CHAPTER XX.

AGRICULTURAL PRODUCTION.

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

§ 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by farmers (approximately 244,000 in 1951–52) who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Australian Capital Territory. Particulars for the Northern Territory have not been available in recent years. The returns are collected on a substantially uniform basis in all States at 31st March each year and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes) provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjunction with the "census" returns. Except where otherwise stated the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§ 2. Progress of Agriculture.

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

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

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

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

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eleven seasons ended 1951–52, and on page 875 there is a graph showing the area of crops in Australia from 1860 onward.

AREA OF CROPS.

('000 Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
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
1941–42	5,930	4,735	1,671	3,976	3,852	281	(a)	5	20,450
1942–43	5,297	3,816	1,743	3,437	2,820	300	(a)	7	17,420
1943–44	4,797	3,463	1,757	2,761	2,782	335	(a)	7	15,902
1944–45	5,045	4,310	1,797	3,179	2,790	343	(a)	8	17,472
1945–46	6,087	5,327	1,822	3 824	2,945	412	(a)	9	20,426
1946–47	6,512	5,103	1,617	3,885	3,590	361	(a)	9	21,077
1947–48	7,168	5,023	1,849	3,852	4,026	342	(a)	11	22,271
1948–49	5,711	4,645	1,953	3,757	4,215	345	(a)	10	20,636
1949–50	5,670	4,480	2,057	3,617	4,399	368	(a)	10	20,601
1950–51	4,761	4,351	2,077	3,676	4,650	396	(a)	6	19,917
1951–52	4,704	4,271	2,022	3.696	4,693	410	(a)	6	19,802

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915–16, when, as the result of a special effort to raise wheat during the 1914–18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum 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. Subsequently the area increased and reached a maximum of 23.5 million acres in 1938–39. Thereafter it declined to less than 16 million acres in 1943–44, rising in each succeeding year up to and including 1947–48, when the area of crops amounted to 22.3 million acres. This upward trend was reversed in 1948–49, the area of crops declining in that year and each succeeding year to 19.8 million acres in 1951–52. As the area under wheat in Australia constitutes a large proportion of the total areas cropped (55 per cent. during the ten years ended 1951–52), 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 18.6 million acres in 1951–52.

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 Commerce and Agriculture 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 technical committee known as the Standing Committee on Agriculture was formed to act in an advisory capacity to the Council. Its functions, in addition to advising the Agricultural Council on the above-mentioned matters, include the following:—(i) to secure co-operation and co-ordination in agricultural research throughout Australia; (ii) to advise the Commonwealth and State Governments, either directly or through the Council, on matters pertaining to the initiation and development of research on agricultural problems; and (iii) to secure co-operation between the Commonwealth and States and between the States in respect of quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Commonwealth Scientific and Industrial Research Organization, the Commonwealth Director-General of Health, the Secretary, Department of Commerce and Agriculture, the Secretary, Department of Territories and a representative of the Commonwealth Treasury. The Council and the Standing Committee meet normally two or three times a year according to the nature and urgency of the problems to be discussed.

At the 36th Meeting of the Council held in Canberra in April, 1952, a programme of expansion of rural industries was unanimously approved by members. As a first stage quantitative production aims to be achieved over a period of five years, the target date being 1957–58, were set for the major rural products. These were set having regard to methods of production and conditions on farms existing at the time the programme was approved and do not represent a maximum level of production to be achieved, but rather suggest a balanced expansion between different commodities within the limits of physical capacity and the avenues in which production should be increased so as to contribute to the best development of rural industries in the national interest.

The production aims were based on the following general assumptions:—

(1) That Commonwealth and State Governments will continue their efforts to expand agricultural production by increasing their extension or advisory services to farmers, by special grants for research purposes and by such incentives as special taxation depreciation allowances for primary producers;

(2) That supplies of farm machinery, farm materials, fertilizers and labour will be adequate;

(3) That work on land development schemes including irrigation projects, will be intensified;

(4) That seasonal conditions are reasonably satisfactory over the next five years;

(5) That the relative prices of individual rural commodities will be such that there will be no undue incentive to the production of any one commodity at the expense of another (such as occurred in the case of wool particularly in 1950–51);

(6) That the price of each individual commodity will be regarded as attractive;

Details of the 1957–58 production aims for the principal rural products as agreed on by the Council compared with actual production in 1951–52 are shown in the following table.

RURAL PRODUCTION 1951-52 AND PRODUCTION AIMS SET FOR 1957-58. BY THE AUSTRALIAN AGRICULTURAL COUNCIL

A. CROP PRODUCTION.

Commodity.	1951-52.		1957-58 Aims.		Percentage Increase 1957-58 on 1951-52.	
	Area.	Production.	Area.	Production.	Area.	Production.
	'000 acres.	'000 bus.	'000 acres.	'000 bus.		
Wheat for Grain	10,384	159,725	13,650	191,000	31	20
Oats for Grain	2,365	34,506	2,790	42,000	12	22
Barley for Grain	1,118	21,909	1,400	25,000	25	14
Maize for Grain	170	4,018	240	7,200	41	79
Grain Sorghum	177	2,693	300	6,000	69	123
Linseed	54	296	200	2,000	270	576
Rice	36	3,048 '000 lb.	40	4,000 '000 lb.	11	31
Cotton (raw)	4.5	549	60	10,000	1,233	1,738
Tobacco	8.2	7,554 '000 tons	16.5	14,900 '000 tons	101	97
Sugar (*a*)	403	745	530	1,228	32	65

(*a*) Area includes stand-over and cut for plants. Production refers to raw sugar 94 net titre.

B. LIVE STOCK PRODUCTION.

Commodity.	Unit of Quantity.	Production.		Percentage increase 1957-58 on 1951-52.
		1951-52.	1957-58 Aims.	
Total Milk (All purposes)	Mil. gals.	1,051	1,350	28
Butter (factory)	'000 tons	131	170	30
Cheese (factory	,,	41	40	—2
Processed Milk Products	,,	110	190	73
Beef and Veal(*a*)	,,	582	672	15
Lamb (*a*)	,,	107	190	78
Mutton (*a*)	,,	176	213	21
Pigmeats (*a*)	,,	85	100	18
Eggs (*b*)	Mil. doz.	102	129	26
Wool (*c*)	Mil. lb.	1,080	1,200	11

(*a*) Carcass weight, bone-in. (*b*) Commercial production only. (*c*) Total production of shorn and skin wools.

§ 3. Distribution, Production and Value of Crops.

1. **Area of Crops in States and Territories.**—The following table shows the areas in the several States and the Australian Capital Territory of each of the crops for the season 1951-52. Similar details for the season 1950-51 appear in *Primary Industries Bulletin* No. 45, *Part* I.—*Rural Industries.*

AREA OF CROPS, 1951-52.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—								
Barley—								
2 Row ..	7,022	160,702	21,478	753,362	19,043	3,855	..	965,462
6 Row ..	4,119	25,522	6,680	78,251	37,531	386	22	152,511
Maize	54,216	4,115	111,181	..	8	18	2	169,540
Oats	596,527	676,503	20,839	387,377	656,559	26,539	563	2,364,907
Panicum, Millet and Setaria ..	20	1,171	16,008	..	..	..	..	17,199
Rice	35,589	..	75	..	..	..	..	35,664
Rye	1,278	18,556	291	45,043	5,884	372	10	71,434
Sorghum ..	7,101	..	169,558	..	1	..	..	176,660
Wheat ..	2,753,317	2,463,574	454,543	1,613,126	3,094,536	3,603	1,042	10,383,741
Hay	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
Green Fodder ..	672,633	(b) 45,661	604,190	(c) 385,079	636,728	176,319	1,225	2,521,835
Other Stock Fodder	7,687	10,132	11,350	20,093	7,272	22,577	..	79,111
Grass Seed—								
Lucerne ..	6,723	(d)	441	7,951	(e)	12	..	(f) 15,127
Clover ..	2,607	1,921	..	24,176	12,898	868	..	42,470
Other	3,758	9,162	5,619	10,526	52	1,910	170	31,197
Industrial Crops—								
Broom Millet ..	3,121	250	221	..	..	..	..	3,592
Canary Seed ..	730	195	19,971	10	..	..	..	20,906
Cotton ..	..	..	4,480	..	..	..	..	4,480
Flax—								
For Fibre ..	..	2,821	..	1,599	1,965	..	..	6,385
For Linseed ..	15,785	4,431	28,580	4,853	12	80	..	53,741
Hops ..	..	347	..	..	(g)	1,378	..	(f) 1,725
Peanuts ..	374	..	13,312	..	15	..	..	13,701
Sugar-cane—								
Productive ..	8,354	..	273,370	..	..	..	..	281,724
Unproductive	6,165	..	114,978	..	..	..	..	121,143
Sunflowers ..	231	35	4,092	3	..	..	..	4,361
Tobacco ..	432	1,500	5,038	..	1,229	..	..	8,199
Vegetables for Human consumption—								
Onions ..	401	4,745	2,527	620	334	50	5	8,682
Potatoes ..	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
Other Vegetables ..	55,176	38,130	37,833	8,801	6,865	14,958	60	161,823
Vineyards—								
Bearing ..	15,067	42,812	2,538	56,857	8,119	..	(g)	(f) 125,393
Not Bearing ..	1,980	2,455	281	4,357	1,239	..	(g)	(f) 10,312
Orchards and other Fruit Gardens—								
Bearing ..	72,427	55,376	23,282	22,246	18,715	25,099	98	217,243
Not Bearing ..	16,935	13,339	11,767	7,129	3,004	1,453	12	53,639
Nurseries and Cut Flowers ..	1,060	2,848	204	153	156	163	7	4,591
All Other Crops ..	396	1,683	2,622	104	231	1,027	12	6,075
Total Area ..	4,704,272	4,270,512	2,022,400	3,695,692	4,693,136	409,944	5,702	19,801,658

(a) Excludes Northern Territory, details for which are not available. (b) Excludes 41,115 acres of pasture land sown to lucerne and 193,064 acres sown to oats, for grazing. (c) Excludes 129,608 acres of pasture land sown to lucerne for grazing. (d) Not available. Included in "All Other Crops". (e) Not available. Included in "Other Grass Seed". (f) Incomplete. *See* footnotes to individual States. (g) Not available for publication. Included in "All Other Crops".

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories to the total area of crops for the season 1951-52 is shown in the next table. Similar details for the season 1950-51 appear in *Primary Industries Bulletin* No. 45, *Part* I.—*Rural Industries*. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are wheat, green fodder and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing more than 50 per cent. of the total area of crops in 1951–52.

RELATIVE AREAS OF CROPS, 1951–52.

(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Wheat (Grain) ..	58.57	57.69	22.48	43.65	65.94	0.88	18.27	52.45
Green Fodder(b) ..	14.31	1.07	29.87	10.42	13.57	43.01	21.48	12.74
Oats (Grain) ..	12.69	15.84	1.03	10.48	13.99	6.47	9.87	11.94
Hay	7.11	15.00	2.16	6.95	3.70	23.85	40.44	7.82
Barley (Grain) ..	0.24	4.36	1.39	22.50	1.20	1.03	0.39	5.65
Sugar-cane ..	0.31	..	19.20	..	..	..	..	2.03
Orchards and Fruit Gardens ..	1.90	1.61	1.73	0.80	0.46	6.48	1.93	1.37
Maize (Grain) ..	1.15	0.10	5.50	..	..	..	0.04	0.86
Vineyards ..	0.36	1.06	0.14	1.66	0.20	..	(c)	d 0.68
Potatoes ..	0.41	0.98	0.57	0.19	0.15	7.69	2.95	0.60
All other ..	2.95	2.29	15.93	3.35	0.79	10.59	4.63	3.86
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Excludes Northern Territory, details for which are not available. (b) Includes green forage except in Victoria. (c) Not available for publication; included in "All Other" (d) Incomplete. *See* footnote (c).

3. **Area of Principal Crops in Australia.**—The area of the principal crops during each of the five seasons ended 1951–52, 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Cereals for Grain—						
Barley, 2 Row	428	745	899	927	963	965
Maize	295	223	182	194	169	170
Oats	1,393	2,105	1,770	1,748	1,757	2,365
Rice	22	26	33	38	37	36
Wheat	14,345	13,880	12,583	12,240	11,663	10,384
Hay	2,994	1,970	1,580	1,605	1,377	1,549
Green Fodder	1,272	1,705	2,011	2,178	2,224	2,522
Vegetables for Human Consumption—						
Onions	8	11	10	8	8	9
Potatoes	130	146	120	134	127	118
Other vegetables for human consumption	(a) 83	167	176	155	156	162
Industrial Crops—						
Cotton	43	8	6	3	3	4
Hops	1	2	2	2	2	2
Sugar-cane	332	345	384	398	397	403
Tobacco	12	4	4	5	6	8
Vineyards	118	132	135	135	137	136
Orchards	276	290	287	280	275	271
All other Crops	206	513	454	551	616	698
Total	21,958	22,272	20,636	20,601	19,917	19,802

(a) Incomplete. Market gardens and pulse only.

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

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

The standard weights adopted per bushel for the more important cereals, are as follows:—rye, sorghum and wheat 60 lb.; barley, 50 lb.; maize, 56 lb.; oats, 40 lb.; and rice 42 lb. Several types of cases are used for fruits, but in determining average weights a bushel case with a capacity of 2,223 cubic inches has been adopted. The packed weight of a bushel of fruit also is subject to considerable variation according to the kind and variety of fruit. The weights adopted per bushel for the more important fruits were as follows :—Apples, pineapples and grapefruit, 42 lb.; apricots, cherries, oranges, mandarins and lemons, 48 lb.; bananas, 56 lb.; papaws, 24 lb.; peaches and pears, 45 lb.; and plums and prunes, 58 lb.

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

5. **Production of Crops in States and Territories.**—The following table shows production of crops in the various States and the Australian Capital Territory for the season 1951–52 :—

PRODUCTION OF CROPS, 1951–52.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Q.land	S. Aust.	W.A.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—									
Barley—									
2 Row	'000 bus.	99	3,146	337	15,527	230	137	..	19,476
6 Row	,, ,,	68	473	113	1,299	465	13	1	2,432
Maize	,, ,,	1,411	168	2,438	..	..	1	..	4,018
Oats	,, ,,	9,395	11,151	263	5,405	7,689	594	9	34,506
Panicum, Millet and Setaria	,, ,,	1	18	174	..	..	..	..	193
Rice	,, ,,	3,047	..	1	..	..	..	..	3,048
Rye	,, ,,	8	123	3	207	35	7	..	383
Sorghum	,, ,,	41	..	2,652	..	..	..	..	2,693
Wheat	,, ,,	39,689	45,995	6,632	27,301	40,000	94	14	159,725
Hay	,, tons	452	1,047	80	380	211	171	4	2,345
Grass Seed—									
Lucerne	Cwt.	4,749	(b)	154	4,767	(b)	23	..	(c) 9,693
Clover	,,	3,795	3,609	..	30,859	25,283	1,014	..	64,560
Other	,,	2,953	12,644	12,418	7,915	36	3,622	104	39,692
Industrial Crops—									
Broom Millet—									
Fibre	,,	18,807	1,216	884	..	..	..	..	20,907
Grain	Bus.	19,761	1,801	..	..	..	..	..	21,562
Canary Seed	,,	5,596	520	70,575	84	..	..	..	76,775
Cotton, Unginned	'000 lb.	..	..	1,406	..	..	..	..	1,406
Flax—									
Straw	Ton	..	4,065	..	2,214	1,573	..	..	7,852
Linseed	,,	1,617	705	4,174	857	1	39	..	7,393
Hops (Dry Weight)	Cwt.	..	2,590	..	..	(d)	15,324	..	(c) 17,914
Peanuts	,,	4,433	..	90,713	..	179	..	..	95,325
Sugar-cane, Crushed	'000 tons	322	..	5,005	..	..	..	..	5,327
Sunflower Seed	,, lb.	165	3	1,161	2	..	..	..	1,331
Tobacco, Dried Leaf	,, ,,	518	1,381	4,667	..	988	..	..	7,554
Vegetables for human consumption—									
Onions	Ton	1,937	31,150	9,691	6,302	3,855	243	38	53,216
Potatoes	,,	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
Vineyards—									
Grapes—									
For Drying	,,	30,528	197,601	..	44,553	11,652	..	..	284,334
Table	,,	3,132	4,697	2,228	787	1,584	..	(d)	c 12,428
Wine	,,	23,998	17,252	173	132,742	3,598	..	(d)	c 177,763

(a) Excludes Northern Territory, details for which are not available. (b) Not available. (c) Incomplete. *See* footnotes to individual States. (d) Not available for publication.

6. **Production of Principal Crops in Australia.**—The following table shows the production of the principal crops for the five years ended 1951–52, and the average for the decennium ended 1938–39 :—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Cereals for Grain—							
Barley, 2 Row ..	'000 bus.	7,480	18,937	15,929	17,569	20,811	19,476
Maize	,, ,,	7,228	6,168	5,188	5,996	4,729	4,018
Oats	,, ,,	16,437	40,697	23,601	27,391	25,128	34,506
Rice	,, ,,	2,005	2,676	2,739	3,783	4,118	3,048
Wheat	,, ,,	169,398	220,116	190,703	218,221	184,244	159,725
Hay	,, tons	3,490	3,008	2,292	2,430	2,063	2,345
Vegetables for human consumption—							
Onions	,, ,,	43	86	57	48	35	53
Potatoes ..	,, ,,	351	498	460	471	412	509
Industrial Crops—							
Cotton, Unginned ..	,, lb.	15,667	2,064	1,821	719	1,102	1,406
Hops, (dry weight) ..	cwt.	18,989	(a)24,449	(a)17,073	(a)22,993	(a)26,147	(a)17,914
Sugar (from Cane) ..	'000 tons	'658	605	943	937	921	745
Tobacco (Dried leaf)..	,, lb.	5,113	2,484	3,416	4,138	4,211	7,553
Vineyards—							
Grapes	,, tons	381	510	436	434	362	475
Wine made(b) ..	,, gals.	16,104	32,879	32,818	32,675	26,036	35,255
Raisins and Currants	,, tons	70	85	65	68	56	72

(a) Excludes Western Australia. (b) Excludes spirits used in fortified wine, such spirit having been made from distillation wine.

7. **Average Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1951–52 and the average for the decennium ended 1938–39.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Cereals for Grain—							
Barley, 2 Row	Bushel.	17.49	25.43	17.72	18.95	21.61	20.17
Maize..	,,	24.53	27.69	28.51	30.97	27.93	23.70
Oats	,,	11.80	19.33	13.34	15.67	14.30	14.59
Rice	,,	93.00	102.12	83.79	100.78	111.45	85.47
Wheat	,,	11.81	15.86	15.15	17.83	15.80	15.38
Hay	Ton	1.17	1.53	1.45	1.51	1.50	1.51
Vegetables for human consumption—							
Onions	,,	5.54	8.00	5.81	6.34	4.61	6.13
Potatoes	,,	2.71	3.42	3.84	3.52	3.24	4.31
Industrial Crops—							
Cotton, Unginned ..	lb.	366	244	293	267	373	314
Hops (dry weight) (a) ..	cwt.	17.88	16.40	11.28	14.76	16.32	10.79
Sugar (fom Cane) (a) ..	Ton	2.76	2.72	3.54	3.33	3.39	2.65
Tobacco (Dried leaf) ..	lb.	463	646	918	903	651	921
Vineyards—							
Grapes (a)	Ton	3.45	4.12	3.53	3.53	2.91	3.78
Wine (a)	Gallon	335	586	557	551	450	581
Raisins and Currants (a)	Ton	1.28	1.43	1.15	1.22	0.95	1.25

(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 1951–52 and the average for the decennium ended 1938–39.

GROSS VALUE OF PRINCIPAL CROPS: AUSTRALIA.

(£'000.)

Crop.	Average, ten years ended 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Cereals for Grain—						
Barley	1,214	16,299	7,394	10,709	13,339	17,739
Maize	1,537	2,340	2,640	2.806	3,048	3,809
Oats	1,937	12,823	5,458	8.254	10,293	19,005
Rice	392	950	1,032	1,653	2,171	2,108
Wheat (a)	30,125	161,904	112,465	148,596	124,740	120,734
Hay	11,413	17,100	14,561	17,770	17,931	26,193
Green Fodder	2,775	(b) 3,518	(b) 3,635	(b) 3,894	(b) 5,001	(b) 6,934
Vegetables for human consumption—						
Onions	245	1,245	863	1,058	1,086	2,250
Potatoes	2,314	6,543	8,125	9,142	10,265	15,982
Other vegetables for human consumption	(c) 2,203	12,185	12,920	14,835	20,200	27,123
Industrial Crops—						
Cotton, Unginned	(a) 298	46	48	26	54	127
Hops	157	(b) 317	(b) 284	(b) 465	(b) 620	(b) 517
Sugar-cane	7,895	11,423	17,996	18,581	19,046	19,635
Tobacco (Dried leaf)	474	405	695	1,146	1,622	2,379
Vineyards	3,907	8,397	7,475	8,886	10,125	14,084
Orchards	(a) 7,953	22,066	20,160	26,273	30,656	43,838
All other Crops	2,651	5,635	7,186	7,795	8,441	10,098
Total, Gross Value	77,490	283,196	222,937	281,889	278,638	332,555

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

9. **Value of Production and Indexes of Price and Quantity of Production.**—(i) *Gross and Net Values, 1950–51 and 1951–52.* Uniform methods for arriving at the gross and net values of production in the various States were determined at a Conference of Statisticians held in March, 1935. The returns for the year 1933–34 and subsequent years have been valued on the new basis, and a revaluation was made for the years back to 1928–29. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXIX.—Miscellaneous.

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

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1950–51 AND 1951–52.

