten-year periods ended 1938-39 and 1954-55, are shown in the following table:—

WINE : PRODUCTION.(a)
(‘000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39 ..	2,099	1,449	36	12,127	393	16,104
1951-52.. ..	5,465	3,472	33	25,495	790	35,255
1952-53.. ..	4,250	2,267	42	22,733	731	30,023
1953-54.. ..	5,066	2,327	59	23,497	717	31,666
1954-55.. ..	2,271	1,612	61	19,208	812	23,964
Average, 1945-46 to 1954-55 ..	4,211	2,630	41	22,653	694	30,229
1955-56.. ..	2,327	1,342	37	18,403	787	22,896

(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 1955-56 amounted to 48,547 gallons valued at £106,462 compared with 53,204 gallons valued at £127,470 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 1955-56 totalled 1,203,992 gallons, of which the United Kingdom received 896,490 gallons, New Zealand 61,972 gallons, Canada 176,852 gallons, and other countries 68,678 gallons.

Exports for the five years ended 1955-56 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
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
1954-55.. ..	5,570	1,258,503	1,264,073	19,670	797,767	817,437
1955-56.. ..	5,997	1,197,995	1,203,992	19,833	714,235	734,068

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 vines. The quantities of table grapes produced during the season 1955–56 in each State are shown in § 3 of this chapter. (See p. 826)

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1951–52 to 1955–56 and the averages for the ten-year periods ended 1938–39 and 1954–55 are shown in the following table. Production in 1955–56 was 60,270 tons, compared with 80,752 tons in 1954–55.

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
1951–52.. ..	7,095	537	44,834	3,858	7,999	4,730	391	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
1953–54.. ..	8,261	591	51,073	4,669	16,451	6,326	259	2,284	76,044	13,870
1954–55.. ..	7,873	663	49,368	4,675	12,287	3,654	60	2,172	69,588	11,164
Average, 1945–46 to 1954–55 ..	6,606	855	43,365	6,138	10,424	5,224	426	2,574	60,821	14,791
1955–56.. ..	5,600	753	29,417	5,150	11,699	5,009	136	2,506	45,852	13,418

(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, 1955, totalled 79,469 tons, Australian consumption amounting to 18,036 tons and oversea exports 61,433 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the overseas exports of raisins and currants during each of the years 1951-52 to 1955-56 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
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
1954-55 ..	59,934	6,720	8,373	917	68,307	7,637
1955-56 ..	51,734	6,224	9,561	1,151	61,295	7,375

(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 1955-56 being 36,024 tons, 5,852 tons and 15,193 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 p. 783 of Official Year Book No. 41.

7. **Overseas Marketing of Dried Fruits.**—(i) *The Dried Fruits Export Control Act 1924-1953.* This Act was passed to organize overseas 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 appraisal, regulation of shipments and advertising.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for a levy on exports of dried fruits to defray costs and expenses incurred by the Board. Provision is made for exemption from the levy upon 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. There has been an increase in each year since then to 278,907 acres in 1955-56. The total area of orchards and fruit-gardens in the several States during the years 1951-52 to 1955-56 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.	N.T.	A.C.T.	Aust.
Average, 1929-30									
1938-39 ..	84,025	76,643	32,437	29,365	20,703	32,627	(a)	69	275,869
1951-52 ..	89,362	68,715	35,049	29,375	21,719	26,552	(a)	110	270,882
1952-53 ..	90,131	67,234	37,280	28,649	21,492	26,075	(a)	108	270,969
1953-54 ..	90,761	66,180	39,979	29,758	21,542	24,818	(a)	111	273,149
1954-55 ..	91,124	66,091	42,517	30,507	21,475	23,687	102	122	275,625
1955-56 ..	93,482	65,214	41,253	32,998	21,943	23,795	104	118	278,907

(a) Not available.

