

CHAPTER 22

RURAL INDUSTRY

This chapter is divided into four major parts:

Introduction, dealing with the disposal of Crown lands, closer settlement and war service settlement and general rural activity in Australia;

Agricultural production;

Pastoral production; and

Other rural industries, which includes the dairying, pig, poultry and bee-farming industries.

For greater detail on the subjects dealt with in this chapter see the annual bulletins *Rural Industries* (10.29), *Value of Production* (10.24) (10.25) (10.26) (10.27), and *Manufacturing Commodities* (12.7) (regarding butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics* (1.3), *Monthly Review of Business Statistics* (1.4), *Monthly Bulletin of Production Statistics* (12.14), and *Digest of Current Economic Statistics* (monthly) (1.5). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity* (10.28) (see page 747) shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Apparent Consumption of Foodstuffs and Nutrients* (10.10) contains details of the production and utilisation of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

General. *Value of Primary Production (excluding Mining) and Indexes of Price and Quantum of Farm Production* (annual) (10.27), *Value of Primary Production (excluding Mining) (Preliminary Statement)* (annual) (10.25), *Gross Value of Primary Production (excluding Mining) (Preliminary Estimates)* (annual) (10.24), *Rural Land Use, Improvements, Agricultural Machinery and Labour* (annual) (10.59), *New Tractors: Receipts, Sales and Stocks* (quarterly) (12.18), and *New Agricultural Machinery* (quarterly) (12.1), *Estimates of Gross Indebtedness of Agricultural Producers, Australia* (annual) (10.62).

Agricultural production. *Crop Statistics* (annual) (10.58), *Agricultural Statistics (Preliminary Statement)* (annual) (10.57), *The Wheat Industry* (four a year) (10.35) (10.36) (10.52) (10.53), *The Fruit Growing Industry* (annual) (10.11), *Grape Production and Utilisation* (annual) (10.61), *Principal Agricultural Statistics: Australia, Preliminary Estimates* (annual) (10.63).

Pastoral production. *Livestock Statistics Australia, Preliminary Estimates* (annual) (10.15), *Livestock Statistics* (annual) (10.14), *The Meat Industry* (monthly) (10.16), *Wool Production* (annual) (10.39), *Wool Production and Utilisation* (annual) (10.38), *Sheep Numbers, Shearing and Wool Production (Provisional Estimates)* (10.69) and *Wool Production, Sheep Numbers and Shearing (Preliminary Estimates)* (10.56).

Other rural production. *The Dairying Industry* (monthly) (10.6) and annual (10.5), *Chicken Hatchings and Poultry Slaughterings* (monthly) (10.44), *Production Summaries No. 36—Preserved Milk Products* and *No. 55—Butter and Cheese* (monthly) (12.16), and *Bee Farming* (annual) (10.3).

Detailed particulars of the early development of various aspects of Australian rural industry are given in previous issues of the Year Book up to No. 53 (see, for example No. 53, pages 885, 888, 891-2).

Rural debt. For estimated figures of rural debt to specified lenders for the years 1967-68 to 1971-72 see page 533 of this Year Book.

Throughout this chapter yearly periods for area and production of crops relate to years ended 31 March. Other periods in respect of e.g. factory and trade statistics relate to years ended 30 June.

INTRODUCTION

Disposal of Crown lands

Land legislation and tenures

The following sections contain figures showing the extent of the different land tenures in the several States and Territories, classified under broad headings indicating the nature of the tenure, together with some general descriptive matter. Information in greater detail, descriptions of the land

tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure were provided in Year Book No. 48 and previous issues (see also Year Book No. 50, page 85 and List of Special Articles, etc. preceding General Index to this Volume).

Free grants and reservations

Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and or permanent reservation of Crown lands for public purposes. In the Northern Territory any Crown lands not subject to any right of, or contract for, purchase may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act 1910-72*, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

AREAS OF CROWN LANDS RESERVED: STATES AND TERRITORIES, 1968 TO 1972 (‘000 acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.(a)	Tas.(a)	N.T.(a)	Total(c)
1968 . .	15,872	(b)8,952	27,833	22,919	80,658	5,327	60,988	222,549
1969 . .	15,849	n.a.	28,209	22,919	80,772	6,313	61,124	n.a.
1970 . .	15,793	(d)7,787	28,466	22,925	84,018	6,374	62,217	227,580
1971 . .	15,747	(d)7,790	28,636	22,939	90,333	6,619	62,348	234,412
1972 . .	15,667	(d)7,793	28,582	22,943	96,395	6,643	62,348	240,371

(a) At 30 June. (b) At 31 December. (c) Excludes the Australian Capital Territory. (d) Excludes areas set aside for roads.

The purposes for which areas were reserved are given hereunder for the latest year available as set out in the table above.

New South Wales. For travelling stock, 4,913,641 acres; forest reserves, 1,582,899 acres; water and camping reserves, 736,042 acres; mining reserves, 982,352 acres; recreation and parks, 733,791 acres; other reserves, 6,718,240 acres; total 15,666,965 acres.

Victoria. Water reserves, 212,310 acres; forest and timber reserves, 5,805,596 acres; national parks, 506,919 acres; public parks and camping reserves, 120,812 acres; native flora and fauna, 136,048 acres; other reserves (excluding roads), 1,011,071 acres; total, 7,792,756 acres.

Queensland. For timber reserves, 1,721,525 acres; State forests and national parks, 10,365,561 acres; Aboriginal reserves, 6,847,734 acres; streets, surveyed roads and stock routes, 4,322,268 acres; general reserves, 5,324,431 acres; total, 28,581,519 acres.

South Australia. Total area of surveyed roads, railways and other reserves, 22,943,482 acres including 18,842,665 acres set apart as Aboriginal reserves.

Western Australia. For State forests, 4,506,717 acres; timber reserves, 170,727 acres; other reserves, 91,717,845 acres; total, 96,395,289 acres.

Tasmania. For forest reserves, 5,593,000 acres; national parks, 1,050,000 acres; total, 6,643,000 acres.

Northern Territory. For Aboriginal, defence and public requirements, 62,348,000 acres.

Conditional and unconditional purchases of freehold

Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Year Book No. 48, pages 91-2). Conditional purchases of various types may also be made. In the Northern Territory only 0.1 per cent of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory about 11 per cent of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

Leases and licences

Well over half the area of the States of New South Wales and South Australia and of the Northern Territory and about four-fifths of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder being unoccupied.

in Tasmania about one-third is leased or licensed, while about one-quarter of the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.

Land Acts and Ordinances. The types of lease and licence granted under land legislation cover a wide range, and vary with each State or Territory. The following are examples: grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and unconditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 878-81 of Year Book No. 53.

**AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND
FORESTRY: STATES AND TERRITORIES, 1968 TO 1972**
(^{'000} acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.	Tas. (a)	N.T. (a)(c)	A.C.T. (a)(c)	Total
1968	110,499	(b)5,636	353,163	149,530	(a)244,804	766	191,595	254	1,056,247
1969	112,250	n.a.	346,946	149,327	(a)245,240	699	192,966	251	n.a.
1970	111,501	(a)5,469	342,003	149,951	(a)247,010	698	197,033	251	1,053,916
1971	111,131	(a)5,535	339,024	149,651	(b)252,034	851	199,136	243	1,057,605
1972	111,026	(a)5,568	336,689	148,676	(b)251,852	581	200,074	236	1,054,702

(a) Year ended 30 June. (b) Year ended 31 December. (c) Leases and licences for all purposes.

Closer settlement and war service settlement

Closer settlement

Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the Year Book up to No. 22 (*see* No. 22, pages 163-9), and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Page 96 of Year Book No. 48 contains particulars as at 30 June 1960 of the areas and costs for those States for which separate information is available.

War Service Land Settlement Scheme

The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939-45 War and the Korea-Malaya operations. Finance for capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects of the scheme in all States is provided by annual parliamentary appropriation. The *States Grants (War Service Land Settlement) Act* 1952 provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine. At 30 June 1970, 9,129 farms had been allotted from a total area of 13,936,731 acres acquired and no further farms are to be provided.

Particulars of expenditure on war service land settlement, to 30 June 1968, are given in Year Book No. 55, pages 716-17.

Alienation and occupation of Crown lands

Detailed particulars of the alienation and occupation of Crown lands in the several States and Territories are given in previous issues of the Year Book up to No. 53 (*see* No. 53, pages 878-81).

The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1972.

ALIENATION AND OCCUPATION OF CROWN LANDS: STATES AND TERRITORIES, 1972

State or Territory	Private lands				Crown lands				Total area '000 acres
	Alienated		In process of alienation		Leased or licensed		Other(a)		
	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	
N.S.W.(b)	62,195	31.4	4,240	2.1	112,562	56.8	19,040	9.6	198,037
Vic.(b)	33,379	59.3	379	0.7	5,568	9.9	16,920	30.1	56,246
Qld(c)	28,179	6.6	34,353	8.0	340,160	79.7	24,188	5.7	426,880
S.A.(b)	16,038	6.6	288	0.1	148,676	61.1	78,243	32.2	243,245
W.A.(c)	34,852	5.6	13,445	2.2	255,478	40.9	320,814	51.3	624,589
Tas.(b)	6,680	39.6	240	1.4	5,099	30.2	4,866	28.8	16,885
N.T.(b)	298	0.1	..	..	200,074	60.1	132,607	39.8	332,979
A.C.T.(b)(d)	58	9.6	6	1.1	236	39.2	301	50.1	601
Australia	181,679	9.6	52,951	2.8	1,067,853	56.2	596,979	31.4	1,899,462

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30 June. (c) At 31 December, 1971. (d) Includes Jervis Bay area.

Number and area of rural holdings

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 prevent comparisons. For the purpose of these statistics a holding has been defined as land of one acre or more in extent used for the production of agricultural produce (including fruit and vegetables) or for the raising of livestock (including poultry) and the production of livestock products.

There are considerable fluctuations from time to time in the numbers of very small holdings, and it is very difficult to determine in some cases whether or not they are rural holdings within the definition. In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied for extensive grazing under short-term lease or other arrangement, and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some States which are also only occasionally occupied.

RURAL HOLDINGS: NUMBER AND AREA, STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF RURAL HOLDINGS									
1967-68	76,225	72,802	43,694	29,058	23,116	10,631	305	196	256,027
1968-69	76,103	71,056	44,074	29,137	23,004	10,384	317	195	254,270
1969-70	75,908	69,498	43,829	29,035	22,937	10,159	322	193	251,881
1970-71	75,365	68,555	43,399	29,087	22,592	9,926	384	187	249,495
1971-72	74,960	67,714	43,389	29,095	21,997	9,807	419	187	247,568
TOTAL AREA OF RURAL HOLDINGS (^{'000} acres)									
1967-68	171,767	39,564	380,993	160,765	275,334	6,579	174,385	350	1,209,737
1968-69	171,020	39,182	378,956	162,109	276,174	6,591	177,942	346	1,212,320
1969-70	170,630	39,057	380,218	162,692	280,819	6,517	182,116	339	1,222,387
1970-71	171,068	38,945	382,253	162,584	283,107	6,501	184,943	337	1,229,739
1971-72	170,504	39,249	381,540	160,980	282,864	6,442	192,468	329	1,234,377

(a) In 1967-68 the lists of land holdings used in the collection of agricultural and pastoral statistics in Victoria were reconciled with lists of rateable land of one acre or more in extent as recorded by municipalities for rating purposes.

Land utilisation of rural holdings

The following table shows the purposes for which the land on the rural holdings referred to in the preceding paragraphs was used.

RURAL HOLDINGS: LAND UTILISATION, 1967-68 TO 1971-72
(*'000 acres*)

<i>Year</i>	<i>Area used for crops(a)</i>	<i>Land lying fallow(b)</i>	<i>Area under sown grasses and clovers(c)</i>	<i>Balance of holdings(d)</i>	<i>Total area of holdings</i>
1971-72—					
New South Wales	10,342	2,372	14,567	143,222	170,504
Victoria	4,780	2,235	20,869	11,365	39,249
Queensland	4,983	434	5,748	370,375	381,540
South Australia	5,629	994	7,893	146,465	160,980
Western Australia	9,269	871	16,863	255,861	282,864
Tasmania	165	27	2,106	4,144	6,442
Northern Territory	18	2	315	192,134	192,468
Australian Capital Territory	3	..	101	225	329
Australia	35,189	6,936	68,461	1,123,790	1,234,377
1970-71	33,101	8,995	69,267	1,118,377	1,229,739
1969-70	38,641	7,127	64,784	1,111,835	1,222,387
1968-69	41,012	9,525	59,747	1,102,036	1,212,320
1967-68	35,884	9,340	57,235	1,107,278	1,209,737

(a) Excludes (i) duplication on account of area double cropped, except for New South Wales and South Australia, and (ii) clovers and grasses cut for hay and seed which have been included in Area under sown grasses and clovers, and differs therefore from crop area figures shown later in this chapter. (b) Excludes short or summer fallow. (c) Includes *paspalum*. (d) Used for grazing, lying idle, etc.

Classification by size and type of activity

Some of the information obtained from the 1968-69 Agricultural Census has been classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops, and numbers of livestock). In addition, all holdings have been classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1968-69. Similar information was published in a series of bulletins for the years 1959-60 and 1965-66. Classifications of holdings by size of principal characteristics are available for each State for the years 1947-48, 1949-50 and 1955-56.

Employment on rural holdings**Persons engaged**

The following table shows, for each State and Territory, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales and Victoria. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

MALES(a) ENGAGED ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1972

<i>Males engaged</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Permanent—									
Owners, lessees or share-farmers	53,646	55,086	38,220	21,225	19,892	6,515	207	114	194,905
Relatives of owner, lessee or share-farmer, over 15 years of age, not receiving wages or salary	635	3,783	2,892	141	1,311	..	27	8	8,797
Employees, including managers and relatives working for wages or salary	21,460	12,395	14,492	5,885	6,243	3,166	1,571	121	65,333
Total permanent males	75,741	71,264	55,604	27,251	27,446	9,681	1,805	243	269,035
Temporary	22,822	22,882	14,869	7,208	(b)	4,179	468	100	(b)
Total males	98,563	94,146	70,473	34,459	(b)	13,860	2,273	343	(b)

(a) Details for females not available except for New South Wales and Victoria where 7,170 and 15,049 females respectively were engaged on rural holdings. (b) Not available for publication.

Farm machinery on rural holdings

The tables following show the principal types of farm machinery on rural holdings in the States and Territories at 31 March 1972. Additional information was published in the statistical bulletin *Rural Land Use, Improvements, Agricultural Machinery and Labour, 1971-72* (10.59). A more detailed analysis of tractors on rural holdings according to type, horse-power, type of fuel used, and age of tractor was published in the statistical bulletin *Tractors on Rural Holdings—Australia, 31 March 1969*. Details of grain and seed harvesters on rural holdings at 31 March 1970, classified according to type of propulsion, width of cut, age and type of front were published in the statistical bulletin *Grain and Seed Harvesters on Rural Holdings, 31 March 1970*.

FARM MACHINERY ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1972

Machinery	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cultivating—									
Rotary hoes and rotary tillers—									
Self-contained power unit	8,404	6,676	3,437	3,340	1,728	1,204	69	26	24,884
Tractor-mounted or trailing type	8,911	6,060	5,781	2,665	2,149	1,105	43	19	26,733
Seeding and planting—									
Grain drills—									
Combine type	29,814	20,175	15,117	15,355	13,687	1,507	83	55	95,793
Other types	5,776	7,202	1,961	4,485	3,404	2,093	11	27	24,959
Maize and cotton planters(a)	(b)	837	9,260	(b)	(b)	(b)	22	(b)	(c)
Fertiliser distributors and broad-casters	24,795	28,552	17,561	9,816	10,089	5,832	102	85	96,832
Harvesting—									
Grain and seed headers and harvesters(d)—									
Self-propelled	4,946	1,803	3,434	2,807	1,906	118	18	8	15,040
Tractor drawn	14,539	11,265	4,433	9,078	8,556	556	32	20	48,479
Pick-up balers	12,146	14,822	3,689	5,582	4,570	2,044	44	45	42,942
Forage harvesters	3,145	2,217	1,663	856	688	357	24	10	8,960
Other—									
Tractors—									
Wheel	82,905	79,369	65,071	34,233	31,809	11,716	440	179	305,722
Crawler	6,194	3,101	8,493	2,974	3,631	1,147	151	7	25,698

(a) Number of units, i.e. number of rows that can be planted simultaneously. (b) Not collected. (c) Not available.
 (d) Excludes reapers, binders, specialised clover harvesters and forage harvesters.

FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA 31 MARCH 1968 TO 1972

Machinery	31 March—				
	1968	1969	1970	1971	1972
Rotary hoes and rotary tillers—					
Self-contained power unit	27,174	25,722	24,549	23,059	24,884
Tractor-mounted or trailing type	20,333	21,581	20,837	23,264	26,733
Seeding and planting—					
Grain drills—					
Combine type	94,094	94,650	94,917	93,567	95,793
Other types	29,634	28,490	27,196	25,717	24,959
Maize and cotton planters	13,826	(a)18,495	(a)18,646	(a)18,083	(b)
Fertiliser distributors and broad-casters	95,853	97,119	98,434	98,117	96,832
Harvesting—					
Grain and seed headers and harvesters—					
Self-propelled	11,953	13,213	13,191	13,871	15,040
Tractor drawn	55,929	53,883	50,163	49,904	48,479
Pick-up balers	38,211	40,142	41,237	42,187	42,942
Forage harvesters	7,545	8,016	8,421	8,523	8,960
Other—					
Shearing machines (number of stands)	195,542	196,286	195,352	n.a.	188,482
Milking machines (number of units)	233,022	231,698	228,190	n.a.	209,805
Tractors—					
Wheel	323,982	{ 299,297 }	329,969	326,725	{ 305,722 }
Crawler . . . . .						24,299	{ 25,698 }

(a) Definition changed in 1969 when informants were asked to report in terms of numbers of units, i.e. the number of rows that can be planted simultaneously. Figures not strictly comparable with earlier years. (b) Not available.

The soils of Australia

Year Book No. 52 contains an article (pages 873-9) on the soils of Australia which deals with the following matters: nature and development of Australian soils, including the agricultural development of soils, and types of Australian soils. A soil map of Australia and illustrations are included on plates 47 to 51 of Year Book No. 52.

Soil improvement and conservation

Fertilisers

The bulk of Australia's requirements of nitrogenous and phosphatic fertilisers is supplied by the domestic industry. Requirements of potassic fertilisers are primarily imported. Raw materials and manufactured fertilisers which are not available in Australia are imported as required.

As a result of widespread deficiency of phosphorus in Australian soils, phosphatic fertilisers account for a large proportion of usage both on crops and pastures. During 1971-72 usage of nitrogen, phosphorus and potassium in elemental terms was approximately 122,295 tons, 369,412 tons and 69,372 tons respectively. This is equivalent to a usage ratio of 2 : 7 : 1.

Information regarding the area treated with artificial fertilisers and the quantity of artificial fertilisers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1971-72 season is given in the following table.

AREA FERTILISED AND QUANTITY OF ARTIFICIAL FERTILISERS USED
STATES AND TERRITORIES, 1971-72

State or Territory	Crops			Pastures			Total		
	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales .	6,008	241,229	65,047	7,011	400,890	17,738	13,018	642,119	82,785
Victoria	3,916	187,288	40,035	9,300	571,760	101,439	13,216	759,048	141,474
Queensland	1,300	36,740	210,058	438	41,923	10,048	1,738	78,563	220,106
South Australia	5,221	255,299	24,655	4,502	242,613	7,771	9,723	497,912	32,426
Western Australia	9,019	433,329	59,724	11,425	589,978	38,302	20,444	1,023,307	98,026
Tasmania	145	12,887	10,645	1,235	86,576	22,210	1,380	99,463	32,855
Northern Territory	14	1,836	1,159	112	6,440	293	126	8,276	1,452
Australian Capital Territory	3	181	43	24	1,356	23	27	1,537	66
Australia	25,625	1,168,789	411,366	34,048	1,941,536	197,824	59,672	3,110,325	609,190

Particulars of the quantity of artificial fertilisers used in each State and Territory during each of the seasons 1967-68 to 1971-72 are shown in the next table. These details include the quantity used for the top dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILISERS USED: STATES AND TERRITORIES
1967-68 TO 1971-72

(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	893,469	1,068,605	263,460	599,877	1,219,968	172,195	4,629	2,695	4,224,898
1968-69	897,893	954,807	264,973	580,756	1,323,293	160,462	5,117	2,195	4,189,496
1969-70	903,334	1,007,216	292,376	590,261	1,416,936	153,649	5,414	2,785	4,371,971
1970-71	828,228	916,249	289,870	538,515	1,230,296	140,025	5,643	2,106	3,950,932
1971-72	724,904	900,522	298,769	530,338	1,121,333	132,318	9,728	1,603	3,719,515

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

IMPORTS OF FERTILISERS: AUSTRALIA, 1967-68 TO 1971-72

Description	1967-68		1968-69		1969-70		1970-71		1971-72	
	cwt	\$'000	cwt	$'000	cwt	$'000	cwt	$'000	cwt	$'000
Fertilisers, Crude—										
Natural sodium nitrate	111,298	292	76,899	182	90,387	305	63,816	185	62,182	212
Natural phosphates, whether or not ground	65,915,602	32,162	63,531,304	31,606	52,986,234	28,109	41,483,953	22,174	32,564,484	18,157
Natural potassic salts, crude	..	..	..	..	..	..	102,420	152	..	..
Fertilisers, Manufactured—										
Mineral or chemical fertilisers, nitrogenous—										
Ammonium nitrate	323,037	1,031	410,795	1,317	327,091	1,201	288,324	954	53,048	164
Ammonium sulphate	2,264,628	3,379	1,392,998	1,707	238,649	465	8,908	20	7,388	13
Calcium ammonium nitrate	305,717	606	389,456	789	71,084	149	20,517	40	21,592	41
Sodium nitrate	49,429	98	25,939	73	9,997	22	41,352	110	20,365	66
Urea containing in the dry state more than 45% by weight of nitrogen	2,391,423	7,585	2,869,995	7,423	157,260	433	249,371	626	137,466	435
Other	27,854	109	13,611	65	12,419	40	18,651	58	11,103	32
Mineral or chemical fertilisers, phosphatic—										
Basic slag	1	..	..	..	..	..	..	..	..	..
Other (including super-phosphates)	606	2	280,418	406	32,463	97	61,828	132	47,892	218
Mineral or chemical fertilisers, potassic—										
Potassium chloride	2,288,755	3,195	2,371,086	2,749	2,203,561	2,684	2,679,761	4,045	2,567,429	3,350
Potassium sulphate	309,333	565	259,626	603	341,673	748	337,209	748	304,744	768
Other	4,405	10	67,938	105	117,528	152	48,571	66	17,546	54
Fertilisers, n.e.s.										
In the form of tablets, lozenges and similar prepared forms or in packs of gross weight not exceeding 10 kg	29,792	92	550	31	554	27	765	54	972	53
Other—										
Sodium nitrate mixed or combined with potassium nitrate	4,260	14	3,832	12	3,738	13	4,597	15	2,314	9
N.P.K. complete fertilisers	414,640	1,336	610,858	1,795	142,777	462	146,434	443	292,303	985
Mixed or composite fertilisers	262,720	1,041	98,729	316	155,541	476	7,385	22	862	10
Blood and bone	6,000	14	3,400	12	..	..	..	..	..	..
Other	133,908	598	591,339	1,607	199,123	673	18,740	117	6,308	68

Exports of fertilisers (manufactured locally) amounted to 1,012,000 cwt valued at \$1,311,000 in 1971-72 compared with 287,000 cwt valued at \$174,000 in 1970-71.

Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination.

For 1956-57 (the first year for which data are available) the total area treated was 1,466,000 acres; in 1971-72 the total was 10,604,000 acres. The following table shows details of area treated and materials used for each State for the five years ended 31 March 1972.

AERIAL AGRICULTURE, 1967-68 TO 1971-72

Year ended 31 March	Area topdressed and seeded		Total area treated(a)	Materials used		Total flying time
	'000 acres	'000 acres		Super-phosphate	Seed	
	'000 acres	'000 acres	'000 acres	tons	'000 lb	hours
1972—						
New South Wales(b)	3,609	1,541	5,292	178,835	2,963	37,138
Victoria	1,208	244	1,582	67,433	167	11,767
Queensland(c)	863	(d)	1,590	(d)	1,161	12,049
South Australia	(d)	204	541	17,832	(d)	(d)
Western Australia	674	698	(d)	39,492	(d)	8,992
Tasmania	(d)	(d)	(d)	(d)	(d)	(d)
Australia	6,906	3,353	10,604	330,076	4,390	75,620
1971	8,165	2,778	11,320	410,773	2,450	83,692
1970	10,270	3,723	14,868	550,952	2,854	102,619
1969	9,474	4,580	14,416	436,589	4,125	99,639
1968	10,495	(d)	14,348	524,374	3,249	102,112

(a) Includes other types of treatment (rabbit baiting, etc.). (b) Includes details for the Australian Capital Territory.
(c) Includes details for the Northern Territory. (d) Not available for publication.

Pasture improvement

An article on pasture improvement, which includes notes on indigenous and introduced species of grasses and which traces the development of pasture research in Australia, appears on pages 1001-2 of Year Book No. 49.