(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net value of Production. (a)	Depreciation (estimated).
				Seed used and Fodder for Farm Stock.	Value of other Materials used in process of production.		
1950–51.							
New South Wales	58,717	8,260	50,457	4,146	(b) 1,819	44,492	(c)
Victoria	72,100	7,581	64,519	8,385	2,669	53,465	950
Queensland	42,421	4,410	38,011	3,140	2,870	32,001	1,910
South Australia	48,935	8,216	40,719	2,633	1,684	36,402	594
Western Australia	43,876	4,641	39,235	2,024	4,085	33.126	(c)
Tasmania	12,458	2,326	10,132	992	(b) 496	8.644	137
Total	278,507	35.434	243.073	21,320	13,623	208,130	(c)
1951–52.							
New South Wales	77,026	11,058	65,968	5,334	(b) 2,301	58,333	(c)
Victoria	88,629	11,266	77,363	10,215	3,064	64,084	950
Queensland	47,212	4,910	42,302	3.490	3,190	35,622	2,130
South Australia	60,253	8,173	52,080	2,780	2,397	46.903	594
Western Australia	43,396	4,788	38,608	2,252	5,329	31,027	(c)
Tasmania	15,631	3,263	12.368	1.144	(b) 508	10,716	168
Total	332,147	43,458	288,689	25,215	16,789	246,685	(c)

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

(ii) *Net Values, 1929–30 to 1951–52.* 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 1947–48 to 1951–52 in comparison with the averages for the decennial periods ended 1938–39 and 1950–51 :—

NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£'000.)							
Average, ten years 1929–30 to 1938–39	13,304	10,508	10,189	6,540	4,903	1,824	47,268
1947–48	79,308	49,876	24,392	41,950	26,295	3,982	225,803
1948–49	46,205	39,352	28,977	23,951	21,875	4,012	164,372
1949–50	69,078	53,905	30,953	32,790	26,605	5,372	218,703
1950–51	44,492	53,465	32,001	36,402	33,126	8,644	208,130
Average, ten years 1941–42 to 1950–51	38,468	31,989	21,638	20,977	15,042	4,712	132,826
1951–52	58,333	64,084	35,622	46,903	31,027	10,716	246,685
NET VALUE PER HEAD OF POPULATION. (£ s. d.)							
Average, ten years 1929–30 to 1938–39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	7 1 4
1947–48	26 7 7	24 2 1	21 18 5	64 6 3	51 13 6	15 4 3	29 13 4
1948–49	15 1 7	18 12 5	25 10 9	36 0 2	41 17 9	14 19 1	21 3 3
1949–50	21 15 7	24 16 9	26 12 3	47 14 10	48 14 11	19 7 4	27 5 8
1950–51	13 11 9	23 18 1	26 16 6	51 3 11	57 19 7	30 1 1	25 3 1
Average, ten years 1941–42 to 1950–51	12 14 4	14 16 7	19 9 9	31 18 0	28 15 7	18 3 0	17 6 5
1951–52	17 7 8	27 16 11	29 3 5	64 6 2	52 9 8	35 17 10	29 0 8

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

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

INDEXES OF QUANTITY AND PRICE OF AGRICULTURAL PRODUCTION.

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

Particulars.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity Produced—					
Wheat	134	116	133	112	97
Other Crops	114	102	107	105	107
Total, All Crops ..	122	108	117	108	103
Total per Head of Population	109	95	100	89	83
Price—					
Wheat	369	294	341	338	378
Other Crops	187	186	221	256	321
Total, All Crops	267	234	274	292	346

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

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941–42 to 1948–49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.

4. **Legislation relating to Wheat Industry.**—(i) *Financial Assistance to Wheat Growers.* Reference to financial assistance during 1950–51 and 1951–52 will be found in § 23, Financial Assistance to Primary Producers, hereafter. Details of financial assistance rendered by the Commonwealth Government prior to 1950–51 appear in Official Year Books No. 37, No. 38 and No. 39.

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

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

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

(*b*) The price guaranteed was 6s. 3d. per bushel f.o.r. ports, bulk basis (this being related to costs of producing wheat in the 1947–48 season), subject to variation, as agreed upon by the Commonwealth Minister for Commerce and Agriculture in consultation with the appropriate State Ministers, in accordance with variations in the cost of producing wheat in subsequent seasons. Following reviews of wheat production costs, the guaranteed price was increased to 6s. 8d. per bushel f.o r. ports, bulk basis for the 1948–49 season and to 7s. 1d. per bushel for the 1949–50 season. For the 1947–48 and 1948–49 seasons the price of wheat fixed for home consumption was the guaranteed price of 6s. 3d. and 6s. 8d. per bushel respectively, but for the 1949–50 season it remained unchanged from the previous year at 6s. 8d. per bushel. The additional 5d. per bushel payable to growers for wheat for home consumption in 1949–50 was met by subsidy provided by the Commonwealth Government. For the 1950–51 season the subsidy was withdrawn and the guaranteed and home consumption prices fixed at 7s. 10d. per bushel (f.o.r. ports, bulk basis).

(c) The guaranteed price applies in respect of the export from any one season's crop up to a maximum of 100,000,000 bushels.

(d) A Wheat Prices Stabilization Fund has been established by means of a tax on wheat exported. The tax applies when the export price is greater than the guaranteed price, the rate of tax being 50 per cent. of the difference between the two but not exceeding 2s. 2d. per bushel.

(e) The Stabilization Fund will be drawn upon as required to meet the guaranteed price when this exceeds the export price. If amounts held in the Fund are at any time insufficient for this purpose, the deficiency will be provided by the Commonwealth Government from Consolidated Revenue.

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

The provisions of the Commonwealth Wheat Stabilization Plan relating to the levy of a tax on wheat exported and the establishment of a Stabilization Fund were implemented by the Commonwealth Government under legislation passed in 1946 and in 1948. Contributions to the Fund from the 1949–50, 1950–51 and 1951–52 harvests were approximately £15,000,000, £11,000,000 and £8,400,000 respectively. The 1949–50 harvest contributions were refunded to growers in August, 1952. No contributions were made to the Fund from the 1952–53 harvest.

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

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations the Board was empowered, subject to directions of the Minister for Commerce and Agriculture, to purchase, sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc., of wheat acquired, and such other matters necessary to give effect to the regulations under which it was created. The Australian Wheat Board was reconstituted and vested with similar powers under the Commonwealth Wheat Stabilization Act 1948, for the purpose of administering the Wheat Stabilization Plan (*see* paragraph 4 (iii) above). The reconstructed Board commenced operations on 18th December, 1948.

(iii) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1942–43 to 1951–52 harvests are shown in the following table :—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1942–43 TO 1951–52.

('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
6	1942–43	44,709	40,213	4,403	34,660	17,983	22	141,990
7	1943–44	40,880	17,227	4,599	18,141	13,853	57	94,757
8	1944–45	12,167	941	5,837	6,758	13,079	39	38,821
9	1945–46	54,889	25,621	7,492	18,162	17,742	23	123,929
10	1946–47	8,635	44,482	444	24,818	20,521	68	98,968
11 and 11A ..	1947–48	89,416	44,402	10,017	29,572	31,128	59	204,594
12	1948–49	58,358	46,661	13,544	23,515	32,828	103	175,009
13	1949–50	75,450	55,238	11,195	26,377	34,581	88	202,929
14, 14A and 14B	1950–51	37,292	49,430	7,712	29,523	46,088	60	170,105
15	1951–52	33,852	43,765	6,169	25,773	36,412	48	146,019

(*b*) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1946 to 1952 are shown in the following table :—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1946 TO 1952.(*a*)
('000 Bushels.)

Particulars.	1946.	1947.	1948.	1949.	1950.	1951.	1952.
Sold for export as wheat ..	19,820	13,314	104,253	67.225	80,931	85,227	46,192
Sold for export as flour ..	37,487	34,927	45,553	41,938	30,947	42,454	36,693
Sold for local consumption as flour	32,204	30,833	33,006	34.493	35,484	37.577	39,049
Sold for all other purposes ..	26,283	25,071	22,702	24,109	25,499	29,556	26,233

(*a*) Years ended 30th November.

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

AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS POOLS Nos. 10 to 15.
(*£.*)

Particulars.	No. 10 Pool.(*a*) (1946–47 Harvest).	Nos. 11 and 11A Pools.(*a*) (1947–48 Harvest).	No. 12 Pool.(*a*) (1948–49 Harvest).	No. 13 Pool.(*a*) (1949–50 Harvest).	Nos. 14, 14A and 14B Pools. (*b*) (1950–51 Harvest).	No. 15 Pool.(*b*) (1951–52 Harvest).
Paid to growers	c43,683,708	144,069,316	96,748,162	129,469,276	93,478,957	71,144,300
Rail freight	1,795,753	5,118,053	4,629,297	6,300,839	6,100,000	7,580,000
Expenses	1,769,592	3,830,755	3,110,979	4,393,660	4,855,000	5,250,000
Total Payments ..	c47,249,053	153,018,124	104,488,438	140,163,775	104,433,957	83,974,300
	(*c*)	(*d*)	(*e*)	(*f*)	(*g*)	(*h*)
Value of sales delivered ..	45,309,645	153,018,124	104,488,438	140,163,775	116,088,439	95,400,195
Value of flour tax	1,939,408	..	..	..	..	..

(*a*) Complete. (*b*) Incomplete. (*c*) Includes £4,329,780 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest. £99,224. (*d*) Includes £16,420,334 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, since refunded and distributed to growers, plus interest £579,666. (*e*) Includes £12,495,973 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest. £464,027. (*f*) Includes £15,244,895 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act, 1948, plus interest. £394,285. (*g*) Includes £11,069,030 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948. (*h*) Includes £5,614,684 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948.

NOTE.—Details of earlier pools will be found in Official Year Books No. 36, p. 798, No. 37, p. 909, No. 38, p. 943, and No. 39, p. 943.

(v) *Advances to Growers.* Full details of advances made to wheat growers in respect of pools prior to No. 12 were given in earlier issues of the Year Book.

The table below shows particulars of advances made to 23rd May, 1953 in pools Nos. 12 to 16.

WHEAT POOLS Nos. 12 to 16 : ADVANCES MADE TO GROWERS TO 23rd MAY, 1953.

Particulars.	Amount Paid (Trucks Terminal Port Basis).									
	No. 12 Pool.(a) (1948–49 Harvest).		No. 13 Pool.(a) (1949–50 Harvest).		No. 14, 14A and 14B Pools.(a) (1950–51 Harvest).		No. 15 Pool.(a) (1951–52 Harvest).		No. 16 Pool.(a) (1952–53 Harvest).	
	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.
	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.
Advances made to Growers—										
1st Payment—										
Bulk ..	5 0	45,339	6 0	62,833	6 7	57,798	7 10	59,275	12 0	109,619
Bagged ..	5 6		6 6		7 3		9 0		12 9	
2nd Payment—										
Bulk ..	1 6	13,126	2 0	20,292	1 0	8,505	1 7	11,560		
Bagged ..	1 6		2 0		1 0		1 7			
3rd Payment—										
Bulk ..	1 0	8,750	1 6	15,220	1 0	8,505	1 0	7,301		
Bagged ..	1 0		1 6		1 0		1 0			
4th Payment—										
Bulk ..	2 0	17,501	1 6	15,220	(b)2 0	18,364	1 6	11,397		
Bagged ..	2 0		1 6		(b)2 6		1 9			
5th Payment—										
Bulk ..	0 3.3	3,093	0 5	5,531	0 7.5	5,880	0 10	6,364		
Bagged ..	0 5.9		0 9		0 10		1 0			
6th Payment—										
Bulk ..	1 6.105	13,255	1 7.062	16,215						
Bagged ..	1 6.305		1 7.362							
Total—										
Bulk ..	11 3.405	101,064	13 0.062	135,311	b11 2.5	99,052	12 9	95,897	12 0	109,619
Bagged ..	12 0.205		13 10.362		b12 7		14 4		12 9	

(a) Rail freight was deducted from 1st payment. (b) 1s. 6d. per bushel (bulk and bagged) less for No. 14B Pool than for Nos. 14 and 14A.

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

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

The Agreement covered a period of four years from 1st August, 1949 to 31st July, 1953, with provision for extension beyond that date, if desired. Under its terms, the exporting countries participating in the Agreement were to sell specified minimum quantities of wheat each year if required by importing countries to do so at the maximum price quoted in the Agreement, while the importing countries were obliged to buy specified quantities if required by the exporter at the minimum price quoted for the relevant year. Expressed in Australian currency equivalent, the maximum price in respect of transactions under the Agreement was approximately 16s. 6d. per bushel (including 5d. per bushel carrying charge) for each year, while minimum prices ranged from 13s. 5d. per bushel in 1949–50 to 10s. 9d. per bushel in 1952–53.

The export and import quotas originally specified in the Agreement, totalling 456.3 million bushels, were subsequently varied because of—(i) the withdrawal of certain countries from participation in the Agreement (Uruguay as an exporter, and China, principally, of the importing countries), and (ii) the admission of new members to the Agreement. The principal new participants were Germany (from late 1949) and Japan (from 1951–52), for which the United States of America originally accepted responsibility for wheat supplied outside the provisions of the Agreement.

The adjusted quotas for 1951–52 initially totalled 580.9 million bushels, but because Australian supplies in that year were inadequate to meet commitments, her quota was reduced from 88.7 million bushels to 72.0 million bushels and the total quota was reduced to 572.8 million bushels. The table below shows guaranteed sales and purchases and actual transactions recorded during 1951–52.

INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1951–52.

('000,000 Bushels.)

Exporting Country.	Guaranteed Annual Sales.(a)	Sales Recorded 1951–52.	Importing Country.	Guaranteed Annual Purchases.(a)	Purchases Recorded 1951–52.
United States of America ..	255.1	255.1	United Kingdom ..	177.1	177.1
Canada	241.6	241.6	Germany	66.1	65.7
Australia	72.0	71.2	Italy	40.4	36.1
France	4.1	4.1	India	55.1	55.0
			Netherlands	24.8	24.9
			Belgium	20.2	20.1
			Union of South Africa ..	11.0	10.2
			Remaining Importing Countries	186.2	182.9
Total	572.8	572.0	Total	580.9	572.0

(a) Wheat and wheat flour as wheat.

A further agreement covering a period of three years from 1st August, 1953 to 31st July, 1956 was signed in Washington in April, 1953 by all member countries of the 1949 Agreement except the United Kingdom. It was decided that Australia's export quota under the new Agreement should be 48 million bushels.

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 1947–48 to 1951–52, 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
New South Wales ..	15,657	16,797	15,674	15,594	14,279	13,147
Victoria	12,393	12,703	12,105	11,491	11,203	10,076
Queensland.. ..	2,403	2,921	3,804	3,744	3,862	3,005
South Australia ..	12,255	10,171	9,405	9,346	8,416	8,345
Western Australia ..	8,859	7,551	7,779	7,808	7,814	7,766
Tasmania	269	126	123	58	79	51
Total (a) ..	51,836	50,269	48,890	48,041	45,653	42,390

(a) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1949–50. The tabulations, which covered, *inter alia*, a series

of size classifications of wheat farms, have been published in detail in *Primary Industries Bulletin*, 1949–50, No. 44. A similar tabulation was made for the year 1947–48, a summary of the results being published in *Production Bulletin* No. 42, *Part* II.—*Primary Industries* and Official Year Book No. 38, page 947.

8. **Area, Production and Average Yield.**—(i) *Area.* Wheat is the principal crop raised in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of 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 most serious interruptions in more recent years were those occasioned by the two World Wars and the economic depression of the early 'thirties.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area, production and average yield per acre of wheat for grain in each State are shown below for the years 1947–48 to 1951–52 in comparison with the averages for the decennial periods ended 1938–39 and 1950–51 :—

WHEAT FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

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
1947–48 ..	5,043	3,227	462	2,375	2,760	8	5	13,880
1948–49 ..	4,038	2,996	608	2,063	2,867	7	4	12,583
1949–50 ..	4,012	2,828	600	1,896	2,894	6	4	12,240
1950–51 ..	3,329	2,735	559	1,848	3,185	5	2	11,663
Average, 1941–42 to 1950–51 ..	3,721	2,737	411	2,036	2,346	6	2	11,259
1951–52 ..	2,753	2,464	455	1,613	3,094	4	1	10,384
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1947–48 ..	95,227	46,962	10,685	32,524	34,500	118	100	220,116
1948–49 ..	64,704	49,064	14,317	26,136	36,250	156	76	190,703
1949–50 ..	81,939	57,434	11,778	28,351	38,500	127	92	218,221
1950–51 ..	43,273	51,236	8,785	30,936	49,900	95	19	184,244
Average, 1941–42 to 1950–51 ..	52,817	39,529	7,461	26,386	29,446	113	48	155,800
1951–52 ..	39,689	45,995	6,632	27,301	40,000	94	14	159,725
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	13.00	12.54	14.88	9.84	11.34	21.73	20.63	11.81
1947–48 ..	18.88	14.55	23.11	13.70	12.50	15.20	20.90	15.86
1948–49 ..	16.02	16.38	23.56	12.67	12.64	22.69	18.23	15.15
1949–50 ..	20.42	20.31	19.63	14.95	13.30	23.26	20.55	17.83
1950–51 ..	13.00	18.73	15.72	16.74	15.67	17.84	10.10	15.80
Average, 1941–42 to 1950–51 ..	14.19	14.44	18.16	12.96	12.55	19.86	18.49	13.84
1951–52 ..	14.42	18.67	14.59	16.92	12.93	26.10	13.97	15.38

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 875 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1947–48 appeared on pp. 977–8 of issue No. 39. Similar maps showing the distribution of wheat areas in 1924–25 and 1938–39 appeared in Official Year Book No. 22, p. 695, and Official Year Book No. 34, p. 451, respectively.

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

It should be noted, however, that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during five decades to 1951 have shown a continued improvement.

The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports from the mainland to satisfy its needs, though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to three-quarters of the crop is exported overseas.

Australia's wheat production in 1951–52 was 159.7 million bushels, representing an average yield of 15.38 bushels per acre. This was 3.9 million bushels more than the average for the decennium ended 1950–51 and 9.7 million bushels less than the average for the ten years ended 1938–39.

(iii) *Average Yield.* Short-term variations in this are due chiefly to the vagaries of the seasons. The best average yields per acre for single seasons since 1901 were obtained in 1920–21, 16.08 bushels; in 1942–43, 16.78 bushels; and in 1949–50, 17.83 bushels. The average yield obtained for the 1951–52 season was 15.38 bushels.

(iv) *Decennial Averages, 1861–70 to 1943–52.* 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.

Decennium.	Area.	Production.	Yield per Acre.
	'000 Acres.	'000 Bushels.	Bushels.
1861–70	831	10,622	12.77
1871–80	1,646	17,711	10.76
1881–90	3,258	26,992	8.29
1891–1900	4,087	29,934	7.32
1901–10	5,711	56,058	9.82
1911–20	8,928	95,480	10.69
1921–30	11,291	135,400	11.99
1931–40	14,176	177,758	12.54
1941–50	11,358	145,599	12.82
1943–52	11,097	155,101	13.98

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

(ii) *States*, 1951. Details of the principal varieties of wheat sown in 1951 in the five main producing States and the proportion each bears to the total area sown are given in the following table.

WHEAT : PRINCIPAL VARIETIES SOWN FOR ALL PURPOSES. 1951.

New South Wales.		Victoria.(a)		Queensland.(b)	
Variety.	Proportion.	Variety.	Proportion.	Variety.	Proportion.
	%		%		%
Bencubbin ..	34.50	Quadrat ..	36.36	Charter ..	16.54
Gabo	13.00	Insignia ..	30.37	Gabo	14.67
Kendee ..	7.78	Pinnacle ..	15.79	Seafoam ..	8.30
Celebration ..	6.53	Bencubbin ..	4.67	Puora ..	7.85
Ford	5.87	Magnet ..	3.99	Lawrence ..	7.30
Charter ..	5.39	Baldmin ..	1.78	Puseas ..	4.25
Bordan ..	4.00	Gabo	1.52	Puglu ..	3.95
Koala	2.36	Pindar ..	1.39	Fedweb ..	3.62
Quadrat ..	2.31	Diadem ..	0.98	Three Seas ..	3.19
Magnet ..	1.86	Ghurka ..	0.88	Puno	3.11
Eureka and		All other (c) ..	2.27	Celebration ..	3.06
Eureka 2 ..	1.63			Kendee ..	2.76
Warigo ..	1.56			Cailloux ..	2.02
Yalta	1.30			Warput ..	0.88
All other (c) ..	11.91			All other (c) ..	18.50
Total ..	100.00	Total ..	100.00	Total ..	100.00

South Australia.		Western Australia.	
Variety.	Proportion.	Variety.	Proportion.
	%		%
Gabo	20.58	Bungulla ..	27.92
Bencubbin ..	15.08	Bencubbin ..	23.98
Warigo ..	6.10	Gluclub ..	11.09
Scimitar ..	4.93	Kondut ..	10.96
Dirk	4.00	Wongoondy ..	4.29
Quadrat ..	4.00	Eureka ..	3.26
Reldep ..	3.97	Koorda ..	3.22
Waratah ..	3.42	Ranee ..	1.99
Marathon ..	3.21	Gabo ..	1.74
Javelin ..	2.70	Regalia ..	1.26
Gluyas ..	2.69	Insignia ..	1.17
Sword	2.64	Bluclub ..	0.95
Insignia ..	2.44	All other (c) ..	8.17
Rapier ..	2.06		
Bungulla ..	1.99		
Glen Wari ..	1.95		
All other (c) ..	18.24		
Total ..	100.00	Total ..	100.00

(a) Wheat sown for grain and hay only. (b) Wheat sown for grain only. (c) Includes "not stated."

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

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

The f.a.q. weight of a bushel of wheat used in each of the four main wheat-producing States for the 1952–53 season's crop was as follows (1951–52 details in parentheses)—New South Wales, 64 lb. (63 lb.); Victoria, 64¾ lb. (64 lb.); South Australia, 63¼ lb. (63 lb.); and Western Australia, 64¾ lb. (62½ lb.).

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

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

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

Particulars.	1947.	1948.	1949.	1950.(*a*)	1951.	1952.	1953.
For Flour ..	(*b*) 3 11	6 3	6 8	6 8	7 10	10 0	11 11
For Stock Feed ..	4 11	6 3	6 8	6 8	7 10	(*c*)12 0	(*c*)13 11

(*a*) Excludes 5d. per bushel subsidy paid by the Commonwealth Government, making the total return to growers 7s. 1d. per bushel, bulk basis. (*b*) Excludes 1s. per bushel recovered from Flour Tax and included in advances to growers. (*c*) Excludes subsidy of 4s. 1d. in 1952 and 2s. 2d. in 1953 paid by the Commonwealth Government. In Western Australia the price in 1952 was 10s., exclusive of subsidy.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.* Details of the export wheat prices are given in the table below for the years stated. Owing to changes which have occurred in the manner of selling export wheat, it is not possible to quote prices on a strictly comparable basis throughout the period covered by the table. The prices for 1939 represent the "weighted average shippers' limits f.o.r. ports for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide." Following the acquisition of the 1939–40 and later wheat crops by the Commonwealth Government, it was no longer possible to record prices on this basis. The prices shown below for the years 1946 to 1951 are the basic export selling prices of the Australian Wheat Board. The quotations are more or less nominal, as the market is "broad" and wheat is sold at times above and below this basic price, depending upon conditions of sale. Much of the wheat is sold at prices fixed under contract for delivery over lengthy periods.