2. **Varieties of Crops.**—The varieties grown differ in various parts of the States, ranging from such fruits as pineapples, papaws and mangoes in the tropics, to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums pears and cherries are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, pineapples, apples, bananas, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to apples, oranges, apricots, plums, peaches and pears, almonds and olives are extensively grown. In Western Australia, apples, oranges, pears, plums, peaches, lemons, apricots and figs are the chief varieties. In Tasmania, apples occupy over three quarters of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberries are 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, 1955-56.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AREA, BEARING AND NON-BEARING (ACRES).									
Apples ..	15,549	20,208	9,420	6,326	12,465	18,269	..	99	82,336
Apricots ..	2,179	4,551	311	4,665	423	926	..	1	13,056
Bananas ..	21,683	..	7,113	..	490	..	45	..	29,331
Cherries ..	2,440	1,814	8	739	37	69	..	..	5,107
Citrus—									
Oranges ..	27,710	5,269	3,657	7,435	3,971	..	22	..	48,064
Mandarins ..	1,964	134	1,521	142	239	..	..	..	4,000
Lemons and Limes ..	2,783	1,569	447	308	583	..	9	..	5,699
Other ..	651	293	91	321	150	..	2	..	1,508
Nuts ..	393	605	210	3,722	197	4	..	1	5,132
Peaches ..	7,097	10,557	1,557	3,326	845	97	..	6	23,485
Pears ..	3,277	13,622	446	1,957	1,013	1,708	..	7	22,030
Pineapples ..	565	..	12,316	..	..	..	20	..	12,901
Plums and Prunes ..	4,648	2,402	1,316	1,429	968	150	..	2	10,915
Small Fruits ..	13	612	179	123	8	2,529	..	..	3,464
Other Fruits ..	2,530	3,578	2,661	2,505	554	43	6	2	11,879
Total	93,482	65,214	41,253	32,998	21,943	23,795	104	118	278,907

PRODUCTION.

Apples '000 bus.	1,645	2,649	734	985	1,516	5,926	..	9	13,464
Apricots " "	345	236	19	664	42	74	..	..	1,380
Bananas " "	4,037	..	626	..	69	..	4	..	4,736
Cherries " "	113	76	..	41	1	6	..	..	237
Citrus—									
Oranges " "	3,561	771	402	1,494	424	..	..	1	6,653
Mandarins " "	186	17	161	32	20	..	..	..	416
Lemons and Limes, " "	396	219	68	57	88	..	2	..	830
Other " "	138	57	22	65	27	..	..	..	309
Nuts '000 lb.	146	192	58	1,474	37	4	..	..	1,912
Peaches '000 bus.	897	1,162	93	360	65	8	..	..	2,585
Pears " "	427	2,743	45	354	99	538	..	..	4,206
Pineapples " "	103	..	4,308	..	..	..	1	..	4,412
Plums and Prunes " "	386	166	74	118	73	25	..	..	842
Small Fruits '000 cwt.	..	10	8	2	..	104	..	..	124

ORCHARDS AND FRUIT-GARDENS, 1955-56—*continued.*

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
GROSS VALUE OF PRODUCTION. (£'000.)									
Apples ..	3,190	2,980	1,056	1,624	2,348	5,385	..	11	16,594
Apricots ..	756	295	53	1,026	99	57	..	..	2,286
Bananas ..	4,873	..	616	..	249	..	..	..	5,738
Cherries ..	616	211	1	203	13	9	..	..	1,053
Citrus—									
Oranges ..	3,377	784	455	1,808	604	..	..	..	7,028
Mandarins ..	237	25	248	60	40	..	..	..	610
Lemons and									
Limes ..	300	174	79	25	94	..	..	..	672
Other ..	114	44	25	34	22	..	..	..	239
Nuts ..	16	32	6	155	5	1	..	..	215
Peaches ..	1,175	1,201	166	675	143	5	..	..	3,365
Pears ..	521	2,743	76	524	206	611	..	..	4,681
Pineapples ..	93	..	2,527	..	..	..	..	..	2,620
Plums and Prunes	701	113	196	200	159	11	..	..	1,380
Small Fruits ..	3	116	132	28	4	557	..	..	840
Other Fruits ..	380	73	344	120	88	2	13	..	1,020
Total ..	16,352	8,791	5,980	6,482	4,074	6,638	13	11	48,341

3. **Principal Fruit Crops.**—The area, production and gross value of the principal fruit crops during the periods 1951-52 to 1955-56 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
1951-52.. ..	80,206	13,282	26,021	58,419	25,603	20,957	11,841
1952-53.. ..	80,210	12,899	27,724	57,605	23,755	21,404	11,485
1953-54.. ..	80,684	12,881	28,799	57,479	23,685	21,040	11,546
1954-55.. ..	79,971	13,106	30,480	57,703	24,079	21,247	11,477
1955-56.. ..	82,336	13,056	29,331	59,271	23,485	22,030	10,915
PRODUCTION ('000 BUSHELS).							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
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
1954-55.. ..	11,678	1,544	3,139	7,086	3,080	4,708	820
1955-56.. ..	13,464	1,380	4,736	8,212	2,585	4,206	842
GROSS VALUE OF PRODUCTION. (£'000.)							
Average, 1929-30 to 1938-39	2,677	326	1,072	1,808	679	559	286
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	7,400	3,489	4,455	1,351
1954-55.. ..	13,969	2,010	7,350	8,639	3,606	4,628	1,220
1955-56.. ..	16,594	2,286	5,738	8,549	3,365	4,681	1,380

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 1955-56 output of jams and jellies amounted to 84,096,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 283,611,000 lb. Production of preserved apples was 20,296,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 231,548 tons in 1955-56.