Soil conservation

Year Book No. 49 contains an article (pages 1003-4) on soil conservation which deals with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

AGRICULTURAL PRODUCTION

In general, statistics in this chapter relating to agricultural production are derived from returns supplied by approximately 248,000 farmers who utilise one acre or more of land for agricultural or pastoral purposes. The latest figures available are those for the year 1971-72. The returns are collected on a substantially uniform basis in all States at 31 March each year, and relate mainly to crops sown 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 annual census returns. The statistics published in this section are therefore shown in 'agricultural' years. For most purposes there will be little error involved in considering them as applying to years ended 30 June.

For more detailed information on period covered and details of the weights and measures used in recording production of agricultural commodities see introductory notes to the bulletin *Rural Industries*. Details of weights and measures are also included after the Contents of this Year Book.

Progress, assistance and control

Progress of cultivation

The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the eleven seasons 1961-62 to 1971-72.

AREA OF CROPS^(a): STATES AND TERRITORIES, 1860-61 TO 1971-72
(*000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092
1963-64	8,997	6,102	3,665	5,975	6,915	380	3	8	32,045
1964-65	10,334	6,477	3,967	5,965	7,505	404	4	9	34,665
1965-66	9,052	6,219	4,119	6,030	8,680	386	4	8	34,498
1966-67	12,421	6,765	4,605	6,488	8,817	444	4	10	39,553
1967-68	11,343	5,457	4,653	5,414	8,877	262	14	5	36,024
1968-69	13,614	6,250	5,117	6,415	9,484	273	16	8	41,178
1969-70	12,352	5,466	5,456	5,659	9,667	242	16	5	38,865
1970-71	9,797	4,315	4,519	4,936	9,455	207	6	3	33,237
1971-72	10,348	4,784	5,100	5,629	9,271	172	18	3	35,324

(a) The classification of crops was revised in 1971-72 and adjustments made to statistics back to 1967-68. After 1966-67 lucerne for green feed, hay and seed, and pasture cut for hay are excluded.

The Australian Agricultural Council

The influence of government and semi-government authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council. This is a permanent organisation which was formed following a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December 1934. The Council consists of the Commonwealth Ministers for Primary Industry, Northern Development and the Northern Territory 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: the promotion of the welfare and development of agricultural industries generally; the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organised marketing.

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

The Standing Committee on Agriculture comprises the permanent heads of the State Departments of Agriculture, the Secretary, Department of Primary Industry, and a representative each from the Commonwealth Departments of the Treasury, Health, Overseas Trade, Northern Development, the Northern Territory, External Territories, and from the Commonwealth Scientific and Industrial Research Organization.

Financial assistance to primary producers

Financial assistance to primary producers by the Commonwealth Government may be provided in a number of ways. *See also* pages 556 and 561, Chapter 18, Public Finance. Examples of these follow.

The Rural Reconstruction Scheme provides finance to the States to help restore to economic viability those farms and farmers with capacity to maintain viability in the longer term. The forms of assistance comprise:

Debt reconstruction to assist the farmer who, although having sound prospects of long term commercial viability, has used all his cash and credit resources and cannot meet his financial commitments; and

Fruitgrowing Reconstruction Scheme announced on 14 July 1972 provides \$4.6 million to assist horticulturists facing financial difficulties to remove surplus fruit trees. Growers eligible for assistance are those whose trees take at least 5 years to mature; have a commercial bearing life of at least 10 years; and produce fruit which are in a chronic state of over supply. The scheme applied initially to the canning peach, canning pear, fresh apple and fresh pear industries, but may be extended to other fruit trees which meet the above criteria. In March 1973 it was extended to include the canning apricot industry.

Two forms of assistance are offered:

Clear fell for the grower who is predominantly a horticulturist, who is in severe financial difficulties and intends to clear fell his orchard and leave the fruit growing industry.

Partial fell for the grower whose resources are inadequate to withstand the short term effects on his economic viability of removing trees without assistance; whose long term viability is threatened by the surplus of the horticultural commodity concerned; and who has sound long term prospects after removal of the surplus trees and taking into account other potential uses of the land.

The maximum rate of assistance is \$500 per acre for canning peaches and canning pears and \$350 per acre for fresh apples and fresh pears. The Scheme is administered, so that the average rate of assistance does not exceed \$350 per acre for canning fruit and \$250 per acre for fresh fruit.

A grower who receives assistance under the scheme must undertake not to plant within 5 years from the date of receipt of assistance any trees specified by the administering authority. The specified trees at present are the same as those in respect of which assistance

is provided under the Scheme. Applications for assistance close on 30 June 1973 and trees must be removed by 31 October 1973. At 9 March 1973, 433 applications had been received and 69 applications involving 950 acres of fruit trees had been approved.

Farm build-up to supplement the normal processes under which properties which are too small to be economic are amalgamated with an adjoining holding, or to assist a farmer with a property too small to be economic to purchase additional land to build up his property to at least economic size.

For those obliged to leave the industry limited assistance by way of a loan up to a maximum of \$3,000 is available where such assistance is necessary to alleviate conditions of personal hardship. In addition, such persons may be eligible for retraining under the Rural Reconstruction Employment Training Scheme.

Originally, \$100 million was to be made available to the States over a period of 4 years ending 30 June 1975. In addition the States were authorised to use \$9.5 million from the pre-war Farm Debt Adjustments Scheme for rural reconstruction purposes. However, following a review of the scheme in March/April 1972, the Commonwealth undertook to provide the whole \$100 million by 30 June 1973 and to provide \$15 million in 1973-74 to fund approvals given in the later months of 1972-73. Following the review of the scheme in March 1973, the Commonwealth agreed to provide a further \$36 million to finance new approvals in 1973-74. From the inception of the scheme until 28 February 1973, 12,621 applications for assistance had been received, 3,308 applications for debt reconstruction and 1,129 applications for farm build-up have been approved; and the value of assistance approved amounted to \$116.8 million.

Five Year Dairy Industry Stabilisation Plan. A new five year stabilisation plan providing for the continuation of financial assistance on butter and cheese production and an export bounty on processed milk products commenced on 1 July 1972. The amount of assistance on butter and cheese production will be determined annually in the light of the needs and circumstances of the industry but will not be less than \$27 million annually and for 1972-73 the level of assistance was set at \$27 million. The export bounty on processed milk products will continue at the maximum rate of \$800,000 annually for each of the five years of the plan. (Details of earlier plans have been given in previous year books.)

Commitments to industry-financed stabilisation schemes. In schemes of this nature the Commonwealth generally accepts a defined contingent liability to contribute to Government-approved stabilisation funds if growers' contributions prove inadequate. The contribution by the Commonwealth to the Wheat Prices Stabilisation Fund is an example.

Commonwealth payments are made to assist in control and eradication of diseases and pests by the various States and to provide natural disaster relief assistance, where these are beyond the financial capacity of the States.

For details of the Emergency Financial Assistance for Woolgrowers and the Wool Deficiency Payments Scheme see page 812. Details of the Marginal Dairy Farms Reconstruction Scheme are given on page 826.

Agricultural research

Each State Department of Agriculture has a number of research stations, investigating problems mainly of the regions in which they are located. In addition, a substantial amount of research and investigational work is carried out by these departments on farmers' properties. The work is supported by central laboratory and service facilities in capital cities, and increasingly also by research, analytical and diagnostic laboratories in the country areas. Research results are passed on to farmers through field days, meetings and publications, and through extension staff of the State Departments of Agriculture. In recent years, there has been increasing interest in economic interpretation of research results.

The Commonwealth Scientific and Industrial Research Organization carries out research at field stations and laboratory facilities in many parts of Australia, and also undertakes developmental studies at national level. Its research programs in the agricultural and livestock fields are generally designed to give information which is widely applicable in the Australian environment, and which may require further regional interpretation and adaptation in order that it may be of use to the farming industries. The universities also carry out agricultural research at laboratory and field levels, in addition to their teaching functions.

For details of agricultural training see Chapter 19, Education, Cultural Activities and Research.

Research schemes

The research activities of State Departments, the C.S.I.R.O., universities and other institutions, are supplemented by funds provided under a series of joint Commonwealth-industry research schemes. Statutory arrangements of this nature exist for tobacco, wool, wheat, dairying, meat, poultry (eggs), chicken meat, pigs, dried fruits and fish. Contributions to these research schemes are raised from the industry by way of a levy on the produce concerned, matched by Commonwealth funds.

For research work in industries where legislation-backed arrangements do not exist, voluntary contributions from the rural industry are matched by the Commonwealth from a Special Research Grant to finance a range of research projects e.g. fruit fly disinfestation, locust control, pest management, grape forecasting, etc.

Extension services and market outlook information

Agricultural extension services are provided by the States through their Departments of Agriculture, and in certain special fields by other State departments and authorities. Extension services also operate in the Northern Territory, Australian Capital Territory and Papua New Guinea.

All State Departments of Agriculture have university or agricultural college trained officers located in country areas. They carry out advisory and educational activities in the farming community, through contact with individual farmers, and through group and general publicity channels. In recent years several States have placed agricultural economists in country areas, strengthening the economic and farm management content of extension.

Support for the field extension staff is provided by information service groups, by applied research teams and industry and subject matter specialist groups and by diagnostic and analytical services. Some States have advisory staff specialising in agricultural mechanisation, and one State has begun to place extension method specialists in country areas.

Information services operated by Departments of Agriculture include agricultural journals, periodicals in various industry fields, pamphlets, newsletters, films, radio talks and television presentations. Group activities include discussion groups, field days, demonstrations, evening meetings and displays.

Since 1948 the Commonwealth has provided unmatched grants to the States to assist them in expanding their extension activities. In 1966, a program of rapid expansion of this assistance beyond the existing provision of \$1.4 million per annum was undertaken, with \$21 million being made available during the subsequent five years. Provision for the five year period which began in 1971 amounts to \$37 million. The Commonwealth Extension Services Grant is used mainly by State Departments of Agriculture, and its scope includes extension, regional research, information, economic services and training.

Since 1971 the Bureau of Agricultural Economics has organised a series of annual National Agricultural Outlook Conferences to which representatives from industry bodies, marketing authorities, State and Commonwealth government departments, universities and other agricultural institutions are invited to analyse and discuss in depth the outlook for rural commodities.

Extension type services are available from non-government sources. Some commercial firms and co-operatives provide extension or advisory services primarily for their clients. Over the past decade a new profession of farm management consultants has emerged, providing fee or contract services ranging from property assessment or supervision to detailed farm management and development plans. Farmers' needs and interests were demonstrated by an initial phase of grouping themselves together in farm management clubs to employ their own advisors.

Distribution, production and value of crops

Distribution of crops

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while other crops are confined to specific locations in a few States.

AREA OF CROPS: STATES AND TERRITORIES, 1971-72

(Acres)

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Wheat	5,995,438	2,570,312	1,373,879	2,640,447	5,045,608	11,293	..	1,024	17,638,001
Barley—									
2-row	647,861	707,946	355,182	1,886,713	1,409,323	28,128	..	..	5,035,153
6-row	274,912	23,020	36,805	49,731	842,592	2,947	..	..	1,230,007
Oats	645,598	814,154	50,848	417,237	1,121,573	15,893	..	250	3,065,553
Grain sorghum	513,466	404	1,045,834	..	3,865	..	13,932	..	1,577,501
Maize	82,145	927	110,076	..	71	..	..	..	193,219
Rye	17,236	12,509	(a)	48,377	24,299	26	..	..	(b)102,447
Rice	91,304	..	8,759	..	(a)	..	(a)	..	(b)100,063
Panicum and millet	1,467	9,293	48,426	..	..	..	(a)	..	(b)59,186
Canary seed	2,795	103	11,562	689	318	..	..	..	15,467
Legumes mainly for grain—									
Cow, field and poona peas	18,722	14,981	12,423	35,570	4,158	3,569	(c)	..	(b)89,423
Soy beans	9,137	44	35,344	..	..	..	(c)	..	(b)44,525
Navy beans . . . . .	..	..	20,363	..	..	422	..	..	20,785
Other	17,343	613	..	777	65,798	174	420	..	85,125
Crops for hay—									
Wheat	75,591	28,876	5,313	38,014	50,015	1,024	..	90	198,923
Barley	5,953	7,120	2,231	23,202	9,876	248	..	..	48,630
Oats	77,047	179,598	15,741	130,342	171,742	4,583	..	370	579,423
Rye	703	2,388	..	557	492	261	..	..	4,401
Other	946	228	7,701	..	2,067	..	453	..	11,395
Crops for green feed or silage—									
Wheat	43,539	2,964	21,934	3,840	13,294	495	..	..	86,066
Barley	73,742	9,152	40,688	51,059	57,778	858	..	..	233,277
Oats	530,341	76,677	471,934	139,324	258,971	26,429	..	547	1,504,223
Forage sorghum	67,280	2,482	197,340	..	6,023	20	..	..	273,145
Grain sorghum . . . . .	..	1,498	65,912	..	442	..	2,193	..	70,045
Maize	8,774	1,991	6,885	..	509	117	..	..	18,276
Rye	8,053	1,640	(c)	6,838	5,386	281	..	..	(b)22,198
Vegetables for animal feed	48,489	39,358	12,734	4,003	1,607	10,238	165	..	116,594
Other	23,129	4,513	80,970	4,449	12,462	16,212	223	169	142,127
Sugar cane—									
Cut for crushing	23,055	..	554,521	..	..	..	..	..	577,576
Cut for plants	662	..	12,164	..	..	..	..	..	12,826
Other land under sugar cane	18,330	..	77,514	..	..	..	..	..	95,844
Tobacco	3,146	9,499	12,178	..	..	..	..	..	24,823
Peanuts	561	..	82,744	..	(a)	..	100	..	(b)83,405
Cotton	72,425	..	17,042	..	9,540	..	..	..	99,007
Sunflower	590,248	5,290	132,635	775	38	..	..	..	728,986
Rapeseed	81,596	36,772	..	5,577	90,826	86	..	(a)	(b)214,857
Linseed	23,205	9,127	4,626	424	11,845	..	..	..	49,228
Safflower	46,146	3,143	30,843	488	2,923	..	..	..	83,543
Fruit—									
Tree	78,034	66,349	31,293	42,262	21,991	17,761	92	35	257,817
Small and berry	210	816	281	216	29	1,568	..	..	3,120
Other	18,659	62	23,838	..	539	..	129	..	43,227
Grapevines	31,270	51,383	3,882	71,090	6,735	..	..	..	164,360
Vegetables	73,710	82,525	67,158	25,754	14,852	24,629	394	131	289,153
All other crops—									
Nurseries	1,863	2,727	685	418	331	119	(a)	8	(b)6,151
Hops . . . . .	..	975	..	..	(a)	1,367	..	..	(b)2,342
Broom millet	1,117	91	67	..	(a)	..	..	..	(b)1,275
Other crops, n.e.i.	2,622	2,164	9,888	904	2,642	2,803	148	65	21,236
Total area of crops (excluding pastures)	10,347,871	4,783,714	5,100,243	5,629,077	9,270,560	171,551	18,249	2,689	35,323,954
<i>Area of above double-cropped</i>	<i>5,591</i>	<i>3,507</i>	<i>117,271</i>	<i>540</i>	<i>1,095</i>	<i>6,904</i>	<i>57</i>	<i>18</i>	<i>134,983</i>
Total area used for crops (excluding pastures)	10,342,280	4,780,207	4,982,972	5,628,537	9,269,465	164,647	18,192	2,671	35,188,971
Pastures and grasses cut for hay	555,467	1,354,388	109,658	414,040	202,582	194,475	3,435	1,780	2,835,825
Pastures and grasses harvested for seed	38,516	20,434	69,713	79,285	50,716	5,092	1,335	..	265,091
Total area used for crops (including pastures)	10,936,263	6,155,029	5,162,343	6,121,862	9,522,763	364,214	22,962	4,451	38,289,887

(a) Not available for publication, included in 'Other crops, n.e.i.'. (b) Incomplete; see footnotes to individual States. (c) Not available separately, included in 'Other'.

AREA OF CROPS: AUSTRALIA, 1967-68 TO 1971-72

('000 acres)

<i>Crop</i>	1967-68	1968-69	1969-70	1970-71	1971-72
Crops (excluding pastures)—					
Cereals for grain	29,314	34,941	32,026	26,703	29,017
Legumes for grain	64	72	103	110	240
Crops for hay	1,240	1,058	1,058	863	843
Crops for green feed or silage	3,637	3,292	3,792	3,449	2,466
Sugar cane	675	685	680	682	686
Tobacco	23	26	27	27	25
Peanuts	62	79	83	95	83
Cotton	77	81	77	87	99
Sunflower	9	34	64	187	729
Rapeseed . . . . .	..	n.a.	12	106	215
Linseed	54	71	122	103	49
Safflower	105	46	27	68	84
Fruit	311	310	309	305	304
Grapevines	140	143	150	158	164
Vegetables	280	298	295	265	289
All other crops	33	41	40	31	31
<i>Total</i>	36,024	41,178	38,865	33,237	35,324
Area of above double-cropped	140	166	224	137	135
<i>Total area used for crops (excluding pastures)</i>	35,884	41,012	38,641	33,101	35,189
Pastures and grasses cut for hay	1,560	2,897	2,135	2,499	2,836
Pastures and grasses harvested for seed	248	343	339	329	265
<i>Total area used for crops (including pastures)</i>	37,692	44,252	41,114	35,929	38,290

Production and yield per acre of crops

PRODUCTION OF CROPS (EXCLUDING PASTURES), 1972

<i>Crop</i>		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—										
Wheat	'000 tonnes	2,410	1,797	722	1,407	2,165	8	..	1	8,150
Barley—										
2-row	'000 bus	10,341	16,857	10,063	45,072	29,898	1,106	..	..	113,339
6-row	"	4,926	574	904	1,084	14,211	115	..	..	21,814
Oats	"	12,194	24,770	972	9,138	22,812	389	..	5	70,280
Grain sorghum	"	13,640	14	30,624	..	339	..	507	..	45,124
Maize	"	4,506	76	3,837	..	4	..	..	..	8,422
Rye	"	207	95	(a)	295	208	..	..	..	(b)805
Rice	"	12,121	..	588	..	(a)	..	(a)	..	(b)12,710
Panicum and millet	"	26	98	741	..	(a)	..	(a)	..	(b)866
Canary seed	"	14	1	133	6	2	..	..	..	156
Legumes mainly for grain—										
Cow, field and poona peas	tons	4,306	8,206	1,834	20,115	1,033	165	(a)	..	(b)35,660
Soy beans	"	11,427	11	21,660	..	..	..	(a)	..	(b)33,098
Navy beans . . . . .	"	..	..	6,146	..	..	159	..	..	6,305
Crops for hay—										
Wheat	tons	82,874	45,404	6,446	59,909	64,416	2,077	..	90	261,216
Barley	"	7,489	9,606	2,886	29,990	11,407	555	..	..	61,933
Oats	"	97,529	296,652	26,201	201,138	247,933	9,522	..	231	879,206
Rye	"	827	4,813	..	710	733	611	..	..	7,694
Other	"	1,355	530	11,775	..	2,653	..	491	..	16,804
Sugar cane, cut for crushing	'000 tons	965	..	18,119	..	..	..	..	..	19,084
Tobacco	'000 lb	4,090	12,709	18,507	..	..	..	..	..	35,306
Peanuts	cwt	4,755	..	901,024	..	(a)	..	865	..	(b)906,664
Cotton	'000 lb	222,276	..	14,633	..	24,849	..	..	..	261,757
Sunflower	cwt	2,382,250	46,930	471,735	2,970	158	..	..	..	2,904,043
Rapeseed	"	333,289	248,216	..	35,806	457,460	247	..	(a)	(b)1,075,018
Linseed	tons	3,654	3,334	1,280	91	1,708	..	..	..	10,067
Safflower	bus	583,800	39,802	190,818	4,458	29,805	..	..	..	848,683
Grapes	tons	160,950	374,848	5,471	266,802	10,666	..	..	..	818,737
Hops	cwt	..	13,550	..	..	(a)	22,818	..	..	(b)36,368
Broom millet—										
Grain	bus	2,628	149	..	..	..	..	..	..	2,777
Fibre	cwt	6,632	417	169	..	(a)	..	..	..	(b)7,218

(a) Not available for publication. (b) Incomplete; see footnotes to individual States.

PRODUCTION OF CROPS (EXCLUDING PASTURES): AUSTRALIA, 1967-68 TO 1971-72

Crop		1967-68	1968-69	1969-70	1970-71	1971-72
Cereals for grain—						
Wheat	'000 tonnes	7,547	14,804	10,546	7,890	8,510
Barley—						
2-row	'000 bus	28,731	58,438	61,652	78,634	113,339
6-row	"	8,067	14,149	13,249	25,016	21,814
Oats	"	39,628	94,250	68,723	88,882	70,280
Grain sorghum	"	10,582	10,820	20,114	47,673	45,124
Maize	"	7,132	5,869	7,543	8,331	8,422
Rye	"	380	597	417	814	805
Rice	"	11,597	13,420	12,951	15,698	12,710
Panicum and millet	"	780	701	1,266	2,127	866
Canary seed	"	60	220	697	202	156
Legumes mainly for grain—						
Cow, field and poona peas	tons	8,490	22,663	26,130	26,870	35,660
Soy beans	"	873	1,712	4,948	8,792	33,098
Navy beans	"	1,445	833	2,491	1,103	6,305
Crops for hay—						
Wheat	tons	319,943	391,787	436,311	256,038	261,216
Barley	"	47,379	71,181	71,427	67,658	61,933
Oats	"	837,862	1,205,313	953,053	910,838	879,206
Rye	"	10,181	15,804	13,815	13,360	7,694
Other	"	10,825	16,584	15,068	5,822	16,804
Sugar cane, cut for crushing	'000 tons	16,756	18,413	15,535	17,366	19,084
Tobacco	'000 lb	24,721	34,072	37,553	37,761	35,306
Peanuts	cwt	606,159	334,601	840,851	612,618	906,664
Cotton	'000 lb	214,736	223,423	186,443	132,013	261,757
Sunflower	cwt	35,461	122,986	260,794	1,160,364	2,904,043
Rapeseed	"	..	n.a.	87,862	661,762	1,075,018
Linseed	tons	10,482	19,496	36,093	30,318	10,067
Safflower	bus	878,246	569,939	229,507	515,388	848,683
Grapes	tons	628,523	544,669	745,661	540,700	818,737
Hops	cwt	36,752	42,757	40,319	33,591	36,368
Broom millet—						
Grain	bus	10,138	23,605	6,383	4,139	2,777
Fibre	cwt	10,245	23,123	10,210	6,452	7,218

YIELD PER ACRE OF CROPS (EXCLUDING PASTURES): AUSTRALIA, 1967-68 TO 1971-72

<i>Crop</i>		1967-68	1968-69	1969-70	1970-71	1971-72
Cereals for grain—						
Wheat	tonnes	0.336	0.552	0.450	0.493	0.483
Barley—						
2-row	bus	13.9	22.3	21.2	20.8	22.5
6-row	"	15.0	20.4	15.6	21.6	17.7
Oats	"	11.7	24.3	20.2	23.2	22.9
Grain sorghum	"	22.9	20.9	22.7	34.9	28.6
Maize	"	35.6	35.7	38.3	39.4	43.6
Rye	"	4.5	6.2	4.9	8.1	7.9
Rice	"	152.7	161.2	130.5	166.9	127.0
Panicum and millet	"	15.2	10.0	13.3	17.5	14.6
Canary seed	"	8.4	9.4	10.2	9.2	10.1
Legumes mainly for grain—						
Cow, field and poona peas	tons	0.15	0.40	0.34	0.34	0.40
Soy beans	"	0.34	0.33	0.40	0.49	0.74
Navy beans	"	0.24	0.08	0.19	0.10	0.30
Crops for hay—						
Wheat	tons	0.89	1.47	1.27	1.37	1.31
Barley	"	0.81	1.30	1.20	1.17	1.27
Oats	"	1.04	1.69	1.53	1.56	1.52
Rye	"	1.21	1.77	1.70	1.87	1.75
Other	"	1.34	1.07	0.68	0.24	1.48
Sugar cane, cut for crushing	tons	30.30	32.39	29.54	31.87	33.04
Tobacco	lb	1,076	1,323	1,408	1,402	1,422
Peanuts	cwt	9.82	4.24	10.13	6.43	10.87
Cotton	lb	2,793	2,744	2,414	1,524	2,910
Sunflower	cwt	3.96	3.65	4.06	6.21	3.98
Rapeseed . . . . .	"	..	..	7.31	6.24	5.00
Linseed	tons	0.19	0.28	0.30	0.29	0.20
Safflower	bus	8.40	12.29	8.58	7.54	10.16
Grapes	tons	4.49	3.81	4.96	3.43	4.92
Hops(a)	cwt	16.50	18.67	18.57	17.23	16.99
Broom millet—						
Grain	bus	n.a.	n.a.	n.a.	3.00	2.19
Fibre	cwt	4.58	6.68	5.29	4.68	5.66

(a) Yield per bearing acre only.

Value of crop production

Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in the chapter *Miscellaneous*.