As from August, 1949, under the terms of the International Wheat Agreement, Australia has undertaken to sell, if required, 80.8 (subsequently increased to 88.7, but for the year 1951–52, because of the small harvest, reduced to 72.0) million bushels per year (August to July) to contracting importing countries. After commitments

under the International Wheat Agreement have been met, Australia is free to sell any additional wheat available at any price which may find a market. It has therefore become necessary since August, 1949, to distinguish between the prices applicable to wheat for sale within and without the Agreement as follows :—

(*a*) *Prices at which Australia is prepared to sell Wheat under the Terms of the I.W.A.* These are shown in terms of Australian currency under the heading "I.W.A. Quota Wheat" in the table below. Up to July, 1953 (that is for the full period covered by the 1949 Agreement) negotiations were at the maximum price permitted by the Agreement. As the prices were fixed basically in terms of gold the maximum prices expressed in terms of Australian currency rose from 11s. 2d. prior to devaluation to 16s. 1d. per bushel after devaluation (19th September, 1949). From 1st December, 1951 the f.o.b. price at which Australia will sell wheat under the I.W.A. was increased to 16s. 6d. per bushel (bulk basis) by the addition of 5d. per bushel carrying charge.

(*b*) *Prices at which Australia is prepared to sell Wheat outside the I.W.A.* These are shown in terms of Australian currency under the heading "Free" Wheat in the table below. The amount of wheat available for sale at these prices on the "free" market is that which is available after commitments under the I.W.A. have been met and thus varies considerably from year to year.

Owing to the fact that in recent years varying proportions of exportable wheat have been sold forward on contracts for delivery some months ahead at widely differing prices and because sales have been made on differential bases under the I.W.A. since August, 1949 prices recorded in the table below do not necessarily represent the prices actually received for wheat shipped during the periods shown.

EXPORT WHEAT PRICES : AUSTRALIA.

(s. d.)

Year ended December.	Average price per bushel for bulk and bagged lots f.o.r. ports basis.	Year ended July.	Australian Wheat Board average selling price per bushel for f.a.q. bulk wheat, f.o.b. basis.	
			I.W.A. Quota Wheat.	"Free" Wheat.
	s. d.		s. d.	s. d.
1939(*a*)	2 4	1950	15 5	18 6
1946(*b*)	10 11	1951	16 1	18 9
1947(*b*)	16 8	1952	(*d*) 16 4	20 9
1948(*b*)	18 8	1953	(*d*) 16 6	21 2
1949(*b*)(*c*)	15 1			

(*a*) Weighted average of shippers' limits for growers' bulk and bagged lots, Sydney, Melbourne and Adelaide, for eight months ended August, 1939. (*b*) Australian Wheat Board basic export selling price. (*c*) Average for seven months ended July, 1949. (*d*) Includes 5d. per bushel carrying charge from 1st December, 1951.

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

12. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the seasons 1950–51 and 1951–52 is shown below. The values are on a gross basis at the principal market in each State and are based upon payments made to producers.

WHEAT FOR GRAIN : VALUE OF CROP(a), 1950-51 AND 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value £	28,868,190	34,054,844	6,285,124	22,793,283	32,664,123	63,890	10,617	124,740,071
Value per acre ..	£8/13/5	£12/9/0	£11/4/11	£12/6/8	£10/5/1	£12/0/3	£5/10/8	£10/13/11
1951-52—								
Aggregate value £	29,031,730	34,090,625	5,395,520	22,643,963	29,492,155	68,780	10,803	120,733,576
Value per acre ..	£10/10/11	£13/16/9	£11/17/5	£14/0/9	£/9/10/7	£19/1/10	£10/7/4	£11/12/7

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

13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the cereal years ended 30th November, 1948 to 1952 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 *see* graph, p. 876).

WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

('000,000 Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1948.	1949.	1950.	1951.	1952.
Opening stocks (including flour as wheat)	10.2	13.3	26.3	19.0	43.8	19.4
Production	164.7	220.1	190.7	218.2	184.2	159.7
Total Available Supplies ..	174.9	233.4	217.0	237.2	228.0	179.1
Exports—						
Wheat	75.0	86.9	82.5	82.8	85.9	45.6
Flour as wheat	30.6	43.0	35.7	36.9	41.6	35.2
Local Consumption—						
Flour as wheat	30.9	33.6	34.5	35.5	37.6	39.0
Stock feed	9.3	20.7	22.6	23.5	27.4	23.9
Seed	14.6	12.5	12.2	11.6	10.5	10.3
Breakfast foods and other uses ..	(a)	4.2	4.2	3.0	4.3	3.8
Balance retained on farm (excluding seed)	(b)	3.9	4.2	4.7	4.2	3.4
Closing stocks (including flour as wheat)	14.5	26.3	19.0	43.8	19.4	16.9
Total Disposals	174.9	231.1	214.9	241.8	230.9	178.1
Excess (+) or Deficiency (—) of Disposals in respect of Available Supplies (c)	..	—2.3	—2.1	+4.6	+2.9	—1.0

(a) Included with flour (local consumption). (b) Included with stock feed. (c) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. **Exports of Wheat and Flour.**—(i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1947–48 to 1951–52 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 1951–52 exports in terms of wheat averaged 112,252,000 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 bush.	Tons. (2,000 lb.)	'000 bush.	'000 bush.			
Average, 1934–35 1938–39 ..	76,473	b 647,073	29,959	106,432	14,813	b 5,058	19,871
1947–48.. ..	60,174	788,017	36,485	96,659	52,813	31,981	84,794
1948–49.. ..	83,030	860,578	39,845	122,875	64,705	33,916	98,621
1949–50.. ..	78,426	775,499	35,906	114,332	62,173	26,482	88,655
1950–51.. ..	86,782	886,533	41,046	127,828	74,151	33,022	107,173
1951–52.. ..	62,921	791,470	36,645	99,566	55,287	33,107	88,394

(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 1951–52 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
United Kingdom	45,195	17,226	34,523	9,435	20,017	17,932
Cyprus	..	..	1,582	773	1,276	2,266
India	1,662	21,336	16,939	35,254	16,742	7,372
Ireland, Republic of ..	3,276	2,402	1,337	321	1,897	1,933
New Zealand	1,537	4,401	7,395	5,756	4,863	9,649
Rhodesia, Southern ..	..	741	799	712	1,034	1,513
Union of South Africa ..	602	5	1,623	2,242	430	..
Other British Countries ..	3,985	4,900	4,885	629	1,184	1,609
Egypt	503	509	8,510	6,511	17,075	3,980
Finland	..	..	..	1,337	309	331
Germany..	235	..	..	..	(a)2,336	(a)4,734
Italy	3,152	665	5	325	7,965	6,473
Japan	6,471	..	1,843	6,885	2,798	..
Netherlands	760	402	352	1,339	1,786	3,095
Persia (Iran)	..	23	2,260	1,023	740	148
Spain	246	..	..	1,655	..	..
Sweden	..	556	746	1,029	1,342	1,493
Other Foreign Countries ..	8,849	7,008	231	3,200	4,988	393
Total	76,473	60,174	83,030	78,426	86,782	62,921

(a) Germany, Federal Republic of.

(*b*) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1951-52, and the average for the five years ended 1938-39 :—

FLOUR : EXPORTS FROM AUSTRALIA.

(Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39. (*a*)	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom	142,912	56,366	233,544	35,236	112,953	96,432
Ceylon	16,915	190,217	187,987	131,348	190,674	187,134
Hong Kong	44,966	21,988	9,820	90,699	21,122	8,689
India	2,732	59,642	72,192	188,358	54,609	83,142
Malaya (British)	63,309	136,488	100,445	78,372	79,930	60,030
Mauritius	54,960	46,367	19,722	33,204	22,168	22,347
Singapore	(*b*)	4,729	15,282	21,399	58,339	52,238
Sudan Anglo-Egyptian ..	4,060	28	5,446	15,214	16,710	16,146
Other British Countries ..	5,623	c122,712	70,037	35,589	60,173	41,013
Egypt	24,284	85,841	42,869	53,759	121,001	65,143
Indonesia, Republic of ..	..	..	..	4,472	62,890	62,322
Japan	722	1,887	124	18,649	163	..
Siam	3,175	..	3,249	12,068	8,697	8,475
Other Foreign Countries ..	283,415	61,752	99,861	57,132	77,104	88,359
Total	647,073	788,017	860,578	775,499	886,533	791,470

(*a*) Excludes wheatmeal for baking. (*b*) Included with Malaya (British). (*c*) Includes 58,377 tons, Palestine.

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 1948 to 1952 are shown in the following table. These data are based on stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT) : STOCKS AT 30TH NOVEMBER.(*a*)

(Bushels.)

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939	6,674,033	4,702,088	549,219	6,133,986	2,512,576	240,728	20,812,630
1948	14,051,381	4,366,397	1,533,993	4,677,100	1,285,047	391,417	26,305,335
1949	7,863,597	4,932,544	1,022,181	2,263,210	2,758,154	130,511	18,970,197
1950	16,875,191	12,596,836	1,880,457	6,658,635	5,556,227	221,856	43,789,202
1951	3,595,558	6,250,683	565,049	5,557,175	3,248,883	162,826	19,380,174
1952	5,880,929	4,432,261	5,000	4,253,930	2,107,632	187,226	16,866,978

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

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

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but no attempt was made until 1952 to introduce such a system in Queensland or South Australia. In this year, partly because of the difficulty of obtaining supplies of jute bags, the Australian Wheat Board erected an up-to-date plant for the receival and shipping of wheat in bulk at the Port of Ardrossan in South Australia and a temporary silo at Pinkenba, Brisbane. Tasmania has to date not found bulk handling necessary as it is a relatively small wheat producer.

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

(*a*) *New South Wales.* At present, there are 180 elevators situated at the more important wheat receiving stations throughout the State, with a storage capacity of 24,678,000 bushels, as well as terminal elevators at Sydney and Newcastle, which have receiving capacity per day of 6,000 tons and 2,000 tons respectively.

Work is proceeding on additions to country silos and the extension to the Newcastle terminal. In addition, four wheat storage sub-terminals at Junee, Temora, Parkes and Werris Creek are being erected to overcome the shortage of sacks and the immediate difficulties involved in constructing permanent silos at country centres. Two of these sub-terminals were in operation for the 1951–52 season. For that season there were also 75 temporary country bulkheads erected by the Australian Wheat Board each with a capacity of approximately 100,000 bushels. These bulkheads are operated by the Government Grain Elevators.

The following table illustrates the development of the bulk handling system in New South Wales from its inception in 1920–21 :—

GRAIN ELEVATORS : WHEAT RECEIVED, NEW SOUTH WALES.

Season.	Elevators in Country Districts.		Storage Capacity of Elevators available in Country Districts. (*a*)	Wheat Received.			Proportion of Total Crop Received in Elevators.
	Available.	Used.		In Country Elevators.	In Terminal Elevators from Non-Silo Stations.	Total.	
	No.	No.	Bushels.	Bushels.	Bushels.	Bushels.	%
1920–21	28	28	5,450,000	1,941,694	..	1,941,694	3.5
1930–31	99	99	16,373,000	22,948,116	724,972	23,673,088	35.9
1940–41	175	159	23,548,000	11,453,207	7,140	11,460,347	47.9
1948–49	180	180	24,478,000	36,103,108	..	36,103,108	55.8
1949–50	180	180	24,478,000	40,208,521	88,164	40,296,685	49.2
1950–51	180	180	24,678,000	(*b*)26,679,000	..	26,679,000	61.7
1951–52	180	180	24,678,000	(*c*)28,631,000	105,000	28,736,000	72.4

(*a*) At one filling. (*b*) Includes 268,000 bushels received into bulkheads. (*c*) Includes 3,483,000 bushels received into bulkheads and terminals.

(*b*) *Victoria.* The Victorian Grain Elevators Board operates at present 147 country elevators, including nine leased from flour mills, with a capacity of 16,639,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Amendments to the Grain Elevators Acts were passed in 1950 to permit the construction of elevators at a number of stations not yet provided with bulk handling facilities, and to erect additional bins at stations where the existing storage capacity is inadequate. The shortage of essential construction materials and labour has so far prevented commencement of this new work.

Temporary means of extending bulk handling facilities have been adopted pending these extensions and owing to cornsack difficulties. During the war years, the Australian Wheat Board had constructed or acquired sub-terminal storages at Dunolly, Murtoa and Warracknabeal with total storage capacity of 23,000,000 bushels. In addition, in recent years, a programme of construction of temporary bulkheads at country stations has been planned by the Australian Wheat Board and, for the 1951–52 season, 71 of these with a capacity of 5,990,000 bushels were in operation. Bulkheads were also constructed at eight country centres in New South Wales, where bulk wheat receivals are under the control of the Victorian bulk handling authorities. These gave a further 1,064,000 bushels of bulk storage capacity.

The following table sets out the development of the bulk handling system in Victoria for a series of years from 1939–40.

GRAIN ELEVATORS: WHEAT RECEIVED, VICTORIA.

Season.	Elevators.		Terminal.		Wheat Received.	Proportion of Total Crop Received in Elevators.
	Number.	Capacity at one filling.	Number.	Capacity at one filling.		
		'000 Bush.		'000 Bush.	'000 Bush.	%
1939–40 ..	48	5,385	1	2,250	10,784	23.9
1948–49 ..	138	14,159	1	4,100	38,739	79.0
1949–50 ..	138	14,159	1	4,100	45,341	78.9
1950–51 ..	(a) 147	16,639	1	4,100	(b) 40,590	79.2
1951–52 ..	(a) 147	16,639	1	4,100	(b) 41,849	91.0

(a) Includes 9 elevators leased from country flour mills. (b) Includes bulkheads and sub-terminals.

(c) *Queensland.* Bulkheads of 90,000 bushels capacity each have been erected at Oakey and Dalby in the Darling Downs. These together with a temporary terminal silo at Pinkenba, Brisbane with a capacity of 500,000 bushels first came into operation in the 1952–53 season.

(d) *South Australia.* Arising from the shortage of cornsacks which threatened the 1951–52 season and also the restricted demand overseas for wheat in bags, the Australian Wheat Board constructed a bulk terminal at Ardrossan capable of receiving wheat direct from growers on York Peninsula and storing approximately 1,000,000 bushels of wheat. With shipments being made during the receival period the total which could be received into this facility would be about 1,250,000 bushels, whilst any bagged wheat received in excess of that accommodation could be later cut into the storage and shipped in bulk. This facility is controlled by the Australian Wheat Board and operated from the 1952–53 harvest.

(e) *Western Australia.* Under the Bulk Handling Act, 1936, the Co-operative Bulk Handling Ltd., controlled and managed by Western Australian wheat growers, has until 31st December, 1955, the sole right of receiving wheat in bulk at railway stations and sidings where the company has installations.

The company operates 268 sidings equipped for bulk handling, a shipping gallery and conveyor belt at Geraldton and a silo at Fremantle. The installations at Geraldton and Fremantle are owned by the State Government. Plans are in hand for the construction of a terminal at Albany and improvements at Bunbury which at present has a storage capacity of 300,000 bushels.

The method of storage in Western Australia differs from that employed in the eastern States. Horizontal storages made simply from timber and galvanized iron are employed as compared with the more costly vertical concrete structures in the eastern States. The Western Australian storage bins can be dismantled, moved and re-erected as required.

Owing to the nature of the system in use in Western Australia, particulars of the capacity comparable with those published for New South Wales and Victoria do not exist. The table below sets out the number of sidings equipped for bulk handling, receipts of bulk wheat and the proportion of the marketable harvest represented by the receivals for the seasons indicated.

BULK WHEAT HANDLED: WESTERN AUSTRALIA.

Season.	Total Sidings Equipped.(a)	Total Bulk Receivals.	Receivals as a Proportion of Marketable Harvest.
	No.	Bushels.	%
1931–32	5	1,265,000	3.4
1941–42	232	33,304,000	(b) 97.8
1948–49	234	32,815,119	(c) 100.0
1949–50	234	34,565,140	(c) 100.0
1950–51	260	46,088,474	(c) 100.0
1951–52	268	36,412,027	(c) 100.0

(a) These figures do not include four bins in Lakes District erected in 1940, a fifth point at Ravensthorpe equipped for the 1947–48 season, and two installations in East and West Yorkrakine built in 1949. These points are removed from the railway and wheat received is transported by road to the rail or direct to the port. They do not include six points at which wheat is directly loaded into railway wagons. (b) Quantities affected by war-time restrictions and difficulties. (c) In 1948, the Wheat Stabilization Act passed by the Western Australian Parliament as complementary legislation to the Federal Act provided for all bagged wheat to be treated. This is done by the company paying the grower the value of the bag when received and issuing him a bulk wheat receipt.

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 Relations. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

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

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935–39.	1951.	1952.(b)	Average 1935–39.	1951.	1952.(b)	Average 1935–39.	1951.	1952.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,595	25,254	25,995	312,399	552,657	687,922	12.2	21.9	26.5
United States ..	57,293	61,492	70,585	758,629	980,810	1,291,447	13.2	16.0	18.3
Total(c) ..	84,170	88,470	98,370	1,086,000	1,550,000	1,997,000	12.9	17.5	20.3
Europe—									
France	12,560	10,900	11,000	286,505	265,000	310,000	22.8	24.3	28.2
Greece ..	2,172	2,357	2,382	30,425	34,200	38,500	14.0	14.5	16.2
Italy	12,577	12,125	12,000	278,366	260,000	295,000	22.1	21.4	24.6
Spain	(d)11,253	10,380	10,625	(d)157,986	175,000	170,000	d 14.0	16.9	16.0
United Kingdom	1,843	2,131	2,030	62,361	86,460	86,130	33.8	40.6	42.4
Western Germany	(e) 2,785	2,650	2,950	(e) 92,400	112,580	120,920	e 33.2	42.5	41.0
Yugoslavia ..	5,400	4,349	4,530	97,700	83,664	61,618	18.1	19.2	13.6
Total(c) ..	74,890	71,170	71,340	1,599,000	1,585,000	1,650,000	21.4	22.3	23.1
U.S.S.R.	104,000	(f)	(f)	1,240,000	(f)	(f)	11.9	(f)	(f)

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.	1951.	1952.(b)	Average 1935–39.	1951.	1952.(b)	Average 1935–39.	1951.	1952.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bushel.	bushel.	bushel.
Africa—									
Algeria	4,185	4,037	4,258	35,201	33,000	45,000	8.4	8.2	10.6
Egypt	1,464	1,554	1,455	45,849	45,000	40,500	31.3	29.0	27.8
Total(c) ..	13,850	15,360	16,920	143,000	160,000	175,000	10.3	10.4	10.3
Asia—									
China	(e) 49,000	(g)53,000	(f)	(e) 750,000	(g)788,395	(g)789,975	e 15.3	g 14.9	(f)
India	(e) 34,765	24,134	23,235	(e) 379,100	248,000	246,000	e 10.9	10.3	10.6
Iran	(e) 4,191	(f)	6,529	(e) 72,128	66,000	75,000	e 17.2	(f)	11.5
Japan	1,735	1,812	1,781	49,954	54,750	56,480	28.8	30.2	31.7
Pakistan ..	(h)	10,832	10,435	(h)	147,600	115,000	(h)	13.6	11.0
Turkey ..	8,973	12,000	13,500	135,690	205,000	235,000	15.1	17.1	17.4
Total(c) ..	108,190	114,620	115,320	1,498,000	1,610,000	1,630,000	13.8	14.0	14.1
South America—									
Argentina ..	15,834	6,772	13,500	221,769	77,161	285,000	14.0	11.4	20.0
Chile	1,963	1,853	2,070	31,562	36,300	43,590	16.1	19.6	21.1
Total(c) ..	20,490	12,150	19,190	281,000	155,000	375,000	13.7	12.8	19.5
Oceania—									
Australia ..	13,128	10,384	10,209	169,744	159,725	195,208	12.9	15.4	19.1
Total(c) ..	13,349	10,479	10,339	176,873	163,725	199,208	13.2	15.6	19.3
World Total(c)	418,940	427,250	446,480	6,024,000	6,480,000	7,326,000	14.4	15.2	16.4

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

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 1950 and 1951 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations.

While Australia's production of wheat ranges between 2 and 4 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 1951 the proportion fell to 11 per cent., although the actual quantity shipped was somewhat greater.

WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934–38.		1950.		1951.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada	175,294	27.58	206,962	26.57	289,663	27.00
Argentina	122,740	19.31	102,263	13.13	91,512	8.53
Australia	**102,406**	**16.11**	**125,951**	**16.17**	**122,891**	**11.45**
United States of America ..	46,274	7.28	250,286	32.13	474,066	44.19
U.S.S.R. (Russia)	26,631	4.19	(b)14,697	1.89	(b)25,720	2.40
France	18,316	2.88	32,488	4.17	30,107	2.80
All other	143,993	22.65	46,305	5.94	38,937	3.63
Total	635,654	100.00	778,952	100.00	1,072,896	100.00
World Production (mil. bush.)	6,024		6,317		6,480	
Proportion of Australia's Production to World Production	% 2.82		% 2.92		% 2.46	

(a) Includes flour expressed in terms of wheat. (b) Unofficial.

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.		1950.		1951.	
	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	33.82	143,136	18.82	177,557	17.70
Belgium and Luxembourg ..	42,853	6.94	23,391	3.08	35,277	3.52
Brazil	36,387	5.89	45,462	5.98	41,141	4.10
China	27,469	4.45	(b)	(b)	(b)	(b)
United States of America ..	26,539	4.30	15,013	1.97	31,698	3.16
Italy	26,043	4.22	41,509	5.46	60,115	5.99
Germany	25,606	4.15	(c) 63,694	(c) 8.37	c 108,803	(c)10.85
Netherlands	22,593	3.66	26,642	3.50	31,908	3.18
Switzerland	16,920	2.74	13,246	1.74	14,102	1.41
Greece	16,428	2.66	14,436	1.90	21,079	2.10
Japan	11,552	1.87	57,900	7.61	61,563	6.14
Austria	8,969	1.45	13,885	1.83	16,983	1.69
India and Pakistan ..	1,826	0.30	53,773	7.07	113,095	11.27
Egypt	588	0.10	20,609	2.71	41,791	4.17
All other	144,772	23.45	227,884	29.96	247,972	24.72
Total	617,282	100.00	760,580	100.00	1,003,084	100.00

(a) Includes flour expressed in terms of wheat. (b) Not available. (c) Federal Republic.

§ 5. Oats.