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 1955-56 are shown in Chapter XXX.—Miscellaneous, of this Year Book.

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

A considerable export trade in both fresh and dried fruit is carried on by Australia with oversea countries. The values of the shipments in 1955-56 amounted to £9,138,000 and £7,802,000 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 1951-52 to 1955-56 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
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	9,569
1953-54 ..	4,728	6,089	1,209	2,045	533	809	6,596	9,384
1954-55 ..	4,265	5,444	1,407	2,183	525	783	6,248	8,771
1955-56 ..	5,023	6,513	1,012	1,470	585	869	6,663	9,138

(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 1951-52 to 1955-56, 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 Imports.	
	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
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
1954-55 ..	(b) 13,176	(b) 373	6,576	804	6,600	-431
1955-56 ..	(b) 8,627	(b) 204	3,681	428	4,946	-224

(a) Excludes raisins and currants referred to separately under Vineyards, § 15, para. 5. (b) Imports of dates and figs only.

NOTE.—Minus (-) denotes net exports.

(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 1955-56 exports amounted to only 4,429,000 lb., valued at £265,000. 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 1955-56, was 992,000 lb. valued at £70,070. 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 1955-56, the value of exports had increased to £15,478,431. In addition, the exports of pulped fruits during 1955-56 amounted to 3,471,000 lb., valued at £245,980. Quantities of fruit preserved in liquid exported from Australia in 1955-56 amounted to 209,231,000 lb. compared with average

exports of 68,896,000 lb. for the five years ended 1938-39. Exports in 1955-56 were principally made up of peaches (61,464,000 lb.), pears (62,406,000 lb.), apricots (29,368,000 lb.) and pineapples (41,320,000 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 pp. 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 1926-1956.* This legislation was introduced with the object of organizing the oversea marketing of canned fruit. The Australian Canned Fruits Board, comprising members representing the Commonwealth Government and canners of apricots, peaches, pears, pineapples and fruit salad, was appointed with functions mentioned above and also to recommend conditions under which export licences are issued.

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

(ii) *The Canned Fruits Export Charges Act 1926-1938.* 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 1953-54 to 1955-56.

FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1953-54.		1954-55.		1955-56.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Asparagus	3,885	3,592	3,966	4,776	4,140	4,994
Beans, French and Runner	13,269	19,109	14,192	19,516	15,609	21,722
Beans, Navy	2,468	631	1,064	222	1,022	90
Beetroot	1,855	11,242	1,899	11,172	2,134	12,580
Cabbages and Brussels Sprouts	6,676	69,174	6,185	66,284	6,444	65,949
Carrots	3,992	33,399	4,002	32,223	4,196	34,448
Celery(b)	603	9,393	525	7,368	590	7,527
Cucumbers(b)	1,196	4,055	1,267	4,436	1,461	5,205
Cauliflowers	7,362	79,837	6,689	72,488	6,675	70,425
Lettuces	4,012	15,809	3,997	14,313	4,228	15,412
Parsnips	1,450	12,055	1,306	10,679	1,391	11,006
Peas, Blue	5,365	3,053	5,699	3,112	5,887	3,760
Peas, Green	33,191	32,444	36,929	35,235	44,136	44,233
Pumpkins	20,168	60,105	20,795	60,428	25,335	62,698
Tomatoes	13,136	76,683	14,873	84,343	16,774	89,029
Turnips, Swede and White	5,151	24,075	4,782	21,967	5,896	26,862
All Other	7,188	..	7,413	..	9,380	..
Total	130,967	..	135,583	..	155,298	..

(a) Excludes potatoes and onions.

(b) Incomplete; excludes New South Wales.

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1955–56 amounted to 77,812,000 lb., which was considerably higher than pre-war production, but only approximately 65 per cent. of the peak war-time production. The principal canned vegetables produced in 1955–56 were green peas 25,465,000 lb., green beans 4,748,000 lb., baked beans (including pork and beans) 16,985,000 lb., tomatoes 3,119,000 lb. and asparagus 7,501,000 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 1955–56 had declined to approximately 392,000 lb.

3. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1955–56 consisted of:—Pulse, 14,224 tons, £593,000; onions, 981 tons, £55,000; potatoes, 3,478 tons, £225,000; other vegetables, 1,767 tons, £158,000. Imports of pulse amounted to 4,629 tons, valued at £390,000, whilst imports of fresh vegetables were negligible.

In 1955–56, exports of vegetables preserved in liquid consisted of:—Peas, 375,000 lb., £28,000; tomatoes, 253,000 lb., £16,000; other vegetables, 1,269,000 lb., £167,000.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1955–56 are shown in Chapter XXX.—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 1955–56, the acreage planted was 11,306 acres which was approximately the same as the average for the ten years ended 1938–39. Owing to improvement in average yields, however, the production of dried leaf in 1955–56 was 27 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 1951–52 to 1955–56, together with averages for the ten-year periods ended 1938–39 and 1954–55:—

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
1951–52.. .. .	432	1,500	5,038	..	1,229	..	8,199
1952–53.. .. .	445	1,613	4,339	..	1,525	..	7,922
1953–54.. .. .	501	2,246	4,065	..	1,434	..	8,246
1954–55.. .. .	635	2,471	5,135	..	1,418	..	9,661
Average, 1945–46 to 1954–55	430	1,432	3,314	..	935	..	6,111
1955–56.. .. .	893	2,876	6,301	..	1,235	..	11,306
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929–30 to 1938–39	860	2,354	1,400	83	361	56	5,114
1951–52.. .. .	518	1,381	4,667	..	988	..	7,554
1952–53.. .. .	514	1,472	3,431	..	1,068	..	6,485
1953–54.. .. .	587	2,155	4,015	..	912	..	7,669
1954–55.. .. .	618	868	4,332	..	1,003	..	6,821
Average, 1945–46 to 1954–55	422	990	2,772	..	744	..	4,928
1955–56.. .. .	547	1,135	3,702	..	721	..	6,106

(a) Excludes Northern Territory for the years up to 1954–55. In that year, 616 lb. and in 1955–56 300 lb. were produced.

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) *Central Tobacco Advisory Committee.* The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and 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, pp. 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.

In 1955, the Central Tobacco Advisory Committee formulated a programme for increased research and advisory activities. The capital costs of establishing this programme are estimated at £168,000 of which the Commonwealth Government 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. This programme commenced in 1956.

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

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

(vii) *Tobacco Factories.* Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages rose from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946 to 7½ per cent. and 17½ per cent. respectively from 1st July, 1955. The Commonwealth Government has announced that the percentages to apply, from 1st July, 1957, shall be 12½ per cent. and 21 per cent. respectively. In 1955-56, the quantity of cured leaf used in tobacco factories in Australia amounted to 43.6 million lb. of which 5.3 million was of local origin, the balance being imported, chiefly from the United States of America.

3. *Overseas Trade.*—Imports of tobacco and manufactures thereof into Australia during 1955-56 were valued at £16.2 million, including 45.8 million lb. of unmanufactured tobacco valued at £15.1 million. Exports of tobacco and manufactures thereof during 1955-56 were valued at £518,000.

§ 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1955-56 being 1,765 acres, of which 1,377 acres were in Tasmania, and 388 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 1951-52 to 1955-56 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.	
Average, 1938-39	1934-35	to	20,576	173	1,020	78	21,518	18,992
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
1954-55	..	..	34,075	1,106	10,311	..	44,386	42,976
1955-56	..	..	34,374	1,102	16,880	..	51,254	43,638

(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.

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

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

Following on the Tariff Board's Report on Flax Fibre dated the 5th August, 1954, the Government introduced a bounty on flax fibre for a period of two years to permit the modernization of plant and machinery. The amount of the bounty is related to the difference between overseas prices and local production costs and it came into operation on the 1st November, 1954. The Tariff Board conducted a further inquiry into flax fibre in 1956 and in its report dated 8th February, 1957, recommended the continuance of bounty payments for a further period of three years.

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

FLAX FOR FIBRE: AREA AND PRODUCTION.