GROSS VALUE OF PRINCIPAL CROP PRODUCTION, AUSTRALIA, 1967-68 TO 1971-72
(*\$'000*)

<i>Particulars</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Crops for grain—					
Wheat	435,443	731,334	547,253	414,292	469,226
Barley	42,222	70,531	65,982	110,789	121,368
Grain sorghum	11,582	13,861	24,121	57,382	50,731
Oats	34,205	58,763	33,351	54,283	37,396
Rice	12,831	14,358	14,533	13,720	12,842
Sugarcane, cut for crushing	135,714	156,008	148,054	173,300	207,388
Tobacco	27,919	38,528	38,930	42,528	39,848
Peanuts	6,136	3,152	8,985	7,998	11,765
Cotton	19,675	20,753	18,979	14,015	24,688
Sunflower	291	595	1,531	7,340	16,713
Rapeseed . . . . .	..	..	40	2,944	5,101
Linseed	1,270	2,233	4,337	3,522	1,049
Safflower	1,519	997	422	984	1,318
Fruit (excluding grapes)—					
Orchard (including edible tree nuts)	124,768	133,658	154,428	163,220	149,690
Berry and small	2,926	4,088	4,433	4,537	4,054
Other	27,552	28,133	34,135	31,727	32,711
Grapes—					
Table	5,855	5,161	7,092	6,412	7,223
Wine	15,191	18,549	23,016	20,419	24,570
Dried vine	26,704	20,891	28,604	19,533	33,374
Vegetables	144,569	138,186	140,222	169,053	160,444
Lucerne cut for hay	29,573	35,380	37,006	38,645	31,815
Pastures and grasses harvested for seed	11,067	12,692	11,316	9,620	8,302

Values of crop production in the various States and Territories are shown for 1971-72 in the following table. 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.

GROSS, LOCAL AND NET VALUES OF CROP PRODUCTION
STATES AND TERRITORIES, 1971-72
(*\$'000*)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales	404,527	86,757	317,770	(b)31,515	286,255
Victoria	301,742	46,198	255,544	30,137	225,408
Queensland	433,570	49,412	384,158	63,994	320,164
South Australia	213,207	27,319	185,888	27,109	158,779
Western Australia	215,998	35,315	180,683	36,012	144,670
Tasmania	35,652	9,705	25,947	4,631	21,316
Northern Territory	1,500	n.a.	1,500	n.a.	1,500
Australian Capital Territory	401	35	366	17	348
Australia	1,606,597	254,741	1,351,856	193,415	1,158,440

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

Wheat

Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades. In January 1934 a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

It should be noted that for the 1972-73 season, production of wheat was reported in metric units. The *standard unit of reporting is a tonne* and consequently, figures relating to production of wheat are expressed in tonnes in this section of the Year Book. Conversion of previous years series was made by using a factor of 1 tonne = 36.7437 bushels.

Wheat marketing and research

Two of the aspects of government and semi-government assistance and control which have contributed to the development of the industry are the organisation of overseas marketing and of research.

As a large proportion of the Australian wheat crop is exported, the marketing of wheat plays an important part in the industry. The Australian Wheat Board was constituted in September 1939, under National Security (Wheat Acquisition) Regulations, to purchase, sell, or dispose of wheat or wheat products, and to manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations. Details of the operations of the Australian Wheat Board and the Wheat Stabilization Board in licensing wheat grown during the seasons 1941-42 to 1948-49 will be found in Year Book No. 38, pages 940-1, and a detailed survey of legislation relating to stabilisation of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the Wheat Industry Stabilization Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295-9.

The Wheat Industry Stabilization Board ceased to function on 31 December 1948, and under the *Wheat Industry Stabilization Act 1948* the Australian Wheat Board was reconstituted to administer the first stabilisation plan and was given powers similar to those held under the National Security Regulations. The new Board commenced to function on 18 December 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts 1954, 1958, 1963-66 and 1968-70* for the purpose of administering the second, third, fourth and fifth five year stabilisation plans. Details of the more recent plans were published in Year Book No. 40, pages 841 and 842 (1947-48 to 1952-53 Plan), No. 44, page 861 (1953-54 to 1957-58), No. 48, pages 903 and 904 (1958-59 to 1962-63) and No. 54, pages 868 and 869 (1963-64 to 1967-68).

Fifth Post-war Wheat Industry Stabilisation Plan. Following negotiations during 1968, the fifth post-war Wheat Industry Stabilisation Plan was enacted by the Commonwealth and States towards the end of 1968. The new plan operates on very much the same lines as the previous ones. However, there are some important changes in detail in the main features of the plan which are set out below.

The plan was to operate for five years, commencing with the 1968-69 crop and ending with the marketing of the 1972-73 crop. However, the plan was subsequently extended to cover the 1973-74 crop. More detailed information is available in the publication: *The Wheat Industry, 1971-72 and 1972-73 (Preliminary)*, (10.35).

The *Wheat Export Charge Act 1968* repealed the *Wheat Export Charge Act 1963* and provided for an export charge on wheat and wheat products for the seasons 1968-69 to 1972-73 inclusive. The charge which may be levied is the excess of the average export return over the sum of the guaranteed price (*see below*) and five cents per bushel (\$1.84 per tonne) with a maximum charge of fifteen cents per bushel (\$5.51 per tonne). The ceiling on the Wheat Prices Stabilisation Fund, into which this charge is paid, has been raised from \$60 million to \$80 million. Any excess beyond this figure is returned to growers on a 'first in, first out' basis.

Payments from the Wheat Prices Stabilisation Fund will be paid to the Australian Wheat Board when required, for the purpose of building up the average export price for any season to the guaranteed price. When the average export realisations fall below the guaranteed price the deficiency is made up first by drawing upon the Stabilisation Fund in respect of up to 200 million bushels (5.44 million tonnes) of wheat from each crop. If the Fund is exhausted, the necessary deficiency payments will be made from the Commonwealth Government's Consolidated Revenue Fund. As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956-57 No. 20 Pool when \$3,178,000 was collected. In fact, grower's money in the Fund was exhausted with the closure of the 1959-60 Pool, and since then the Commonwealth has been obliged to meet its commitment in respect of the export guarantee. Up to the payment on the 1971-72 Pool this has involved an amount totalling \$284 million.

The Commonwealth has guaranteed a price to growers applying to 200 million bushels (5.44 million tonnes) of wheat exported from each crop during the period of the plan. The guaranteed price is subject to adjustment in each year of the plan in accordance with changes in price of cash costs, rail freights and handling and storage charges. There will no longer be any adjustment for imputed costs such as interest on farmers' equity. The guaranteed price per tonne in the 1972-73 season is \$57.61 f.o.b. vessel, an increase of \$1.83 on that of the previous season. Following the extension of the fifth plan to cover the 1973-74 crop, the guaranteed price for that season has been set at \$58.79 per tonne.

The Australian Wheat Board is retained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

Amending legislation, with effect from December 1969, gave the Australian Wheat Board discretionary power to sell wheat in Australia for purposes other than human consumption at prices below that set for human consumption but not less than the equivalent of the guaranteed price.

The table below shows the home consumption prices of wheat by end usage, for the last five years.

WHEAT PRICES: HOME CONSUMPTION PRICES^{(a)(b)}, 1968-69 TO 1972-73
(\$ per tonne)

Utilisation	1968-69	1969-70	1970-71	1971-72	1972-73
Human consumption	62.83	63.38	63.93	65.40	67.63
Manufacture of flour for industrial use		52.73	53.28	54.75	56.98
Stockfeed (basic)		55.12	56.95	58.79	67.63
Stockfeed (where purchaser undertakes to buy entire season's requirements from Wheat Board)		52.73	53.28	54.75	56.98

(a) Australian Wheat Board basic selling prices for f.a.q. bulk wheat, f.o.r. (ports) basis. (b) Includes a loading of \$0.37 per tonne in 1968-69, \$0.59 in 1969-70, \$0.55 in 1970-71, \$0.44 in 1971-72, and \$0.83 in 1972-73 to meet freight charges on wheat shipped to Tasmania.

Wheat delivery quotas plan

In March 1969 the Australian Wheat Growers' Federation put forward proposals for the allotment of quotas on deliveries of wheat to the Australian Wheat Board. The Federation's proposals were mainly designed to bring marketable supplies of wheat more into line with available outlets, following the record 1968-69 harvest. The proposals became effective for the 1969-70 harvest. State governments have the responsibility, for Constitutional reasons, of implementing the quota plan within the States and each State has enacted the necessary enabling legislation. The period of operation of the legislation varies among the States.

Quotas are subject to annual review. Wheat in excess of a quota may be received from a grower if storage space is available but 'quota wheat' will receive preference as far as receipt and subsequent sale by the Australian Wheat Board is concerned.

State quotas effective for the 1970-71 to 1972-73 seasons and those proposed by the Federation and agreed to by all parties for 1973-74 are given in the table below.

WHEAT DELIVERY QUOTAS, SEASONS 1970-71 TO 1973-74
('000 tonnes)

Quota	State	1970-71	1971-72	1972-73	1973-74
Basic	New South Wales	2,694	3,102	4,028	5,030
	Victoria	1,415	1,551	1,823	2,490
	Queensland	680	735	871	1,012
	South Australia	979	1,089	1,252	1,886
	Western Australia	2,259	2,068	2,585	3,065
	Total	8,027	8,545	10,559	13,483
Additional	New South Wales—				
	Prime hard	327	327	191	191
	Durum	..	54	54	54
	Queensland—				
	Prime hard	299	299	163	163
	South Australia—				
Southern hard	..	..	109	109	
	Total	626	680	517	517
	Grand total	8,653	9,225	11,076	(a)14,000

(a) In terms of '000 tonnes the national and State quotas are: New South Wales 5,275, Victoria 2,490, Queensland 1,175, South Australia 1,995, Western Australia 3,065, total 14,000. In addition, for 1973-74, provision has been made for a special pool quantity of 544,000 tonnes which will be available as determined by the Minister for Primary Industry, to any State that achieves deliveries in excess of its quota.

Deliveries made within the quotas established receive a first advance payment. This has been \$1.10 per bushel (\$40.42 per tonne) for f.a.q. bulk wheat, f.o.r. ports basis for a number of years. For 1973-74 in addition to \$1.10 there will be a special incentive first advance payment of 10 cents per bushel (\$3.67 per tonne). The quota plan also provides that wheat received which is declared by the Australian Wheat Board to have been sold and paid for within the season will be treated as quota wheat of the season and receive a first advance payment.

The States are responsible for determining the method of allocation of individual quotas within their respective boundaries. The bases of quota allocation vary from State to State, but in the main, quotas are based on a farm's average deliveries over a recent period.

Wheat standards

A description of the F.A.Q. (fair average quality) standard of wheat is given in issues of the Year Book up to No. 53 (*see*, for example No. 53 page 902). However, over recent years there has been an extension of the system and Australian wheat is now marketed under eleven main different and distinct classifications. Each reflects the climatic and growing characteristics of its region of origin and also the particular characteristics of the varieties of wheat cultivated.

For each classification, samples of wheat are obtained each year and are mixed to give a representative sample of that grade. From these samples, which are representative of all the wheat of a particular classification grown in that region, standards for each grade are established and expressed, since the recording of wheat production in metric units in 1972-73, in kilograms per hectolitre. This standard is used as the basis for sales of each grade and varies from year to year and from State to State. Below is a table showing the standard weight of the main wheat varieties for the five years 1968-69 to 1972-73.

AUSTRALIAN STANDARD WEIGHTS FOR PRINCIPAL GRADES, 1968-69 TO 1972-73

(Source: Australian Wheat Board)

(kilograms per hectolitre)

State and grade	1968-69	1969-70	1970-71	1971-72	1972-73
New South Wales—					
Prime hard	76.1	77.7	78.6	78.3	78.0
Northern hard	(a)77.8	78.0	78.6	79.6	81.5
South-Western F.A.Q.	79.0	78.6	77.4	78.3	80.5
Victoria—					
F.A.Q.	80.7	81.7	81.1	80.5	82.3
Queensland—					
Prime hard	(b)81.5	80.5	79.6	78.6	80.2
Hard	79.0	79.2	78.6	(c)	76.2
Southern prime hard	79.8	(c)	(c)	79.2	(c)
Southern F.A.Q.	79.3	(c)	(c)	(c)	(c)
South Australia—					
Hard	79.3	78.3	77.7	76.8	80.7
F.A.Q.	79.3	78.6	78.6	78.3	81.6
Western Australia—					
F.A.Q.	79.8	78.6	79.9	79.9	78.6

(a) Northern f.a.q. (b) Central f.a.q. (c) Not fixed.

The several F.A.Q. grades, while possessing some characteristics in common, vary in protein content, milling characteristics, and dough qualities, and all are distinct grades. Similarly, the prime hard, hard and soft grades are individual grades segregated on the basis of specific quality characteristics.

In a normal season Australia produces a full range of wheats for all purposes from high protein hard wheats to low protein soft wheats.

Bulk handling and storage of wheat

A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

Bulk handling is general and has been in operation in all States for a considerable time. The bodies concerned with the administration of bulk handling in the various States are: Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd, Co-operative Bulk Handling Ltd (Western Australia), and the Tasmanian Grain Elevators Board.

**WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES(a)
STATES, 30 NOVEMBER 1968 TO 1972**

(Source: Bulk handling authorities in the various States. *see above*)
(*000 tonnes)

<i>State</i>	1968	1969	1970	1971	1972
New South Wales	5,034	5,786	6,368	5,763	5,823
Victoria(b)	2,942	3,538	3,602	3,884	3,884
Queensland	838	947	985	1,129	1,189
South Australia	1,539	2,599	2,582	2,555	2,545
Western Australia	4,345	2,280	5,525	5,851	5,898
Tasmania	29	29	29	29	29
Australia	15,171	17,901	19,091	19,212	19,368

(a) Includes terminals, sub-terminals, country installations, and temporary storage. (b) Includes storage in southern New South Wales operated by the Victorian Grain Elevators Board.

Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

International Wheat Agreement

Details of the first and second International Wheat Agreements operative from 1 August 1949 to 31 July 1953, and from 1 August 1953 to 31 July 1956, respectively, were published in Year Book No. 42 (*see* pages 840-1) or previous issues. Details of the third, fourth and fifth International Wheat Agreements which covered the periods from 1 August 1956 to 31 July 1959, 1 August 1959 to 31 July 1962 and 1 August 1962 to 31 July 1968 were published in Year Books 43 (page 836), 48 (page 906) and 55 (page 836) respectively.

International Grains Arrangement

In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. Details of the Arrangement were published in Year Book No. 55 (*see* page 836).

A new three year International Wheat Agreement came into effect on 1 July 1971. Like the International Grains Arrangement it covers a Wheat Trade Convention and a Food Aid Convention. The Wheat Trade Convention differs markedly from its 1968 predecessor in that it does not establish any maximum or minimum price provisions.

Research into the wheat industry

Details of research into the Wheat Industry were published in Year Book No. 55 and previous issues. To the end of June 1972, the Wheat Industry Research Council and the State Wheat Industry Research Committees had spent \$17,710,000 mainly through grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and Wheat Research Institutes.

Wheat farms: number and classification by activity

Particulars of the number of farms growing twenty acres and upwards of wheat for grain during each of the years 1967-68 to 1971-72 are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

**NUMBER OF FARMS GROWING TWENTY ACRES AND UPWARDS
OF WHEAT FOR GRAIN: STATES AND A.C.T., 1967-68 TO 1971-72**

<i>State or Territory</i>	1967-68	1968-69	1969-70	1970-71	1971-72
New South Wales	20,619	21,340	20,608	18,537	18,723
Victoria	11,056	11,722	11,618	9,669	10,273
Queensland	5,867	6,063	4,982	2,816	4,503
South Australia	8,905	9,884	9,529	8,548	8,997
Western Australia	8,746	8,964	8,922	8,677	8,559
Tasmania	159	239	203	403	160
Australian Capital Territory	20	27	16	9	8
Australia	55,372	58,239	55,878	48,659	51,223

There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for all States and for Australia, in respect of the 1968-69 season, in a series of statistical bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1968-69, Nos 1 to 7. These publications also contain details of numbers of rural holdings classified according to area of wheat for grain.

Varieties of wheat sown

The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field, and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages as well as an improvement in the quality of wheat grown. In 1968 the Australian Wheat Collection was established at Tamworth, New South Wales, to supply basic genetic material to Australian wheat breeders. Some 15,000 varieties are at present held in the collection.

The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1971-72 were as follows: New South Wales, Timgalen (16.3), Heron (15.8), Falcon (13.3); Victoria, Insignia (32.8), Olympic (19.3), Summit (14.6); Queensland, Mendox (27.5), Timgalen (19.7), Gamut (18.7); South Australia, Heron (32.3), Insignia (including Insignia 49) (14.9); and Western Australia, Gamenya (57.1), Falcon (13.4), Insignia (7.8). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry, 1971-72 and 1972-73 (Preliminary)* (published in May 1973).

Wheat area, production and yield per acre

Prominent factors in the early development of the wheat industry were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties of wheat 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.

WHEAT FOR GRAIN: AREA AND PRODUCTION STATES AND AUSTRALIAN CAPITAL TERRITORY, 1968-69 TO 1972-73

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
1968-69	9,962	3,984	1,789	3,748	7,295	17	4	26,799
1969-70	8,623	3,298	1,504	3,210	6,788	15	3	23,449
1970-71	5,475	1,879	825	1,983	5,835	11	1	16,009
1971-72	5,995	2,570	1,374	2,640	5,046	11	1	17,638
1972-73p	6,515	2,794	1,172	2,472	6,212	11	1	19,177
PRODUCTION ('000 TONNES)								
1968-69	5,855	2,469	1,143	2,263	3,060	11	2	14,804
1969-70	4,430	2,274	405	1,610	1,815	10	2	10,547
1970-71	3,010	1,004	120	790	2,957	8	1	7,896
1971-72	2,410	1,797	722	1,407	2,165	8	1	8,510
1972-73p	1,989	1,320	401	815	2,017	8	1	6,552

A graph showing the area sown to wheat for grain in Australia for the years 1900-01 to 1970-71 appears on plate 39, page 746 of Year Book No. 58, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013 of Year Book No. 50. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48, and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 833.

The size of the wheat harvest in Australia is determined largely by the nature of the season, resulting in considerable year-to-year fluctuations in production. The main wheat-producing States of Australia are New South Wales, Western Australia and Victoria. Tasmania imports wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits. The production of wheat from 1940-41 is shown in Plate 40, page 765.

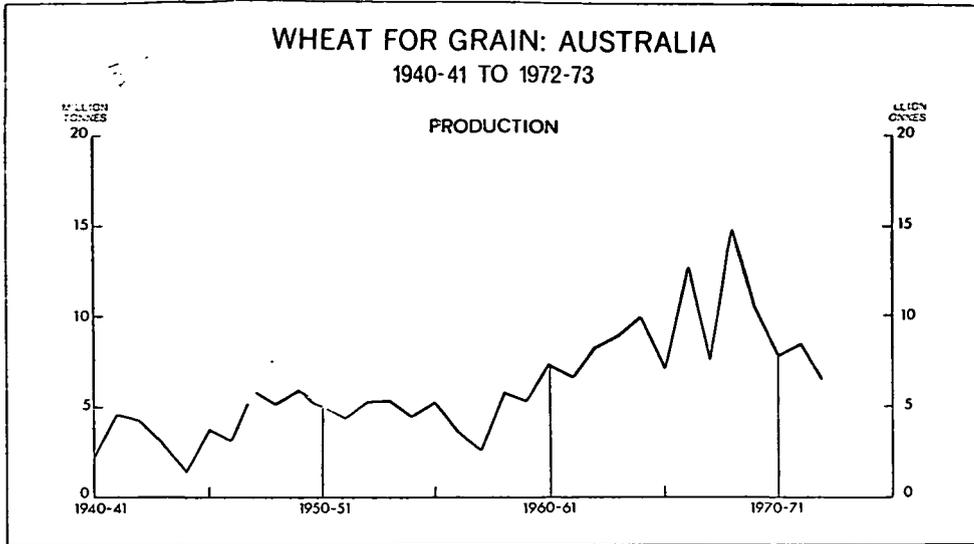


PLATE 40

Price of wheat

For details of prices paid for wheat by end usage, see the table on page 761.

The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat, f.o.b. basis, are shown below.

MONTHLY EXPORT WHEAT PRICES(a): JULY 1968 TO JUNE 1973
(\$ per tonne)

Month	1968-69	1969-70	1970-71	1971-72	1972-73
July	52.31	50.89	46.99	52.50	49.05
August	52.31	50.11	47.40	51.53	51.17
September	52.31	48.46	49.19	49.88	61.18
October	52.27	48.46	50.94	48.92	71.52
November	52.41	48.46	51.99	48.55	73.99
December	52.41	48.46	52.27	48.13	83.09
January	52.41	48.13	53.19	47.95	82.44
February	52.41	48.13	52.87	47.95	72.52
March	52.22	47.49	52.87	47.95	70.18
April	51.90	46.99	52.68	48.73	70.23
May	51.53	46.85	52.50	48.96	73.90
June	50.75	47.03	52.31	48.69	83.13

(a) Australian Wheat Board average basis f.o.b. price quoted for f.a.q. bulk wheat. Much of the wheat exported is sold under contract for delivery over lengthy periods, and therefore, the prices shown do not necessarily reflect the prices received for all wheat shipped during the months shown.

International Wheat Agreements, 1949-53 to 1962-68. As indicated on page 763 full details of the five International Wheat Agreements covering the years 1949-53, 1953-56, 1956-59, 1959-62 and 1962-68 have been given in previous issues of the Year Book.

International Grains Agreement. In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. The new arrangement consisted of two legal instruments, the Wheat Trade Convention and the Food Aid Convention. For further details see Year Book No. 57, page 758.

International Wheat Agreement, 1971. The new International Wheat Agreement came into force on 1 July 1971. It has a life of three years. The form of the 1967 International Grains Arrangement has been continued and the new Agreement comprises two separate legal instruments, namely the Wheat Trade Convention and the Food Aid Convention.

The new Wheat Trade Convention ensures that the machinery for consultation and co-operation on wheat marketing existing under earlier Agreements will be maintained. The administrative body, the International Wheat Council, continues in existence. The Convention provides for the continuation of the full reporting and recording of all commercial and concessional transactions in wheat and flour.

The 1971 Wheat Trade Convention differs in an important aspect from earlier agreements in that it contains no specific pricing provisions, but the agreement specifically provides that when prices and related rights and obligations are judged capable of successful negotiation, the International Wheat Council shall arrange a further conference with the objective of bringing them into effect. In addition, a newly established Advisory Sub-Committee on Market Conditions will keep the wheat market under continuous review. This Sub-Committee will report to the Executive Committee of the Council if it considers that a situation of market instability has arisen, or threatens to arise. The Executive Committee will then review the situation and try to find mutually acceptable solutions.

With the entry of U.S.S.R. and Brazil, which were not members of the 1967 International Grains Agreement, all major wheat trading nations except the People's Republic of China participate in the Wheat Trade Convention.

The new Food Aid Convention is basically unchanged from the previous arrangement. Under this Convention a number of developed countries, importers and exporters alike, will continue to provide developing countries with food aid in the form of grains or flour for human consumption. Australia's contribution will remain unchanged at 225,000 tonnes annually (8,267,000 bushels of wheat). Since the new convention has fewer members and total annual contributions have fallen from 4,259,000 tonnes to 3,974,000 tonnes, Australia's share has risen marginally to some 5.6 per cent.

Several minor changes have been incorporated in the new Food Aid Convention. A new clause provides that in exceptional cases, and on request, limited quantities of rice may be included in the program. Also, sales on credit terms of 20 years or more will be eligible to be counted against aid commitments provided that maximum use is made of the other eligible forms of aid such as grants and sales for non-transferable local currency.

Value of the wheat crop

The estimated gross value of the wheat crop in each State and in Australia during the season 1971-72 and the value per acre are shown below.

WHEAT FOR GRAIN: VALUE OF CROP(a), STATES, 1971-72

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(b)</i>
Aggregate value	· \$'000	130,264	100,001	39,724	78,739	120,044	415	469,226
Value per acre	· \$	21.73	38.91	28.91	29.83	23.79	37.73	26.60

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of \$27,538,000 by the Commonwealth Government. (b) Includes the Australian Capital Territory.

Production and disposal of wheat in Australia

In the following tables details are given of Australian Wheat Board transactions, production and disposal of wheat during each of the years ended 30 November 1969 to 1972, and preliminary estimates for 1972-73.

RECEIVALS OF WHEAT BY THE AUSTRALIAN WHEAT BOARD, 1968-69 TO 1972-73 (^{'000} tonnes)

<i>State</i>	<i>Year ended 30 November</i>				
	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>	<i>1972-73</i>
New South Wales	5,357	3,966	2,555	2,008	1,446
Victoria	2,577	2,337	894	1,753	1,165
Queensland	1,056	326	90	666	325
South Australia	2,162	1,516	681	1,306	709
Western Australia	2,876	1,598	2,712	1,927	1,776
Tasmania	6	5	3	5	4
Total	14,033	9,747	6,935	7,665	5,426

Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30 November for the years 1968 to 1972 are shown in the following table. These data relate to stocks held at mills, sidings, ports, and depots as recorded by the Australian Wheat Board.