1. **Area, Production and Average Yield.**—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1951–52 accounted for 52.45 per cent., oats grown for grain represented only 11.94 per cent. of the area of crops. The area, production and average yield per acre of oats for the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown in the following table :—

OATS FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

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
1947–48 ..	609	650	25	309	495	17	..	2,105
1948–49 ..	378	540	21	286	532	12	1	1,770
1949–50 ..	375	483	21	261	585	23	..	1,748
1950–51 ..	332	527	17	271	586	24	..	1,757
Average, 1941–42 to 1950–51 ..	452	516	20	286	453	18	..	1,745
1951–52 ..	596	676	21	387	657	27	1	2,365
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1947–48 ..	13,674	15,381	474	5,394	5,411	360	3	40,697
1948–49 ..	5,779	7,490	410	2,643	6,998	262	10	23,601
1949–50 ..	7,016	8,718	338	3,464	7,268	577	10	27,391
1950–51 ..	3,994	9,034	221	3,534	7,914	429	2	25,128
Average, 1941–42 to 1950–51 ..	6,277	7,425	339	3,177	5,207	436	6	22,867
1951–52 ..	9,395	11,151	263	5,405	7,689	594	9	34,506
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	15.66	12.03	12.77	7.91	10.77	28.15	22.35	11.80
1947–48 ..	22.45	23.66	18.97	17.47	10.94	21.09	6.86	19.33
1948–49 ..	15.28	13.88	19.68	9.23	13.16	22.36	14.14	13.34
1949–50 ..	18.72	18.04	16.50	13.25	12.43	25.31	28.83	15.67
1950–51 ..	12.02	17.14	13.01	13.02	13.51	18.31	6.96	14.30
Average, 1941–42 to 1950–51 ..	13.88	14.38	16.51	11.10	11.50	24.65	12.70	13.09
1951–52 ..	15.75	16.48	12.61	13.95	11.71	22.39	15.39	14.59

(a) 40 lb. per bushel.

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

Oats are mainly used in Australia as feed grain. During the ten years ended 1951–52 the average annual quantity consumed by stock was about 11.5 million bushels, leaving a balance of about 6.5 million bushels for seed purposes, about 3.4 million bushels for oatmeal and a small quantity for the production of spirits and for malting. Prior to the year 1947–48 exports of oats were usually small, but from 1947–48 to 1951–52 heavy shipments were made and exports over these years averaged 9.84 million bushels.

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

2. **Price of Oats.**—The average wholesale price in the Melbourne market for oats of good milling quality in 1951–52 was 10s. 6½d per bushel. This represents an increase of 25.6 per cent. on the price in 1950–51 (8s. 4¾d.) and of 204.8 per cent. on the price in 1938–39 (3s. 5½d.).

3. **Value of Oat Crop.**—The estimated values of the oat crops for the seasons 1950–51 and 1951–52 were as follows :—

OATS : VALUE OF CROP, 1950–51 AND 1951–52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950–51—								
Aggregate value £	1,514,420	3,976,845	125,700	1,371,979	3,116,030	187,740	809	10,293,523
Value per acre ..	£4/11/2	£7/10/10	£7/7/11	£5/1/1	£5/6/5	£8/0/2	£2/12/8	£5/17/2
1951–52—								
Aggregate value £	5,411,980	5,791,686	170,828	3,204,791	4,086,678	334,230	4,993	19,005,186
Value per acre ..	£9/1/5	£8/11/3	£8/3/11	£8/5/6	£6/4/6	£12/11/11	£8/17/4	£8/0/9

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 1947–48 to 1951–52 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity .. bush.	286,360	6,803,427	14,853,777	6,625,560	7,946,736	12,971,224
Value .. £	36,458	3,945,807	6,160,586	2,393,566	3,529,070	8,000,703

The quantity of oats imported into Australia is usually not very large, although in 1945–46 imports exceeded exports by 801,922 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was in 1927–28 (by 460,581 bushels) when New Zealand was the main supplier. In 1951–52 the principal countries of destination of the exports were Federal Republic of Germany, Netherlands, United Kingdom, Union of South Africa, Denmark and Belgium.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1951–52 to 363,400 cwt., equivalent to about 2,035,000 bushels of oats, or about 6.0 per cent. of the total production. Prior to the 1939–45 War the exports of oatmeal were small, but in recent years a considerable export trade has developed and in 1951–52 the quantity shipped amounted to 133,386 cwt. or 36.7 per cent. of total production.

6. **World Production.**—The world's production of oats for the year 1952, excluding that produced in U.S.S.R., according to preliminary details released by the Food and Agriculture Organization of the United Nations, amounted to 3,348 million bushels, harvested from 90 million acres, representing an average yield of 37.20 bushels per acre. This compared with the production in the previous year of 3,458 million bushels from an

area of 89 million acres giving an average yield of 38.85 bushels per acre. The world's average production including that of the U.S.S.R. for the years 1935 to 1939 amounted to 4,336 million bushels from 139 million acres giving an average yield of 31.26 bushels per acre. In comparison with the average return per acre for world production in 1952 that of Australia for the same period (14.59 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 1951–52 season being 165,397 acres, or 98 per cent. of the total for Australia. In all States except South Australia the crop is grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Average Yield.**—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 238,869 acres during the past decennium. Compared with the previous year, the area in 1951–52 increased by 201 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 average 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 average yield per acre of maize for grain in each State for the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales and Queensland for 1951–52.

MAIZE FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929–30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1947–48 ..	86,979	7,968	127,703	..	90	7	1	222,748
1948–49 ..	77,820	6,460	97,598	3	72	5	..	181,958
1949–50 ..	72,872	5,136	115,550	..	20	10	3	193,591
1950–51 ..	52,674	4,089	112,467	..	107	2	..	169,339
Average, 1941–42 to 1950–51 ..	91,099	6,644	141,041	2	75	7	1	238,869
1951–52—								
Hybrid ..	24,268	4,115	24,133	..	8	18	2	169,540
Other ..	29.948		87,048					
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	3,072	631	3,525	..	..	..	..	7,228
1947–48 ..	2,356	324	3,487	..	1	..	..	6,168
1948–49 ..	2,476	260	2,451	..	1	..	..	5,188
1949–50 ..	2,408	194	3,393	..	1	..	..	5,996
1950–51 ..	1,512	187	3,029	..	1	..	..	4,729
Average, 1941–42 to 1950–51 ..	2,498	252	3,432	..	1	..	..	6,183
1951–52—								
Hybrid ..	692	168	627	..	..	1	..	4,018
Other ..	719		1,811					

(a) 56 lb. per bushel.

MAIZE FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	26.74	34.28	21.84	29.84	10.02	..	8.48	24.53
1947–48 ..	27.10	40.66	27.30	..	7.17	15.71	11.00	27.69
1948–49 ..	31.82	40.23	25.12	6.67	6.25	19.20	..	28.51
1949–50 ..	33.05	37.80	29.36	..	22.05	20.50	10.00	30.07
1950–51 ..	28.70	45.65	26.93	..	14.30	12.50	..	27.93
Average, 1941–42 to 1950–51 ..	27.42	37.97	24.33	18.00	10.84	11.14	12.00	25.89
1951–52—								
Hybrid ..	28.50	40.81	26.00	..	13.88	34.78	3.00	23.70
Other ..	24.00		20.81					

(a) 56 lb. per bushel.

The average yield for Australia for the ten-year period was 25.89 bushels per acre. Among principal producing countries the United States of America during 1952 averaged 40.64 bushels, Italy, 29.91 bushels and Brazil, 20.27 bushels.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market in 1951–52 was 21s. 3½d., per bushel compared with 14s. 4¾d. in 1950–51. No comparable pre-war price is available, but that in the Sydney market in 1938–39 was 4s. 6½d.

4. **Value of Crop.**—The values of the crops for the seasons 1950–51 and 1951–52 were as follows :—

MAIZE FOR GRAIN: VALUE OF CROP, 1950–51 AND 1951–52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1950–51—								
Aggregate value £	1,095,980	193,771	1,756,187	..	2,118	30	..	3,048,086
Value per acre ..	£20/16/2	£47/7/9	£15/12/4	..	£19/15/11	£15/0/0	..	£18/0/0
1951–52—								
Aggregate value £	1,492,580	172,601	2,142,796	..	275	880	6	3,809,138
Value per acre ..	£27/10/7	£41/18/11	£19/5/6	..	£34/7/0	£48/17/9	£3/0/0	£22/9/4

5. **Exports of Maize and Maize Products.**—Details of exports of maize for the five years ended 1951–52 compared with the five-yearly average ended 1938–39 are shown below.

MAIZE: EXPORTS, AUSTRALIA.

Particulars.	Average, 1934–35 to 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity .. bush.	57,432	547,536	126,686	1,201,032	1,188,960	187,600
Value .. £	8,571	627,565	105,786	613,604	785,686	148,580

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

Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1951–52 1,538,424 lb., valued at £58,376, were exported, compared with an annual average of 36,761 lb., valued at £364, during the five years ended 1938–39. It should be noted that these figures include some quantities of " cornflour " made from wheat. 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 1952, amounted to 5,590 million bushels, harvested from 209 million acres giving an average yield per acre of 26.75 bushels. This compared with production in the previous year of 5,189 million bushels from 204 million acres yielding an average per acre of 25.44 bushels. Production (including that of the U.S.S.R.) over the years 1935 to 1939 averaged 4,725 million bushels from 216 million acres giving an average yield per acre of 21.88 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1952 the area sown to maize in that country averaged 81 million acres or 39 per cent. of the world total. During the same period production averaged 3,088 million bushels or about 58 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals as the area and an estimate of grain equivalent of maize used as green fodder are included. In recent years maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

§ 7. Barley.

1. **Area, Production and Average Yield.**—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 1951–52 reached the record level of 1,118,000 acres. Victoria was originally the principal barley-growing State, but since 1913–14 its place has been taken by South Australia which accounted for 74 per cent. of the Australian acreage in 1951–52. Victoria was next in importance with 17 per cent., leaving a balance of about 9 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are cut for green forage. These, however, are not included in this section. The area, production and average yield per acre of barley for grain in the several States for the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown in the following table :—

BARLEY FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

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
1947–48 ..	23	165	17	562	63	9	..	839
1948–49 ..	19	196	28	698	64	7	..	1,012
1949–50 ..	13	236	25	694	68	4	..	1,040
1950–51 ..	9	217	26	765	59	3	..	1,079
Average, 1941–42 to 1950–51 ..	20	158	17	506	64	6	..	771
1951–52—								
Malting (2-Row)	7	161	21	753	19	4	..	965
Other (6-Row)	4	25	7	79	38	..	..	153
Total ..	11	186	28	832	57	4	..	1,118
				PRODUCTION ('000 BUSHELS).(a)				
Average, 1929–30 to 1938–39 ..	173	1,976	132	5,714	371	186	1	8,553
1947–48 ..	519	3,577	433	15,363	745	219	..	20,856
1948–49 ..	322	3,548	622	12,104	981	208	..	17,785
1949–50 ..	265	4,876	578	12,725	968	131	..	19,543
1950–51 ..	129	4,510	489	16,727	925	91	..	22,871
Average, 1941–42 to 1950–51 ..	287	2,808	356	9,889	790	136	1	14,267
1951–52—								
Malting (2-Row)	99	3,147	337	15,527	230	137	..	19,477
Other (6-Row)	68	473	113	1,299	465	13	1	2,432
Total ..	167	3,620	450	16,826	695	150	1	21,909

(a) 50 lb per bushel.

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

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929–30 to 1938–39 ..	16.62	18.44	16.67	17.29	11.89	25.21	18.88	17.29
1947–48 ..	22.13	21.78	25.18	27.32	11.79	26.79	19.50	24.87
1948–49 ..	16.91	18.12	22.49	17.35	15.29	28.39	..	17.58
1949–50 ..	20.64	20.65	23.06	18.34	14.24	30.12	..	18.79
1950–51 ..	15.56	20.77	18.74	21.87	15.64	27.81	..	21.20
Average, 1941–42 to 1950–51	14:17	17.77	20.96	19.54	12.31	25.69	13.33	18.51
1951–52—								
Malting (2-Row)	14.12	19.58	15.69	20.61	12.10	35.48	..	20.17
Other (6-Row)	16.61	18.54	16.97	16.60	12.38	33.30	26.05	15.95
Total ..	15.04	19.44	15.99	20.23	12.29	35.28	26.05	19.60

(a) 50 lb. per bushel.

Taking Australia as a whole, about 86 per cent. of the area of barley for grain in 1951–52 was sown with malting or 2-row barley while the remainder consisted of 6-row, or feed varieties. The proportion, however, varied considerably in the several States. The disposal of barley during the season 1951–52 was as follows :—malt works, 6,063,000 bushels; flour and other grain mills, 169,000 bushels; distilleries, 310,000 bushels; exports, 12,061,593 bushels; leaving a balance of 3,305,000 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 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51.

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

Season.	Area. ('000 Acres.)			Production. ('000 Bushels.)			Average Yield per Acre. (Bush.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2 row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average, 1929–30 to 1938–39 ..	428	67	495	7,480	1,073	8,553	17.49	16.03	17.29
1947–48 ..	745	94	839	18,936	1,920	20,856	25.43	20.46	24.87
1948–49 ..	899	113	1,012	15,930	1,855	17,785	17.72	16.46	17.58
1949–50 ..	927	113	1,040	17,569	1,974	19,543	18.95	17.51	18.79
1950–51 ..	963	116	1,079	20,811	2,060	22,871	21.61	17.82	21.20
Average, 1941–42 to 1950–51 ..	667	104	771	12,647	1,620	14,267	18.97	15.57	18.51
1951–52 ..	965	153	1,118	19,477	2,432	21,909	20.17	15.95	19.60

During the last ten-yearly period shown the average area of barley of the malting, or 2-row class, was more than six times the corresponding figures for barley of the 6-row, or feed class. The average yield per acre for malting barley was 22 per cent. higher than that for 6-row barley.

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

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

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

Particulars of the barley acquired and sold, and of advances made to growers by the Australian Barley Board in respect of the 1945–46 to 1947–48 crops are given in the following table. The Commonwealth Government did not acquire barley after the 1947–48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948–49 and subsequent crops of the two States. Details of these acquisitions are also shown in the table below.

AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC., TO 31st DECEMBER, 1952.

Pool.	Quantity Acquired.	Quantity Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Payments to Growers.
	'000. bushels.	'000. bushels.	s. d.	£
No. 7 (1945–46 Crop)	6,716	6,782	(b) 6 0.17	1,962,049
,, 8 (1946–47 ,,)	8,543	8,572	(b) 8 2.625	3,497,956
,, 9 (1947–48 ,,)	17,228	17,302	(b) 15 1.7	12,737,512
,, 10 (1948–49 ,,)	13,986	14,087	(b) 7 11.9	5,377,137
,, 11 (1949–50 ,,)	16,250	16,336	(b) 10 2.2	7,905,902
,, 12 (1950–51 ,,)	19,976	20,154	(b) 11 2.488	10,721,180
,, 13 (1951–52 ,,) (c)	19,340	19,475	(d) 14 9	d13,697,930

(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) Subject to revision. (d) To 31st December, 1952.

3. **Prices.**—The average wholesale prices in the Melbourne market during 1951–52 were 12s. 10½d. per bushel for malting barley and 9s. 6½d. per bushel for feed barley. These were substantially higher than in 1950–51 when prices were 7s. 8d. and 7s. 1¾d. per bushel respectively. In 1938–39 comparative prices were 3s. 5¾d. per bushel and 2s. 11½d. per bushel respectively.

4. **Value of Barley Crop.**—The estimated values of the barley crops for the seasons 1950–51 and 1951–52 and the value per acre are shown in the following table :—

BARLEY FOR GRAIN : VALUE OF CROP, 1950–51 AND 1951–52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950–51—								
Aggregate value £	61,520	2,518,234	290,652	9,901,590	520,415	43,490	..	13,338,901
Value per acre	£7/15/5	£11/12/0	£11/2/9	£12/18/11	£8/16/1	£13/6/9	..	£12/7/4
1951–52—								
Aggregate value £	113,000	2,753,491	329,496	13,852,936	583,214	106,190	365	17,738,692
Value per acre ..	£10/2/10	£14/15/9	£11/14/6	£16/13/2	£10/6/2	£25/0/9	£16/11/10	£15/17/4

5. **Exports.**—Australian exports of barley during the five years ended 1951–52 averaged 10,780,000 bushels, South Australia being the principal exporting State and the United Kingdom, Netherlands and Japan the principal countries to which barley was shipped. Particulars of Australian exports for the years 1947–48 to 1951–52 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity ('000 bush.)	3,279	8,050	10,876	10,703	12,208	12,062
Value .. £'000	483	8,134	6,864	6,433	9,053	11,154

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 1951–52 amounting to 467,814 lb., valued at £16,292, and consigned mainly to Ceylon, Singapore and Malaya.

6. **Malt.**—(i) *Production.* The production of malt in Australia was sufficient to meet local requirements and to provide a margin for export up until 1947–48 but since then imports have risen rapidly in each succeeding year, reaching a surplus of 265,731 bushels over exports in 1951–52. 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Grain used .. bush.	3,729,730	4,976,615	5,048,387	5,293,979	5,543,042	6,063,112
Malt produced bush.(*a*)	3,620,909	4,879,145	4,989,371	5,437,539	5,550,307	6,072,509

(*a*) 40 lb. per bushel.

(ii) *Net Exports.* Details of the net exports of malt for the years 1947–48 to 1951–52, together with the average for the five years ended 1938–39, are given in the next table :—

MALT : NET EXPORTS, AUSTRALIA.

Particulars.	Average, 1934–35 to 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity .. bush.	108,550	12,920	—14,002	— 95,460	—131,556	—265,731
Value .. £	37,647	14,159	—16,508	—107,641	—195,982	—389,342

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

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. The main world producers in 1952 were China, Canada and the United States of America. Australian production in that year was less 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 1952, excluding that of the U.S.S.R., amounted to 2,342 million bushels harvested from 98.3 million acres, equivalent to an average yield per acre of 23.82 bushels. This compared with the production

of 2,251 million bushels in the previous year from 96.1 million acres giving an average yield per acre of 23.41 bushels. Production, including that of U.S.S.R., over the years 1935–39 averaged 2,338 million bushels from 114.2 million acres, representing an average yield of 20.47 bushels per acre.

§ 8. Rice.

Rice growing is almost entirely concentrated in Asia and the extent to which this crop is grown in other countries is relatively small. In Australia experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales for a number of years before 1924–25, but it was not until that year that an attempt was made to grow the crop on a commercial basis, 16,240 bushels being produced from 153 acres, or an average of 106 bushels per acre. Favoured by tariff protection and high average yields, the development of rice culture in the Murrumbidgee Irrigation Area made rapid progress, and production soon equalled Australian requirements and later provided a margin for export.

The area which growers may plant is subject to control. Each year representatives of the Rice Marketing Board, rice growers, the Department of Agriculture and the Water Conservation and Irrigation Commission of New South Wales meet to decide the maximum area which growers may plant in the following season, the extent of any expansion being determined by the limits imposed by the quantity of water available.

For the five years ended 1938–39 the area sown to rice in the Murrumbidgee Irrigation Area averaged 22,800 acres. The area sown fluctuated considerably during succeeding years, the maximum of 40,690 acres being recorded in 1943–44. In 1950–51 the area sown was 36,945 acres, but in 1951–52 it fell to 35,664 acres.

The production of paddy rice in 1943–44 was more than 4 million bushels or an average yield of just under 100 bushels per acre. In 1944–45 it dropped to nearly 1.7 million bushels or 69 bushels per acre, owing to water shortage arising from severe drought conditions. In 1950–51 production reached its highest level with 4.1 million bushels or an average of 111 bushels per acre, but in 1951–52 it declined to 3.0 million bushels or an average of 85 bushels per acre.

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

Details relating to area, production, and trade for the years 1947–48 to 1951–52 compared with the averages for the years 1934–35 to 1938–39 are shown in the following table :—

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

Year.	No. of Growers.	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (*b*)		Uncleaned.	Cleaned.	Uncleaned.	Cleaned.
		Acres.	'000 Bushels.(*c*)	£'000.	Bushels.(*c*)	Centals.	Centals.	Centals.	Centals.
Average, 1934–35 to 1938–39 ..	(*d*) 313	22,823	2,274	450	99.66	2,124	38,272	9,357	271,851
1947–48 ..	349	26,208	2,676	950	102.12	..	5	4,763	622,208
1948–49 ..	404	32,689	2,739	1,032	83.79	..	549	8,658	610,497
1949–50 ..	444	37,540	3,783	1,653	100.78	..	6,685	225	597,759
1950–51 ..	462	36,945	4,118	2,171	111.45	1	63	2,065	657,267
1951–52 ..	452	35,664	3,048	2,108	85.47	3	18	4,140	559,395

(*a*) Rice growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland in the 1950–51 and 1951–52 seasons. (*b*) Excludes the value of straw. (*c*) 42 lb. per bushel. (*d*) 1938–39 figure, previous years not collected.

§ 9. Sorghum for Grain.

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

Year.	Area.			Production.(a)			Average Yield per Acre.(a)		
	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)	N.S.W.	Q'land.	Total. (b)
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939–40 ..	(c)	4,397	(d)4,397	(c)	57,936	(d) 57,936	(c)	13.17	d 13.17
1947–48 ..	24,680	116,079	140,769	467,412	3,335,322	3,802,784	18.94	28.73	27.01
1948–49 ..	4,732	48,011	52,745	83,244	899,136	982,389	17.59	18.73	18.63
1949–50 ..	3,575	99,362	102,937	67,809	2,157,717	2,225,526	18.97	21.72	21.62
1950–51 ..	4,466	166,311	170,778	73,773	3,683,286	3,757,064	16.52	22.15	22.00
1951–52 ..	7,101	169,558	176,660	41,487	2,651,799	2,693,289	5.84	15.64	15.25

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

2. **Queensland-British Food Corporation Project.**—Early in 1948 an agreement was entered into between the Queensland Government and the Overseas Food Corporation of the United Kingdom Government to develop selected areas of Central Western Queensland for the growing of grain sorghum for pig-raising in Queensland and/or for export to the United Kingdom, and for sunflower and possibly other oilseed production. Because of losses incurred, the United Kingdom and Queensland Governments decided, early in 1953, to abandon the project. Although the scheme resulted in financial loss, the activities of the Corporation did much to indicate ways by which combined grain sorghum production and beef cattle husbandry could be used as a basis for closer settlement of the great tracts of brigalow country in Queensland. The activities of the Corporation are described in "The future of the Queensland-British Food Corporation", a White Paper Cmd 8760 presented to the United Kingdom Parliament, February, 1953.