Season.	Victoria.	S. Aust.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934-35 to 1938-39	1,021	..	..	(a) 1,030
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
1954-55	5,878	1,314	464	7,656
1955-56	2,550	526	1,594	4,670
PRODUCTION (TONS OF STRAW).				
Average, 1934-35 to 1938-39	61	..	..	61
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
1954-55	7,799	1,888	500	10,187
1955-56	4,637	1,150	1,875	7,662

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

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 in the acreage and a further decline in 1953-54 when 6,343 acres only were sown. Since then an increase in the guaranteed price to growers has led to an increase in the area sown to 19,403 acres in 1954-55 and 47,727 acres in 1955-56.

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 1951-52 to 1955-56.

FLAX FOR LINSEED: AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
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
1954-55	1,826	1,829	15,569	171	..	8	19,403
1955-56	1,817	580	45,202	128	..	..	47,727
PRODUCTION (TONS OF LINSEED).							
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
1954-55	355	358	4,705	28	..	2	5,448
1955-56	400	94	12,738	15	..	..	13,247

§ 21. Peanuts.

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

PEANUTS: AREA AND PRODUCTION, AUSTRALIA.

Season.	Area (Acres).					Production (Tons).				
	N.S.W.	Qld.	W.A.	N.T.	Aust.	N.S.W.	Qld.	W.A.	N.T.	Aust.
Average, 1929-30 to 1938-39 ..	29	8,320	100	(a)	8,449 (b)	11	3,715	24	(a)	3,750
1951-52 ..	374	13,312	15	(a)	13,701	222	4,535	9	(a)	4,766
1952-53 ..	789	18,920	10	(a)	19,719	409	8,438	7	(a)	8,854
1953-54 ..	1,525	36,617	(c)	(a)	d 38,142	718	17,866	(c)	(a)	d 18,584
1954-55 ..	769	37,971	(c)	780	d 39,520	346	14,001	(c)	135	d 14,482
1955-56 ..	414	31,493	(c)	544	d 32,451	174	8,633	(c)	40	d 8,847

(a) Not available.

(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 1955-56 crop was £888,000 which was approximately £301,000 less than in 1954-55. This decrease was largely the result of the low level of production at 8,847 tons. This was due to very wet conditions at harvest time in Queensland where the yield per acre was the lowest ever recorded in that State.

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 1955-56, 14,828 tons (shell equivalent), consisted of 14,482 tons grown locally in the 1954-55 season and 346 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 1955-56 chiefly from the United States of America, Mexico, Pakistan, India, and Egypt. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods and payment of bounties, but so far have not met with much success. Production increased very considerably during the early years of the 1939-45 War, reaching a peak of 17,550,000 lb. unginned cotton in 1939-40, but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter VII.—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 the guaranteed return for 1957 and 1958 seasons will not be less than 14d. per pound.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1951 to 1955 are shown hereunder together with the average for the period of ten years ended 1939. Details of the production of ginned cotton are derived from published statistics of the Queensland Cotton Marketing Board.

COTTON: AREA AND PRODUCTION IN QUEENSLAND.

Season ended December—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned— Equivalent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£'000.	'000 lb.	Bales.	lb.	lb.
Average, 1930 to 1939	58,436	16,617	291	5,564	11,181	284	95
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	2,068	4,229	572	231
1954	8,377	3,597	208	1,365	2,819	429	163
1955	13,290	5,359	307	(b)	4,386	403	(b)

(a) Bales of approximately 500 lb.

(b) Not yet available.

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
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	2,068	44,203	46,271	43,994
1954–55	1,365	43,218	44,583	47,098

§ 23. Financial Assistance to Primary Producers.

NOTE.—See also Chapter XXI.—Public Finance, pp. 767–8.

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

(i) *Cotton Bounty.* The Cotton Bounty Act provides for payment of a bounty on seed cotton delivered by growers to processors. The present rate of bounty is designed to give growers an average return of 14d. per lb. The total payment in 1955–56 was £67,284 in respect of 5,650,785 lb. of cotton. In 1954–55, the total payment was £25,243 in respect of 3,687,828 lb.

(ii) *Tractor Bounty.* Under the Tractor Bounty Act, bounties are payable on tractors produced and sold for use in Australia. The period for payment of bounty was extended, in 1956, for three years from 24th October, 1955. The rate of bounty which has increased from time to time, varies according to the belt horse-power of the engine. Payments in 1955–56 amounted to £55,034 on 253 tractors as compared with £81,786 on 388 tractors in 1954–55.

(iii) *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 1955–56, total payments amounting to £14,499,587 were made compared with £15,749,998 in 1954–55.