STOCKS OF WHEAT, AND FLOUR AS WHEAT, 1968 TO 1972

(Source: Australian Wheat Board)

('000 tonnes)

State	30 November				
	1968	1969	1970	1971	1972
New South Wales	276.2	2,304.1	2,629.3	1,504.7	489.2
Victoria	361.9	1,684.5	2,112.2	655.1	399.3
Queensland	18.7	185.1	61.7	2.5	25.7
South Australia	184.8	1,254.5	1,227.8	430.0	278.9
Western Australia	560.1	1,816.1	1,175.0	798.6	244.7
Tasmania	9.6	15.5	15.5	13.4	12.9
Total	1,411.3	7,259.8	7,221.5	3,404.3	1,450.7

Particulars of the production and disposal of wheat during the years ended 30 November 1968 to 1972 are shown in the following table.

PRODUCTION, DISPOSAL AND STOCKS OF WHEAT: AUSTRALIA, 1967-68 TO 1971-72

('000 tonnes)

	Year ended 30 November—				
	1968	1969	1970	1971	1972
Opening stocks (including flour as wheat)(a)					
(b)	2,192	1,411	7,260	7,222	3,404
Production	7,547	14,804	10,546	7,890	8,510
Total available supplies	9,739	16,215	17,806	15,112	11,914
Exports—					
Wheat	5,103	5,960	7,569	8,595	7,427
Flour(c)	520	408	454	376	256
Breakfast foods and other products(b)(c)	27	52	60	79	76
Local consumption—					
Flour(b)(c)	1,225	1,211	1,236	1,246	1,276
Breakfast foods and other products(b)(c)	65	46	38	38	38
Stock feed wheat sales(b)	615	267	321	395	533
Seed	667	591	389	444	544
Balance (including retained on farm for other than seed use)	148	183	401	513	291
Closing stocks (including flour as wheat)(a)(b)	1,411	7,260	7,222	3,404	1,451
Total disposals	9,786	15,978	17,690	15,090	11,892
Excess (+) or deficiency (—) of disposals in relation to total available supplies(d)	+47	—237	—116	—22	—22

(a) Held at ports, depots, mills and sidings. (b) Source: Australian Wheat Board. (c) In terms of wheat.
(d) Includes allowances for unrecorded movements in stocks, gain or loss in out-turn, etc., and in differences related to the timing of official export statistics.

The *Wheat Industry Stabilization Act* 1948 empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, 1967-68 TO 1971-72
(\$'000)

	67/68 <i>Pool</i>	68/69 <i>Pool</i>	69/70 <i>Pool(a)</i>	70/71 <i>Pool(a)</i>	71/72 <i>Pool(a)</i>
	(1967-68 <i>Harvest</i>)	(1968-69 <i>Harvest</i>)	(1969-70 <i>Harvest</i>)	(1970-71 <i>Harvest</i>)	(1971-72 <i>Harvest</i>)
Paid to growers	321,719	546,475	319,741	321,607	371,703
Rail freight	42,009	90,644	57,083	50,843	46,894
Expenses	32,317	65,014	55,161	36,395	35,600
Total payments	396,045	702,133	431,985	408,845	454,197
Value of sales delivered	(b)353,793	(c)674,414	(d)405,225	(e)377,500	(f)414,743

(a) Incomplete. (b) Subject to an additional \$42,870,000 provided by the Commonwealth Government and payment of \$618,000 to Wheat Industry Research Fund. (c) Subject to an additional \$29,008,000 provided by the Commonwealth Government and payment of \$1,289,000 to Wheat Industry Research Fund. (d) Subject to an additional \$27,538,000 to be provided by the Commonwealth Government and payment of \$778,000 to Wheat Industry Research Fund. (e) Subject to an estimated additional \$32,058,000 to be provided by the Commonwealth Government and payment of \$713,000 to the Wheat Industry Research Fund. (f) Subject to an estimated additional \$40,132,000 to be provided by the Commonwealth Government and payment of \$678,000 to the Wheat Industry Research Fund.

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

Imports of wheat

Wheat and flour have been imported in substantial quantities on four occasions since 1900; in 1902-3 the wheat harvest was only 336,874 tonnes, and wheat and flour equivalent to 339,323 tonnes of wheat were imported. An equivalent of 198,102 tonnes was imported in 1914-15 to supplement the yield of 680,000 tonnes produced in that season. Drought conditions in the Eastern States in 1945 necessitated the importation of feed grains from the U.S.A. including 20,000 tonnes of wheat. Owing to drought conditions in 1957-58 supplies of high protein wheat were insufficient for local requirements and, as a result, 40,415 tonnes were imported from Canada in 1958. No wheat has since been imported.

Exports of wheat and flour

Statistics in the following three tables are for years ended 30 June and relate to the exports of *Australian produce* only.

WHEAT AND FLOUR: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72
(\$'000 f.o.b.)

	1967-68	1968-69	1969-70	1970-71	1971-72
Wheat(a)	342,767	258,334	337,570	433,000	418,529
Flour(b)	25,303	23,822	23,011	21,374	15,091
Total	368,070	282,156	360,581	454,374	433,620

(a) Includes both bulk and bagged. (b) White flour (plain and self-raising), sharps and wheatmeal for baking.

WHEAT: EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1967-68 TO 1971-72(a)
(*'000 tonnes*)

<i>Country to which exported</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Arab Republic of Egypt . . . . .	..	..	..	1,275	1,801
Chile	171	105	79	197	297
Germany (East) . . . . .	..	..	..	114	170
Germany, Federal Republic of	6	..	15	23	273
Iraq	197	..	56	436	192
Japan	612	1,147	1,014	821	1,466
Korea, Republic of . . . . .	..	10	..	27	361
Kuwait	69	68	82	103	104
Malaysia	255	253	283	312	310
Peru	83	154	150	157	155
U.S.S.R. . . . .	..	..	..	..	502
United Kingdom	574	781	1,041	1,744	573
Other(b)	4,531	2,373	4,166	3,879	2,255
Total	6,498	4,891	6,886	9,088	8,459

(a) 1972-73 preliminary estimate 5,360,000 tonnes. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

The following table shows the exports of flour to various countries for each of the years 1967-68 to 1971-72. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

FLOUR(a): EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1967-68 TO 1971-72
(Tonnes)

<i>Country to which exported</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Burma . . . . .	..	..	10,031	..	8,940
Fiji	30,604	32,045	31,412	33,632	33,948
Indonesia	59,479	53,157	62,971	51,064	7,893
Libya	940	7,700	10,506	13,575	11,243
Malawi	9,511	5,865	8,127	10,895	11,756
Mauritius	15,761	15,425	18,305	13,542	17,299
Oman	5,119	5,341	5,634	4,727	6,204
Papua New Guinea	16,151	16,472	18,478	21,407	19,524
Qatar	4,053	4,024	5,185	5,876	7,126
Saudi Arabia	15,588	13,625	7,188	10,570	9,530
Sri Lanka	145,714	129,733	89,196	85,020	14,911
Union of Arab Emirates	11,074	9,834	14,890	18,072	17,952
Other(b)	55,098	50,849	40,979	32,487	30,182
Total	369,092	344,070	322,902	300,867	196,508

(a) Plain white and self-raising flour, sharps and wheatmeal for baking. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

World area and production of wheat

The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from statistics published by the International Wheat Council. Harvests in the northern hemisphere occur in the first of the two years mentioned in each column heading, and in the southern hemisphere at the end of that year and the beginning of the next. Harvests of the northern hemisphere countries are thus combined with those of the southern hemisphere which immediately follow; e.g. in 1970-71 the Canadian harvest occurred from August to September 1970 and the Australian harvest from October 1970 to February 1971.

WHEAT: AREA, PRODUCTION AND YIELD PER HECTARE IN VARIOUS COUNTRIES AND REGIONS(a), 1969-70 TO 1971-72
(Source for countries other than Australia: International Wheat Council—World Wheat Statistics)

Country and region	Area(b)			Production(c)			Yield per hectare		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
	'000 hectares	'000 hectares	'000 hectares	'000 tonnes	'000 tonnes	'000 tonnes	tonnes	tonnes	tonnes
Africa	9,250	9,450	9,500	7,170	8,270	8,500	0.775	0.875	0.895
Asia—									
China, People's Republic of(d)	23,500	24,700	25,000	22,300	24,500	24,900	0.949	0.992	0.996
India	15,958	16,626	17,892	18,651	20,093	23,247	1.169	1.209	1.299
Pakistan	6,277	6,349	6,185	6,711	7,399	6,616	1.069	1.165	1.070
Turkey(e)	8,250	8,600	8,680	10,500	10,000	13,250	1.273	1.163	1.526
Total Asia(a)	65,600	67,300	68,300	69,720	72,270	75,900	1.063	1.074	1.111
Europe—									
France	4,034	3,746	3,977	14,459	12,922	15,360	3.584	3.450	3.862
Germany, Federal Republic of(e)	1,494	1,493	1,544	6,000	5,662	7,142	4.016	3.792	4.626
Italy	4,218	4,138	3,952	9,585	9,689	10,070	2.272	2.341	2.548
Spain(e)	3,744	3,756	3,658	4,622	4,062	5,384	1.235	1.081	1.472
Total Europe(a)	28,170	27,265	28,373	70,829	66,877	80,860	2.514	2.453	2.850
North and Central America—									
Canada	10,104	5,052	7,781	18,623	9,022	14,253	1.843	1.786	1.832
United States	19,254	17,863	19,608	39,740	37,291	44,620	2.064	2.088	2.276
Total North and Central America(a)	30,130	23,635	27,990	60,570	48,500	60,590	2.010	2.052	2.165
Oceania—									
Australia	9,486	6,479	7,261	10,547	7,890	8,380	1.112	1.218	1.154
Total Oceania(a)	9,594	6,575	7,382	10,834	8,214	8,761	1.129	1.249	1.187
South America—									
Argentina	5,191	3,332	..	7,020	4,920	5,100	1.352	1.477	..
Total South America(a)	7,840	6,520	7,480	10,205	8,720	9,250	1.302	1.337	1.237
U.S.S.R. (Europe and Asia)	66,426	65,200	64,035	79,917	99,664	99,700	1.208	1.529	1.557
World total(a)	217,010	205,945	213,060	309,245	312,515	343,561	1.425	1.517	1.613

(a) Totals include estimates for countries not listed. (b) One acre = 0.404686 hectares. (c) One tonne = 36.7437 bushels. (d) Unofficial. (e) Includes spelt.

Principal wheat exporting and importing countries

The following table shows world exports of wheat and wheat flour (in terms of wheat) by the major wheat exporting countries, according to continents and countries of primary destination, based on statistics recently published by the International Wheat Council. While Australia's production of wheat has averaged about three per cent of the world's total during recent years, its exports account for a much higher proportion of the total quantities shipped. For the three years ended 1971-72 Australia's share of the world wheat exports has averaged 16 per cent.

**WORLD EXPORTS OF WHEAT, AND WHEAT FLOUR IN TERMS OF WHEAT
1967-68 TO 1971-72**

(Source: International Wheat Council—Review of the World Wheat Situation)

('000 tonnes)

Year and country of primary destination	Exporting country							Total
	Argentina	Australia	Canada	E.E.C.	U.S.A.	U.S.S.R.	Other	
1971-72p—								
Africa—								
Arab Republic of Egypt . . . . .	..	1,860	64	599	5	44	185	2,757
Other	63	484	598	1,128	1,506	94	33	4,306
Total Africa	63	2,344	662	1,727	1,511	138	218	7,063
Asia(b)—								
China, People's Republic of . . . . .	..	..	2,967	..	..	..	..	2,967
Iran . . . . .	..	432	..	2	588	..	22	1,044
Iraq . . . . .	..	180	44	7	..	55	..	286
Indonesia . . . . .	..	116	38	117	182	..	3	456
Japan . . . . .	..	1,454	1,388	..	2,195	..	..	5,037
Korea, Republic of . . . . .	..	334	..	3	1,754	..	5	2,096
Kuwait . . . . .	..	124	..	10	..	..	..	134
Lebanon . . . . .	..	117	10	72	153	34	8	394
Malaysia . . . . .	..	323	14	..	..	..	3	340
Saudi Arabia . . . . .	..	131	5	67	138	..	..	341
Singapore . . . . .	..	137	13	..	9	..	..	159
Other	14	657	1,455	867	4,474	532	747	8,746
Total Asia	14	4,005	5,934	1,145	9,493	621	788	22,000
Europe(b)—								
Norway . . . . .	..	110	52	10	87	..	97	356
United Kingdom . . . . .	..	513	1,429	624	694	391	183	3,834
Germany (East) . . . . .	..	443	..	..	..	1,522	..	1,965
Other	367	65	1,533	933	1,438	2,475	107	6,918
Total Europe	367	1,131	3,014	1,567	2,219	4,388	387	13,073
North and Central America	..	3	747	142	964	237	1	2,094
Oceania . . . . .	..	146	4	30	2	..	..	182
South America—								
Chile	155	325	..	11	7	53	..	551
Peru . . . . .	..	156	174	..	458	..	..	788
Other	724	48	333	8	1,853	41	70	3,077
Total South America	879	529	507	19	2,318	94	70	4,416
U.S.S.R. . . . .	..	502	2,821	18	..	..	68	3,409
All other . . . . .	..	..	27	8	..	..	11	46
Total, 1971-72	1,323	8,660	13,716	4,656	16,907	5,478	1,543	52,283
1967-68	1,400	7,000	8,900	4,400	20,200	5,100	3,800	50,800
1968-69(a)	2,800	5,400	8,700	5,000	14,700	5,400	3,000	45,000
1969-70	2,100	7,300	9,000	7,200	16,500	5,900	2,300	50,300
1970-71	1,700	9,500	11,600	3,100	19,800	7,100	1,000	53,700

(a) Years prior to 1968-69 include European Economic Community intratrade. (b) Excludes U.S.S.R., details of which are shown separately.

The above particulars are based on customs clearances of the exporting countries, and relate to years ended 30 June. There are small differences between Australian exports as shown and those on pages 768-9 due in part to the use by the International Wheat Council of a slightly different factor to convert flour to wheat equivalent.

Oats

Oats is traditionally a cereal of moist temperate regions. However improved varieties and management practices have enabled oats to be grown over a wide range of soil and climatic conditions. It has excellent feed value and produces a greater bulk of growth than other winter cereals. It needs less cultivation than other winter cereals and responds to superphosphate and nitrogen in districts where it is usual to apply fertilisers. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as a fodder crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold through voluntary pools in Victoria, South Australia and Western Australia. In 1971 State statutory marketing boards were set up in New South Wales and Victoria after a poll of growers. The Victorian board was disbanded in 1972 and marketing reverted to a voluntary pooling arrangement. In the same year legislation to constitute a board was passed in South Australia. It has not yet commenced to operate. In Western Australia the grain is sold through a voluntary pool.

Oats area, production and yield per acre

Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1971-72 accounted for 61 per cent of the area of all crops, oats grown for grain represented only 11 per cent.

**OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
AREA ('000 ACRES)								
1967-68	907	723	31	525	1,158	35	1	3,380
1968-69	1,185	991	55	516	1,092	31	1	3,872
1969-70	903	884	75	372	1,139	22	1	3,396
1970-71	1,002	987	60	482	1,284	23	1	3,838
1971-72	646	814	51	417	1,122	16	..	3,066

	PRODUCTION ('000 BUSHELS)(a)							
1967-68	8,235	6,859	450	3,299	19,759	1,014	12	39,628
1968-69	27,454	30,230	1,119	11,895	22,942	583	27	94,250
1969-70	19,238	25,927	950	6,665	15,463	455	25	68,723
1970-71	25,133	25,720	464	8,408	28,657	486	14	88,882
1971-72	12,194	24,770	972	9,138	22,812	389	5	70,280

	YIELD PER ACRE (BUSHELS)(a)							
1967-68	9.1	9.5	14.6	6.3	17.1	28.7	20.3	11.7
1968-69	23.2	30.5	20.3	23.1	21.0	18.5	22.4	24.3
1969-70	21.3	29.3	12.6	17.9	13.6	20.5	28.1	20.2
1970-71	25.1	26.1	7.7	17.5	22.3	20.8	23.7	23.2
1971-72	18.9	30.4	19.1	21.9	20.3	24.5	19.0	22.9

(a) 40 lb per bushel.

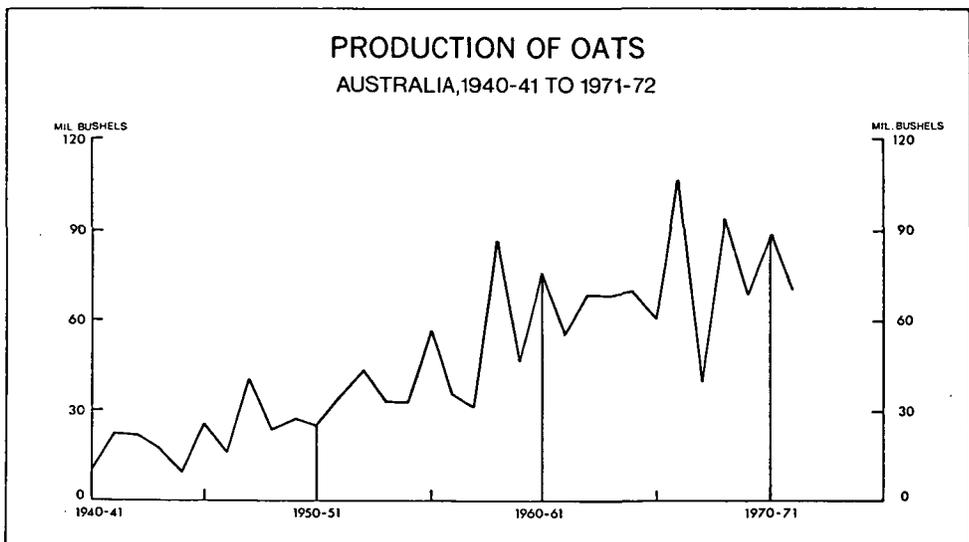


PLATE 41

Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015 of Year Book No. 50. The area sown to oats from 1900-01 to 1970-71 is shown in Year Book No. 58, Plate 39, page 746.

The production of oats from 1940-41 to 1971-72 is shown in plate 41, page 772.

Production of oats in 1971-72, 70,280,000 bushels was 35 per cent below the record production in 1966-67. Yield per acre was 22.9 bushels, which is below the record yield per acre of 25.2 bushels in 1966-67.

Value of oat crop

The average wholesale price in the Melbourne market for oats of good milling quality was \$0.73 per bushel in 1971-72, compared with \$0.64 in 1970-71. The estimated gross value of the oat crop in each State for the 1971-72 season and the value per acre were as follows.

OATS FOR GRAIN: VALUE OF CROP, STATES, 1971-72

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value	\$'000	8,780	11,334	1,215	5,496	10,256	304	37,391
Value per acre	\$	13.60	13.92	23.89	13.17	9.14	19.13	12.20

(a) Includes the Australian Capital Territory.

Exports of oats

OATS: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

		1967-68	1968-69	1969-70	1970-71	1971-72
Quantity	'000 bus	10,033	18,373	12,086	30,640	18,132
Value	\$'000 f.o.b.	8,408	13,042	7,559	23,827	12,425

In 1971-72 the principal countries of destination were Japan (12,581,000 bushels), Italy (1,561,000 bushels), the Federal Republic of Germany (1,647,000 bushels) and the Netherlands (1,620,000 bushels).

World production of oats

The world production of oats for the year 1972, according to preliminary figures issued by the United States Department of Agriculture, amounted to 2,706 million bushels, harvested from 74.2 million acres, resulting in an average yield of 36.1 bushels an acre. This compared with an estimated production in the previous year of 3,015 million bushels from an area of 74.9 million acres and an average yield of 40.3 bushels an acre. The main producers are Canada, West Germany and Poland, with Australia producing about 3 per cent of the world total. On occasions in recent years Australia has been the world's largest exporter.

Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley is grown principally on pasture land worked up early in the year of sowing. In this way it forms an important phase in the rotation of crops. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Crops sown for malting purposes require a combination of light textured soil of moderate fertility, reliable rainfall, and mild weather during ripening. The main barley-growing areas in Australia are situated in South Australia (South Adelaide Plains, Eyre and Yorke Peninsulas), but considerable quantities are grown also in New South Wales, Victoria, Queensland and Western Australia. There are State statutory marketing boards operating in all mainland States.

Barley Boards

The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards handle the crops of their respective States. A marketing board was established in New South Wales in 1971 after a poll of growers. Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented below.

**AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC.
1967-68 TO 1971-72**

<i>Pool</i>	<i>Quantity received</i>	<i>Quantity sold(a)</i>	<i>Total advances per bushel(b)</i>	<i>Net payments to growers</i>
	'000 bushels	'000 bushels	\$	\$'000
No. 29 (1967-68 Crop) . . .	7,985	7,975	1.1912	7,511
„ 30 (1968-69 „) . . .	27,280	27,218	0.9681	21,765
„ 31 (1969-70 „) . . .	31,429	31,381	0.8490	21,191
„ 32 (1970-71 „) . . .	36,499	36,422	1.1010	34,551
„ 33 (1971-72 „) . . .	50,045	49,573	0.9100	(c)35,592

(a) Includes surplus or shortage in out-turn except for No. 33 Pool for which the sales are not yet complete. (b) 2-row No. 1 Grade (bulk) less freight. (c) As at 28 February 1973. At that date it was estimated that the amount still to be paid to growers was 5 cents per bushel.

Barley area, production and yield per acre

Since the imposition of wheat quotas for the 1969-70 season, the area of barley sown for grain has increased substantially. The area sown in 1971-72 was 6,265,000 acres, which was 27 per cent more than the previous record acreage of 4,942,000 acres in 1970-71. The production of barley for grain in 1971-72, 135,153,000 bushels, was a record and was 30 per cent more than the previous record production of 103,650,000 bushels in 1970-71. The area, production and yield per acre of barley for grain in the several States for the years 1967-68 to 1971-72 are shown in the following table. Separate details for 2-row and 6-row varieties are shown for all States for 1971-72.

**BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
AREA ('000 ACRES)								
1967-68	367	305	342	1,157	416	24	..	2,611
1968-69	486	409	427	1,412	553	26	..	3,314
1969-70	542	487	417	1,384	900	30	..	3,759
1970-71	744	665	226	1,714	1,562	32	..	4,942
1971-72—								
2-row	648	708	355	1,887	1,409	28	..	5,035
6-row	275	23	37	50	843	3	..	1,230
Total	923	731	392	1,936	2,252	31	..	6,265

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND AUSTRALIAN CAPITAL TERRITORY, 1967-68 TO 1971-72—*continued*

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELS)(a)								
1967-68	4,834	2,709	8,965	12,380	7,027	884	..	36,798
1968-69	11,212	8,885	12,869	29,551	9,187	884	..	72,588
1969-70	12,335	11,373	7,587	30,454	12,058	1,095	..	74,901
1970-71	18,937	14,038	2,704	32,738	33,922	1,312	..	103,650
1971-72—								
2-row	10,344	16,857	10,063	45,072	29,898	1,106	..	113,339
6-row	4,926	574	904	1,084	14,211	115	..	21,814
Total	15,269	17,431	10,966	46,156	44,109	1,221	..	135,153

YIELD PER ACRE (BUSHELS)(a)								
1967-68	13.2	8.9	26.2	10.7	16.9	36.8	..	14.1
1968-69	23.1	21.7	30.1	20.9	16.6	33.7	..	21.9
1969-70	22.8	23.4	18.2	22.0	13.4	36.9	..	19.9
1970-71	25.4	21.1	12.0	19.1	21.7	41.2	..	21.0
1971-72—								
2-row	16.0	23.8	28.3	23.9	21.2	39.3	..	22.5
6-row	17.9	24.9	24.5	21.8	16.9	38.9	..	17.7
Total	16.5	23.8	28.0	23.8	19.6	39.3	..	21.6

(a) 50 lb per bushel.

For Australia, 80 per cent of the area of barley for grain in 1971-72 was sown with 2-row barley. The proportion, however, varied considerably in the several States. The utilisation of barley during the season ended November 1972 was as follows: exports, 76,991,000 bushels; pearl barley, 140,000 bushels; seed 9,000,000 bushels.

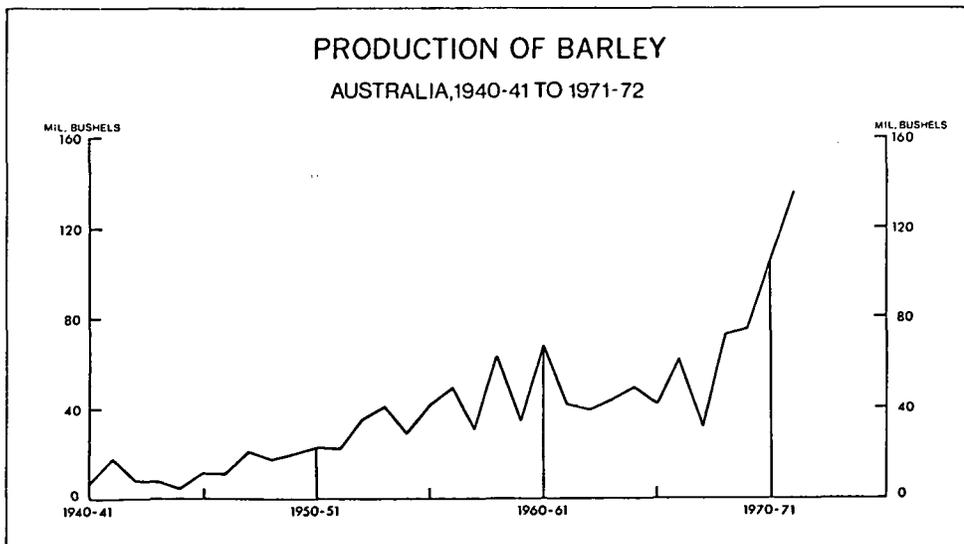


PLATE 42

The production of barley in Australia since 1940-41 is shown in plate 42, above and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014 of Year Book No. 50. The area sown to barley from 1900-01 to 1970-71 is shown in plate 39, page 746 of Year Book No. 58.