§ 10. Potatoes.

1. **Area, Production and Average Yield.**—Victoria possesses peculiar advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, and the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 78 per cent. of the total for Australia in 1951–52.

The area sown, production and average yield per acre of potatoes in each State during the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown hereunder :—

POTATOES : 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	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1947–48	21,911	59,400	10,664	6,202	6,955	40,382	115	145,629
1948–49	18,101	45,785	11,184	5,860	6,344	32,319	89	119,682
1949–50	23,369	50,651	11,624	7,245	6,895	34,110	108	134,002
1950–51	18,374	52,482	10,783	6,969	6,780	31,581	142	127,111
Average, 1941–42 to 1950–51	23,296	56,653	12,083	7,486	7,387	45,048	111	152,064
1951–52	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
PRODUCTION (TONS).								
Average, 1929–30 to 1938–39	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1947–48	65,535	184,882	29,299	34,181	40,608	142,746	716	497,967
1948–49	61,265	166,105	27,511	33,054	39,516	131,800	561	459,812
1949–50	69,395	167,881	30,681	40,984	39,459	122,000	637	471,037
1950–51	43,102	139,391	24,725	35,955	43,887	124,000	660	411,720
Average, 1941–42 to 1950–51	61,197	194,898	27,144	36,563	38,650	173,612	597	532,661
1951–52	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929–30 to 1938–39	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1947–48	2.99	3.11	2.75	5.51	5.84	3.53	6.23	3.42
1948–49	3.38	3.63	2.46	5.64	6.23	4.08	6.30	3.84
1949–50	2.97	3.31	2.64	5.66	5.72	3.58	5.90	3.52
1950–51	2.35	2.66	2.29	5.16	6.47	3.93	4.65	3.24
Average, 1941–42 to 1950–51	2.63	3.44	2.25	4.88	5.23	3.85	5.38	3.50
1951–52	2.73	4.24	2.88	6.30	7.25	4.78	6.05	4.31

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 have shown a general decline to the figure for the 1951–52 season, 118,145 acres.

Compared with the average yield per acre obtained in other countries, that returned for Australia is low ; the production in New Zealand, for example, in 1951–52 averaged 6.85 tons per acre from an area of about 12,000 acres, as compared with the record yield of 4.31 tons per acre in Australia from 118,145 acres in the same season.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the seasons 1950–51 and 1951–52 is shown in the following table :—

POTATOES : VALUE OF CROP, 1950-51 and 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950–51—								
Aggregate value£	1,218,170	3,661,748	556,313	877,152	1,153,130	2,779,740	18,654	10,264,907
Value per acre ..	£66/6/0	£69/15/5	£51/11/10	£125/17/4	£170/1/7	£88/0/5	£131/7/4	£80/15/1
1951–52—								
Aggregate value£	2,097,710	5,512,002	962,117	1,640,688	1,587,166	4,141,040	41,010	15,981,733
Value per acre ..	£110/4/2	£130/18/0	£83/18/4	£235/7/2	£230/10/6	£131/8/1	£244/2/2	£135/5/5

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1949–50 to 1951–52 amounted to 391,800 tons, 341,700 tons and 438,100 tons respectively, or 109.0 lb., 92.1 lb. and 114.9 lb. per head of population respectively. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938–39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. **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.

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

5. **Exports.**—Prior to the 1939–45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war, an expanded export trade has been developed, principally with Eastern countries, including Singapore, Ceylon, Hong Kong and Indo-China. However in 1951–52, the bulk of exports was diverted to New Zealand which received a total of 6,883 tons. Details showing exports for the years 1947–48 to 1951–52 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity .. tons	18,838	30,008	15,074	15,183	6,231	12,468
Value .. £	16,639	622,379	243,540	340,747	190,128	436,780

Imports of potatoes are negligible.

§ 11. Onions.

1. **Area, Production and Average Yield.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 54.7 per cent. of the total area and 58.5 per cent. of the quantity produced in 1951–52. Queensland came next with 29.1 per cent. of the area and 18.2 per cent. of the production, leaving a balance of 16.2 per cent. of area and 23.3 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 average yield per acre are given in the following table for the years 1947–48 to 1951–52 together with averages for the ten-year periods ended 1938–39 and 1950–51.

ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Year.	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
1947–48	568	6,722	2,378	583	475	19	6	10,751
1948–49	322	5,554	2,828	498	499	31	4	9,736
1949–50	225	4,093	2,371	435	371	28	3	7,526
1950–51	211	4,148	2,399	506	379	19	5	7,667
Average, 1941–42 to 1950–51 ..	607	5,944	2,123	543	402	47	5	9,671
1951–52	401	4,745	2,527	620	334	50	5	8,682

ONIONS: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION (TONS).								
Average, 1929–30 to 1938–39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1947–48	2,158	61,540	12,843	5,350	4,000	75	31	85,997
1948–49	1,242	33,684	12,535	4,971	3,930	180	27	56,569
1949–50	770	25,436	13,137	4,607	3,611	130	22	47,713
1950–51	539	18,182	7,256	5,242	4,033	89	26	35,367
Average, 1941–42 to 1950–51 ..	1,914	34,862	8,842	4,879	3,186	157	26	53,866
1951–52	1,937	31,150	9,691	6,302	3,855	243	38	53,216
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929–30 to 1938–39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1947–48	3.80	9.16	5.40	9.18	8.42	3.95	5.17	8.00
1948–49	3.86	6.06	4.43	9.98	7.88	5.81	6.75	5.81
1949–50	3.42	6.21	5.54	10.59	9.73	4.64	7.33	6.34
1950–51	2.55	4.38	3.02	10.36	10.64	4.68	5.20	4.61
Average, 1941–42 to 1950–51 ..	3.15	5.87	4.16	8.99	7.93	3.34	5.20	5.57
1951–52	4.83	6.56	3.83	10.16	11.54	4.86	7.60	6.13

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 17.

2. **Gross Value of Onion Crop.**—The gross value of the onion crop is shown in the following table for the years 1950–51 and 1951–52.

ONIONS: VALUE OF CROP, 1950–51 AND 1951–52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1950–51—								
Aggregate value £	25,060	571,142	176,690	188,712	121,206	2,310	1,209	1,086,329
Value per acre..	£118/15/4	£137/13/10	£73/13/0	£372/19/0	£319/16/1	£121/11/7	£241/16/0	£141/13/9
1951–52—								
Aggregate value £	118,500	1,176,951	454,186	349,761	139,429	8,510	2,325	2,249,662
Value per acre..	£295/10/2	£248/0/10	£179/14/8	£564/2/7	£417/9/0	£170/4/0	£465/0/0	£259/2/4

3. **Consumption.**—The annual consumption of onions in Australia averaged 45,100 tons or 12.3 lb. per head of population during the three years ended 1951–52 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 7,900 tons and 2,200 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. Onions were imported in 1950–51 for the first time since 1946–47 when approximately 100 tons were obtained, principally from New Zealand. Imports in 1950–51 amounted to 636 tons principally from Lebanon, Egypt and India and in 1951–52 to 2,397 tons principally from New Zealand. During 1951–52 exports, which amounted to 3,673 tons, valued at £152,216, were shipped mainly to Singapore and Canada.

§ 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 has been next in importance but since that year it has been third to oats (for grain).

In 1951–52 the hay area represented 7.8 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 875. 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 average yield per acre of hay of all kinds in the several States during the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown below :—

HAY : 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 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1947–48 ..	627,654	657,146	71,834	296,261	220,172	84,354	3,766	1,970,187
1948–49 ..	374,392	591,341	59,642	234,792	226,779	90,579	2,486	1,579,511
1949–50 ..	339,091	606,525	55,108	294,590	216,320	91,335	2,271	1,605,240
1950–51 ..	238,931	557,454	44,934	260,856	176,990	96,388	1,609	1,377,162
Average, 1941–42 to 1950–51 ..	545,550	759,017	63,335	362,294	259,792	93,642	2,883	2,086,513
1951–52 ..	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
PRODUCTION (TONS).								
Average, 1929–30 to 1938–39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1947–48 ..	978,236	1,042,438	132,694	443,659	267,901	137,648	5,182	3,007,758
1948–49 ..	496,873	933,983	117,339	311,997	277,329	150,699	4,064	2,292,284
1949–50 ..	496,081	1,000,855	116,412	384,604	272,052	155,653	4,332	2,429,989
1950–51 ..	314,940	894,585	101,319	362,162	226,703	160,722	2,509	2,062,940
Average, 1941–42 to 1950–51 ..	646,498	1,046,230	117,488	449,806	295,706	144,851	3,867	2,704,446
1951–52 ..	450,774	1,046,764	79,763	379,978	211,629	172,286	3,655	2,344,849
AVERAGE 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
1947–48 ..	1.56	1.59	1.85	1.50	1.17	1.63	1.38	1.53
1948–49 ..	1.33	1.58	1.97	1.33	1.22	1.66	1.63	1.45
1949–50 ..	1.46	1.65	2.11	1.31	1.26	1.70	1.91	1.51
1950–51 ..	1.32	1.60	2.25	1.39	1.28	1.67	1.56	1.50
Average, 1941–42 to 1950–51 ..	1.19	1.38	1.86	1.24	1.14	1.55	1.34	1.30
1951–52 ..	1.35	1.63	1.83	1.48	1.22	1.76	1.58	1.51

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915–16, 3,597,771 acres, was the largest on record, whilst the average for the decennium ended 1950–51 was 2,086,513 acres.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1951–52 are given in the following table. Similar information for 1950–51 appears in *Primary Industries Bulletin* No. 45, *Part* I.—*Rural Industries.*

HAY : AREA UNDER VARIOUS KINDS GROWN, 1951-52.

(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales ..	120,756	113,348	72,760	27,143	334,007
Victoria	34,964	214,427	40,851	350,176	640,418
Queensland	6,807	3,284	29,791	3,704	43,586
South Australia	63,439	132,465	7,789	53,312	257,005
Western Australia ..	48,597	84,244	143	40,871	173,855
Tasmania	2,452	32,668	781	61,862	97,763
Australian Capital Territory	146	1,100	972	88	2,306
Total	277,161	581,536	153,087	537,156	1,548,940

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1951–52 were 37 per cent. for oaten, 18 per cent. for wheaten, 10 per cent. for lucerne, and 35 per cent. for other hay. In that year, oaten hay predominated in the States of South Australia and Western Australia, wheaten hay in New South Wales, lucerne in Queensland, and meadow and grass in Victoria and Tasmania.

2. **Value of Hay Crop.**—The following table shows the value, and the value per acre, of the hay crop of the several States for the seasons 1950–51 and 1951–52 :—

HAY : VALUE OF CROP, 1950-51 AND 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950–51—								
Aggregate value £	3,537,030	8,307,154	1,235,606	2,766,903	964,429	1,084,870	34,599	17,930,591
Value per acre..	£14/16/1	£14/18/0	£27/10/0	£10/12/2	£5/9/0	£11/5/1	£21/10/1	£13/0/5
1951–52—								
Aggregate value £	6,702,190	11,407,015	2,228,823	2,877,613	1,438,253	1,464,430	74,497	26,192,821
Value per acre..	£20/1/4	£17/16/3	£51/2/9	£11/3/11	£8/5/5	£14/19/7	£32/6/1	£16/18/2

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 1948 to 1952 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.
1948 ..	825,821	1,059,842	96,158	478,142	176,188	95,147	3,676	2,734,974
1949 ..	691,608	969,242	84,170	404,813	177,502	88,098	3,345	2,418,778
1950 ..	680,498	1,014,747	101,222	341,888	188,167	116,549	2,530	2,445,601
1951 ..	608,416	940,537	102,487	321,873	154,094	112,887	1,774	2,242,068
1952 ..	500,596	1,129,163	29,766	418,734	142,711	129,893	2,702	2,353,565

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 1951–52 exports amounted to 3,663 tons, valued at £92,669.

§ 13. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. The areas recorded in respect of green fodder include areas of crops cut for feeding to live stock as green fodder, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1951–52 the area under green fodder (2,521,835 acres) consisted of oats (1,455,611 acres), lucerne (228,703 acres), wheat (177,634 acres), sorghum (62,017 acres), maize (49,736 acres), barley (78,502 acres), rye (33,464 acres), sugar-cane (6,431 acres) and other crops (429,737 acres). Particulars concerning the area of green fodder in the several States during each of the years 1947–48 to 1951–52 are given in the following table together with the average for the periods of ten years ended 1938–39 and 1950–51.

GREEN FODDER : AREA.
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929–30 to 1938–39	482,989	120,355	347,804	106,820	189,332	24,255	656	1,272,211
1947–48	488,028	46,100	511,115	141,452	400,100	116,482	2,044	1,705,321
1948–49	548,106	50,847	544,669	291,688	447,411	125,961	2,150	2,010,832
1949–50	584,541	44,928	581,811	277,265	550,690	136,412	2,249	2,177,896
1950–51	528,214	41,279	583,304	340,727	566,312	163,153	1,214	2,224,203
Average, 1941–42 to 1950–51	588,948	68,292	573,050	236,257	409,716	97,437	1,744	1,975,444
1951–52	672,633	45,661	604,190	385,079	636,728	176,319	1,225	2,521,835

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 1951–52, excluding Western Australia, may be taken approximately as £6,934,000.

§ 14. Sugar-cane.

1. **Area.**—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (*see* No. 38, page 985). The area of sugar-cane in Australia for the seasons 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown in the following table. In 1951–52 the total area of sugar-cane (excluding areas cut for green fodder) was a record at 402,867 acres, an increase of 1.4 per cent. over the 1950–51 area of 397,122 acres.

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

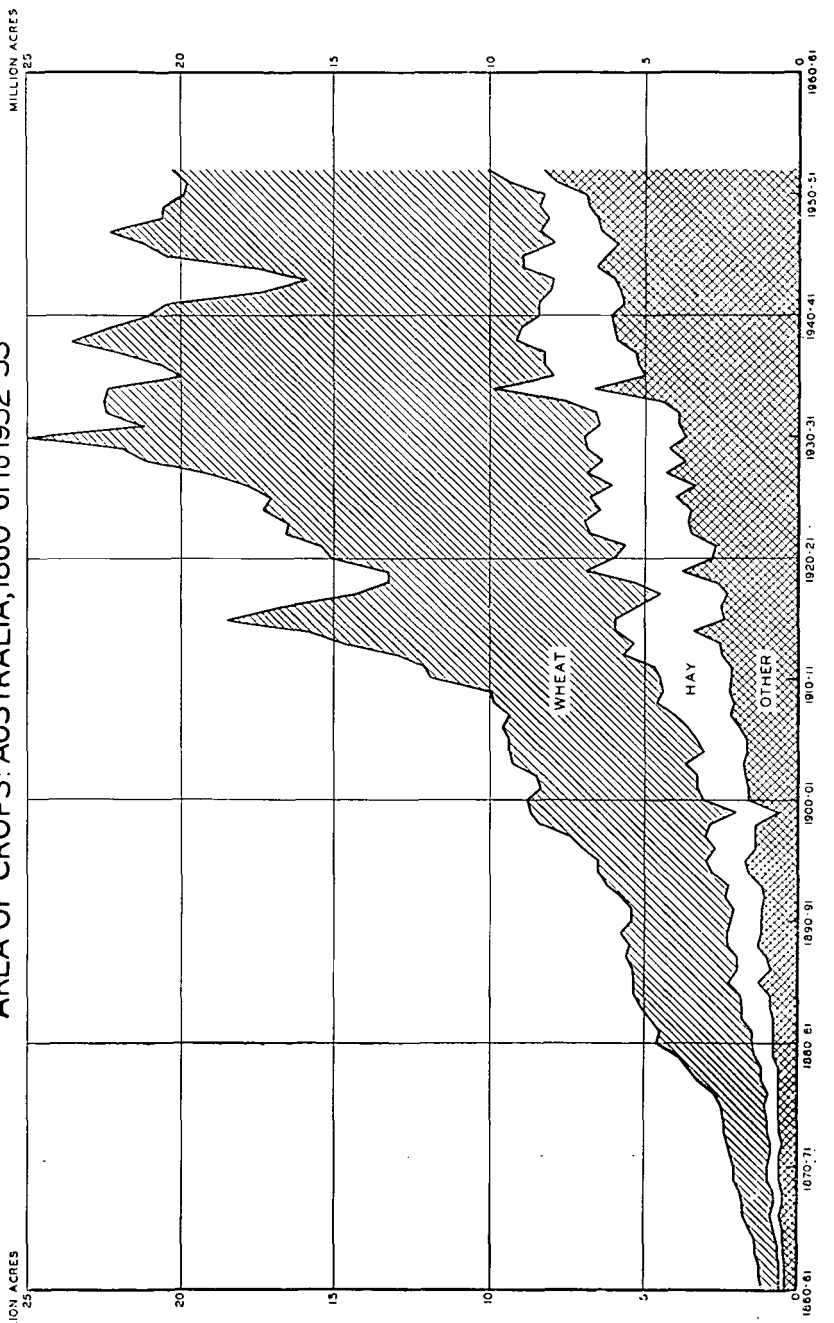
Season.	New South Wales.			Queensland.			Australia.			
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total.
Average, 1929–30 to 1938–39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1947–48 ..	7,113	8,955	360	215,378	98,403	14,705	222,491	107,358	15,065	344,914
1948–49 ..	8,386	8,761	312	257,944	97,434	10,664	266,330	106,195	10,976	383,501
1949–50 ..	8,517	8,081	297	272,812	97,878	10,639	281,329	105,959	10,936	398,224
1950–51 ..	8,207	7,134	236	263,666	106,903	10,976	271,873	114,037	11,212	397,122
Average, 1941–42 to 1950–51 ..	7,896	8,272	293	237,685	86,693	12,035	245,581	94,965	12,328	352,874
1951–52 ..	8,354	5,974	191	273,370	101,731	13,247	281,724	107,705	13,438	402,867

(*a*) Excludes areas cut for green fodder.

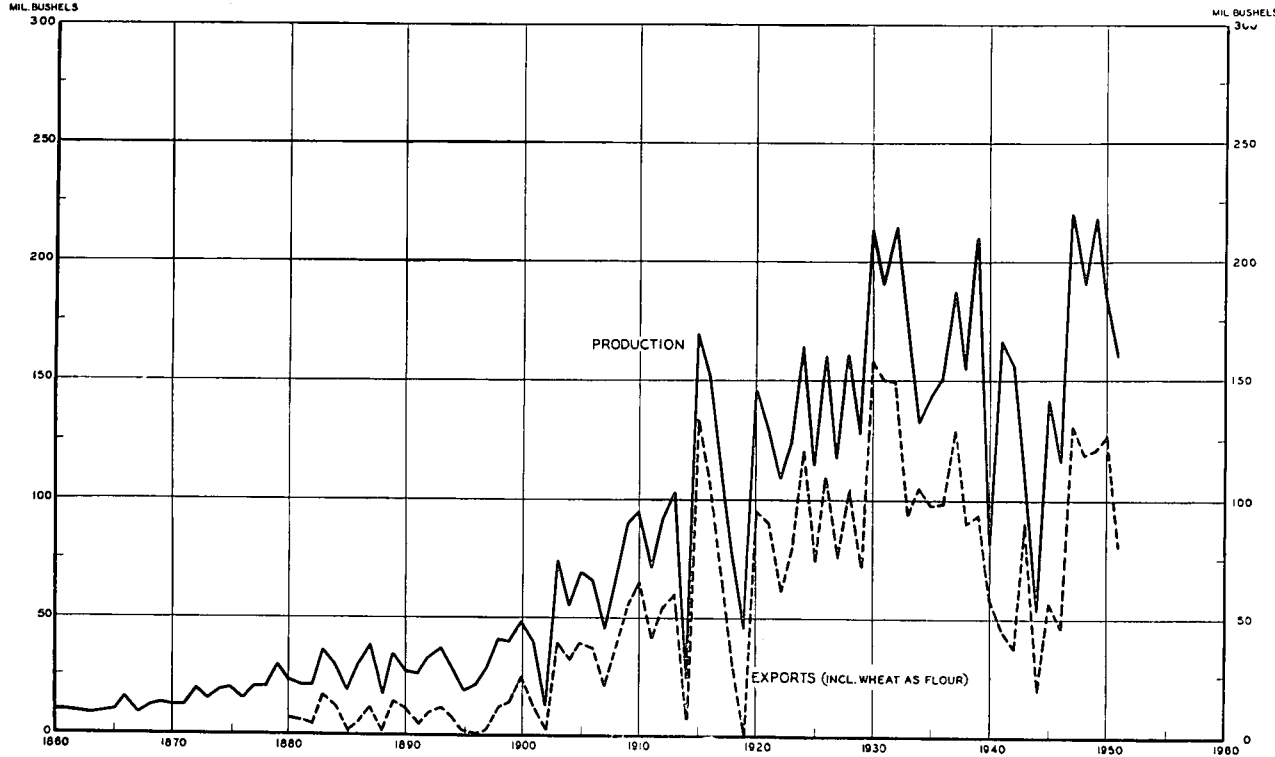
2. **Productive and Unproductive Cane.**—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1951–52 amounted to 6,431 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "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 prior to the season 1897–98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 7,051,555 tons in 1950–51.

The average production of cane during the ten seasons ended 1950–51 was 5,190,256 tons, and of raw sugar 721,395 tons. Particulars of the total production of cane and sugar for the years 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are as follows.