(iv) *Flax Fibre Bounty.* From November, 1954, a bounty has been paid on scutched flax fibre produced from flax grown in Australia. In 1955–56, payments amounted to £58,070. Expenditure in 1954–55 was £4,907.

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.

§ 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 1955-56, 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.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Ammonium Sulphate tons	26,090	40,848	384	11,187	35,056	9,466
	£'000 215	1,016	10	242	764	228
Potash Salts tons	10,641	15,978	14,467	22,234	27,403	39,099
	£'000 82	369	314	397	489	652
Rock Phosphate tons	635,097	1,014,100	1,271,139	1,143,330	1,086,884	1,418,527
	£'000 776	2,258	2,478	2,432	2,166	2,828
Sodium Nitrate tons	7,199	15,802	7,848	6,948	11,714	14,102
	£'000 63	363	185	183	250	323
Other .. tons	3,430	2,735	1,837	6,935	399	506
	£'000 8	120	15	151	14	16
Total .. tons	682,457	1,089,463	1,295,675	1,190,634	1,161,456	1,481,700
	£'000 1,144	4,126	3,002	3,405	3,683	4,047

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,962 tons valued at £37,000 in 1955-56 compared with 2,345 tons valued at £34,000 in 1954-55 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 1,727 tons in 1955-56.

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 1955-56 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, 1955-56.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales	2,401	4,003	6,404	97,818	209,790	307,608
Victoria	3,500	8,537	12,037	173,678	479,913	653,591
Queensland	449	18	467	97,603	1,472	99,075
South Australia	3,405	3,499	6,904	176,935	203,848	380,783
Western Australia	5,208	4,576	9,784	257,263	210,845	468,108
Tasmania	162	830	992	22,752	60,215	82,967
Northern Territory .. ..	..	..	..	67	..	67
Australian Capital Territory ..	5	50	55	333	2,649	2,982
Total	15,130	21,513	36,643	826,449	1,168,732	1,995,181

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1951-52 to 1955-56, 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.	N.T.	A.C.T.	Total.
Average, 1934-35									
1938-39 ..	148,277	305,969	50,651	200,566	2,071,3	30,272	(a)	276	966,724
1951-52 ..	177,120	579,022	72,610	270,046	399,304	56,719	(a)	1,033	1,555,854
1952-53 ..	196,124	619,327	82,222	284,226	409,959	64,439	(a)	1,554	1,657,851
1953-54 ..	251,440	592,403	96,358	325,085	405,012	71,015	(a)	2,304	1,743,617
1954-55 ..	273,548	635,290	91,700	350,351	450,823	75,748	54	2,672	1,880,186
1955-56 ..	307,608	653,591	99,075	380,783	468,108	82,967	67	2,982	1,995,181

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 1955-56 was 54, made up as follows:—New South Wales, 15; Victoria, 9; Queensland, 8; South Australia, 8; Western Australia, 6 and Tasmania, 8. The production of superphosphate in Australia during 1955-56 amounted to 2,126,000 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, 1954, 1955 and 1956 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—								
1953-54 season ..	84,465	69,830	18,513	13,755	12,070	22,459	..	221,092
1954-55 „ ..	102,790	86,373	24,760	22,908	10,105	23,991	20	270,947
1955-56 „ ..	86,125	127,878	36,191	35,457	12,312	47,282	395	345,640
Farm Stocks, as at—								
31st March, 1954 ..	101,262	(a)	18,907	11,497	4,324	19,811	25	(a)
„ „ 1955 ..	99,238	(a)	23,609	17,963	4,837	18,422	85	(a)
„ „ 1956 ..	101,179	(a)	43,155	26,664	8,918	42,863	415	(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 was 303,495 tons. During subsequent seasons, output declined to the extremely low level of 94,744 tons during the drought year 1944-45 rising to 180,622 tons in 1947-48 but decreasing again in succeeding years to 110,474 tons in 1951-52. Since then production has increased substantially each year up to 1955-56 when a record quantity of 345,640 tons was made.

§ 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 livestock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree, they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying, etc., according to the course undertaken.

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

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes 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 201,849 in 1956 or by 381 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 305 per cent., and crawler types by 156 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 1956. More detailed information showing the number of tractors in 1954 classified according to age, horse-power and type of fuel used is available from Primary Industries Bulletin, Part I., 1953-54.

TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
WHEELED TYPE TRACTORS.									
1952	35,302	33,678	27,084	15,396	14,579	3,857	(a)	142	130,038
1953	39,229	37,484	29,822	16,729	15,381	4,550	(a)	158	143,353
1954	41,195	41,953	32,535	18,228	16,577	5,111	(a)	163	155,762
1955	45,619	45,824	35,024	20,074	17,832	5,699	51	172	170,295
1956	50,005	49,584	37,443	21,155	18,537	6,272	70	193	183,259
CRAWLER OR TRACK TYPE TRACTORS.									
1952	2,828	1,187	3,810	2,788	2,498	342	(a)	6	13,459
1953	3,179	1,271	4,176	3,021	2,932	442	(a)	8	15,029
1954	3,221	1,214	4,547	2,614	3,093	547	(a)	7	15,243
1955	3,479	1,430	4,945	3,036	3,334	660	4	9	16,897
1956	4,001	1,645	5,313	3,190	3,654	745	32	10	18,590
TOTAL TRACTORS.									
1939(b) ..	12,926	8,802	8,541	5,069	5,680	(a)	(a)	25	(c) 41,943
1952	38,130	34,865	30,894	18,184	17,077	4,199	(a)	148	143,497
1953	42,408	38,755	33,998	19,750	18,313	4,992	(a)	166	158,382
1954	44,416	43,167	37,082	20,842	19,670	5,658	(a)	170	171,005
1955	49,098	47,254	39,969	23,110	21,166	6,359	55	181	187,192
1956	54,006	51,229	42,756	24,345	22,191	7,017	102	203	201,849

(a) Not available.

(b) At commencement of year.

(c) Excludes Tasmania.

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

NOTE.—In § 1, Introductory, of this chapter, reference was made to the reconciliation carried out in New South Wales, in 1955-56, of the lists of rural holdings used in the collection of agricultural and pastoral statistics with lists of ratable land of 1 acre or more in extent

recorded by country shires for rating purposes. This reconciliation led to the addition of a number of holdings to the collection in 1955-56. To permit continuity of comparison of the statistics included in paras. 1, 3 and 4 of this Section, number and area of holdings, employment, and wages and salaries paid, as recorded for the additional holdings, are set out below.

Number of holdings	.. .. .	.. .. .	4,784
Area of holdings, acres	.. .. .	.. .. .	3,131,462
Persons engaged on rural holdings at 31st March, 1956—		Male.	Female.
Permanently—			
Owners, lessees or sharefarmers	..	2,943	94
Relatives of owner, etc., not receiving wages or salary	.. .. .	323	153
Employees, including managers and relatives working for wages or salary	.. .. .	584	15
Total	.. .. .	3,850	262
Temporarily	.. .. .	1,068	112
Wages and salaries paid during 1955-56—			
To permanent employees	.. .. .	£340,000	} .. £13,000
To temporary employees	.. .. .	£319,000	

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

There are considerable fluctuations from time to time in 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 1951-52 to 1955-56.

RURAL HOLDINGS : NUMBER AND AREA.

Season	N.S.W.	Vic.	Q.land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.(a)
NUMBER OF RURAL HOLDINGS.									
1938-39	75,365	72,452	41,503	31,280	21,052	11,680	(b)	204	253,536
1951-52	73,122	69,298	41,641	28,698	19,515	11,414	(b)	226	243,914
1952-53	72,940	69,353	42,382	28,832	19,655	11,812	(b)	213	245,187
1953-54	73,371	69,392	42,850	29,220	20,132	11,818	(b)	213	246,996
1954-55	73,759	69,551	43,284	28,092	20,876	11,743	(b)	212	247,517
1955-56	(c)77,828	69,575	43,459	28,636	21,323	11,647	223	222	252,913
TOTAL AREA OF RURAL HOLDINGS. (⁰⁰⁰ ACRES.)									
1938-39	174,660	40,791	317,782	144,682	211,720	6,778	(b)	371	896,784
1951-52	168,250	37,935	358,320	151,785	215,386	6,438	(b)	395	938,509
1952-53	167,907	37,868	358,332	152,689	215,858	6,559	(b)	394	939,607
1953-54	168,996	37,546	361,520	150,314	221,805	6,511	(b)	391	947,083
1954-55	169,444	37,814	362,200	149,379	228,883	6,604	(b)	390	954,714
1955-56	c172,255	37,856	367,514	149,966	229,734	6,628	160,153	389	1,124,495

(a) Excludes Northern Territory prior to 1955-56. (b) Not available. (c) Not strictly comparable with previous years. See special note at beginning of § 28.

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 p. 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	34	17,638
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
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	2,809	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	1,755	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, 1956. Additional particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, p. 852 and previous issues. Similar details for later years are not available.