Value of barley crop

The average wholesale price for 2-row English malting barley in the Melbourne market was \$1.46 per bushel in 1971-72 compared with \$1.43 in 1970-71. The estimated gross value of the barley crop in each State for the 1971-72 season and the value per acre are shown in the following table.

BARLEY FOR GRAIN: VALUE OF CROP, STATES, 1971-72

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Aggregate value	\$'000	17,727	15,689	9,933	40,295	39,223	1,310	124,177
Value per acre	\$	19.21	21.46	25.34	20.81	17.42	42.16	19.82

Exports of barley

South Australia is the principal exporting State, and Taiwan, Japan, the United Kingdom, the Republic of Korea and the Federal Republic of Germany were the principal countries to which barley was shipped in 1971-72. Particulars of exports of Australian-produced barley for the years 1967-68 to 1971-72 are shown in the following table.

BARLEY: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Quantity	'000 bus	5,701	19,871	27,880	49,515	80,463
Value	\$'000 f.o.b.	6,569	18,246	22,766	50,820	74,344

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1971-72 amounting to 455,000 lb, valued at \$14,000, the main countries of consignment being Papua New Guinea, Singapore and Mauritius.

Barley malt

Details of the recorded usage of barley and the production of barley malt in the years 1967-68 to 1971-72 are given in the following table.

**BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA
1967-68 TO 1971-72**

		<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Barley used	'000 bus(a)	13,003	14,066	13,761	n.a.	n.a.
Malt produced	'000 bus(b)	13,547	13,825	14,428	17,404	20,469

(a) 50 lb per bushel. (b) 40 lb per bushel.

Since 1952-53 the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports of Australian produce amounting to 8,216,000 bushels (value \$15,437,000) and 9,389,000 bushels (value \$19,193,000) were recorded in 1970-71 and 1971-72 respectively.

World production of barley

In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1972 were the Union of Soviet Socialist Republics, Canada, the United States of America, France and the United Kingdom. The People's Republic of China is also normally a major producer, but recent details are not available. Australian production in 1972 was approximately 2 per cent of the world total.

According to preliminary estimates made by the United States Department of Agriculture, world production of barley in the year 1972 amounted to 5,639 million bushels harvested from 187 million acres, equivalent to a yield per acre of 32.2 bushels. This compared with the production of 5,750 million bushels in the previous year from 178 million acres, giving a yield per acre of 32.2 bushels.

Sorghum

The sorghums are summer growing crops which are used in three ways: grain sorghum for grain; sweet or fodder sorghum, sudan grass and more recently columbus grass for silage, green feed and grazing; and brook millet for brooms and brushware.

The growing of grain sorghum on an extensive scale did not attain a position of prominence until the last two decades. Operations are highly mechanised and, over the past three years, rapid increases in production have resulted in a substantial increase in exports. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghums. In Queensland grain sorghum production is concentrated in the Burnett, Dawson-Callide areas and in the Central Highlands. In New South Wales the north-western slopes and the Murrumbidgee Irrigation Areas are the main areas. The crop is also being developed in north Queensland, in the Northern Territory, and in Western Australia.

In Queensland orderly marketing of the crop is arranged through the Central Queensland Grain Sorghum Marketing Board and the Grain Sorghum Export Committee of the Queensland Grain-growers Association. A State statutory marketing board commenced operations in New South Wales with the marketing of the 1972 crop.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE, STATES
1967-68 TO 1971-72

Year	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)
	acres	acres	acres	'000 bushels	'000 bushels	'000 bushels	bushels	bushels	bushels
1967-68	78,165	382,192	461,834	1,580	8,939	10,582	20.2	23.4	22.9
1968-69	136,945	371,234	518,164	3,927	6,789	10,820	28.7	18.3	20.9
1969-70	245,180	637,569	886,480	6,011	14,012	20,114	24.5	22.0	22.7
1970-71	445,692	911,118	1,364,474	17,876	29,614	47,673	40.1	32.5	34.9
1971-72	513,466	1,045,834	1,577,501	13,639	30,624	45,124	26.6	29.3	28.6

(a) 60 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year. (b) Includes small areas sown and quantities produced in other States and Territories. Excludes Northern Territory for 1967-68, 1968-69 and 1969-70.

Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. For grain, growing is almost entirely confined to the south-east regions and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, the cereal provides a stock feed for dairy cattle, fat stock, poultry and pigs. In times of drought it is used also as a sheep feed. In all States except South Australia, however, this crop is grown to some extent for green feed and silage, particularly in connection with the dairying industry. There is practically no difference between grain and fodder varieties.

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

A State statutory board controls marketing in the Atherton Tablelands area of Queensland. Elsewhere, marketing is in the hands of private merchants.

Maize area, production and yield per acre

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE
STATES AND A.C.T., 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
1967-68	51,569	917	147,732	..	155	..	..	200,373
1968-69	54,484	1,161	108,679	..	39	..	..	164,363
1969-70	80,780	1,145	114,129	..	654	..	..	196,708
1970-71	82,318	1,322	127,815	..	153	..	..	211,608
1971-72	82,145	927	110,076	..	71	..	..	193,219

PRODUCTION ('000 BUSHELS)(a)								
1967-68	2,320	32	4,778	..	2	..	..	7,132
1968-69	3,083	72	2,713	..	1	..	..	5,869
1969-70	4,006	72	3,459	..	6	..	..	7,543
1970-71	4,191	62	4,076	..	2	..	..	8,331
1971-72	4,506	76	3,837	..	4	..	..	8,422

YIELD PER ACRE (BUSHELS)(a)								
1967-68	45.0	34.9	32.3	..	11.4	..	..	35.6
1968-69	56.6	62.2	25.0	..	17.0	..	..	35.7
1969-70	49.6	62.8	30.3	..	9.9	..	..	38.3
1970-71	50.9	47.0	31.9	..	10.2	..	..	39.4
1971-72	54.8	80.6	34.9	..	61.8	..	..	43.6

(a) 56 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year.

The average yield for Australia for the five-year period ended 1971-72 was 38.5 bushels per acre. Among principal producing countries, the United States of America averaged 96.9 bushels per acre and Brazil 20.6 bushels for 1972.

Value of maize crop

The average wholesale price of maize in the Melbourne market in 1971-72 was \$2.81 per bushel compared with \$2.48 in 1970-71. The estimated gross value of the crop in each State for the 1971-72 season and the value per acre were as follows.

MAIZE FOR GRAIN: VALUE OF CROP, STATES, 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Aggregate value . \$'000	5,856	122	4,466	..	5	..	10,449
Value per acre . \$	71.29	131.61	40.57	..	70.42	..	54.01

Exports of maize

MAIZE: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Quantity . . . '000 bus	101	7	27	881	1,514
Value . . . \$'000 f.o.b.	169	15	51	1,203	2,281

World production of maize

According to figures issued by the United States Department of Agriculture, world production of maize in the year 1972 amounted to an estimated 11,181 million bushels, harvested from 264.4 million acres, giving an average yield per acre of 42.3 bushels. This compared with production in the previous year of 11,378 million bushels from 274.3 million acres, and an average yield of 41.5 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the four years ended 1970 the area sown to maize in that country averaged 57.1 million acres or 22 per cent of the world total. During the same period production averaged 4,449 million bushels or 45 per cent of the world total.

Rice

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

Apart from small experimental areas in Western Australia and the Northern Territory, rice-growing in Australia is practically confined to the Murray and Murrumbidgee Irrigation Areas in New South Wales and recently, the Burdekin area of Queensland. In 1971-72, the largest purchasers of Australian rice were Papua New Guinea, Hong Kong and Chile. Details relating to area, production, and Australian-produced exports for the years 1967-68 to 1971-72 are shown in the following table.

RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)
1967-68 TO 1971-72

Year	No. of holdings growing rice(b)	Area	Production (paddy rice)		Average yield (paddy) per acre	Imports	Exports
			Quantity	Gross value(c)			
		acres	'000 bushels (d)	\$'000	bushels (d)	'000 lb	'000 lb
1967-68	1,210	75,957	11,597	12,831	152.7	3,749	224,956
1968-69	1,464	83,267	13,420	14,358	161.2	3,225	245,202
1969-70	1,804	99,244	12,951	14,533	130.5	3,397	283,918
1970-71	1,880	94,033	15,698	13,720	166.9	966	225,830
1971-72	1,541	100,063	12,710	12,842	127.0	847	398,055

(a) For some years particulars of area and production for Western Australia and the Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) 42 lb per bushel.

Fodder crops

Hay

As well as crops grown specifically for grain, considerable areas of Australia are devoted to fodder crops. These crops are utilised either for grazing (as green feed), or conserved as hay, ensilage, etc.

This development of fodder conservation as a means of supplementing pasture and natural sources of stockfeed is the result of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas.

The following tables show statistics for hay, green feed, and silage produced.

**HAY: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES
1967-68 TO 1971-72**

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA ('000 ACRES)									
1967-68	230	520	25	281	160	24	..	1	1,240
1968-69	286	327	37	241	149	16	..	2	1,058
1969-70	179	252	78	181	356	10	1	..	1,058
1970-71	116	197	41	209	287	10	1	..	863
1971-72	160	218	31	192	234	6	..	..	843
PRODUCTION ('000 TONS)									
1967-68	199	531	32	212	207	45	..	1	1,226
1968-69	441	598	52	371	205	31	1	2	1,701
1969-70	287	495	77	271	338	20	1	1	1,490
1970-71	182	349	26	280	395	21	..	1	1,254
1971-72	190	357	47	292	327	13	..	..	1,227
YIELD PER ACRE (TONS)									
1967-68	0.87	1.02	1.30	0.75	1.29	1.87	1.06	0.93	0.99
1968-69	1.54	1.83	1.40	1.54	1.38	1.91	3.10	1.29	1.61
1969-70	1.60	1.96	0.99	1.49	0.95	2.00	1.57	1.47	1.41
1970-71	1.57	1.77	0.63	1.34	1.22	2.00	0.24	1.29	1.45
1971-72	1.19	1.64	1.53	1.52	1.40	2.09	1.08	0.70	1.46

**HAY: AREA OF VARIOUS KINDS GROWN, STATES AND TERRITORIES
1971-72
(Acres)**

State or Territory	Oats	Wheat	Other	Total
New South Wales	77,047	75,591	7,602	160,240
Victoria	179,598	28,876	9,736	218,210
Queensland	15,741	5,313	9,932	30,986
South Australia	130,342	38,014	23,759	192,115
Western Australia	171,742	50,015	12,435	234,192
Tasmania	4,583	1,024	509	6,116
Northern Territory	..	..	453	453
Australian Capital Territory	370	90	..	460
Australia	579,423	198,923	64,426	842,772

HAY: VALUE OF CROPS, STATES 1971-72

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value . \$'000	25,940	41,832	9,549	10,651	13,294	5,778	(b)107,376
Value per acre . \$	36.24	26.60	67.89	17.57	30.44	28.80	29.19

(a) Includes Northern Territory and Australian Capital Territory. (b) Includes \$204,000 and \$128,000 for the Northern Territory and Australian Capital Territory respectively.

Farm stocks of hay

Particulars of stocks of hay held on farms at 31 March for the years 1968 to 1972 are given in the table below.

STOCKS OF HAY HELD ON FARMS, STATES AND A.C.T., 1968 TO 1972
(Tons)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
1968 . . .	1,273,385	1,104,034	241,922	267,677	223,115	297,118	3,594	3,410,845
1969 . . .	1,819,874	2,987,848	152,945	723,057	243,836	450,547	4,975	6,383,082
1970 . . .	2,536,522	2,376,974	254,397	630,388	237,339	443,332	13,540	6,492,492
1971 . . .	2,520,843	2,653,004	283,216	614,417	400,592	464,146	9,650	6,945,868
1972 . . .	1,753,873	3,800,147	333,320	946,627	471,891	508,165	14,123	7,829,076

(a) Includes 930 tons in the Northern Territory.

Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for overseas trade, and consequently does not figure largely among Australian exports. During 1971-72 exports amounting to 12,674 tons, valued at \$503,000, were made, principally to Kuwait, Iran, Singapore and Japan. Imports of hay are not recorded separately, but are considered to be negligible.

GREEN FEED OR SILAGE: AREA, STATES AND TERRITORIES, 1967-68 TO 1971-72
('000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 . . .	1,104	419	1,206	391	409	106	..	1	3,637
1968-69 . . .	1,087	257	1,252	281	293	121	1	1	3,292
1969-70 . . .	1,268	241	1,502	296	376	106	1	1	3,792
1970-71 . . .	1,224	259	1,204	326	356	78	..	1	3,449
1971-72 . . .	803	140	898	210	356	55	3	1	2,466

Silage

SILAGE: PRODUCTION AND FARM STOCKS, STATES AND A.C.T.
1967-68 TO 1971-72
(Tons)

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
Production during—								
1967-68 season . . .	134,408	160,771	36,238	22,388	30,322	66,602	40	450,769
1968-69 " . . .	208,650	337,360	18,221	91,925	45,469	71,209	98	772,932
1969-70 " . . .	426,738	289,413	57,396	41,179	38,549	52,449	1,650	907,374
1970-71 " . . .	377,234	211,863	124,984	45,814	68,803	46,595	66	875,359
1971-72 " . . .	236,722	242,230	76,967	57,725	75,188	63,360	1,280	(a)754,722
Farm stocks at—								
31 March 1968 . . .	365,488	82,139	79,461	24,749	21,460	54,118	4	627,419
" " 1969 . . .	393,838	263,190	68,222	80,892	30,078	66,596	27	902,843
" " 1970 . . .	690,892	251,880	73,496	69,075	19,656	66,969	1,679	1,173,647
" " 1971 . . .	846,971	222,554	127,574	57,211	36,944	68,222	49	1,359,525
" " 1972 . . .	734,213	233,808	184,203	76,078	56,422	72,183	725	(b)1,358,212

(a) Includes 1,250 tons in the Northern Territory.

(b) Includes 580 tons in the Northern Territory.

Sugar cane

The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions.

The Bureau of Sugar Experiment Stations in Queensland and the Colonial Sugar Refining Company Limited render useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilisers, lime, etc. and by producing and distributing improved varieties of cane. In common with these two organisations, Sugar Research Ltd, of Mackay, undertakes technological research in raw sugar milling practices.

Sugar agreements and marketing arrangements in Australia

In Year Book No. 37, pages 940-1, a summary is given of the form of agreement which operates 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 maximum wholesale price of sugar consumed in Australia. The current agreement, which replaced the 1962 agreement is for the period from 1 July 1969 to 30 June 1974 and prescribes maximum wholesale prices for sugar (delivered State capital cities, Launceston and Fremantle) approximately equivalent to a retail price of 10.5 cents per lb.

Production of sugar is regulated under the terms of the agreement. At the mill level control is exerted by means of seasonal 'mill peaks' in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total equals the estimated requirements of the domestic and export markets. Farm production is regulated according to the limit on the mill which the farm supplies. Exports are limited by the export quota provisions of the International Sugar Agreement (*see* below).

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and uniform prices paid to mills. Production for 1972-73 is estimated to be 2,773,000 tons 94 net titre, of which New South Wales is expected to contribute approximately 101,000 tons.

International Sugar Agreement

The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953, 1958 and 1968. Details of the 1937, 1953 and 1958 Agreements were given in Year Books No. 40, pages 881-2, No. 48, page 936 and No. 54, page 892 respectively.

The 1968 International Sugar Agreement came into force on 1 January 1969, its term of operation being for five years from that date. Like its predecessors, the 1968 Agreement is built around a schedule of export quotas governing the net exports of exporting members to the world 'free' market. The Agreement is designed to maintain a balance between total world free market supply and demand by adjustments to the level of quotas in effect of exporting members. Quotas in effect cannot be adjusted downwards below 90 per cent of basic export tonnages except in exceptional circumstances where adjustments down to 85 per cent may be possible.

Quota adjustments under the Agreement must take account of the prices (meaning 'prevailing prices' as defined by the Agreement) ruling in the world free market. The quota adjustment provisions pivot around a world free market price of U.S. four cents per pound f.o.b. and stowed Caribbean port, in bulk. When the price is below U.S. four cents, the system is designed to provide an upward pressure on prices by quota reductions. When the price is above U.S. four cents, the system is designed to apply a downward pressure on prices by increases in the level of quotas in effect above basic export tonnages.

Under the Agreement, exporters are required to establish and maintain certain levels of minimum stocks which are only to be released to the market when the price rises above U.S. 4.75 cents. If the price rises above U.S. 5.25 cents, all quota restraints become inoperative, but if the price rises above U.S. 6.50 cents, exporters are required to supply their traditional importing members with certain historical quantities of sugar at prices not exceeding the commercial equivalent of U.S. 6.50 cents, subsequently raised to U.S. 6.95 cents owing to the U.S. currency devaluation.

If the price is below U.S. 3.50 cents, minimum export quotas in effect are to apply, while at prices below U.S. 3.25 cents, members are obliged to prohibit imports from non-member countries.

Australia has a basic export tonnage under this Agreement of 1,100,000 metric tons raw value (about 1,040,000 long tons of actual raw sugar) and is obliged to establish a minimum level of uncommitted stocks amounting to 15 per cent of this quantity. However, owing to the high world price of sugar and under the terms of the Agreement, all export quotas and other restrictions on

the export of sugar were suspended on 21 December 1971 and remained suspended throughout the whole year 1972. On 17 January 1972, for the same reasons, exporting member countries' minimum stocks were released for prompt sale and prompt shipment. In November 1972 the International Sugar Council decided not to allocate initial export quotas for 1973 or fix at that stage any other limitations on exports for 1973.

Australian exports of negotiated price sugar to the United Kingdom under the British Commonwealth Sugar Agreement, and to the U.S.A. market, are not controlled by the International Sugar Agreement.

In 1971, in accordance with the Agreement, member countries reviewed its operation. They made no change in basic export tonnages and price levels, but listed a number of points which would require consideration when the Agreement is renegotiated in 1973.

British Commonwealth Sugar Agreement

On 1 January 1953 the British Commonwealth Sugar Agreement became effective. A triennial review of the Agreement was held late in 1971, and in the expectation of the United Kingdom entering the European Economic Community, the negotiations were concluded on the understanding that the Agreement would terminate at the end of 1974. Under the Agreement Australia has a Negotiated Price Quota of 335,000 tons per annum to the United Kingdom. The negotiated price for Australian sugar had remained at £Stg. 43.10.0 per long ton f.o.b. and stowed, bulk sugar 96° polarisation, for the years 1966 to 1971. The price was increased to £Stg. 50 for 1972, 1973 and 1974.

The Agreement also allows Australia an adjusted Overall Agreement Quota (including the negotiated price quota) of 630,000 tons per annum, which can be adjusted from time to time as a result of re-allocations of other Commonwealth Sugar Agreement exporters. The balance of this quota over the negotiated price quota may be sold to preferential markets on the basis of the world market price plus preference, as part of Australia's export quota under the International Sugar Agreement.

Exports to the United States of America

Australian exports to the U.S.A. are governed by United States legislation at present covering the three years to the end of 1974. These exports are sold on the U.S. domestic raw sugar market, the supplies to which are regulated with a view to ensuring stable and equitable prices, independently of prices ruling elsewhere in the world.

Australian export entitlements to this market vary from year to year. In 1972 Australia's entitlement totalled 180,360 long tons of raw sugar and at 23 February 1972 our 1973 entitlement stood at 175,680 long tons raw value.

Fruit Industry Sugar Concession Committee and sugar rebates

The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund provided from contributions by the Queensland Government on behalf of the sugar industry.

Until 15 May 1960 a domestic rebate of \$4.40 a ton of refined cane sugar used in processing approved fruit products was paid to Australian manufacturers, provided they bought fresh fruit for processing at prices not lower than those declared by the Committee as reasonable. This was increased to \$10 a ton from 16 May 1960 and to \$15 from 1 July 1969.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for the Australian sugar content than the Australian equivalent of the world sugar parity price. The Queensland Government is responsible for payment of a similar rebate to exporters of other approved products. Payment of the export sugar rebate in respect of approved fruit products has been made conditional upon satisfactory arrangements having been made for payment for the fresh fruit used for processing at not less than the prices (if any) which the Committee has declared to be reasonable.

Under the Sugar Agreement 1969 the Queensland Government contributes \$924,000 to the fund annually, out of which the Committee pays the domestic sugar rebate on approved fruit products manufactured. The Queensland Government also reimburses the Committee for the latter's payments of the export rebate paid on approved fruit products which are subsequently exported. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for research for the purpose of increasing the yield per acre of Australian fruit, or of obtaining information regarding Australian marketable fresh fruits.

Financial assistance to the sugar industry

Under the provisions of the *Sugar Marketing Assistance Agreement Act 1967* and the *Sugar Industry Assistance Act 1967* the Commonwealth Government arranged two loans to assist the returns from No. 1 Pool in the 1966 and 1967 seasons. The total amount of \$23,327,590 so advanced is repayable over ten years commencing in mid-1971, and was not subject to interest before then. Thereafter it incurs interest at the rate of five per cent per annum.

Bulk handling of sugar

Bulk handling and mechanised loading and unloading of raw sugar is now in operation throughout the Australian sugar industry. Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, at Mourilyan in 1960, and at Cairns in 1964. A second storage shed at Bundaberg, a third shed at Mackay, second sheds at Lucinda, Townsville and Cairns, and an extension at Mourilyan have been opened subsequently to give a total bulk storage capacity of 1,449,000 long tons. The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. Bulk receiving facilities are in operation at all Australian refineries.

Mechanisation

Mechanisation of harvesting processes has been gradually developed and has been accelerated in recent years. In Queensland the proportion of the crop mechanically cut rose from 8.7 per cent in 1962 to 98.78 per cent in 1972 while the proportion mechanically loaded on to the transport conveying cane to mills rose from 64.5 per cent to 99.95 per cent in the same period. Chopper harvesters, which chop cane into short lengths and pour it into bins hauled alongside, harvested 92.56 per cent of the crop, and whole-stalk harvesters, which cut the cane at the base and deposit the whole stalks in bundles, cut 6.29 per cent. In New South Wales, mechanical harvesting is not employed as extensively as in Queensland but is being used on an increasing scale.

Area of sugar cane

A brief outline of the development of the industry was included in earlier issues of the Year Book (see No. 38, page 985). The area of sugar cane in Australia for the seasons 1967-68 to 1971-72 is shown in the following table. The areas shown in the table exclude a very small acreage cut for green feed prior to 1971-72. 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.

SUGAR CANE: AREA(a), STATES, 1967-68 TO 1971-72
(Acres)

Year	New South Wales			Queensland			Australia			Total
	Area crushed	Area of standover and newly-planted cane	Area cut for plants	Area crushed	Area of standover and newly-planted cane	Area cut for plants	Area crushed	Area of standover and newly-planted cane	Area cut for plants	
1967-68	22,181	18,761	488	530,828	89,494	13,194	553,009	108,255	13,682	674,946
1968-69	22,174	18,588	599	546,306	84,237	13,314	568,480	102,825	13,913	685,218
1969-70	19,838	19,490	487	505,978	120,735	13,808	525,816	140,225	14,295	680,336
1970-71	22,263	19,879	471	522,655	104,535	12,457	544,918	124,414	12,928	682,260
1971-72	23,055	18,330	662	554,521	77,514	12,164	577,576	95,844	12,826	686,246

(a) Excludes areas cut for green fodder prior to 1971-72.

Production of cane and sugar

The production of sugar cane in 1971-72 was 19,084,000 tons, which was 671,000 tons above the previous record production in 1968-69. The production of raw sugar from 1940-41 is shown in plate 43, following.

SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR, STATES, 1967-68 TO 1971-72
(Tons)

Year	New South Wales		Queensland		Australia	
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)
1967-68 . . .	1,038,507	120,583	15,717,789	2,213,810	16,756,296	2,334,393
1968-69 . . .	997,813	120,381	17,414,966	2,604,319	18,412,779	2,724,700
1969-70 . . .	835,232	97,721	14,699,785	2,081,036	15,535,017	2,178,757
1970-71 . . .	1,160,064	146,877	16,206,027	2,338,018	17,366,091	2,484,895
1971-72 . . .	964,712	121,857	18,119,492	2,627,451	19,084,204	2,749,308

(a) Raw sugar at 94 net titre.