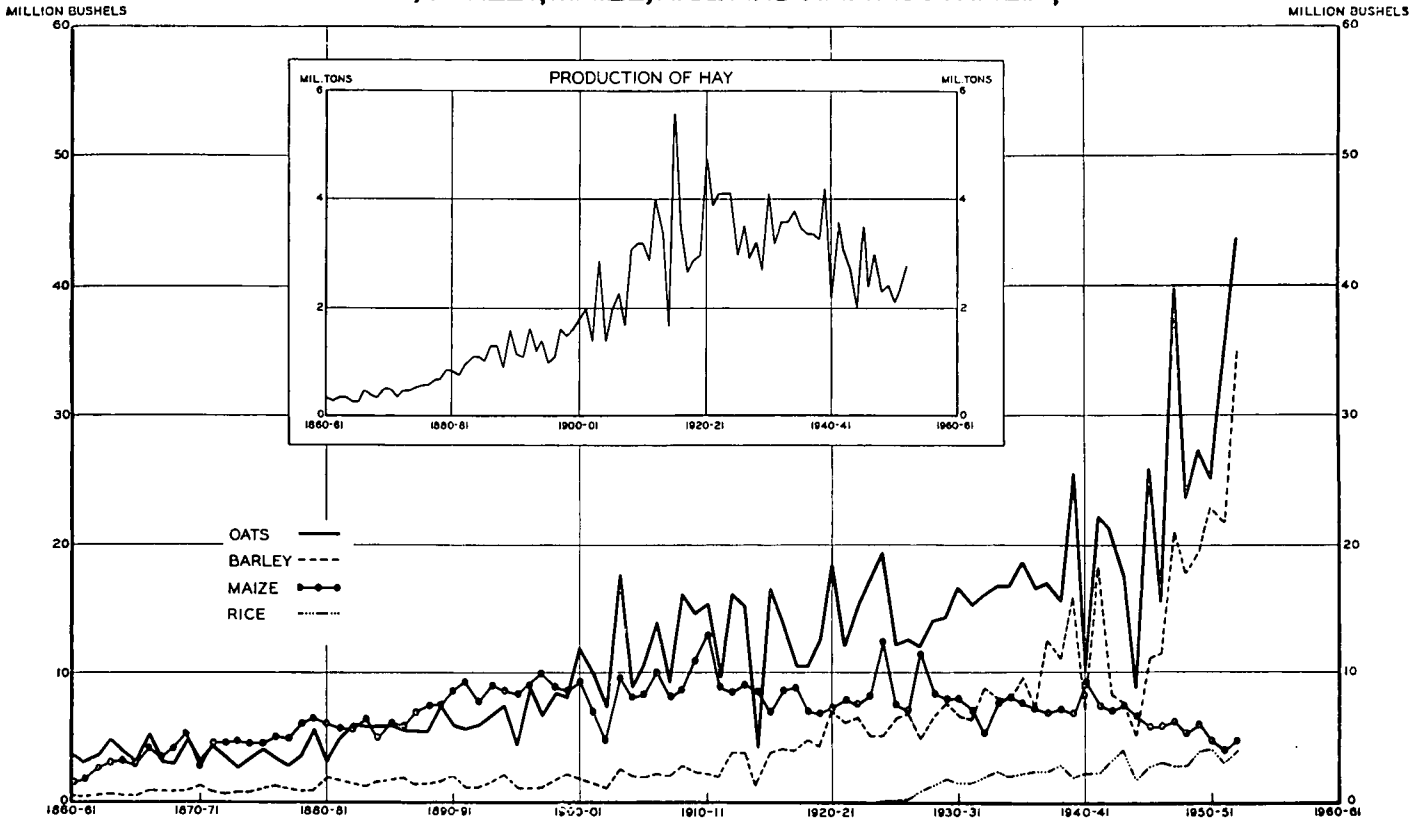

AREA OF CROPS: AUSTRALIA, 1860-61 TO 1952-53
MILLION ACRES
25
20
15
10
5
0
1860-61
1870-71
1880-81
1890-91
1900-01
1910-11
1920-21
1930-31
1940-41
1950-51
1960-61
WHEAT
HAY
OTHER

WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 TO 1951-52

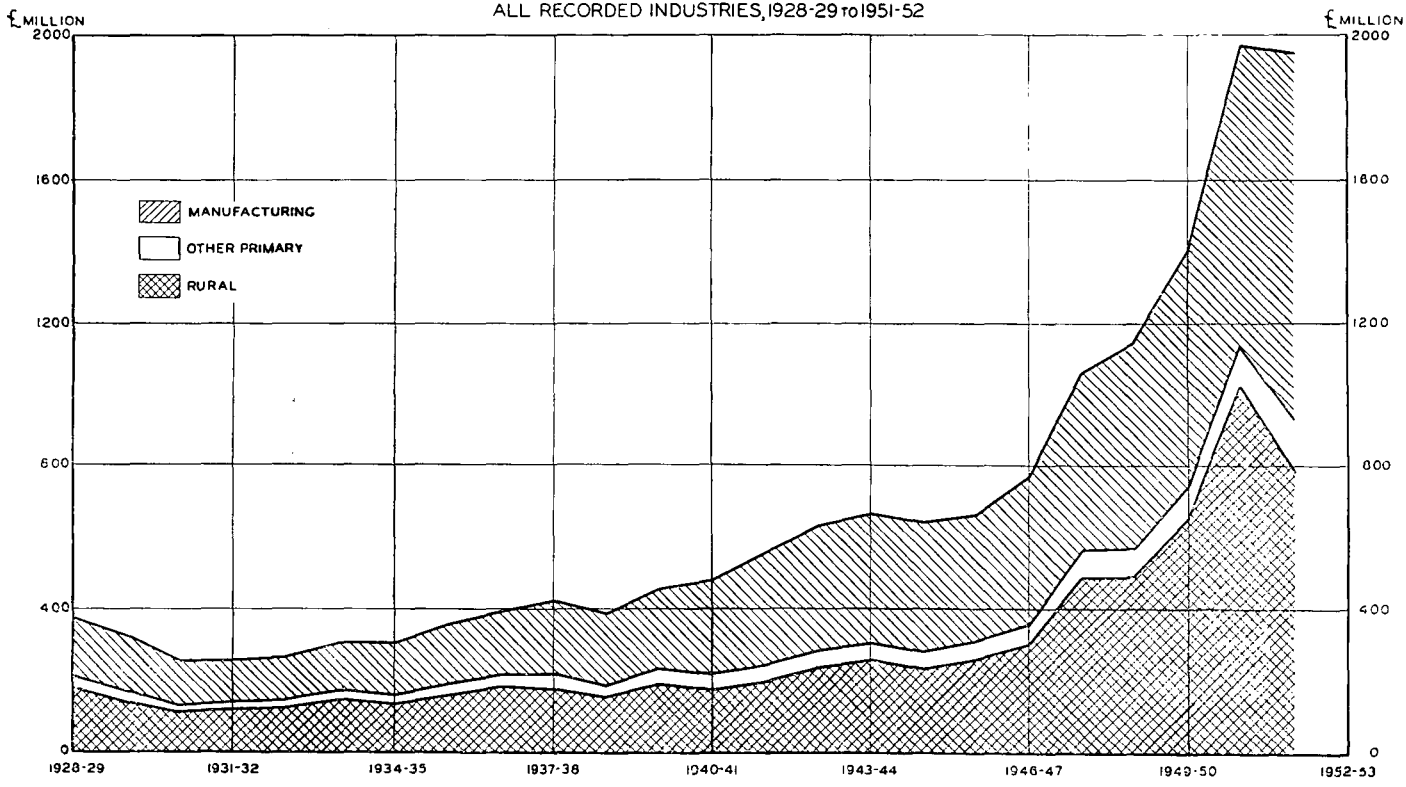


NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY : AUSTRALIA, 1860-61 TO 1952-53



NET VALUE OF PRODUCTION: AUSTRALIA



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
1947–48	267,261	33,560	4,150,986	571,694	4,418,247	605,254
1948–49	273,974	33,003	6,433,556	910,049	6,707,530	943,052
1949–50	330,738	40,706	6,518,042	896,413	6,848,780	937,119
1950–51	359,849	41,258	6,691,706	879,844	7,051,555	921,102
Average, 1941–42 to 1950–51	289,536	36,601	4,900,720	684,794	5,190,256	721,395
1951–52	321,388	41,060	5,005,172	704,341	5,326,560	745,401

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1951–52 amounted to 745,401 tons manufactured from 5,326,560 tons of cane, compared with the record production of 943,052 tons in 1948–49, and production of 921,102 tons in 1950–51.

Official annual data are not available regarding the total number engaged in the sugar industry in Queensland other than the number of separate holdings growing cane (6,136 in 1951–52) and of employees in sugar mills (5,788 in 1951–52).

According to data obtained from the population census of 30th June, 1947, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 15,789 males and 287 females, a total of 16,076 persons, of whom 2,521 were employers and 4,549 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 accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1950–51 were 36.67 tons for New South Wales, and 20.62 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.64 tons and 2.88 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1950–51 were 21.13 tons and 2.94 tons respectively, as compared with 19.73 tons and 2.76 tons for the decennium ended 1938–39.

SUGAR-CANE AND SUGAR : YIELD PER ACRE.

(Tons.)

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
Average, 1929–30 to 1938–39.. ..	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1947–48	37.57	4.72	7.96	19.27	2.65	7.26	19.86	2.72	7.30
1948–49	32.67	3.94	8.30	24.94	3.53	7.07	25.19	3.54	7.11
1949–50	38.83	4.78	8.13	23.89	3.29	7.27	24.34	3.33	7.31
1950–51	43.85	5.03	8.72	25.38	3.34	7.61	25.94	3.39	7.66
Average, 1941–42 to 1950–51.. ..	36.67	4.64	7.91	20.62	2.88	7.16	21.13	2.94	7.19
1951–52	38.47	4.92	7.83	18.31	2.58	7.11	18.91	2.65	7.15

5. **Quality of Cane.**—The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1950–51 it required on the average 7.19 tons of cane to produce 1 ton of sugar, or 13.91 per cent.

of its total weight, as compared with 7.15 tons for the ten years ended 1938–39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased, and in 1937–38 only 6.78 tons of cane were required to produce 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, 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 1947–48 to 1951–52 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

RAW SUGAR: PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stock.	Production.	Exports. (*a*)	Miscellaneous Uses.(*b*)	Consumption in Australia. (*a*)	
					Total.(*c*)	Per Head. (*c*)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936–37 to 1938–39	+ 6.2	779.3	435.3	11.2	326.6	106.5
1947–48	+42.9	633.2	140.3	22.1	427.9	125.4
1948–49	+ 7.3	897.3	461.0	19.5	409.5	117.6
1949–50	−10.4	902.5	483.4	19.5	410.0	116.2
1950–51	+ 5.8	906.9	433.3	21.8	446.0	120.2
1951–52	− 7.0	702.2	206.1	23.8	479.3	125.7

(*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 1951–52 amounted to 273,536 tons compared with 260,560 tons in 1950–51 and 123,883 tons in 1938–39. These figures include, where necessary, estimates of consumption based on the sugar content of the finished product. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1951–52 consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 82,745 tons and by those producing confectionery, ice cream, etc., amounted to 54,011 tons.

8. **Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. On 1st September, 1946, a Sugar Agreement Act came into operation, fixing the wholesale price at £33 4s. per ton (4d. per lb. retail). Subsequently this Act was twice amended, in December, 1947, when the price was raised to £37 6s. 8d. per ton (4⅛d. per lb. retail) and in October, 1949, when a further increase to £41 9s. 4d. per ton (5d. per lb. retail) was granted. This Act was due to expire on 31st August, 1951, but on 27th June, 1951, a new agreement was signed. This new agreement, which came into operation on 7th July, 1951, repealed the 1946, 1947 and 1949 agreements and increased the wholesale price to £53 6s. 8d. per ton (6½d. per lb. retail). The wholesale price was further increased on 24th March, 1952 to £64 per ton (8d. per lb. retail) and on 13th October, 1952 to £72 per ton (9d. per lb. retail) by an exchange of letters between the two Governments. These amendments have not yet been incorporated in the Act. The new agreement is intended to cover the period up to 31st August, 1956.

The net proceeds of all sugar sold in Australia and sugar sold abroad are pooled and a uniform price per ton is paid to the mills. This pooling is made possible by the acquisition by the Queensland Government of all sugar produced in the State, under legislation which has been in force since 1915. The small New South Wales production (about 5 per cent. of the whole) is also acquired by the Queensland Government by private agreement.

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

Between 1929 and 1939 the export price was generally less than half the pool price. In spite of this, production increased by 72 per cent. during that period. In 1939, in view of the fact that the International Sugar Agreement imposed certain restrictions on the volume of Australian exports, the Queensland Parliament passed further legislation limiting the pool (mill peaks) to 737,000 tons in respect of production in Queensland. Any production in excess of this was to be acquired at a penalty price. This tonnage was divided up in quotas between the mills, on the understanding that the mills would allocate quotas of production to individual farmers. Proclamations issued by the Queensland Government, however, permitted the harvesting of the whole of the crops for the seasons 1939 to 1948.

In 1948 the mill peak was raised to 874,000 tons. As a result of the Commonwealth Countries Sugar Marketing Agreement, negotiated in London in December, 1949, the Queensland Government initiated a controlled expansion of the industry, and for the 1950 season mill peaks were increased to 942,300 tons. Further increases in mill peaks to 1,045,000 tons to operate from 1953 and to 1,162,000 tons to operate from 1954 were subsequently announced.

9. **Sugar-beet.**—The production of sugar-beet fell from an average of 4,642 tons in the ten years ended 1938–39 to 584 tons in 1947–48. There has been no production in subsequent years and the Victorian Government has now dismantled and disposed of its factory which formerly treated the sugar-beet at Maffra.

10. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 940, 941) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. A new agreement operating from 7th July, 1951 covers the period up to 31st August, 1956.

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

This agreement, which normally would have expired on 31st August, 1942, has proved of great benefit to Australia. In 1943, fourteen of the original 21 nations signed a protocol continuing the agreement for another two years ending 31st August, 1944. Nine further protocols have since been signed, the latest extending the agreement to 31st August, 1955. The first protocol, signed in 1943, continued the agreement unchanged, while later protocols contained two new provisions. The first of these provisions was that during the period of the extension, the quotas fixed in the agreement should be inoperative. The second provision was that the signatories of the protocols recognized that revision of the agreement was necessary and should be undertaken when the time appeared opportune. The protocols prescribed that, in any negotiations for a new agreement, the existing agreement shall be taken as the starting point. The United Nations, at the request of the International Sugar Council, convened a conference in London in July, 1953, to discuss the conclusion of a new International Sugar Agreement. Australia was represented at the conference.

12. **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 1947–48 to 1951–52 will be found in the following table :—

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

Year.	Proportion Exported. (*b*)	Net Value of Exports per Ton. (*b*)	Average Price per Ton for Whole Crop.	Estimated Value of Crop.
	Per cent.	£ *s.* *d.*	£ *s.* *d.*	£
1938–39	55.78	8 4 3	15 3 11	12,806,376
1947–48	17.61	29 12 6	24 19 9	14,879,144
1948–49	47.00	28 2 0	25 8 6	23,904,606
1949–50	46.92	29 7 6	26 13 8	25,362,288
1950–51	43.73	32 16 6	28 3 4	26,131,998
1951–52	21.12	36 15 6	34 7 0	24,911,788

(*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 not deducting concessions to the fruit industry and other rebates which in 1951–52 amounted to £3,484. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

13. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938–39 and each year 1947–48 to 1951–52 are as follows :—

SUGAR : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934–35 to 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity tons	377,930	100,351	415,194	432,711	387,841	167,431
Value £	3,480,632	3,062,450	13,199,309	14,147,150	14,791,575	6,896,398

14. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter XXIV.—Manufacturing Industry.

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

15. **Sugar Prices.**—The prices of sugar in Australia from 1939 to 1941 and 1947 to 1951 in the case of raw sugar, and from 1925 to 1936 and 1947 to 1956 in the case of refined sugar, are shown in the following table.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per Ton.	Retail Price per lb.
	Home Consumption.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1939 ..	23 12 6	10 7 6	15 17 7	1.9.25 to 31.8.31..	37 6 8	4½
1940 ..	23 1 0	11 5 6	17 2 11	1.9.31 to 4.1.33 ..	37 6 8	4½
1941 ..	22 13 0	10 18 9	17 18 11	5.1.33 to 31.8.36..	33 4 0	4
1947 ..	24 0 0	29 12 6	24 19 9	4.12.47 to 28.10.49	37 6 8	4½
1948 ..	23 1 0	28 2 0	25 8 6	29.10.49 to 6.7.51	41 9 4	5
1949 ..	24 6 0	29 7 6	26 13 8	7.7.51 to 23.3.52..	53 6 8	6½
1950 ..	24 11 0	32 16 6	28 3 4	24.3.52 to 12.10.52	64 0 0	8
1951 ..	33 14 0	36 15 6	34 7 0	13.10.52 to 31.8.56	72 0 0	9

(a) Including " Excess " Sugar.

16. **Marketing Arrangements.**—After the outbreak of war in September, 1939, the British Ministry of Food concluded arrangements with the Queensland Government for the purchase of Australia's surplus production of raw sugar for the season 1939. The price was fixed at £Stg.7 10s. per ton at United Kingdom ports plus the preference on dominion sugar of £Stg.3 15s. per ton under the existing tariff. Similar agreements were negotiated for the disposal of the surplus raw sugar in each subsequent season. The price in sterling currency per ton c.i.f. United Kingdom ports, basic 96° polarization, inclusive of the tariff preference has risen to £32 17s. 6d. per ton from 1st January, 1951, to £38 10s. from 1st January, 1952 and to £42 6s. 8d. from 1st January, 1953. However, the latter price applied only to 314,000 tons of 1953 exports, the remainder being sold at world prices plus preference. (For prices in previous years *see* earlier issues.)

In December, 1949, a Commonwealth Countries Sugar Marketing Agreement was formulated in London, the terms of which include an undertaking by the United Kingdom Government to find a market for the Australian exportable surplus sugar to the end of 1952.

From January, 1953, a new arrangement entered into, pursuant to the British Commonwealth Sugar Agreement, came into operation. For the six years 1953–1958, Australia is to plan for aggregate exports not exceeding 600,000 tons annually. Of this amount, the United Kingdom Government agreed to take 314,000 tons at guaranteed prices to be negotiated annually. The balance of 286,000 tons is expected to find a market in the United Kingdom or Canada at the world price plus United Kingdon or Canadian preference. Provision is made for extension of the term of the agreement, and for upward revision of the quotas, if necessary.

17. **Fruit Industry Sugar Concession Committee and Sugar Rebates.**—The 1931–36 and subsequent Sugar Agreements between the Commonwealth and Queensland Governments have provided for the establishment of a Committee entitled the " Fruit Industry

Sugar Concession Committee ". The Agreements provide that the Queensland Government shall, on behalf of the Australian Sugar Industry, contribute £216,000 annually to a fund administered by the Committee. (The annual contribution is temporarily suspended whilst the Committee's accumulated funds exceed £500,000). From this fund, the Committee pays a rebate to Australian manufacturers amounting to £2 4s. per ton of refined sugar used in the processing of approved fruit products. Payment of this rebate is conditional upon manufacturers paying for all fresh fruit used in such products at prices not lower than those declared by the Committee to be reasonable prices. The Committee also pays exporters of approved fruit products an export sugar rebate the rate of which is equivalent to the amount (if any) by which the price of Australian sugar to manufacturers exceeds the price at which the cheapest available foreign sugar could be landed in Australia. This rebate ensures that manufacturers of fruit products containing sugar are not handicapped on the world's markets by having to pay a higher price for Australian sugar than they would pay for foreign sugar landed in Australia duty free. A similar rebate on some other products (not being approved fruit products) is paid to exporters by the Queensland Government on behalf of the Australian sugar industry. After paying rebates and administrative expenses the Committee is empowered to use any money remaining in the fund for the promotion of the use and sale of Australian fruit products, or for scientific research.

18. **Sugar Inquiry Committee.**—The Sugar Inquiry Committee under the Chairmanship of the Commonwealth Prices Consultant, was constituted by the Commonwealth Government on 18th March, 1952, to conduct an investigation into the Australian Sugar Industry. The terms of reference to the Committee included a general survey of all branches of the Australian sugar industry and particular examination of the prices and other matters covered by the Sugar Agreement between the Commonwealth and Queensland Governments.

The Committee conducted public hearings in New South Wales, Victoria and Queensland and also accepted much supporting material in confidence. It presented its report on 11th September, 1952. As an outcome of the report, the wholesale price of refined sugar was increased as from 13th October, 1952, by £8 per ton (equivalent to an increase of 1d. per lb. in the retail price). Other amendments recommended by the Committee were made to the Sugar Agreement.

19. **Bulk Handling of Sugar.**—Following a successful trial shipment of bulk raw sugar to England in 1951 and consideration of two independent and comprehensive reports on bulk handling prepared for it, the Sugar Board recommended, and the Queensland Government subsequently approved (on 5th August, 1952), the establishment of bulk handling facilities at the ports of Mackay and Lucinda Point. Consideration was to be given later to the installation of similar facilities in certain other Queensland ports. The Government Railways have conducted experiments with improvised railway trucks for conveying bulk sugar with a view to provision of the necessary bulk rail transport facilities.

§ 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 1952 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 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown in the following table.

VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Queen-land.	S. Aust.	W. Aust.	Australia.(a)
Average, 1929-30 to 1938-39	15,777	40,563	2,142	54,156	5,666	118,304
1947-48 ..	16,541	43,784	3,087	58,885	10,025	132,322
1948-49 ..	16,568	45,609	3,265	59,806	10,014	135,262
1949-50 ..	16,931	45,386	3,135	60,253	9,676	135,381
1950-51 ..	16,917	45,313	3,045	61,971	9,258	136,504
Average, 1941-42 to 1950-51	16,392	43,669	3,124	58,700	9,791	131,676
1951-52—						
Wine ..	8,115	7,369	332	47,539	2,411	65,766
Table ..	2,525	1,507	2,487	263	1,456	8,238
Drying ..	6,407	36,391	..	13,412	5,491	61,701
Total ..	17,047	45,267	2,819	61,214	9,358	135,705

(a) Excludes particulars for Australian Capital Territory.

(ii) *Wine Production, Bounties, etc.* The production of wine in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938-39 to 35.3 million gallons in 1951-52. In the same period consumption in Australia has expanded from 4.5 million gallons (0.7 gallons per head of population) to 13.8 million gallons (1.6 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 of 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, page 992.

The quantity of wine produced in the several States during the 1947-48 to 1951-52 seasons, together with the averages for the ten-year periods ended 1938-39 and 1950-51, is shown in the following table :—

WINE : PRODUCTION.(a)

('000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39	2,099	1,449	36	12,127	393	16,104
1947-48 ..	4,500	2,958	28	24,729	664	32,879
1948-49 ..	4,127	3,081	36	24,952	622	32,818
1949-50 ..	5,185	3,230	45	23,702	513	32,675
1950-51 ..	4,372	2,358	43	18,611	652	26,036
Average, 1941-42 to 1950-51	3,700	2,127	34	18,472	577	24,910
1951-52 ..	5,465	3,472	33	25,495	790	35,255

(a) Excludes spirits used in fortified wine, such spirit having been made from distillation wine.

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 1951–52 amounted to 79,791 gallons valued at £166,761 compared with 45,816 gallons valued at £97,655 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 200,000 gallons (approximately) being sent elsewhere. Exports in 1951–52 totalled 1,162,292 gallons, of which the United Kingdom received 552,309 gallons, New Zealand, 175,881 gallons, Canada, 332,831 gallons, and other countries 101,271 gallons.