PERSONS PERMANENTLY AND TEMPORARILY ENGAGED ON RURAL HOLDINGS AT 31st MARCH, 1956.

Particulars.	N.S.W. (a)	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.(b)	A.C.T.	Aust.
<i>Permanent—</i>									
Owners, Lessees or Share-farmers	74,571	68,397	45,759	27,303	20,053	9,211	172	155	245,621
Males	1,544	3,743	9,138	3,004	444	630	29	5	18,537
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	7,732	5,808	3,946	2,012	1,546	154	17	17	21,232
Males	6,762	1,282	6,403	979	1,033	53	24	11	16,547
Employees, including Managers and Relatives working for wages or salary	31,379	17,099	20,099	8,020	7,861	4,243	494	139	89,334
Males	976	1,379	3,474	687	254	196	38	16	7,020
Females									
<i>Total Permanent—</i>									
Males	113,682	91,304	69,804	37,335	29,460	13,608	683	311	356,187
Females	9,282	6,404	19,015	4,670	1,731	879	91	32	42,104
<i>Persons</i>	122,964	97,708	88,819	42,005	31,191	14,487	774	343	398,291
<i>Temporary—</i>									
Males	27,049	16,629	16,370	12,323	5,321	5,339	1,517	59	84,607
Females	1,826	1,335	845	3,253	241	1,714	413	11	9,638
<i>Persons</i>	28,875	17,964	17,215	15,576	5,562	7,053	1,930	70	94,245
<i>Total Persons</i>	151,839	115,672	106,034	57,581	36,753	21,540	2,704	413	492,536

(a) Not strictly comparable with previous years. See special note at beginning of § 28. (b) 1,365 male and 407 female full-blood aboriginals employed are included as temporary employees.

The next table shows for Australia as a whole the number of persons working full-time on rural holdings as at 31st March of the six years 1951 to 1956.

PERSONS PERMANENTLY AND TEMPORARILY ENGAGED ON RURAL HOLDINGS, AUSTRALIA.

Particulars.	As at 31st March—					
	1951.(a)	1952.(a)	1953.(a)	1954.(a)	1955.(a)	1956.
<i>Permanent—</i>						
Males—						
Owners, Lessees or Share-farmers	237,251	236,330	241,368	241,149	240,879	245,621
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	24,676	24,589	23,157	22,736	23,529	21,232
Employees, including managers and relatives working for wages or salary	91,226	88,264	91,864	93,748	91,479	89,334
Total, Males	353,153	349,183	356,389	357,633	355,887	356,187
Females	52,346	46,603	48,234	49,782	46,656	42,104
Total Permanent	405,499	395,786	404,623	407,415	402,543	398,291
<i>Temporary—</i>						
Total, Males	83,190	88,356	91,656	86,644	87,400	84,607
Females	8,663	8,576	8,037	8,365	9,238	9,638
Total Temporary	91,853	96,932	99,693	95,009	96,638	94,245
Grand Total	497,352	492,718	504,316	502,424	499,181	492,536

(a) Excludes Northern Territory.

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 1955–56 and for Australia as a whole for the years 1952–53 to 1955–56.

RURAL HOLDINGS: SALARIES AND WAGES^(a) PAID TO PERMANENT AND TEMPORARY EMPLOYEES, 1955-56.

(£'000.)

Particulars.	N.S.W. (b)	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—Males ..	19,879	10,744	12,344	4,904	4,838	2,600	333	110	55,752
Females ..	297	476	1,278	225	90	61	24	5	2,456
Temporary(c)—Males ..	15,800	8,621	17,555	4,325	4,952	1,584	146	68	53,051
Females ..	425	266	204	255	101	180	1	4	1,436
Total	36,401	20,107	31,381	9,709	9,981	4,425	504	187	112,695

(a) Including value of keep.
note at beginning of § 28.

(b) Not strictly comparable with previous years. See special
(c) Includes amounts paid to contractors.

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

(£'000.)

Particulars.	1952-53.(b)	1953-54.(b)	1954-55.(b)	1955-56.
Permanent—Males	47,623	52,240	53,951	55,752
Females	2,270	2,406	2,468	2,456
Temporary(c)—Males	44,715	51,282	53,855	53,051
Females	1,151	1,190	1,323	1,436
Total	95,759	107,118	111,597	112,695

(a) Including value of keep.
to contractors.

(b) Excludes Northern Territory.

(c) Includes amounts paid