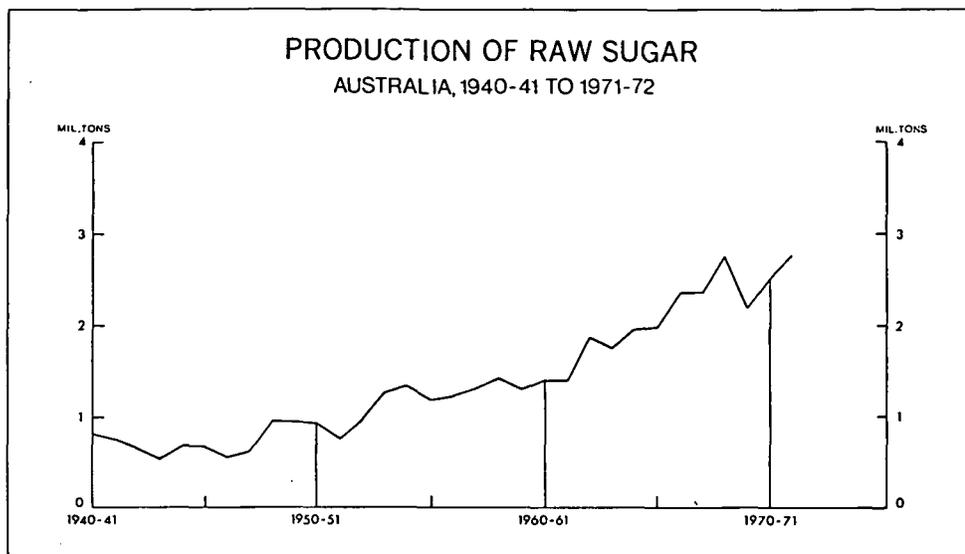


PLATE 43

Climatic conditions in New South Wales are such that the crop matures in from twenty to twenty-four months, whereas in Queensland a period of from twelve to sixteen months is sufficient. The average yields of cane and sugar per acre for the years 1967-68 to 1971-72 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

SUGAR CANE AND SUGAR: YIELD PER ACRE, STATES, 1967-68 TO 1971-72
(Tons)

Year	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
1967-68 . . .	46.82	5.44	8.61	29.61	4.17	7.10	30.30	4.22	7.18
1968-69 . . .	45.00	5.43	8.29	31.88	4.77	6.69	32.39	4.79	6.76
1969-70 . . .	42.10	4.93	8.55	29.05	4.11	7.06	29.54	4.14	7.13
1970-71 . . .	52.11	6.60	7.90	31.01	4.47	6.93	31.87	4.54	7.02
1971-72 . . .	41.84	5.29	7.91	32.68	5.03	6.50	33.04	4.76	6.94

Production and utilisation of sugar

Details of the production and utilisation of sugar for the years 1967-68 to 1971-72 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

SUGAR: PRODUCTION AND UTILISATION, AUSTRALIA, 1967-68 TO 1971-72

Year	Changes in stocks(a)	Production (raw)(b)	Exports(c)	Miscellaneous uses(d)	Consumption in Australia(e)	
					Total	Per head
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68	+170.0	2,393.9	1,634.8	20.8	568.3	106.7
1968-69	n.a.	2,563.2	2,058.4	n.a.	584.7	107.6
1969-70	n.a.	2,167.1	1,387.9	n.a.	609.1	109.6
1970-71	n.a.	2,413.0	1,571.6	n.a.	626.2	110.4
1971-72	n.a.	2,538.6	1,994.4	n.a.	635.4	110.6

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Year ended June; *tel quel* basis. Not comparable with production figures shown in production table as those relate to year ended March on a 94 net titre basis. (c) Raw and refined, including ships' stores and sugar in exported foodstuffs. (d) Includes refining losses and quantities used in golden syrup and treacle. (e) Includes sugar content of manufactured products consumed.

The quantity of sugar recorded as used in factories amounted to 359,978 tons in 1968-69, 373,380 tons in 1969-70 and 405,899 tons in 1971-72. Statistics for 1970-71 are not available. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1971-72 the reported consumption by factories engaged in the production of jams, jellies and preserved fruit and vegetables amounted to 77,875 tons, by those producing confectionery, ice cream, etc., to 82,117 tons, by breweries to 42,875 tons, and by factories producing aerated waters, cordials, etc., to 96,625 tons. Of the remainder, 35,875 tons was used in the production of biscuits, cakes and pastries, 30,781 tons in the production of cereal foods and the preparation of flour and baking mixes, and 39,751 tons used in various other industries.

Sugar prices and returns

The current prices of sugar in Australia (as determined under the Sugar Agreement in Australia, see page 782) and details of net returns for raw sugar from 1967-68 to 1971-72 are shown in the following tables.

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 to retailer per ton	Retail price capital cities per lb
	Home consumption	Exports(a)	Whole crop(a)			
	\$	\$	\$		\$	cents
1968-69(b)	143.20	63.04	82.10	19.6.67	206.72	10.5
1969-70(b)	143.10	80.83	99.76			
1970-71(c)	140.30	87.83	102.34			
1971-72(c)	138.70	100.94	110.35			
1972-73(c)	137.10	114.06	119.85			

(a) Includes 'excess' sugar. (b) Excludes repayable Commonwealth arranged loan (see page 784). (c) Includes repayment of Commonwealth loan.

RAW SUGAR(a): NET RETURNS, AUSTRALIA, 1967-68 TO 1971-72

(Source: The Queensland Sugar Board)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	per cent	\$	\$	\$'000
1967-68	72.89	59.45	82.05	191,471
1968-69	76.23	63.04	82.10	223,638
1969-70	69.61	80.83	99.76	217,279
1970-71	72.36	87.83	102.34	254,191
1971-72	75.09	100.94	110.35	303,290

(a) 94 net titre.

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 comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges. They include concessions to the fruit industry and other rebates, which in 1971-72 amounted to \$2,758,000, and also payment of the first instalment of the repayable Commonwealth grants referred to earlier. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent and 30 per cent respectively.

Exports of sugar

RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Quantity tons	1,597,235	2,029,177	1,364,302	1,546,372	1,976,270
Value \$'000 f.o.b.	97,582	122,214	116,114	149,636	210,593

Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. In Australia almost all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Wangaratta (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

Marketing

Between 9 May 1941 and 24 September 1948 all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently the Board was disbanded, and sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd (southern New South Wales and Victoria). In 1964 the Victorian Tobacco Leaf Marketing Board was set up to market the portion of the crop that was formerly sold by the Victorian Tobacco Growers Association Ltd, and in 1965 a Board was established in New South Wales. However, the actual physical handling of New South Wales leaf at auction is carried out by the Queensland and Victorian authorities.

In 1965 the Commonwealth and State Governments agreed to a stabilisation plan for the tobacco growing industry with an annual marketing quota of 26 million pounds (green weight) of leaf to be sold under an agreed grade and price schedule providing for an average minimum price, based on normal crop fall-out. The overall marketing quota is divided among tobacco-producing States according to a formula approved by the Australian Agricultural Council. The determination of grower disputes in regard to quotas from State allocations is the responsibility of State Quota Committees.

In 1968, the final year of the plan, the Governments concerned agreed that it should continue for a further period of five years with an increased marketing quota for the 1969 selling season of 28.5 million pounds, which was subsequently increased to 31.5 million pounds to correct industry stockholdings which were depleted by higher than expected manufacturer usage. Provision was made for an annual review of the quota and in 1970 a basic quota of 34 million pounds which was set for the 1971 season was retained for the 1972 and 1973 seasons. Each quota is to be divided among the producing States in the same proportions as the original quota.

The plan is administered by the Australian Tobacco Board, constituted under the *Tobacco Marketing Act* 1965-66 and representative of the Commonwealth, tobacco-producing States, growers, and manufacturers.

The guaranteed average minimum Australian price for the 1971 and 1972 seasons, 114.5 cents per lb, is 5.5 cents per lb above the price set for the 1970 season.

Central Tobacco Advisory Committee

The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on factors affecting its development and progress. The Committee was reconstituted as the Central Tobacco Advisory Committee in 1952-53.

In order to receive funds for increased research and extension activities, the Tobacco Industry Trust Account was established by the *Tobacco Industry Act* 1955-65 and came into operation on 2 December 1955. Growers and manufacturers contribute to the Trust Account by way of levies imposed on Australian leaf sold and purchased. These industry contributions are matched by the Commonwealth Government with payments made as funds are expended. The Governments of the three tobacco producing States make fixed annual contributions. Money standing to the credit of the Account may be applied for the purpose of research and investigation in connection with the tobacco industry, the training of personnel and the publication and dissemination of scientific and technical information for the industry.

The Central Tobacco Advisory Committee is required to make recommendations to the Minister for Primary Industry in regard to expenditure from the Tobacco Industry Trust Account. By 30 June 1972 expenditure from the Account amounted to \$8.3 million, and allocations for support of research projects in 1971-72 totalled \$893,251.

Tobacco research and extension

The Commonwealth Scientific and Industrial Research Organization and the State Departments of Agriculture in the tobacco growing States are carrying out investigations into a wide range of problems involving fundamental and applied research in plant breeding and variety evaluation, nutrition, disease and pest control, and cultural practices. The State Departments also provide extension services for tobacco growers. A Mechanisation Sub-Committee of the Central Tobacco Advisory Council was established in 1970 to investigate and advise on practical aspects of mechanisation of the tobacco-growing industry.

Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30 June 1953 are given in Year Book No. 40, pages 895-6, and in previous issues.

Tobacco factories

Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages, which in November 1946 stood at 3 per cent for cigarettes and 5 per cent for tobacco, have been increased progressively in intervening years and since 1 January 1966 have been set at 50 per cent for both cigarettes and tobacco.

In 1971-72 the quantity of cured leaf recorded as used in tobacco factories in Australia amounted to 53 million lb, of which 29 million lb was of local origin. The balance was imported, chiefly from the United States of America.

Tobacco area and production

The area planted to tobacco in 1971-72 was 15.5 per cent below the record area established in 1962-63. Production at 35,306,000 lb was 6.5 per cent below the previous record established in 1970-71.

TOBACCO: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
AREA (ACRES)							
1967-68	1,831	8,664	12,472	..	..	..	22,967
1968-69	2,190	9,727	13,837	..	..	..	25,754
1969-70	2,739	11,015	12,908	..	..	..	26,662
1970-71	3,042	10,481	13,411	..	..	..	26,934
1971-72	3,146	9,499	12,178	..	..	..	24,823
PRODUCTION OF DRIED LEAF ('000 lb)							
1967-68	2,075	7,625	15,021	..	..	..	24,721
1968-69	2,481	12,075	19,517	..	..	..	34,072
1969-70	3,061	15,516	18,975	..	..	..	37,553
1970-71	2,800	15,215	19,745	..	..	..	37,761
1971-72	4,090	12,709	18,507	..	..	..	35,306

Imports and exports of tobacco

Imports of tobacco and tobacco manufactures into Australia during 1971-72 were valued at \$28.2 million. This included 26.9 million lb of unmanufactured tobacco valued at \$18.2 million. Exports of tobacco and tobacco manufactures during 1971-72 were valued at \$4,168,000, including Australian produce, \$3,412,000.

Cotton

This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials, where fibre length is of little importance. The kernels when crushed produce an oil which is used for both edible and industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Until 1964 cotton growing was mainly confined to Queensland, most of it being grown under conditions of natural rainfall. Since then there has been an increasing trend in the use of irrigation. A sound industry has been established in the Namoi and Macquarie Valleys in New South Wales with water provided by the Keepit and Burrendong Dams. More than three-quarters of Australia's raw cotton requirements are now produced in that area. Cotton is also grown under irrigation in Queensland and on the Ord River of Western Australia and to a lesser extent in the Murrumbidgee Irrigation Areas of New South Wales. Nearly all Australian cotton is now grown with the assistance of irrigation and acreage yields compare more than favourably with those obtained by traditional overseas cotton producing countries. Australian production currently satisfies all the requirements of local mills for short and medium staple cotton and should in the future, supply the comparatively small quantities of longer staple combing cottons currently imported. Cotton production in 1972 was 192,000 bales with an export surplus of some 75,000 bales. The 1973 cotton crop is estimated at around 197,000 bales with approximately 90,000 bales available for export.

Cotton bounty

For particulars of the *Cotton Bounty Act* 1951-1958, see page 1044 of Year Book No. 49. This Act was replaced by the *Raw Cotton Bounty Act* 1963-1966 under which the Commonwealth agreed to pay a bounty on raw cotton produced and sold for use in Australia at the rate of 13.4375 cents per lb for Middling 1' White, with premiums and discounts on grades and staples above and below, up to a maximum of \$4 million in any one year, for a period of five years from 1 January 1964. In 1968 this Act was amended to extend bounty payments to all cotton produced in Australia of a grade higher than Strict Good Ordinary, whether used in Australia or not, provided it has a staple length of $\frac{7}{8}$ " or greater. The Commonwealth Government has phased out the bounty assistance. The maximum bounty remained at the previous level of \$4 million for 1969, falling to \$3 million in 1970, and was \$2 million in 1971 the final year in which it was paid.

Cotton area and production

COTTON: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES
1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1967-68	53,474	..	11,629	..	11,782	..	..	..	76,885
1968-69	59,769	..	13,329	..	8,327	..	..	..	81,425
1969-70	56,662	..	13,358	..	7,210	..	..	..	77,230
1970-71	65,242	..	12,882	..	8,505	..	..	..	86,629
1971-72	72,425	..	17,042	..	9,540	..	..	..	99,007
PRODUCTION (UNGINNED) ('000 lb)									
1967-68	170,064	..	18,718	..	25,954	..	..	..	214,736
1968-69	173,759	..	28,104	..	21,560	..	..	..	223,423
1969-70	138,783	..	26,860	..	20,800	..	..	..	186,443
1970-71	85,122	..	19,191	..	27,700	..	..	..	132,013
1971-72	222,276	..	40,972	..	24,849	..	..	..	288,097
YIELD PER ACRE (lb)									
1967-68	3,180	..	1,610	..	2,203	..	..	..	2,793
1968-69	2,907	..	2,108	..	2,589	..	..	..	2,744
1969-70	2,449	..	2,011	..	2,885	..	..	..	2,414
1970-71	1,305	..	1,490	..	3,257	..	..	..	1,524
1971-72	3,069	..	2,404	..	2,605	..	..	..	2,910

NOTE. Before 1968-69 production in Queensland relates to the crop harvested in the first of the years mentioned, and in other States to the year following: e.g., for 1967-68, the Queensland crop was harvested during 1967, while the crop in other States was harvested during 1968.

Production of ginned cotton for 1966-67, was 35,510,000 lb; 1967-68, 70,405,000 lb; 1968-69, 74,035,000 lb; 1969-70, 70,271,000 lb; and 1971-72, 85,905,000 lb. Figures for 1970-71 are not available.

The gross value of cotton for the five years ended 1971-72 was \$19,675,000; \$20,753,000; \$18,979,000; \$14,015,000; and \$29,794,000 respectively.

RAW COTTON(a): IMPORTS AND EXPORTS, AUSTRALIA 1967-68 TO 1971-72

	1967-68	1968-69	1969-70	1970-71	1971-72
Imports—					
Quantity . . . '000 lb	27,066	12,497	10,378	15,421	19,708
Value . . . \$'000 f.o.b.	6,866	3,766	3,003	4,314	5,783
Exports—					
Quantity . . . '000 lb	n.a.	n.a.	25,445	16,351	5,338
Value . . . \$'000 f.o.b.	n.a.	n.a.	5,124	3,431	1,555

(a) Excludes linters.

Japan and Indonesia were the principal importing countries, taking 3,062,000 lb and 1,623,000 lb respectively in 1971-72.

Peanuts

Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest the plant is pulled, wind-rowed, field-cured for two to four weeks, and then threshed to recover the pods. The main products of the industry are nuts, peanut oil and oil cake.

In Australia, peanuts for crushing for oil arise as a by-product in the production of nuts for edible purposes. The oil is used extensively as a cooking and salad oil and in the manufacture of margarine.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, the Northern Territory and, in some years, Western Australia.

PEANUTS: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year	Area (Acres)			Production (cwt)		
	N.S.W.	Qld	Aust.	N.S.W.	Qld	Aust.
1967-68	353	61,373	61,738	3,920	602,207	606,159
1968-69	183	78,454	(a)78,637	1,861	332,740	(a)334,601
1969-70	232	82,789	(a)83,021	4,039	836,812	(a)840,851
1970-71	390	94,895	95,343	5,151	607,172	612,618
1971-72	561	82,744	(a)83,405	4,755	901,024	(a)906,664

(a) Incomplete: excludes Northern Territory.

The gross value of the 1971-72 crop was \$12,234,000 which was approximately \$4,236,000 more than in 1970-71. Total supplies available for consumption in Australia in 1971-72 were 23,329 tons in shell equivalent. Exports of peanuts and peanut products for the year were 1,563 tons.

Flax

The flax plant is a summer-growing annual. Varieties have been developed for the production of either fibre or linseed, which when crushed yields an industrial oil used extensively in the manufacture of paint and linoleum. The introduction of synthetics into these fields has reduced the demand for linseed oil. Flax for the production of fibre was last recorded in 1964-65. Production of linseed during 1971-72 was 10,067 tons.

The main producing areas are the wheat belt of New South Wales, western and north-eastern districts of Victoria, the Esperance district of Western Australia and the Darling Downs in Queensland.

Particulars of area and production of flax for linseed, by States, are given in the following table for the years 1967-68 to 1971-72.

FLAX FOR LINSEED: AREA AND PRODUCTION, STATES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
Area (acres)—						
1967-68	9,947	9,365	27,764	516	6,886	54,478
1968-69	15,164	14,304	21,459	1,025	18,645	70,597
1969-70	49,455	18,880	21,513	977	30,812	121,637
1970-71	50,751	16,877	8,786	695	25,751	102,860
1971-72	23,206	9,127	4,626	424	11,845	49,228
Production (tons of linseed)—						
1967-68	952	804	6,571	72	2,083	10,482
1968-69	2,614	5,079	6,132	350	5,321	19,496
1969-70	14,499	9,312	5,701	355	6,186	36,053
1970-71	16,917	6,370	1,937	254	4,840	30,318
1971-72	3,654	3,334	1,280	91	1,708	10,067

Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but details are not available for publication.

Production and imports of hops

The production of hops in Australia is adequate to meet local requirements, and in recent years small quantities have been exported. In the following table details of the production and imports of hops and the quantity of hops used in breweries are shown for each of the years 1967-68 to 1971-72. Exports of hops are negligible and are not recorded separately.

**HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA
1967-68 TO 1971-72**

Year	Production(a)		Imports	Net available supplies(b)	Quantity used in breweries
	Quantity	Gross value			
	cwt	\$'000	cwt	cwt	cwt
1967-68	36,752	3,211	1,370	38,122	30,501
1968-69	42,757	3,788	1,501	44,258	34,077
1969-70	40,319	3,588	357	40,676	34,545
1970-71	33,591	3,133	361	33,952	34,652
1971-72	36,368	3,658	402	36,770	30,241

(a) Excludes production in Western Australia, for which details are not available for publication.
(b) Disregards movements in stocks.

Rapeseed

Rapeseed is obtained from several varieties of brassica, which are cultivated in temperate and warm temperate zones for their oil producing seed.

The introduction of wheat quotas in Australia and the buoyant world market for oilseeds has brought about an expansion of areas sown to rape in the past three years in New South Wales, Western Australia, Victoria and South Australia.

Domestic production has increased from 88,000 cwt in 1969-70 to 1,075,018 cwt in 1971-72 with the major part of the production for that year being derived from Western Australia.

Rapeseed oil is used mainly as a salad and cooking oil with some minor amounts being utilised for industrial purposes. A protein meal is derived as a by-product in the crushing process.

Safflower

Safflower is best cultivated either in the warm temperate zones or as a winter crop in the tropical or sub-tropical regions, on moderately fertile, weed-free, clay or sandy loams. Adequate moisture is required up to the flowering stage, after which it is relatively drought resistant. The soil preparation and sowing techniques are similar to those employed for small grains; it is usually harvested by combine when the seed is hard and dry. The oil, produced by crushing, is used in the manufacture of margarine, soaps, paints, varnishes, enamels, and textiles.

SAFFLOWER: AREA AND PRODUCTION, STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1967-68	8,550	489	95,351	(a)	225	..	..	..	(b)104,615
1968-69	2,415	199	43,589	..	170	..	..	..	46,373
1969-70	16,022	50	9,475	(a)	1,203	..	..	..	(b)26,750
1970-71	49,012	12,530	5,073	420	1,349	..	..	..	68,384
1971-72	46,146	3,143	30,843	488	2,923	..	..	..	83,543
PRODUCTION (BUSHEL)(c)									
1967-68	59,310	1,375	815,354	(a)	2,207	..	..	..	(b)878,246
1968-69	14,963	1,268	552,555	..	1,153	..	..	..	569,939
1969-70	155,879	164	67,470	(a)	5,994	..	..	..	(b)229,507
1970-71	406,184	76,872	20,462	4,042	7,828	..	..	..	515,388
1971-72	583,800	39,802	190,818	4,458	29,805	..	..	..	848,683

(a) Not available for publication.

(b) Incomplete; see individual States.

(c) 40 lb per bushel.

Imports of crude safflower seed oil in 1970-71 and 1971-72 totalled 1,636,000 gallons and 686,000 gallons respectively. These imports came mainly from the United States of America.

Sunflower seed

Sunflowers are summer growing annuals produced mainly under raingrown conditions in the three eastern mainland States of Australia. The cultivation of sunflowers has developed rapidly in recent years to make it one of the major oilseed crops.

The seed for which the plant is cultivated yields a high quality dual purpose oil and a by-product protein meal used for stockfeed. Main uses for the oil are in the manufacture of margarine, as a salad and cooking oil, and for industrial purposes.

The introduction of wheat quotas and the development of high oil yielding varieties of sunflower seed have resulted in an increase in Australian production from 35,000 cwt in 1967-68 to 2,904,000 cwt in 1971-72.

Vegetables for human consumption

Area, production and trade

Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. Later, the expansion of irrigation areas and improvement in transport services resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

Details of the areas planted and production of individual kinds of vegetables are shown below for the seasons 1969-70 to 1971-72. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available or are not available for publication. For further information see the bulletin *Rural Industries*. Details of the estimated consumption of vegetables for a series of years ending 1971-72 are given in the chapter Miscellaneous.

VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA, 1969-70 TO 1971-72

Vegetable	1969-70		1970-71		1971-72	
	Area sown	Pro-duction	Area sown	Pro-duction	Area sown	Pro-duction
	acres	tons	acres	tons	acres	tons
Asparagus	4,094	5,201	4,637	5,194	4,920	6,605
Beans, french and runner	20,018	39,243	18,512	33,342	19,698	37,500
Beetroot	2,140	22,650	1,890	19,062	2,054	22,977
Cabbages and brussel sprouts	6,388	68,830	6,292	70,066	6,706	78,961
Carrots	7,295	80,819	7,524	83,392	7,291	87,813
Cauliflowers	6,881	92,348	6,550	77,550	6,627	77,345
Celery	1,023	16,882	955	15,314	1,080	17,009
Cucumbers	2,380	10,098	2,306	10,833	2,700	13,580
Lettuce	5,557	31,638	5,386	25,695	5,414	26,679
Onions	10,299	84,177	10,710	91,483	10,919	98,766
Parsnips	1,366	12,022	1,223	11,236	1,157	10,193
Peas, green	62,138	135,257	40,146	80,005	53,047	116,478
Potatoes	107,062	749,763	95,404	735,173	99,833	808,820
Tomatoes	17,819	160,339	18,181	173,472	20,551	186,176
Turnips, swede and white	1,748	7,007	1,945	8,664	2,118	10,418
All other	38,377	..	43,254	..	45,038	..
Total	294,585	..	264,915	..	289,153	..

Processed vegetables

Total production of canned vegetables in 1971-72 amounted to 252,627,000 lb. The principal types produced were baked beans (including pork and beans), 47,117,000 lb; beetroot, 65,357,000 lb; green peas (excluding mint processed peas), 25,177,000 lb; tomatoes, 19,045,000 lb; asparagus, 11,335,000 lb and sweet corn, 18,938,000 lb.

The production of dehydrated vegetables, including split peas, during 1969-70 amounted to 17,907,000 lb. Figures for 1970-71 and 1971-72 are not yet available. Production of potato crisps, chips and flakes during 1971-72 was 29,981,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb of frozen vegetables were produced, made up principally of 10,131,000 lb of peas and 2,540,000 lb of beans. In 1971-72 the production was 198,297,000 lb, of which 87,917,000 lb were peas and 41,554,000 lb were beans.

Exports and imports of vegetables

Overseas exports of fresh and frozen vegetables during 1971-72 amounted to 65,052,000 lb valued at \$3,831,000; dried vegetables, 18,163,000 lb valued at \$2,123,000; preserved vegetables, 1,046,000 lb valued at \$1,303,000; and other prepared or preserved vegetables, 3,538,000 lb valued at \$611,000.

Imports of fresh and frozen vegetables during 1971-72 amounted to 13,593,000 lb valued at \$2,152,000.

Potatoes

This crop requires deep friable soils, which in Australia are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations. Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases. In Australia potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.

Area, production, and yield per acre. Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and the south-western and Gippsland districts. New South Wales and Queensland come next in order of acreage sown. In New South Wales production is chiefly in the tablelands district.