Exports for the five years ended 1951–52 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
1947–48 ..	5,935	2,682,431	2,688,366	8,071	1,421,861	1,429,932
1948–49 ..	5,180	1,873,083	1,878,263	11,558	982,401	993,959
1949–50 ..	6,093	1,097,225	1,103,318	6,323	509,516	515,839
1950–51 ..	3,651	1,219,258	1,222,909	7,121	627,741	634,862
1951–52 ..	6,685	1,155,610	1,162,295	18,983	711,554	730,537

3. **Oversea Marketing of Wine.**—(i) *The Wine Overseas Marketing Act* 1929–1953. This Act was introduced at the request of the viticultural interests in Australia with the object of placing the oversea marketing of Australia's surplus wine on an orderly basis. The Wine Overseas Marketing Board was appointed to supervise the export, and the sale and distribution after export, of Australian wine.

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

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

4. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 7 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes produced during the season 1951–52 in each State are shown in § 3 of this chapter.

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1947–48 to 1951–52 and the averages for the ten-year periods ended 1938–39 and 1950–51 are shown in the following table. The production of 103,410 tons for the 1943–44 season represents the greatest output recorded in any year. Owing to adverse seasonal conditions, heavy crop losses occurred during the three succeeding years. Production in 1947–48 amounted to 84,828 tons, but in none of the three seasons following did it reach 70,000 tons. In 1951–52, however, it amounted to almost 72,000 tons.

RAISINS(*a*) AND CURRANTS : PRODUCTION.

(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929–30 to 1938–39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1947–48 ..	6,944	1,079	47,160	8,086	11,358	6,682	544	2,975	66,006	18,822
1948–49 ..	3,819	1,090	35,705	7,967	6,829	6,250	478	2,766	46,831	18,073
1949–50 ..	5,721	898	42,194	6,930	5,895	4,244	289	1,685	54,099	13,757
1950–51 ..	4,419	971	28,007	6,081	7,870	5,830	402	2,547	40,698	15,429
Average, 1941–42 to 1950–51 ..	6,161	1,107	40,916	7,579	11,325	6,569	590	2,727	58,992	17,982
1951–52 ..	7,095	537	44,834	3,858	7,999	4,730	391	2,522	60,319	11,647

(*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, 1952, totalled 69,475 tons, Australian consumption amounting to 18,521 tons and oversea exports 50,954 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the oversea exports of raisins and currants during each of the years 1947–48 to 1951–52 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.	£	Tons.	£	Tons.	£
Average, 1934–35 to 1938–39	43,191	1,686,447	15,054	548,838	58.245	2,235,285
1947–48 ..	31,364	1,795,358	10,066	468,684	41,430	2,264,042
1948–49 ..	37,077	2,369,216	13,696	740,762	50,773	3,109,978
1949–50 ..	28,558	1,818,662	7,063	408,962	35.621	2,227,624
1950–51 ..	27.122	2,586,243	7,231	716,767	34,353	3,303,010
1951–52 ..	32,669	3,960,703	5,003	646,676	37,672	4,607,379

(*a*) Excludes quantities exported as mincemeat which amounted to 4,150 tons in 1951–52 value at £643,194.

Since 1912 Australia has not only produced sufficient raisins and currants for home consumption but has been able to maintain a large export trade. The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1951–52 being 18,640 tons, 7,303 tons and 10,269 tons respectively. Exports to Canada increased from 4,600 tons in 1928–29 to 16,944 tons in 1939–40 and to 25,955 tons in 1944–45, but had decreased to 10,269 tons by 1951–52.

6. **Post-war Contracts.**—A long-term agreement was negotiated between the Governments of the United Kingdom and Australia for the purchase of the exportable surplus of the dried vine fruit crop for the 1946, 1947 and 1948 seasons. A further agreement was reached between the Governments of the United Kingdom and Australia under which Australian dried vine fruits were purchased by the United Kingdom during the five years 1949 to 1953. This contract originally provided that the quantity of fruit to be purchased each year should not exceed a value of £2,500,000 sterling currency on an f.o.b. basis. This provision, however, was deleted after the 1951 season, enabling unrestricted tonnages of Australian dried vine fruits to enter the United Kingdom during 1952 and 1953. Export prices were fixed for the first two years, but during the remaining three years they were the subject of annual agreements by the two Governments. In April, 1953, the United Kingdom Government agreed to extend the five year contract for a period of one year to provide for the purchase by the British Ministry of Food of the exportable surplus from the 1954 crop on the same terms and conditions as applied under that contract. The contract prices for currants, sultanas and lexias sold to the United Kingdom during the years 1946 to 1953, are shown in the following table.

DRIED VINE FRUITS: CONTRACT PRICES PER TON TO UNITED KINGDOM.
(£A. *s. d.*, f.o.b. Australian Ports.)

Fruit.	Grade.	1946 to 1948.	1949 and 1950.	1951.	1952.	1953.
Currants ..	1 Crown and upwards	50 0 0	60 0 0	93 15 0	100 0 0	96 17 6
Sultanas ..	1 Crown and upwards	65 0 0	70 0 0	125 0 0	123 2 6	117 10 0
Lexias ..	4 and 5 Crown ..	64 7 6	64 7 6	125 0 0	123 2 6	117 10 0

7. **Oversea Marketing of Dried Fruits.**—(i) *The Dried Fruits Export Control Act* 1924–1953. This Act was passed by the Commonwealth Parliament at the request of the dried fruits industry to organize the oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. The Board, as at present constituted, consists of eleven members comprising seven growers' representatives, two members with commercial experience, one member with experience in marketing dried fruits and one representative of the Commonwealth Government. In conjunction with its London agency, the Board has improved the marketing of Australian dried fruits overseas, and has increased the demand for the product. Its system of appraisement has resulted in more satisfactory realizations. Its methods of ensuring continuity of supply and regulating shipments and its participation in the advertising campaign of the Australian Overseas Trade Publicity Committee have benefited the industry considerably. No dried fruits may be exported except by means of a licence, which is issued subject to conditions recommended by the Board.

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

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

§ 16. Orchards and Fruit-Gardens.

1. **Area.**—The largest area of orchards and fruit-gardens prior to the 1939–45 War was attained in 1933–34 when 281,899 acres were planted. From that year until 1942–43, when 260,384 acres were under fruit, there was a gradual decline. 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 270,882 acres in 1951–52. The total area of orchards and fruit-gardens in the several States during the years 1947–48 to 1951–52 compared with the averages for the ten seasons 1929–30 to 1938–39 and the ten seasons 1941–42 to 1950–51 is shown in the following table :—

ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929–30 to 1938–39	84,025	76,643	32,437	29,365	20,703	32,627	69	275,869
1947–48	98,901	71,513	38,665	28,338	22,063	30,739	101	290,320
1948–49	95,421	71,746	37,735	29,732	22,585	29,448	84	286,751
1949–50	94,725	71,046	35,986	26,858	22,744	28,471	98	279,928
1950–51	91,477	69,911	35,241	28,686	22,013	27,130	103	274,561
Average, 1941–42 to 1950–51	88,149	70,247	34,306	27,997	21,818	30,678	106	273,301
1951–52	89,362	68,715	35,049	29,375	21,719	26,552	110	270,882

2. **Varieties of Crops.**—The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, papaw and mango of the tropics, to the strawberry, the raspberry and the currant of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In Queensland, the banana, pineapple, apple, orange, mandarin, peach and plum are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, lemon, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies over two-thirds of the fruit-growing area, but small fruits, such as the currant, raspberry and gooseberry, are extensively grown, while the balance of the area is mainly taken up with the pear, apricot and plum. The following 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, 1951-52.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA, BEARING AND NON-BEARING (ACRES).								
Apples ..	14,442	19,922	7,563	7,054	12,308	18,842	75	80,206
Apricots ..	2,003	5,083	272	4,143	429	1,347	5	13,282
Bananas ..	19,085	..	6,396	..	540	..	..	26,021
Cherries ..	2,429	1,832	6	957	39	80	2	5,345
Citrus—								
Oranges ..	26,533	5,166	3,756	6,342	3,802	..	..	45,599
Mandarins ..	2,119	96	1,558	120	220	..	..	4,113
Lemons and Limes ..	3,615	2,021	428	341	564	..	..	6,969
Other ..	796	356	129	266	191	..	..	1,738
Nuts	545	966	244	3,225	277	..	6	5,263
Peaches ..	7,040	14,173	1,425	2,064	801	95	5	25,603
Pears ..	3,447	12,604	312	1,771	1,011	1,806	6	20,957
Pineapples ..	359	..	9,215	..	1	..	..	9,575
Plums and Prunes	4,535	3,315	1,248	1,583	895	259	6	11,841
Small Fruits ..	12	730	191	187	16	4,078	..	5,214
Other Fruits ..	2,402	2,451	2,306	1,322	625	45	5	9,156
Total ..	89,362	68,715	35,049	29,375	21,719	26,552	110	270,882

ORCHARDS AND FRUIT-GARDENS, 1951–52—*continued.*

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION.								
Apples bus.	1,351,144	1,579,123	494,510	1,249,816	1,127,733	4,930,000	10,729	10,743,055
Apricots ,,	333,276	519,190	14,118	507,340	50,181	67,518	104	1,491,727
Bananas ,,	2,229,192	..	446,874	..	73,276	..	..	2,749,342
Cherries ,,	126,684	69,919	128	51,479	1,034	4,576	17	253,837
Citrus—								
Oranges ,,	2,748,967	484,235	284,549	831,793	407,322	..	..	4,756,866
Mandarins ,,	203,943	15,784	117,745	24,743	16,756	..	..	378,971
Lemons and Limes ,,	401,658	182,682	52,717	50,686	93,657	..	..	781,400
Other ,,	126,773	48,610	15,260	34,976	25,031	..	..	250,650
Nuts .. lb.	165,058	244,682	64,605	1,170,848	35,878	..	694	1,681,765
Peaches bus.	903,421	1,590,702	84,047	157,309	77,478	8,890	172	2,822,019
Pears ,,	296,362	2,538,109	25,316	281,771	85,554	306,662	89	3,533,863
Pineapples ,,	39,424	..	1,904,955	..	40	..	..	1,944,419
Plums and Prunes ,,	309,603	190,592	68,771	129,393	89,020	57,229	131	844,739
Small Fruits cwt.	221	11,876	7,588	2,228	374	169,581	..	191,868
GROSS VALUE OF PRODUCTION. (£.)								
Apples ..	2,519,210	1,973,904	843,730	1,915,214	1,669,869	4,404,310	20,207	13,346,444
Apricots ..	823,430	519,190	45,287	807,623	54,084	58,740	261	2,306,615
Bananas ..	5,566,150	..	901,246	..	274,787	..	..	6,742,183
Cherries ..	640,560	209,757	768	211,064	9,926	5,300	87	1,077,462
Citrus—								
Oranges ..	4,067,470	712,438	442,494	1,270,424	379,119	..	..	6,871,945
Mandarins ..	290,240	23,347	187,901	40,929	24,435	..	..	566,852
Lemons and Limes ..	410,900	143,600	44,395	33,579	49,518	..	..	681,992
Other ..	134,690	42,713	17,586	23,643	15,446	..	..	234,078
Nuts	17,160	29,652	3,230	107,662	3,912	..	79	161,695
Peaches ..	1,099,260	1,670,237	137,325	262,939	98,103	5,700	314	3,273,878
Pears ..	380,660	2,411,204	32,543	427,144	132,326	367,250	264	3,751,691
Pineapples ..	44,350	..	1,539,894	..	36	..	..	1,584,280
Plums and Prunes	737,700	139,988	165,188	193,046	116,456	26,750	244	1,379,372
Small Fruits ..	1,770	94,860	65,327	25,301	9,180	741,610	..	938,048
Other Fruits ..	392,540	70,735	272,723	129,796	54,315	1,400	138	921,647
Total ..	17,126,090	8,041,625	4,697,637	5,448,664	2,891,512	5,611,060	21,594	43,838,182

3. **Principal Fruit Crops.**—The area, production and gross value of the principal fruit crops during the periods 1947–48 to 1951–52 compared with the average for the ten seasons 1929–30 to 1938–39, and the average of ten seasons 1941–42 to 1950–51, are shown hereunder :—

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

Year.	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
1947–48	84,199	13,179	36,591	54,619	28,474	22,785	12,579
1948–49	83,802	13,564	32,263	56,126	28,353	22,634	12,540
1949–50	81,744	13,277	29,669	57,367	27,318	21,579	12,226
1950–51	80,986	13,302	27,515	57,363	26,197	21,737	12,163
Average, 1941–42 to 1950–51	84,681	12,843	26,824	52,661	27,053	22,428	12,563
1951–52	80,206	13,282	26,021	58,419	25,603	20,957	11,841

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

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches	Pears.	Plums and Prunes.
PRODUCTION ('000 BUSHELS).							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
1947-48..	14,292	1,551	3,017	6,770	2,962	3,240	1,129
1948-49..	8,313	1,347	3,147	7,056	2,204	3,125	820
1949-50..	9,225	1,463	3,428	6,394	2,303	2,861	806
1950-51..	9,711	1,309	3,224	7,645	2,435	3,549	940
Average, 1941-42 to 1950-51	11,299	1,278	3,224	5,903	2,334	2,968	907
1951-52..	10,743	1,492	2,749	6,168	2,822	3,534	845
GROSS VALUE OF PRODUCTION. (£.)							
Average, 1929-30 to 1938-39	2,676,915	326,539	1,072,459	1,807,894	679,158	558,872	286,018
1947-48..	6,716,911	1,190,253	3,355,820	4,314,866	1,557,541	1,443,751	714,632
1948-49..	5,381,065	982,987	3,403,546	4,019,784	1,342,490	1,585,031	612,013
1949-50..	7,709,500	1,327,785	3,879,916	5,350,266	1,687,135	2,107,553	786,212
1950-51..	9,105,215	1,463,818	4,531,525	5,936,626	2,067,733	2,626,873	1,106,946
Average, 1941-42 to 1950-51	5,203,936	948,490	3,085,397	4,304,352	1,380,618	1,463,173	688,239
1951-52..	13,346,444	2,306,615	6,742,183	8,354,867	3,275,878	3,751,691	1,379,372

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 1951–52 output of jams and jellies amounted to 108,173,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 241,288,000 lb. Production of preserved apples was 14,845,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 195,877 tons in 1951–52.

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 1952–53 are shown in Chapter XXIX.—Miscellaneous of this Year Book.

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

A considerable export trade in both fresh and dried fruit is carried on by Australia with oversea countries. The values of the shipments in 1951–52 amounted to £6,895,313 and £5,021,635 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 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.
Average, 1934-35 to 1938-39 ..	'000 bus. 4,591	£'000. 1,396	'000 bus. 632	£'000. 268	'000 bus. 533	£'000. 234	'000 bus. 5,865	£'000. 1,981
1947-48 ..	3,352	2,695	400	366	571	604	4,402	3,886
1948-49 ..	2,116	1,771	621	604	611	552	3,449	3,117
1949-50 ..	3,010	2,438	572	639	563	650	4,225	3,934
1950-51 ..	3,263	3,393	885	1,301	619	761	4,854	5,727
1951-52 ..	3,263	4,285	808	1,492	432	779	4,601	6,895

(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 five years ending 1951–52, compared with the average for the five years 1934–35 to 1938–39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq. This trade was prohibited during the war years but has since been resumed.

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

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average, 1934–35 to 1938–39	12,225	80,121	4,315	117,222	—7,910	37,101
1947–48 ..	11,835	253,971	4,508	294,932	—7,327	40,961
1948–49 ..	11,316	239,857	4,796	343,067	—6,520	103,210
1949–50 ..	10,125	212,216	10,218	660,635	93	448,419
1950–51 ..	11,666	285,164	24,336	1,366,259	12,670	1,081,095
1951–52 ..	12,680	292,701	4,520	414,256	—8,160	121,555

(*a*) Excludes raisins and currants referred to separately under Vineyards, § 15, par. 5.
NOTE.—Minus sign (—) denotes net imports.

(iv) *Jams and Jellies.* The exports of jams and jellies have reached large proportions since the 1939–45 War. In 1951–52 shipments totalled 19,919,000 lb. valued at £1,149,096 compared with average exports of 7,118,000 lb. valued at £137,707 during the five years ended 1938–39. Small quantities of jam were imported before the war but the quantities involved now are negligible. Particulars of exports during each of the five years ended 1951–52, compared with the average for the five years 1934–35 to 1938–39, are as follows :—

JAMS AND JELLIES : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934–35 to 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity '000 lb.	7,118	59,642	53,603	65,229	42,129	19,919
Value £	137,707	2,232,168	2,049,224	2,473,095	1,871,686	1,149,096

(v) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1951–52 was 2,923,321 lb. valued at £200,784. 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 1951–52 the value of exports had increased to £6,501,251. In addition, the exports of pulped fruits during 1951–52 amounted to 9,738,789 lb. valued at £451,980. Quantities of fruit preserved in liquid exported from Australia for each of the five years ended 1951–52 compared with the average for the five years 1934–35 to 1938–39 are shown in the following table :—

FRUIT PRESERVED IN LIQUID : EXPORTS FROM AUSTRALIA.
('000 lb.)

Year.	Apricots.	Peaches.	Pears.	Other.	Total.
Average, 1934–35 to 1938–39	8,084	34,588	21,220	5,004	68,896
1947–48	5,451	44,553	23,480	11,327	84,811
1948–49	10,656	55,027	30,205	18,353	114,241
1949–50	9,171	31,589	33,243	27,166	101,169
1950–51	7,772	31,169	26,157	32,573	97,671
1951–52	10,267	41,590	35,714	22,790	110,361

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 for the purpose of organizing and controlling the export trade in fresh apples and pears.

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

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

The Apple and Pear Publicity and Research Act 1938 and the related Apple and Pear Tax Acts, referred to in earlier issues of the Official Year Book, were repealed by amendment to the Apple and Pear Organization Act in 1947.

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

(iii) *Apple and Pear Acquisition.* Exports of apples and pears were seriously curtailed as a result of the war, and during the 1940 to 1948 seasons, crops were acquired and marketed under the National Security (Apple and Pear Acquisition) Regulations and Regulations issued under the Defence (Transitional Provisions) Act 1946. During the 1949 season in Tasmania and the 1949 and 1950 seasons in Western Australia the crops were marketed under State schemes, but crops in all States have since been marketed on a normal commercial basis. Details of the acquisition scheme which operated during the 1940 to 1948 seasons will be found on pages 1003 and 1004 of Official Year Book No. 38 and in earlier issues of the Year Book.

8. **Oversea Marketing of Canned Fruit.**—(i) *The Canned Fruits Export Control Act* 1926–1953. This legislation was introduced at the request of canners and representative organizations of fruit-growers with the object of organizing the oversea marketing of canned fruit. The original Act referred to canned apricots, peaches and pears only, but canned pineapples, canned pineapple juice and certain canned fruit salads were subsequently brought within the scope of the Board's operations. The personnel of the Australian Canned Fruits Board consists of one representative each from proprietary and privately owned canneries, co-operative canneries, pineapple interests and the Commonwealth Government. No canned fruits to which the Act applies are permitted to be exported except under a licence issued in accordance with conditions recommended by the Board. The system of marketing adopted by the Board, including the fixation of minimum selling prices overseas, the appointment of a London agency and the engaging in oversea trade publicity, has resulted in the satisfactory disposal of the annual exportable surplus of canned fruits. The distribution of canned fruits has been widened and the exporting side of the industry placed on a sounder basis through the Board's operations.

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

§ 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 1949–50 to 1951–52. Comparable figures prior to the 1942–43 season are not available.

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

Vegetable.	1949–50.		1950–51.		1951–52.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French(*b*) ..	15,805	15,728	14,752	19,822	15,111	19,469
Beans, Navy ..	2,177	779	2,254	355	2,185	446
Beetroot	1,627	10,652	2,243	13,116	2,440	16,345
Cabbages and Brussels Sprouts	7,358	81,531	8,095	91,831	8,160	81,321
Carrots	4,740	30,962	5,237	39,139	5,396	41,761
Cauliflowers ..	7,118	84,531	7,253	92,163	7,506	76,910
Lettuces	3,293	12,045	3,468	13,678	3,644	13,838
Parsnips	1,487	11,242	1,394	12,224	1,677	13,445
Peas, Blue ..	7,813	4,029	8,695	4,826	7,668	5,332
Peas, Green ..	40,134	31,105	36,630	30,178	41,056	36,231
Pumpkins	25,216	67,278	27,062	70,316	29,522	76,754
Tomatoes	18,943	101,436	18,066	89,342	17,339	102,092
Turnips, Swede and White	6,449	28,412	7,067	26,937	6,977	26,435
All Other	8,912	..	13,590	..	13,142	..
Total ..	151,072	..	155,806	..	161,823	..

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

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1951–52 amounted to 100,446,000 lb., which was considerably higher than pre-war production, and approximately 90 per cent. of the peak war-time production. The principal canned vegetables produced in 1951–52 were beans 27,178,000 lb., green peas 24,374,000 lb., tomatoes 9,605,000 lb. and beetroot 9,298,000 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 recent years has declined to an annual output of less than one million lb.

3. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1951–52 consisted of :—Pulse, 11,005 tons, £616,936 ; onions, 3,673 tons, £178,916 ; potatoes, 12,468 tons, £436,780 ; other vegetables, 2,635 tons, £198,224. Imports totalled 13,424 tons, valued at £839,587, of which pulse comprised 10,890 tons, valued at £684,525.

In 1951–52 exports of vegetables preserved in liquid consisted of :—Peas, 901,785 lb., £61,181 ; tomatoes, 1,317,663 lb., £82,104 ; other vegetables, 6,138,643 lb., £435,438.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1952–53 are shown in Chapter XXIX.—Miscellaneous of this Year Book.

§ 18. Tobacco.

1. **States, Area and Production.** Tobacco-growing years ago promised to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888–89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to more than 2,000 acres, and that in Queensland to more than 1,000 acres, the total area declined considerably.

The expansion of the tobacco-growing industry was hoped for as a 1939–45 war-time measure but, after increasing slightly during the first three war years, the acreage planted decreased to 1948–49, but by 1951–52 had recovered to 73 per cent. of the annual average for the ten years ended 1938–39. Owing to improvement in average yields, however, the production of dried leaf in 1951–52 was 50 per cent. higher than the pre-war average.

In the following table particulars of the area and production of tobacco are given by States for each of the years 1947–48 to 1951–52, together with averages for the ten-year periods ended 1938–39 and 1950–51 :—

TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
AREA (ACRES).							
Average, 1929–30 to 1938–39 ..	1,274	6,237	2,865	292	502	89	11,259
1947–48	414	958	1,912	..	559	..	3,843
1948–49	428	994	1,678	..	620	..	3,720
1949–50	327	919	2,677	..	661	..	4,584
1950–51	342	1,021	4,142	..	967	..	6,472
Average, 1941–42 to 1950–51 ..	513	1,407	2,626	..	900	..	5,446
1951–52	432	1,500	5,038	..	1,229	..	8,199
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929–30 to 1938–39 ..	860	2,354	1,400	83	361	56	5,114
1947–48	338	130	1,581	..	435	..	2,484
1948–49	402	793	1,626	..	595	..	3,416
1949–50	299	668	2,540	..	631	..	4,138
1950–51	184	911	2,144	..	972	..	4,211
Average, 1941–42 to 1950–51 ..	446	938	1,909	..	730	..	4,023
1951–52	518	1,381	4,667	..	988	..	7,554

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

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

(iii) *Tobacco Inquiry Committee.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1952, were given in Official Year Book No. 39, page 1007.

In October, 1952, the Commonwealth Government agreed that—

(*a*) the tenure of the 1946 grant (for experimental and demonstration work in connexion with tobacco leaf production ; particularly in regard to control and elimination of diseases and pests) which expired on 30th June, 1952, be extended for a further period of five years ;

(*b*) the Commonwealth's annual contribution be increased from £10,000 to £15,000, the allocation being as follows :—New South Wales, £2,250 ; Victoria, £3,375 ; Queensland, £5,625 ; Western Australia, £3,750 ;

(*c*) the conditions of the grant be the same as those under which the 1946 grant was made, except that provision be made to enable any unexpended moneys to be carried forward for use in subsequent years, provided that the accumulated carryover be kept within a specified limit.

The Scientific and Industrial Research Organization is investigating diseases affecting the tobacco plant, including work on disease-resisting varieties, and is making tests of smoking quality. In spite of delays due to the war, the Organization has been successful in discovering effective means of preventing blue mould, which has seriously retarded the development of the industry. The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

(iv) *Tobacco Factories.* In 1951-52 the quantity of stemmed leaf used in tobacco factories in Australia amounted to 29.8 million lb. of which 3.7 million was of local origin, the balance being imported, chiefly from the United States of America.

3. **Oversea Trade.**—Imports of tobacco and manufactures thereof into Australia during 1951–52 were valued at £18.8 million, including 27 million lb. of unmanufactured tobacco valued at £8.8 million. Exports of tobacco and manufactures threof during 1951–52 were valued at £344,180.

§ 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1951–52 being 1,725 acres, of which 1,378 acres were in Tasmania, and 347 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 1947–48 to 1951–52 in comparison with the average for the five years ended 1938–39.

HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (*a*)	Quantity used in Breweries.
	Quantity.	Gross Value.				
	Cwt.	£	Cwt.	Cwt.	Cwt.	Cwt.
Average, 1934–35 to 1938–39	20,576	173,253	1,020	78	21,518	18,992
1947–48	24,449	317,531	9,823	15	34,257	25,050
1948–49	17,073	283,608	6,159	..	23,232	29,543
1949–50	22,993	465,158	12,047	..	35,040	31,997
1950–51	26,147	620,304	20,596	11	46,732	36,011
1951–52	17,914	517,303	24,592	..	42,506	38,012

(*a*) Disregards movements in stocks.

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

§ 20. Flax.

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

During the 1914–18 and 1939–45 Wars there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government. The area sown reached a maximum of more than 61,000 acres in 1944–45 but by 1951–52 it had fallen again to less than 6,400 acres.

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

FLAX FOR FIBRE : AREA AND PRODUCTION.

Year.	Victoria.	S. Australia.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934–35 to 1938–39.. ..	1,021	..	..	(a) 1,030
1947–48	12,183	3,544	2,063	17,790
1948–49	6,971	3,099	1,816	11,886
1949–50	5,261	1,753	2,441	9,455
1950–51	3,633	1,198	1,957	6,788
1951–52	2,821	1,599	1,965	6,385
PRODUCTION (TONS OF STRAW).				
Average, 1934–35 to 1938–39.. ..	61	..	..	61
1947–48	19,427	6,068	1,694	27,189
1948–49	11,062	3,631	2,213	16,906
1949–50	6,925	1,511	2,629	11,065
1950–51	5,071	1,365	2,264	8,700
1951–52	4,065	2,214	1,573	7,852

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

Although the growing of flax on a large scale was established as a war-time measure, it is proposed to continue the industry at a level sufficient to meet local requirements, providing that it can be efficiently maintained in competition with other countries. To stimulate the production of flax fibre, on 16th July, 1950, the Flax Canvas Bounty Act was passed, authorizing the payment of £60 per ton of scutched flax fibre used.

The industry is under the control of the Flax Production Committee appointed under the Supply and Development (Flax Production) Regulations. The Committee has, amongst other things, organized the growing and harvesting of the crop and the processing of the flax, as well as disposing of the resultant products to spinners and others in Australia and overseas. In 1943–44 in the four producing States there were 31 mills under the control of the Committee. The number of flax mills operating in 1951–52 was 13.

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. The area sown in 1951–52 (53,741 acres) was a record, but production at 7,393 tons was somewhat lower than in 1950–51 when 7,954 tons were produced. Details are shown in the following table for the years 1947–48 to 1951–52.

FLAX FOR LINSEED : AREA AND PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			AREA (ACRES).				
1947–48	1,019	384	112	177	65	87	1,844
1948–49	5,048	3,793	4,193	959	389	357	14,739
1949–50	6,085	8,148	9,533	3,737	899	453	28,855
1950–51	14,630	9,370	14,986	8,161	543	146	47,836
1951–52	15,785	4,431	28,580	4,853	12	80	53,741
			PRODUCTION (TONS OF LINSEED).				
1947–48	108	69	32	43	4	17	273
1948–49	757	688	875	277	24	76	2,697
1949–50	1,602	1,449	2,249	885	55	153	6,393
1950–51	1,163	1,724	3,561	1,438	36	32	7,954
1951–52	1,617	705	4,174	857	1	39	7,393

The flax industry was the subject of investigations in 1933 and in 1936 (*see* Official Year Book No. 32, p. 658). In addition the Tariff Board has conducted an enquiry into the need for assistance to linseed growers and on the form such assistance should take and subsequently issued a report on 21st March, 1951.

§ 21. Peanuts.

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

PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Year.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Australia. (*a*)	N.S.W.	Q'land.	W. Aust.	Australia (*a*)
Average, 1929–30 to 1938–39 ..	29	8,320	100	8,449	(*b*) 11	3,715	24	3,750
1947–48	97	34,645	28	34,770	41	15,804	3	15,848
1948–49	129	24,290	32	24,451	67	9,928	14	10,009
1949–50	133	17,697	27	17,857	52	7,907	9	7,968
1950–51	225	16,656	92	16,973	103	5,312	18	5,433
Average, 1941–42 to 1950–51 ..	64	22,359	31	22,454	31	10,735	8	10,774
1951–52	374	13,312	15	13,701	222	4,535	9	4,766

(*a*) Excludes Northern Territory. (*b*) Average for five years.

The gross value of the 1951–52 crop was £475,000.

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 1951–52 of 9,309 tons (shell equivalent) consisted of 5,433 tons locally produced (previous season) and 3,876 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 1950–51 chiefly from India, Pakistan, Brazil, Egypt and the U.S. of America. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods and payment of bounties but so far have not met with much success. Production was increased very considerably during the early war years—it reached a peak of 17,550,000 lb. unginned cotton in 1939–40—but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV.—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 Government has decided that the return for the 1954 crop will remain at 14d. per lb.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1947 to 1951 are shown hereunder together with the averages for the periods of ten years ended 1939 and 1950 :—

COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	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 lb.	Bales.	lb.	lb.
Average, 1930 to 1939	58,436	16,617	291,106	5,564	11,181	284	95
1947	8,460	2,064	46,213	762	1,531	244	90
1948	6,222	1,821	47,918	713	1,439	293	115
1949	2,688	719	26,322	255	522	267	95
1950	2,952	1,102	53,671	402	806	373	136
Average, 1941 to 1950	21,253	5,852	130,450	2,043	4,124	275	96
1951	4,480	1,406	127,008	549	1,124	314	123

(a) Bales of approximately 500 lb.

3. **Consumption of Raw Cotton.**—The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938–39.

RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption in Cotton Mills.
Average, 1936–37 to 1938–39..	5,180	9,882	15,062	12,523
1947–48	762	34,114	34,876	31,401
1948–49	713	37,234	37,947	31,077
1949–50	255	28,357	28,612	33,823
1950–51	402	45,201	45,603	40,907
1951–52	549	43,296	43,845	39,030

§ 23. Financial Assistance to Primary Producers.

NOTE.—*See also* Chapter XVII.—Public Finance, pages 685–6.

1. **Bounties.**—Bounties paid by the Commonwealth Government during the year ended 30th June 1952 amounted to £4,729,000 compared with £14,985,000 in 1950–51. Brief details of the various Bounty Acts under which these amounts were paid are given below :—

(i) *Wheat Bounty Act* 1951. This Act provides for the payment of bounty for two years from 1st December, 1951 on wheat sold by the Australian Wheat Board as feed for poultry, pigs or dairy cattle up to a maximum of 26 million bushels, the rate to be the lesser amount by which 16s. 1d. per bushel exceeds—(*a*) the guaranteed price of wheat for the season plus 2s., or (*b*) 14s. The rate of bounty during 1951–52 (from 1st December, 1951) was 4s. 1d. per bushel and a total amount of £2,368,000 was paid on 11,599,000 bushels.

(ii) *Wool Products Bounty Act* 1950. This Act provided for a bounty to be paid on certain wool products made in Australia between 29th November, 1950 and 31st December, 1951, the rate to be fixed according to the quantity and type of clean wool used in them as estimated by the Australian Wool Realization Commission acting as agent for the Commonwealth Government. The cost to the Commonwealth in 1950–51 was £14,875,000 and in 1951–52, £2,254,000.

(iii) *Tractor Bounty Act* 1950. This Act provides for the payment to manufacturers of tractors produced in a factory in the Commonwealth of a bounty based on the belt pulley horse-power of the engine. Payments for 1950–51 were made on 1,501 tractors produced, and amounted to £90,000, and for 1951–52 on 1,275 tractors produced, and amounted to £103,000.

(iv) *Flax Canvas Bounty Act* 1950. This Act provides for the payment of a bounty on flax canvas manufactured in Australia during the two years from 17th July, 1950 for sale and use within the Commonwealth, the rate to be £60 per ton of scutched flax fibre used. Payments during 1950–51 amounted to £20,000 on 342 tons of fibre and during 1951–52 to £4,000 on 135 tons of fibre.

2. **Subsidies.**—Subsidies paid by the Commonwealth Government as assistance to primary producers amounted to £16,579,000 in 1950–51 and to £19,373,000 in 1951–52. The principal subsidies paid were as follows :—

(i) *Dairy Industry.* Under the provisions of the Dairy Industry Assistance Act 1943 subsidy was paid on a flat rate basis on milk supplied for the manufacture of butter, cheese and processed milk products during 1950–51 and 1951–52. The subsidy was designed to ensure a return to dairymen equal to the average cost of production of their produce. In 1950–51 the rate of subsidy on butter was 82s. 4d. per cwt. and on cheese 37s. 11d. per cwt., total payments amounting to £14,998,000. The respective rates rose in 1951–52 to 100s. 1d. and 35s. 10d. per cwt. and total payments to £17,843,000

(ii) *Artificial Fertilizers.* Prices charged to primary producers for superphosphate and nitrogenous fertilizers (other than sulphate of ammonia produced locally as a by-product on which a surcharge is fixed) have been less than cost, the balance being met by the surcharge on sulphate of ammonia and by Commonwealth subsidy. Total subsidy payments in 1950–51 amounted to £862,000, comprising £599,000 on nitrogenous fertilizers and £263,000 on superphospate. Subsidy on superphosphate ceased during 1950–51 and in 1951–52 payments totalling £1,521,000 were made, wholly on account of nitrogenous fertilizers.

(iii) *Wheat-growers.* During the year ended 30th November, 1950 a subsidy of 5d. per bushel was paid on wheat for local consumption to raise the return to growers from 6s. 8d. per bushel, f.o.r. ports, bulk basis, the Australian Wheat Board's local selling price for the year, to 7s. 1d., the price guaranteed by the Commonwealth Government. The amount of subsidy paid by the Commonwealth during the year 1950–51 on this account amounted to £683,000.

§ 24. Fertilizers.

1. **General.**—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill, acting also as a fertilizer-distributor, has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive.

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

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

The chief sources of Australia's supplies of rock phosphate are Nauru, Gilbert Islands Group and Christmas Island. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1951–52, 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.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Ammonium Sulphate	tons	26,090	18,834	10,200	27,259	42,756	40,848
	£	214,509	337,470	228,346	662,121	1,049,893	1,015,570
Potash Salts	tons	10,641	10,849	9,220	12,924	14,605	15,978
	£	82,220	206,231	139,299	265,454	335,826	368,665
Rock Phosphate	tons	635,097	701,602	909,764	1,185,402	1,101,678	1,014,100
	£	775,840	1,862,846	2,022,983	2,559,282	2,216,928	2,258,487
Sodium Nitrate	tons	7,199	6,458	7,173	13,416	5,679	15,802
	£	63,464	68,085	106,711	273,099	130,389	362,755
Other ..	tons	3,430	2,743	534	673	1,369	2,735
	£	7,657	38,259	35,233	24,966	47,396	120,191
Total ..	tons	682,457	740,486	936,891	1,239,674	1,166,087	1,089,463
	£	1,143,690	2,512,891	2,532,572	3,784,922	3,780,432	4,125,668

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,472 tons valued at £79,683 in 1951-52 compared with 1,666 tons valued at £63,387 in 1950-51 and 4,826 tons valued at £34,411 for the average of the five years ended 1938-39. Superphosphate is the principal fertilizer exported and amounted to 990 tons in 1951-52.

3. **Quantities Locally Used.**—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the year 1951–52 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, 1951–52.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales	2,33[illegible]	1,755	4,090	91,957	85,164	177,121
Victoria	3,37[illegible]	7,453	10,832	163,204	415,817	579,022
Queensland	32[illegible]	3	328	72,299	311	72,610
South Australia	3,173	2,150	5,323	153,806	116,240	270,046
Western Australia	4,545	3,650	8,195	226,409	172,895	399,303
Tasmania	176	522	698	23,232	33,487	56,719
Australian Capital Territory ..	4	21	25	248	785	1,033
Total	13,937	15,554	29,491	731,155	824,699	1,555,854

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the years 1947–48 to 1951–52, 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.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934–35 to 1938–39 ..	148,277	305,969	50,651	200,566	230,713	30,272	276	966,724
1947–48 ..	171,707	402,643	54,433	224,253	292,723	41,945	870	1,188,574
1948–49 ..	171,738	467,690	62,084	250,107	333,622	39,109	860	1,325,210
1949–50 ..	174,171	550,020	72,298	243,768	357,632	53,874	1,098	1,452,861
1950–51 ..	160,871	563,086	73,761	255,781	377,083	56,224	822	1,487,628
1951–52 ..	177,120	579,022	72,610	270,046	399,304	56,719	1,033	1,555,854

As mentioned in § 23 the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers. In 1951–52 subsidy was paid only on nitrogenous fertilizers.

4. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1951–52 was 49, made up as follows :—New South Wales, 13 ; Victoria, 9 ; Queensland, 8 ; South Australia, 7 ; Western Australia, 5 ; and Tasmania, 7. The production of superphosphate in Australia during 1951–52 amounted to 1,597,080 tons, the largest producing States being Victoria, Western Australia and South Australia.

§ 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, 1950, 1951 and 1952 are given in the following table :—

ENSILAGE : PRODUCTION AND FARM STOCKS.
(Tons.)

Year ended 31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Production—								
1950	73,047	25,687	10,622	5,545	11,091	8,271	64	134,327
1951	55,470	26,105	8,775	3,842	12,188	10,649	119	117,148
1952	47,920	24,591	7,654	8,234	11,433	10,638	4	110,474
Farm Stocks—								
1950	108,156	(a)	15,096	2,940	4,628	6,814	194	(a)
1951	87,253	(a)	12,825	1,802	2,952	8,979	108	(a)
1952	74,042	(a)	5,973	5,580	2,235	10,289	101	(a)

(a) Not available.

The drought of 1902–3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years

when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939–40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output declined noticeably and reached the extremely low level of 94,744 tons during the drought year 1944–45, but rose to 180,622 tons in 1947–48, and decreased continuously in each succeeding year to 110,474 tons in 1951–52.

§ 26. Agricultural Colleges and Experimental Farms.

Agricultural colleges, administered by State Departments of Agriculture, have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and live stock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying or animal husbandry, 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 143,497 in 1952 or by 242 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 187 per cent., and crawler types by 87 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 1952.

TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
WHEELED TYPE TRACTORS.(b)								
1948 ..	18,659	15,611	16,312	7,429	7,482	1,876	62	67,431
1949 ..	21,283	18,480	17,980	8,891	8,527	2,069	71	77,301
1950 ..	25,533	23,235	20,616	11,184	10,323	2,464	84	93,439
1951 ..	30,061	28,132	24,406	13,562	12,331	3,056	107	111,655
1952 ..	35,302	33,678	26,953	15,396	14,579	3,857	142	129,907

NOTE.—*See* next page for footnotes.

TRACTORS ON RURAL HOLDINGS—*continued.*

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(*a*)
CRAWLER OR TRACK TYPE TRACTORS.(*b*)								
1948 ..	1,599	684	2,637	2,235	1,569	178	3	8,905
1949 ..	1,649	770	2,781	2,380	1,693	173	2	9,448
1950 ..	1,831	884	3,111	2,525	1,796	201	8	10,356
1951 ..	2,145	926	3,388	2,566	2,223	264	6	11,518
1952 ..	2,828	1,187	3,941	2,788	2,498	342	6	13,590
TOTAL TRACTORS.								
1939(*c*) ..	12,926	8,802	8,541	5,969	5,680	(*d*)	25	(*e*) 41,943
1948 ..	20,258	16,295	18,949	9,664	9,051	2,054	65	76,336
1949 ..	22,932	19,250	20,761	11,271	10,220	2,242	73	86,749
1950 ..	27,364	24,119	23,727	13,709	12,119	2,665	92	103,795
1951 ..	32,206	29,058	27,794	16,128	14,554	3,320	113	123,173
1952 ..	38,130	34,865	30,894	18,184	17,077	4,199	148	143,497

(*a*) Excludes Northern Territory. (*b*) Details not collected separately prior to 1943. (*c*) At commencement of year. (*d*) Not available. (*e*) Excludes Tasmania.

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

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

The following table shows the number and area of the holdings in each State for the years 1938–39 and 1947–48 to 1951–52.

RURAL HOLDINGS: NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Total.
NUMBER OF RURAL HOLDINGS.								
1938–39..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1947–48..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758
1948–49..	74,303	71,049	41,986	28,110	19,754	11,739	214	247,155
1949–50..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267
1950–51..	73,195	69,698	41,499	28,248	19,289	11,468	229	243,626
1951–52..	73,122	69,298	41,641	28,698	19,515	11,414	226	243,914

RURAL HOLDINGS: NUMBER AND AREA—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
			TOTAL AREA OF RURAL HOLDINGS. ('000 ACRES.)					
1938–39..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1947–48..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801
1948–49..	167,637	38,867	356,422	146,723	210,658	6,123	376	926,806
1949–50..	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606
1950–51..	168,375	38,108	359,606	151,731	213,362	6,476	395	938,053
1951–52..	168,250	37,935	358,320	151,785	215,386	6,438	395	938,509

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

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

2. **Special Tabulation Relating to Rural Holdings, 1949–50.**—With the co-operation of State Statisticians, the second series of special tabulations relating to rural holdings was undertaken for all States for the year 1949–50. 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.. ..	4,027	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

(*a*) Excludes Northern Territory.

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

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

(a) Excludes Northern Territory.

3. **Employment on Rural Holdings.**—The following table shows, for each State of Australia, the recorded number of persons permanently and temporarily engaged on rural holdings as at 31st March, 1952. Additional particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

RURAL HOLDINGS: PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT AS AT 31st MARCH, 1952.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Permanent—									
Owners, Lessees or Share-farmers	Males	69,157	67,065	43,196	27,213	20,016	9,543	140	236,330
	Females	1,743	3,477	9,618	2,969	1,704	537	5	20,053
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	Males	8,608	6,264	5,112	1,732	2,157	706	10	24,589
	Females	6,165	1,229	5,397	893	4,104	143	1	17,932
Employees, including Managers and Relatives working for wages or salary	Males	32,322	15,334	19,640	8,418	8,062	4,334	154	88,264
	Females	1,890	1,108	3,833	837	711	225	14	8,618
Total Permanent	Males	110,087	88,663	67,948	37,363	30,235	14,583	304	349,183
	Females	9,798	5,814	18,848	4,699	6,519	905	20	46,603
	Persons	119,885	94,477	86,796	42,062	36,754	15,488	324	395,786
Temporary—	Males	27,720	15,088	21,821	17,283	3,258	3,072	114	88,356
	Females	1,824	1,047	1,238	3,111	200	1,152	4	8,576
	Persons	29,544	16,135	23,059	20,394	3,458	4,224	118	96,932
Total Persons ..		149,429	110,612	109,855	62,456	40,212	19,712	442	492,718

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the six years 1947 to 1952.

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

Particulars.	As at 31st March—					
	1947.	1948.	1949.	1950.	1951.	1952.
Permanent—						
Males—						
Owners, Lessees or Share-farmers	240,753	240,992	236,467	235,302	237,251	236,330
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	32,233	28,171	25,195	25,889	24,676	24,589
Employees, including managers and relatives working for wages or salary	84,300	90,502	91,177	90,924	91,226	88,264
Total, Males	357,286	359,665	352,839	352,115	353,153	349,183
,, Females	48,844	47,509	47,933	53,348	52,346	46,603
Total Permanent ..	406,130	407,174	400,772	405,463	405,499	395,786
Temporary—						
Total, Males	(a)	(a)	(a)	83,227	83,190	88,356
,, Females	(a)	(a)	(a)	8,862	8,663	8,576
Total Temporary ..	(a)	(a)	(a)	92,089	91,853	96,932
Grand Total ..	(a)	(a)	(a)	497,552	497,352	492,718

(a) Not available.