POTATOES: AREA, PRODUCTION AND YIELD PER ACRE
STATES AND TERRITORIES, 1967-68 TO 1971-72

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1967-68 . . .	24,334	40,329	17,347	6,527	6,149	10,960	(a)	22	(b)105,668
1968-69 . . .	29,236	39,979	18,515	7,643	6,588	11,461	(a)	15	(b)113,437
1969-70 . . .	25,865	39,765	17,712	8,021	6,332	9,367	(a)	(a)	(b)107,062
1970-71 . . .	22,102	34,965	15,925	7,160	6,246	8,994	(a)	12	(b)95,404
1971-72 . . .	24,678	34,560	18,199	6,858	6,633	8,879	26	(a)	(b)99,833
PRODUCTION (TONS)									
1967-68 . . .	122,795	215,941	106,429	63,331	70,469	79,058	(a)	89	(b)658,112
1968-69 . . .	160,823	299,961	122,990	68,018	74,435	72,120	(a)	131	(b)798,478
1969-70 . . .	142,047	279,553	115,455	78,624	67,164	66,920	(a)	(a)	(b)749,763
1970-71 . . .	143,387	272,200	108,659	71,380	68,058	71,444	(a)	45	(b)735,173
1971-72 . . .	169,087	301,863	130,523	70,608	67,339	69,258	142	(a)	(b)808,820
YIELD PER ACRE (TONS)									
1967-68 . . .	5.05	5.35	6.14	9.70	11.46	7.21	(a)	4.05	(b)6.23
1968-69 . . .	5.50	7.50	6.64	8.90	11.30	6.29	(a)	8.73	(b)7.04
1969-70 . . .	5.49	7.03	6.52	9.80	10.61	7.14	(a)	(a)	(b)7.00
1970-71 . . .	6.49	7.78	6.82	9.97	10.90	7.94	(a)	3.75	(b)7.71
1971-72 . . .	6.85	8.73	7.17	10.30	10.15	7.80	5.46	(a)	(b)8.10

(a) Not available for publication. (b) Incomplete; see individual territories.

The production of potatoes from 1935-36 is shown in plate 44, below.

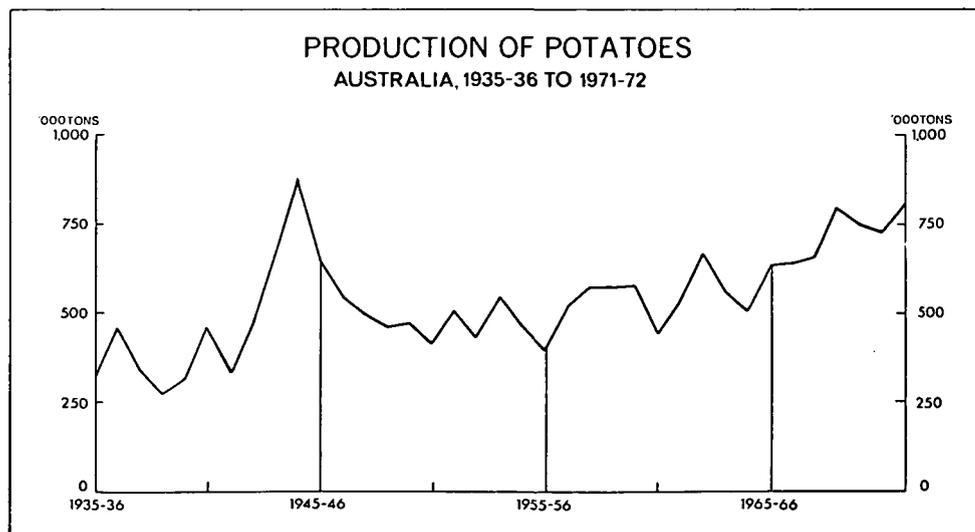


PLATE 44

Potato marketing boards were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The Boards in South Australia and Western Australia are the only statutory boards still in operation.

Value of potato crop. The estimated gross value of the potato crop of each State for the 1971-72 season and the value per acre are shown in the following table.

POTATOES: VALUE OF CROP, STATES, 1971-72

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value	\$'000	8,991	15,002	8,420	4,393	5,923	2,626	45,375
Value per acre	\$	364.33	434.08	462.66	640.56	892.95	295.75	454.50

(a) Excludes Australian Capital Territory.

Consumption and exports of potatoes. The annual consumption of potatoes in Australia during each of the three years 1969-70 to 1971-72 amounted to 679,300 tons, 675,900 tons and 746,900 tons respectively or 122.9 lb, 119.8 lb and 129.7 lb respectively per head of population. These figures exclude the quantities used for seed, which averaged about 50,000 tons annually over this period. Details showing exports and imports for the years 1967-68 to 1971-72 are given in the following table.

POTATOES: EXPORTS AND IMPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Exports		Imports	
	Quantity	Value	Quantity	Value
	tons	\$'000 f.o.b.	tons	\$'000 f.o.b.
1967-68	8,150	693	..	..
1968-69	12,591	966	237	12
1969-70	20,583	1,474	..	..
1970-71	11,475	978	..	..
1971-72	11,763	1,039	..	..

Australia's principal markets are Papua New Guinea, Singapore, New Caledonia and Fiji.

Fruit

The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales citrus fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges, and apricots. In Queensland apples, pineapples, bananas, oranges, mandarins, peaches and plums are the major fruits cultivated. In South Australia, in addition to oranges, apples, peaches, apricots, and pears, almonds and olives are grown extensively. In Western Australia apples, oranges, plums, and pears are the chief varieties. In Tasmania apples are by far the most important type of fruit grown, but small fruit, such as currants raspberries and gooseberries, are also grown extensively, the balance of the area being occupied mainly with pears and apricots.

Apples and pears

The *Apple and Pear Organization Act 1938-1966* provides for the establishment of an Australian Apple and Pear Board comprising representatives of growers, exporters, employees, and the Commonwealth Government. A representative in London has also been appointed by the Board. An export levy to meet the expenses of the Board is provided for in the *Apple and Pear Export Charges Act 1938-1968*. The function of the Board is the organisation and control of exports of fresh apples and pears, and it has the power to regulate shipments, determine export quotas, allocate consignments from each State, and recommend the licensing of exporters. The Board contributes to apple and pear publicity activities overseas.

Early in October 1971 the Government approved a stabilisation plan for the export of apples and pears "at risk", with an estimated Commonwealth liability of \$10 million over 5 years, commencing with the 1971 season. The plan establishes average seasonal returns (including the returns from forward sales) for each variety, which are then compared with the agreed support price for each variety and the extent of the deficiency or surplus is determined.

Canned Fruit

The overseas marketing of canned fruit is regulated by the *Canned Fruits Export Marketing Act 1963-1970*. Under this Act the Australian Canned Fruits Board sets terms and conditions for overseas sales. All exporters must hold an export licence issued by the Minister for Primary Industry on

the recommendation of the Board. The Board comprises representatives of the Commonwealth Government (one), co-operative canners of deciduous fruit (three), proprietary canners of deciduous fruit (three), pineapple canners (one) and growers of deciduous canning fruit (three). The Board maintains a London office. The *Canned Fruits Export Charges Act 1926-1966* provides for a levy on exports to meet the Board's expenses, which include contributions to overseas publicity connected with the canned fruit industry. In 1963 an excise duty was imposed by the *Canned Fruits Excise Act 1963* on canned deciduous fruit entered for domestic consumption, and the proceeds of the duty are made available to the Board.

In 1959 the Australian Canned Fruit Sales Promotion Committee was established to promote the sale of canned deciduous fruit on the home market and overseas. The operations of the Committee are financed by a levy on fruit accepted by the canneries for the production of canned fruit. The Committee comprises representatives of growers and processors of canning fruit and a representative of the Commonwealth Government.

In February 1971 the Canned Deciduous Fruit Industry Advisory Committee was established under the auspices of the Australian Agricultural Council to advise industry and Governments on the longer-term problems facing the industry. The Committee is representative of the Commonwealth, the States and canners and growers.

Overseas marketing of fruits

Details of the overseas marketing of fruits were published in Year Book No. 55 and earlier issues.

Area and production of fruit

The total area under fruit in Australia in 1971-72 was 304,164 acres, 2.9 per cent less than the record acreage established in 1965-66.

FRUIT (EXCLUDING GRAPEVINES): AREA(a), STATES AND TERRITORIES, 1967-68 TO 1971-72 (Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	95,798	71,158	51,391	45,113	25,598	21,762	98	37	310,955
1968-69	94,685	71,598	52,750	44,497	25,366	21,429	90	32	310,447
1969-70	95,326	70,883	53,048	44,801	24,130	21,157	71	38	309,454
1970-71	93,167	66,614	54,752	45,302	23,791	20,837	120	38	304,621
1971-72	96,903	67,227	55,412	42,478	22,559	19,329	221	35	304,164

(a) Bearing and not bearing.

ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), TOTAL NUMBER OF TREES STATES AND TERRITORIES, 1971-72 ('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Pome—									
Apples	1,638	1,699	1,311	671	1,248	2,540	..	5	9,111
Pears	261	1,644	127	208	88	165	..	..	2,494
Quinces	2	6	(a)	3	..	..	..	..	(b)11
Citrus—									
Oranges	2,638	658	260	1,493	370	..	1	..	5,420
Lemons and limes	340	112	42	100	42	..	1	..	636
Mandarins	212	61	237	85	54	..	..	..	650
Grapefruit	107	45	23	62	12	..	..	..	249
Stone—									
Apricots	152	326	55	453	19	50	..	..	1,054
Cherries	377	209	1	72	7	9	..	..	675
Nectarines	47	51	46	26	9	3	..	..	182
Olives	19	91	..	61	21	..	..	..	192
Peaches	689	1,353	173	449	64	5	..	..	2,733
Plums and prunes	499	175	159	84	83	5	..	..	1,006
Nuts—									
Almonds	2	21	..	638	3	..	..	(a)	(b)663
Macadamia	43	..	126	..	..	..	..	..	169
Walnuts	1	7	..	6	2	..	..	(a)	(b)16
Other orchard n.e.i.—									
Custard apples	..	..	17	..	..	..	..	..	17
Figs	3	3	..	7	1	..	..	..	14
Mangoes	1	..	51	..	..	..	1	..	52

(a) Not available for publication. (b) Incomplete, see individual States.

**ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), PRODUCTION
STATES AND TERRITORIES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Pome—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Apples	3,640	3,629	1,839	1,177	2,750	5,873	..	5	18,913
Pears	687	7,144	192	486	222	296	..	..	9,026
Quinces	4	13	(a)	8	..	..	..	..	(b)26
Citrus—									
Oranges	5,700	1,678	926	4,681	376	..	1	..	13,362
Lemons and limes	667	229	191	164	133	..	1	..	1,385
Mandarins	269	118	526	140	43	..	..	..	1,097
Grapefruit	330	150	49	299	18	..	1	..	846
Stone—									
Apricots	340	617	52	403	17	24	..	..	1,454
Cherries	269	189	1	40	2	2	..	..	503
Nectarines	53	43	39	16	10	2	..	..	163
Olives	20	38	..	58	14	..	..	..	129
Peaches	1,405	2,924	185	1,138	90	3	..	..	5,745
Plums and prunes	455	158	131	41	98	4	..	..	886
Nuts—	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb
Almonds	4	34	..	2,917	2	..	..	(a)	(b)2,956
Macadamia	76	..	130	..	..	..	..	..	206
Walnuts	5	158	..	49	17	..	..	..	228
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Other orchard n.e.i.—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Custard apples . . . . .	..	..	21	..	..	..	..	..	21
Figs	7	3	..	10	1	..	..	..	21
Mangoes	2	..	63	..	..	..	1	..	67

(a) Not available for publication.

(b) Incomplete; see individual States.

**BERRY AND OTHER FRUITS (EXCLUDING GRAPEVINES): STATES AND
TERRITORIES, 1971-72**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
TOTAL AREA BEARING AND NOT BEARING (ACRES)									
Small and berry fruit—									
Currants (black, red) . . . . .	..	..	..	(a)	..	745	..	..	(b)745
Raspberries . . . . .	..	157	..	(a)	..	611	..	..	768
Strawberries	111	441	260	185	26	73	..	..	1,096
Other	99	218	21	31	3	139	..	..	511
Other fruit—									
Bananas	18,194	..	6,431	..	416	..	76	..	25,117
Papaws	32	..	1,164	..	..	..	(a)	..	(b)1,196
Passionfruit	240	62	695	..	123	..	..	..	1,120
Pineapples	193	..	15,548	..	(a)	..	23	..	(b)15,764

PRODUCTION

	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt
Small and berry fruit—									
Currants (black, red) . . . . .	..	..	..	(a)	..	22,428	..	..	(b)22,428
Raspberries . . . . .	..	3,003	..	(a)	..	25,813	..	..	(b)28,816
Strawberries	5,698	27,576	16,391	12,227	2,216	1,679	..	..	65,787
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Other fruit—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Bananas	3,627	..	1,178	..	223	..	9	..	5,036
Papaws	6	..	446	..	..	..	(a)	..	(b)452
Passionfruit	31	2	155	..	5	..	..	..	193
Pineapples	54	..	8,030	..	(a)	..	1	..	(b)8,085

(a) Not available for publication.

(b) Incomplete; see individual States.

Principal fruit crops

PRINCIPAL FRUIT CROPS: PRODUCTION, AND GROSS VALUE OF PRODUCTION, AUSTRALIA, 1967-68 TO 1971-72

Year	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Pineapples	Plums and prunes
PRODUCTION ('000 BUSHEL)								
1967-68.	19,615	1,519	5,145	9,846	6,294	7,351	6,804	778
1968-69.	22,174	2,004	4,940	12,137	5,280	5,245	6,363	904
1969-70.	22,259	1,814	5,160	10,787	5,513	9,331	6,344	985
1970-71.	23,238	2,425	5,142	14,804	6,012	9,192	7,408	909
1971-72.	18,913	1,454	5,036	13,362	5,745	9,026	8,085	886
GROSS VALUE OF PRODUCTION (\$'000)								
1967-68.	49,741	4,637	19,636	24,496	14,123	16,469	6,470	3,362
1968-69.	56,146	6,992	19,128	26,095	12,685	13,512	7,482	4,697
1969-70.	56,120	7,438	24,961	29,026	15,101	23,809	7,144	5,828
1970-71.	58,339	9,392	20,033	33,029	15,760	20,855	9,722	6,360
1971-72.	49,666	8,226	20,958	30,542	15,739	19,559	9,629	4,829

Production and consumption of jams and jellies and preserved fruit

In Australia considerable quantities of fruit are used in the production of jams and jellies and for preserving. Fruit usage in factories in 1968-69 and 1969-70 amounted to 459,000 tons and 486,000 tons respectively. Statistics for 1970-71 are not available. During 1971-72 output of jams, conserves, fruit spreads, etc., amounted to 77,966,000 lb, while output of preserved fruit amounted to 558,944,000 lb. Of the latter figure, peaches accounted for 199,743,000 lb, pears 102,605,000 lb, and pineapples 72,645,000 lb.

Details of the estimated consumption of fruit and fruit products for a series of years ending 1971-72 are shown in Chapter 29, Miscellaneous.

Imports and exports of fruit and fruit products

The imports of fresh fruit into Australia are negligible, while those of dried fruit consists mainly of dates, approximately 90 per cent of which are obtained from Iraq and Iran; the bulk of the remainder coming from Turkey and the People's Republic of China. A considerable export trade in fresh and chilled, and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1971-72 amounted to \$28,680,000 for fresh and chilled fruit, and \$19,770,000 for dried fruit respectively. Apples constitute over half of the fresh fruit exported, although exports of pears and citrus fruits are considerable.

FRESH AND CHILLED FRUIT: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Apples		Pears		Citrus		Total value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	
	'000lb	\$'000	'000lb	\$'000	'000lb	\$'000	\$'000
		f.o.b.		f.o.b.		f.o.b.	f.o.b.
1967-68	277,814	17,368	68,922	5,442	54,875	3,656	27,535
1968-69	287,135	19,964	46,652	4,107	68,312	4,423	29,456
1969-70	296,806	20,410	81,324	6,486	48,113	3,216	31,011
1970-71	313,219	21,881	76,029	6,411	59,520	3,721	32,012
1971-72	216,773	15,889	75,914	6,969	76,527	4,824	28,680

(a) Includes exports of all other fresh and chilled fruit.

The quantity and value of overseas imports and exports of dried fruit, other than sultanas, raisins and currants, for the years 1967-68 to 1971-72 are shown below.

**DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA
1967-68 TO 1971-72**

Year	Imports		Exports	
	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1967-68	9,054	779	8,038	2,018
1968-69	10,335	934	5,619	2,120
1969-70	11,834	1,161	4,909	1,730
1970-71	8,612	990	5,029	1,537
1971-72	8,444	1,046	8,474	2,207

(a) Excludes sultanas, raisins and currants dealt with separately under Vineyards (see below).

Exports of jams and jellies in 1971-72 were 6,291,000 lb valued at \$1,132,000, compared with 6,160,000 lb, valued at \$1,032,000 in 1970-71. Imports of jams and jellies in 1971-72 were 4,033,000 lb, valued at \$810,000, compared with 5,546,000 lb, valued at \$877,000 in 1970-71.

EXPORTS OF CANNED OR BOTTLED FRUIT: AUSTRALIA, 1967-68 TO 1971-72

Year	Peaches		Pears		Fruit salad		Apricots		Total Value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	\$'000 f.o.b.
1967-68	198,736	22,115	108,712	13,694	37,673	5,393	17,729	2,169	50,661
1968-69	126,176	14,533	91,739	11,361	37,300	5,345	13,970	1,726	37,842
1969-70	124,528	14,783	82,020	10,708	33,301	5,104	12,446	1,611	37,231
1970-71	110,201	13,971	113,266	14,380	47,129	7,201	14,765	1,924	42,891
1971-72	105,225	13,202	83,390	10,809	40,035	6,337	12,060	1,623	36,462

(a) Includes exports of all other canned or bottled fruit.

Exports of pulped fruit during 1971-72 amounted to 896,000 lb valued at \$146,000.

The total value of preserved fruit and fruit preparations (including fruit juices) imported into Australia during 1971-72 was \$4,430,000. The value of exports of fruit juices in 1971-72 was \$1,292,000.

Vineyards

Grapes require a warm to hot climate and a predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. In Australia wine is produced very largely from irrigated crops, as are dried fruits. Some of the better known wine producing areas are the Murray Valley (South Australia and Victoria), Barossa Valley and Southern Vales Areas (South Australia), the Murrumbidgee Irrigation Areas and the Hunter Valley (New South Wales), the Mildura, Rutherglen and Stawell districts of Victoria, and the Swan Valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localised areas in other States.

Area of vineyards

The area under vineyards in the 1971-72 season in Victoria and South Australia constituted 74 per cent of the total area of vineyards.

VINEYARDS: AREA(a), STATES, 1967-68 TO 1971-72

(Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1967-68	22,155	48,725	3,400	58,129	7,665	140,074
1968-69	22,749	48,970	3,508	60,574	7,270	143,071
1969-70	25,422	49,838	3,614	64,837	6,648	150,359
1970-71	27,792	50,933	3,846	68,332	6,708	157,611
1971-72p	31,270	51,383	3,943	71,090	6,735	164,421

(a) Bearing and not bearing.

Wine industry

Australia produces wine of every type and also brandy. In recent years there has been a distinct trend towards greater consumption and production of unfortified or table wines. Until 1957-58 production of these wines (which include burgundy, claret, riesling, sauterne, and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.). By 1968-69 production of table wines had exceeded the volume of fortified varieties and in 1971-72, production of unfortified wines exceeded fortified wines by 9.1 million gallons.

The *Wine Overseas Marketing Act* 1929-1966 was introduced to place the overseas marketing of wine on an orderly basis. The Australian Wine Board, consisting of representatives from wineries and distilleries, grape growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is a medium for promoting interest in Australian wines and brandy. It is also a retail shop for the sale of these products. The *Wine Grapes Charges Act* 1929-1969 provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The proceeds of the levy are used to meet the Board's projects in Australia and overseas and to defray the administrative expenses of the Board, which has no other source of income.

Production and consumption of wine and brandy

In 1971-72 the total production of wine (beverage and distillation) in Australia was 62.9 million gallons, while total consumption of beverage wine was 25.6 million gallons (2.0 gallons per head of population). Similar particulars for 1970-71 are 55.3 million gallons and 24.4 million gallons (1.9 gallons per head of population) respectively.

WINE: PRODUCTION(a), STATES, 1967-68 TO 1971-72
('000 gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1967-68 . . .	8,350	5,180	31	30,055	829	44,444
1968-69 . . .	8,597	6,241	32	36,186	1,056	52,111
1969-70 . . .	11,529	7,251	31	43,301	1,015	63,127
1970-71 . . .	10,376	6,616	32	37,233	999	55,257
1971-72 . . .	14,569	7,549	26	40,014	772	62,931

(a) Beverage and distillation wine; includes farm wine in New South Wales, Queensland and Western Australia.

BRANDY: PRODUCTION, SOUTH AUSTRALIA
AND AUSTRALIA, 1967-68 TO 1971-72
(Proof gallons)

Year	S.A.	Aust.(a)
1967-68	715,147	872,428
1968-69	848,225	1,068,030
1969-70	1,140,010	1,257,781
1970-71	1,346,708	1,482,573
1971-72	1,450,550	1,633,297

(a) Includes New South Wales and Victoria, for which separate details are not available for publication.

Exports and imports of wine and brandy

Principal markets for exports of Australian wine are the United Kingdom, Canada and Papua New Guinea. During 1971-72 these countries received 633,000 gallons, 492,000 gallons and 183,000 gallons respectively. Exports of Australian-produced wine and imports of wine for the five years ended 1971-72 are shown in the following table.

WINE: EXPORTS AND IMPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	Quantity			Value f.o.b.		
	Sparkling ('000 gals)	Other ('000 gals)	Total ('000 gals)	Sparkling (\$'000)	Other (\$'000)	Total (\$'000)
EXPORTS						
1967-68	88	1,751	1,839	359	2,794	3,153
1968-69	73	1,729	1,802	314	3,081	3,395
1969-70	83	1,212	1,295	348	2,565	2,913
1970-71	87	1,357	1,444	391	3,190	3,581
1971-72	85	1,669	1,754	401	3,844	4,245
IMPORTS						
1967-68	76	226	302	464	899	1,363
1968-69	88	367	455	495	1,387	1,882
1969-70	104	324	428	597	1,325	1,922
1970-71	118	408	526	780	1,801	2,581
1971-72	122	424	546	781	2,114	2,895

During 1971-72 Italy supplied 165,000 gallons valued at \$692,000, Portugal 109,000 gallons valued at \$386,000 and France 73,000 gallons valued at \$916,000.

Exports of Australian-produced brandy in 1971-72 amounted to 76,000 proof gallons, valued at \$416,000. Imports of brandy, mainly from France, amounted to 268,000 proof gallons, valued at \$1,482,000.

Dried vine fruit industries

The dry period from November to March in the lower Murray valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

The *Dried Fruits Export Control Act 1924-1966*. For details of the *Dried Fruits Export Control Act 1924-1966* see Year Book No. 55, page 877, and earlier issues.

For details of the bulk purchase agreements between the Governments of the United Kingdom and Australia which operated during the period 1946-53 see Year Book No. 40, page 888. From 1 December 1953 exports to the United Kingdom have been on a trader to trader basis.

In June 1963, Australian, Greek and Turkish dried vine fruit interests concluded an agreement to maintain minimum prices for sultanas on world markets. The agreement has been periodically reviewed. At the Ninth Conference in London in June 1971, representatives of the signatory countries (which had included South Africa from 1970) met for the last time as parties to the agreement and formally resolved it out of existence. Despite this it was agreed that contacts between the producing countries would continue and efforts are currently being made to revive formal arrangements for co-operation.

The *Dried Vine Fruits Stabilization Act 1971* (For details of the first Dried Vine Fruits Stabilization Scheme, which expired with the disposal of the 1968 crop, see Year Book No. 55, page 877, and earlier issues). A referendum of eligible dried vine fruit producers was held in September 1971 concerning a new five-year stabilisation plan for the dried vine fruits industry. The result of this referendum was that growers were in favour of the introduction of a new plan. Accordingly, legislation was brought down and received the Royal Assent on 16 December 1971. The plan operates as from the 1971 season for a period of five years.

DRIED VINE FRUIT: PRODUCTION, STATES, 1967-68 TO 1971-72

(Tons)

Year	N.S.W.		Vic.		S.A.		W.A.		Aust.	
	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants
1967-68	12,119	505	59,222	3,166	5,200	3,112	40	1,668	76,581	8,451
1968-69	7,829	428	37,896	2,687	1,743	2,261	8	1,862	47,476	7,238
1969-70	14,118	651	67,070	3,383	3,169	3,325	8	1,068	84,365	8,427
1970-71	9,240	630	40,585	3,034	1,313	3,150	29	1,489	51,167	8,303
1971-72	14,942	574	70,391	3,193	8,416	3,049	37	1,213	93,786	8,029

(a) Includes sultanas and lexias.

DRIED VINE FRUIT(a): EXPORTS, AUSTRALIA, 1967-68 TO 1971-72

Year	<i>Raisins, sultanas and lexias</i>		<i>Currants</i>		<i>Total</i>	
	Quantity	Value f.o.b.	Quantity	Value f.o.b.	Quantity	Value f.o.b.
	tons	\$'000	tons	\$'000	tons	\$'000
1967-68	63,562	19,459	3,907	1,316	67,469	20,775
1968-69	58,070	18,310	3,437	1,203	61,507	19,513
1969-70	40,631	13,383	2,793	979	43,424	14,362
1970-71	54,857	17,194	4,194	1,322	59,051	18,516
1971-72	50,862	16,120	4,517	1,378	55,379	17,498

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, New Zealand and the Federal Republic of Germany. The quantities exported to these countries in 1971-72 were 19,640 tons, 16,968 tons, 6,547 tons and 3,563 tons respectively.

Table grapes

Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent of the productive area of vines in 1971-72.

PASTORAL PRODUCTION

Livestock numbers

A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. Since 1861 annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia, at decennial intervals from 1861 to 1961, and from 1968 onwards in single years, are given in the following table, and are shown continuously since 1880 on the graph on plate 45, page 805.

LIVESTOCK: AUSTRALIA, 1861 TO 1972

('000)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs
1861	432	3,958	20,135	351	1941	1,666	13,256	122,694	1,797
1871	717	4,276	41,594	543	1951	999	15,229	115,596	1,134
1881	1,069	7,527	62,184	816	1961	598	17,332	152,679	1,615
1891	1,522	10,300	97,881	891	1968	n.a.	19,218	166,912	2,056
1901	1,610	8,640	70,603	950	1969	n.a.	20,611	174,605	2,253
1911	2,166	11,745	98,066	1,026	1970	456	22,162	180,080	2,398
1921	2,416	13,500	81,796	764	1971	n.a.	24,373	177,792	2,590
1931	1,793	11,721	110,568	1,072	1972	n.a.	27,373	162,910	3,199

While livestock numbers (particularly sheep) have increased substantially since 1861, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883-84, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41, 1944-45 to 1946-47, and 1965-67. The years in which the numbers of livestock attained their peaks are as follows: horses, 1919 (2,527,000); cattle, 1972 (27,373,000); sheep, 1970 (180,080,000); and pigs, 1972 (3,199,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31 March 1963 is shown in the maps on pages 1049 and 1050 and facing pages 1082 and 1083 of Year Book No. 50.

The numbers of horses, cattle, sheep, and pigs in each State and Territory are shown later in this chapter.

Value of pastoral production and indexes of quantum and price

Values of pastoral production are shown for 1971-72 in the table following. Further details of values of pastoral production and indexes of quantum and price, together with details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter 29, Miscellaneous.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION: STATES AND TERRITORIES, 1971-72 (\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production(a)</i>
New South Wales	480,456	48,977	431,479	(b)55,854	375,625
Victoria	399,504	46,356	353,148	66,872	286,275
Queensland	270,015	26,750	243,265	43,401	199,864
South Australia	153,069	9,211	143,858	21,432	122,426
Western Australia	199,444	19,571	179,873	23,558	156,315
Tasmania	40,700	3,307	37,393	12,422	24,970
Northern Territory	23,361	3,570	19,791	..	19,791
Australian Capital Territory	1,669	118	1,551	125	1,425
Australia	1,568,218	157,860	1,410,358	223,664	1,186,691

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

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

Sheep

Distribution throughout Australia

With the exception of a short period in the early eighteen-sixties, when the flocks in Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising. Western Australia is the second largest sheep raising State followed by Victoria. Sheep numbers reached a peak in Australia in 1970. They then declined up to March 1972 as producers turned off large numbers for slaughter and moved from wool-growing towards beef production.

A map showing the distribution of sheep in Australia at 31 March 1963 appears on page 1049 of Year Book No. 50. Graphs showing the number of sheep in Australia from 1880 onwards appear on plates 45 and 46 of this Year Book (pages 805 and 813).

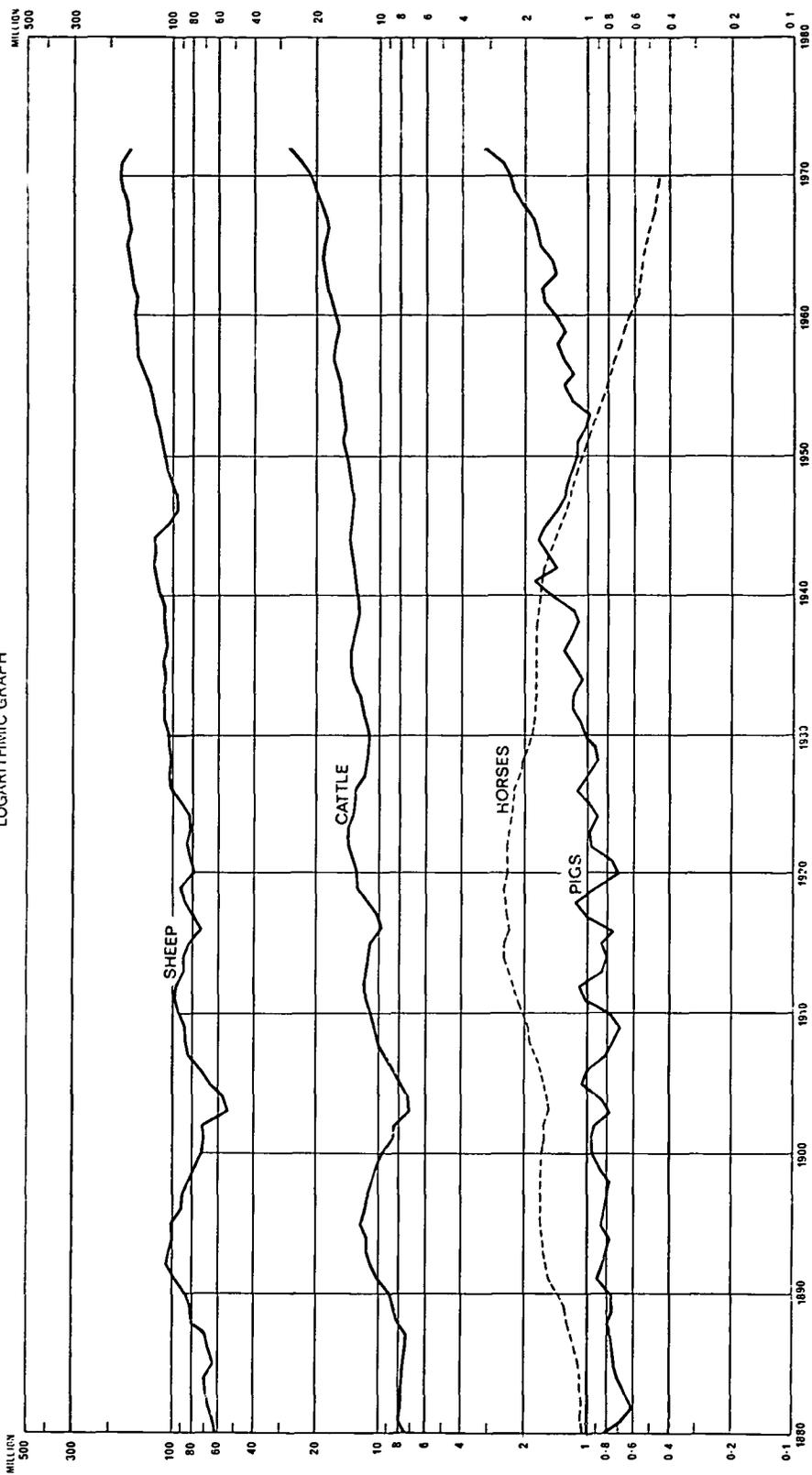
SHEEP: NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972 ('000)

<i>Year ended 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1968	67,786	27,909	19,948	16,405	30,161	4,428	9	267	166,912
1969	68,153	30,185	20,324	18,392	32,901	4,395	10	246	174,605
1970	72,284	33,157	16,446	19,747	33,634	4,560	8	244	180,080
1971	70,605	33,761	14,774	19,166	34,709	4,517	9	251	177,792
1972	62,000	29,496	14,604	17,970	34,405	4,237	7	192	162,910

The percentage distribution of sheep and lambs in the several States in 1972 was: New South Wales, 38; Victoria, 18; Queensland, 9; South Australia, 11; Western Australia, 21; and Tasmania, 3.

LIVESTOCK: AUSTRALIA, 1880 TO 1972

LOGARITHMIC GRAPH



NOTE: VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE. SINCE 1967 FIGURES FOR HORSES HAVE BEEN COLLECTED ON A TRIENNIAL BASIS.

Movement in sheep numbers

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA
1967-68 TO 1971-72
(^{'000})

Year ended 31 March	Numbers at beginning of season	Lambs marked	Net exports	Sheep and lambs slaughtered (a)	Estimated deaths on farms (b)	Numbers at close of season
1968	164,237	50,648	362	38,145	9,466	166,912
1969	166,912	51,171	361	35,676	7,441	174,605
1970	174,605	56,784	487	41,045	9,777	180,080
1971	180,080	54,512	768	44,175	11,857	177,792
1972	177,792	51,705	807	52,659	13,121	162,910

(a) Includes an estimate for numbers boiled down. (b) Balance figure; excludes lambs which died before marking.

Comparisons of Australian flock numbers with those of certain other principal sheep-producing countries are given on page 818.

Classification of sheep according to age, sex, and breed

SHEEP, BY AGE AND SEX: AUSTRALIA, 31 MARCH 1968 TO 1972
(^{'000})

Description	1968	1969	1970	1971	1972
Rams (1 year and over)	2,079	2,184	2,200	2,177	2,060
Breeding ewes (1 year and over)	77,872	83,607	85,474	84,381	75,611
Other ewes (1 year and over)	6,700	6,424	6,483	7,521	9,089
Wethers (1 year and over)	42,512	45,178	45,441	45,269	39,777
Lambs and hoggets (under 1 year)	37,750	37,212	40,482	38,443	36,374
Total sheep and lambs	166,912	174,605	180,080	177,792	162,910

Particulars of the principal breeds of sheep at 31 March 1971 (details are collected on a triennial basis) are shown in the following table.

SHEEP, BY PRINCIPAL BREED: STATES AND TERRITORIES, 31 MARCH 1971
(^{'000})

Breed	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Merino	53,017	16,740	14,449	16,304	32,100	402	9	198	133,218
Other recognised breeds	5,196	6,679	137	1,244	1,267	2,904	..	11	17,438
Merino comeback(a)	1,663	2,199	25	215	363	533	..	8	5,005
Crossbreds(b)	10,729	8,144	163	1,403	979	678	..	35	22,131
Total	70,605	33,761	14,774	19,166	34,709	4,517	9	251	177,792

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half bred and coarser.

Exports and imports of sheep

The movement of sheep to and from Australia is governed under Customs regulations. Exports of both breeding and slaughter sheep are subject to the provision of a permit from the Department of Primary Industry. For most breeds, these permits are freely granted. However, the export of breeding merinos was prohibited in the mid-thirties and this ban has continued on the export of merino ewes, semen and fertilised ova. There has been a partial relaxation on the export of merino rams in recent years, whereby up to 300 merino rams could be purchased for export each year at nominated public auctions. In February, 1973 the Government reimposed the total ban on the export of merinos to any country except New Zealand until a majority of persons affected decide by referendum in favour of removing or relaxing the embargo on the export of merino rams and their semen.

Since June, 1958, there has been a prohibition on the import of sheep to protect the Australian sheep industry from the introduction of exotic diseases, such as 'blue-tongue'.

Cattle

Objects of cattle-raising in Australia

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of profitable dairy herds. While dairy cattle are restricted mainly to coastal districts, beef cattle are more widely distributed in areas such as the tropical area of northern Queensland, the Northern Territory and the Kimberley district in the north of Western Australia. Increasing numbers of beef cattle are being raised in conjunction with sheep.

Distribution throughout Australia

Although cattle numbers declined after 1957 because of drought conditions and heavy slaughtering, they began to rise again in 1960 and in 1964 reached 19,055,000. Again because of drought in the eastern States, this figure declined to 17,936,000 in 1966. There has been an accelerating increase in the total number of cattle in Australia over the last six years due largely to an increase in the demand for beef. Total cattle numbers in March 1972 were 27.4 million compared with 24.4 million in 1971. Total dairy cattle numbers are currently 3.9 million.

For a graph showing the number of cattle in Australia from 1880 onwards see plate 45 page 805.

CATTLE NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972
(*000)

Year ended 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968	4,555	3,474	7,361	695	1,427	564	1,130	13	19,218
1969	4,864	3,878	7,668	865	1,546	586	1,190	14	20,611
1970	5,637	4,462	7,515	1,026	1,681	646	1,179	15	22,162
1971	6,494	5,061	7,944	1,196	1,781	733	1,145	18	24,373
1972	7,410	5,457	9,022	1,495	1,975	829	1,166	20	27,373

Maps showing the distribution of beef and dairy cattle in Australia have been published in previous issues of the Year Book.

Classification of cattle

CATTLE CLASSIFIED ACCORDING TO PURPOSE, AGE AND SEX: STATES, 31 MARCH 1972
(*000)

Classification	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Bulls (1 year and over) used or intended for service—									
Dairy breeds	12	31	10	5	3	3	..	..	63
Beef breeds	117	76	163	26	35	11	33	..	462
Total	129	107	172	31	38	14	33	..	525
Proportion of Aust. total %	24.5	20.5	32.8	5.9	7.2	2.6	6.3	..	100.0
Cattle used or intended for production of—									
Milk or cream for sale—									
Cows in milk and dry	491	1,257	420	145	96	155	..	1	2,565
Heifers—									
1 year and over	124	320	104	39	36	37	..	..	660
Calves (under 1 year)	98	308	79	36	33	36	..	..	591
Milk or cream for use on rural holdings—									
House cows and heifers	61	21	29	7	6	4	..	..	128
Total	773	1,906	633	227	172	232	1	2	3,945
Proportion of Aust. total %	19.6	48.3	16.0	5.7	4.3	5.9	..	..	100.0
Cattle for other purposes (a)—									
Cows and heifers (1 year and over)	3,422	1,702	4,185	667	925	263	699	10	11,873
Calves (under 1 year) (b)	2,148	1,136	2,003	392	455	226	190	6	6,555
Other (1 year and over) i.e. steers, bullocks, spayed cows, etc.	938	606	2,027	178	385	95	243	3	4,475
Total	6,507	3,444	8,215	1,237	1,765	584	1,132	19	22,903
Proportion of Aust. total %	28.4	15.0	35.9	5.4	7.7	2.5	5.0	0.1	100.0
Total cattle and calves for all purposes	7,410	5,457	9,022	1,495	1,975	829	1,166	20	27,373
Proportion of Aust. total %	27.1	19.9	32.9	5.5	7.2	3.0	4.2	0.1	100.0

(a) Mainly for meat production.

(b) Includes vealers, and bull calves intended for service.

**CATTLE CLASSIFIED ACCORDING TO PURPOSE, AGE AND SEX: AUSTRALIA, 31 MARCH
1968 TO 1972
(*000)**

<i>Classification</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1972</i>
Bulls (1 year and over) used or intended for service—					
Dairy breeds	82	77	69	65	63
Beef breeds	299	323	363	414	462
<i>Total bulls</i>	<i>381</i>	<i>400</i>	<i>432</i>	<i>479</i>	<i>525</i>
Cattle used or intended for production of—					
Milk or cream for sale—					
Cows (in milk and dry)	2,794	2,700	2,673	2,601	2,565
Heifers—Springing (within 3 months of calving) and other (1 year and over)	755	769	703	687	660
Calves (under 1 year)	689	624	631	614	591
Milk or cream for use on rural holdings—					
House cows and heifers	169	165	156	145	128
<i>Total cattle, production of milk, etc.</i>	<i>4,407</i>	<i>4,258</i>	<i>4,164</i>	<i>4,047</i>	<i>3,945</i>
Cattle for other purposes(a)—					
Cows and heifers (1 year and over)	7,450	8,333	9,249	10,370	11,873
Calves (under 1 year) (b)	3,868	4,218	4,805	5,669	6,555
Other (1 year and over), i.e. steers, bullocks, spayed cows, etc.	3,113	3,403	3,512	3,808	4,475
<i>Total cattle, other purposes</i>	<i>14,431</i>	<i>15,954</i>	<i>17,566</i>	<i>19,847</i>	<i>22,903</i>
<i>Total cattle and calves for all purposes</i>	<i>19,218</i>	<i>20,611</i>	<i>22,162</i>	<i>24,373</i>	<i>27,373</i>

(a) Mainly for meat production. (b) Includes vealers, and bull calves intended for service.

Exports and imports of cattle

In 1971-72 the number of cattle exported was 3,081, valued at \$855,000 (1970-71, 1,672 valued at \$288,000). Prior to June 1958 small numbers of cattle were imported, consisting mainly of valuable animals for stud purposes. Since that date an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease 'blue-tongue'.

Comparison with other countries

The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world at the latest available date.

CATTLE: NUMBERS IN VARIOUS COUNTRIES

*Source (for countries other than Australia): World Agricultural Production and Trade, United States Department of Agriculture
(*000)*

<i>Country</i>	<i>Year and month</i>	<i>Number p</i>
India(a)	1962 (May)	236,000
United States of America	1972 (January)	117,862
U.S.S.R.	1972 (January)	102,434
Brazil	1970 (December)	95,268
China, Peoples Republic of(a)	1971 (December)	92,550
Argentina	1972 (June)	52,312
Pakistan(a)	1961 (Estimate)	30,300
Australia	1972 (March)	27,373
Ethiopia	1971 (Estimate)	26,310
Mexico	1972 (December)	26,081
France	1972 (October)	21,746
Colombia	1972 (October)	20,960
Turkey(a)	1972 (December)	14,001
Germany, Federal Republic of	1972 (December)	13,638
United Kingdom	1972 (December)	12,928
South Africa, Republic of	1972 (June)	10,247

(a) Includes buffaloes.

Horses

The number of horses on rural holdings in Australia reached a peak of 2,527,000 in 1919. Since then it has declined, because of mechanisation of transport and farming, and the number recorded at 31 March 1970 was 456,000. From 1970 particulars of horses, on a Commonwealth basis, are collected only at decennial intervals in accordance with the world census by FAO.

A graph showing the number of horses in Australia since 1880 appears on plate 45, page 805.

HORSES: NUMBERS IN STATES AND TERRITORIES, 1930 TO 1970
('000)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1930 . . .	535	393	500	189	160	34	34	1	1,846
1940 . . .	535	326	445	190	139	30	33	1	1,699
1950 . . .	342	200	317	83	59	21	33	1	1,057
1960 . . .	204	81	234	30	41	11	38	1	640
1970 . . .	136	53	173	16	29	6	41	1	456

Overseas trade in horses

Exports of Australian-bred horses in 1971-72 numbered 1,372, valued at \$2,908,000, made up of horses for breeding (212 valued at \$404,000), horses for racing (852 valued at \$2,330,000, shipped principally to Singapore, Indonesia, Hong Kong, the United States of America and New Zealand), and horses for other purposes (308 valued at \$174,000). Horses imported into Australia in 1971-72 (1,163 valued at \$4,347,000) were mainly from New Zealand and the United Kingdom.

Pastoral products: wool

With about one-sixth of the world's woolled sheep, Australia produces almost one-third of the world's wool and more than half the world's fine-quality Merino wool. More than 90 per cent of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonised wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 818.

Wool marketing

Details of past wool marketing schemes and agreements, including the 1914-18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd, the 1939-45 War Acquisition Scheme, Joint Organization, and the Reserve Price Plans of 1951 and 1965, are given in previous issues of the Year Book.

Between 80 and 90 per cent of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes). There are fourteen recognised wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Fremantle, Albany, Hobart, and Launceston. At these centres wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling program is drawn up by the Joint Wool Selling Organisation representing wool growers, selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre. Before each sale the selling brokers, who act as agents for the wool-growers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in more than fifty countries.

The balance of the clip is sold mainly through private sale, that is, after direct negotiation between the grower and the buyer. Since September 1971 a further alternative, sale by tender, has been available using the principle of sealed bidding. Companies engaged in this activity employ objective measurement techniques for wool, which can allow substantial savings in handling costs over traditional methods of wool selling by auction.

Wool marketing Committee of Enquiry

Details of this enquiry and its findings are included in previous issues of the Year Book.

The Australian Wool Industry Conference

This body was formed by woolgrowers in October 1962 to meet the need for an organisation with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists of twenty-five members each from the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation. The fifty member conference is presided over by an independent chairman.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board. Under the Wool Tax Acts (see page 581) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Corporation and the wool research program.

In March 1972 the Conference put to the Government a proposal for:

- (i) a revised structure for the management of the industry's affairs through the amalgamation of the Australian Wool Board and the Australian Wool Commission into a single wool authority, and
- (ii) an integrated marketing system, involving a plan for acquisition of the Australian clip and influencing all of the activities bringing wool from the raw material stage to the ultimate consumer.

Committee on Wool (Randall Committee)

In October 1971 the Government appointed a committee chaired by Sir Richard Randall, former permanent head of the Treasury, to report on the situation and outlook of the Australian Wool Industry. The report of the Committee on these matters was presented to the Prime Minister on 16 May 1972.

Following the submission by the Australian Wool Industry Conference in March 1972, see above, the Committee was asked to examine this proposal. The Committee presented the final report on this examination on 29 May 1972.

A report on all the investigations and findings of the Committee was released publicly in August 1972. On the A.W.I.C. proposal the Committee viewed the first part favourably but considered that some aspects of the acquisition proposal needed further clarification.

Australian Wool Corporation

Following the Australian Wool Industry Conference submission and the report of the Randall Committee (see above) the Australian Wool Corporation was established under the *Wool Industry Act 1972* and came into operation on 1 January 1973. The Corporation took over the functions of both the Australian Wool Board and the Australian Wool Commission which ceased to operate on that date.

The Corporation consists of nine members, including a full time Chairman. The Chairman is appointed for a period of five years with the other part-time members being appointed for a period of three years. Of the eight other members, four represent Australian woolgrowers, one represents the Commonwealth Government and three are members with special qualifications who have experience in the marketing, processing or manufacture of wool or wool products, or in commerce, finance, economics or science. All members, including the Chairman are appointed by the Minister for Primary Industry, the woolgrower representatives on the nomination of the A.W.I.C. and the three members with special qualifications after consultation with the A.W.I.C.

The functions of the Australian Wool Corporation, which were inherited almost directly from the Wool Commission and Wool Board relate to Wool Marketing, Wool Use Promotion, Wool Testing, Wool Research and the Management of Wool Stores. At its first meeting on 5 January 1973, the Corporation established a group to investigate wool marketing including the proposals for acquisition.

Funds for the Corporation's activities other than its reserve price functions are provided by both woolgrowers, through a levy on shorn wool proceeds (see below), and the Commonwealth. Reserve price activities are supported by an administrative levy on wool sold at auction, with funds for wool trading activities coming from accumulated funds inherited from the Australian Wool Commission, and from credit facilities established with the trading banks.

Australian Wool Board

The Australian Wool Board which was constituted under the *Wool Industry Act 1962-1970* ceased to function on 1 January 1973 when the Australian Wool Corporation (see above) commenced operations.

For details of the Australian Wool Board see Year Book No. 58, page 800.

Wool levy

Since 1936 a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate of 5c a bale was increased at the request of woolgrowers to 20c a bale in 1945 and 40c a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957 provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 20c a bale. In 1960 the wool promotion levy was raised to 50c a bale, and the following year it was increased further to \$1 a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64.

On 1 July 1964 the basis for collecting the woolgrowers' combined levy for wool promotion and research was changed from a flat rate per bale to a percentage deduction from the gross value of shorn wool sold. A maximum rate of 2 per cent was fixed, but provision was made for a lower rate to be prescribed, if appropriate. For 1964-65 the rate was set at 1.875 per cent, which involved a substantial increase in payments by woolgrowers for promotion (from \$1 per bale to the equivalent of about \$2.70 per bale), while the research component of the levy was left unaltered at 20c per bale. In 1965-66 the levy was set at 2 per cent and it remained at the maximum rate till 1969-70. From 1 August 1970, the rate of levy was reduced to 1 per cent.

Following agreement between the Australian Wool Industry Conference and the Government on overall funding of wool research and promotion activities, the rate of the levy for the triennium beginning 1 July 1973 has been set at 2.4 per cent of gross proceeds of shorn wool. This rate includes, however, a loading for administrative expenses of the Wool Corporation in its reserve price activities.

The imposition and collection of the combined levy from woolgrowers is governed by six complementary Acts, the Wool Tax Acts (Nos 1 to 5) 1964 and the *Wool Tax Administration Act* 1964-1966.

Commonwealth Government's contributions to wool research and promotion

In 1945 the Commonwealth Government commenced contributing on a statutory basis to wool research. Initially the contribution was at the rate of 20c a bale, but this was doubled in 1957 to 40c a bale. At this rate the Commonwealth Government contributed about \$2 million to wool research in 1965-66, and a similar sum was provided in 1966-67.

Prior to 1964-65 the Commonwealth Government had not contributed to wool promotion. However, following representations made by the Australian Wool Industry Conference, the Commonwealth Government undertook to provide assistance to the Australian Wool Board in financing its commitment to the greatly expanded wool promotion program of the International Wool Secretariat. The expanded wool promotion program, announced by the Secretariat, envisaged an increase in the Wool Board's annual contribution to overseas wool promotion campaigns from the then level of \$5 million to about \$20 million.

From 1 July 1964 the Commonwealth Government undertook to match on a \$1 for \$1 basis any increase in contributions by woolgrowers for wool promotion in excess of the levy of \$1 a bale then in force, and the Wool Industry Conference agreed to increase the growers' levy to the equivalent of about \$2.70 a bale, which resulted in a Commonwealth commitment of about \$1.70 a bale. In aggregate this commitment entailed a Commonwealth contribution for promotion of about \$8 million a year. This arrangement operated until 30 June 1967.

During 1967 the Wool Industry Act was amended following negotiations between the Executive of the Australian Wool Industry Conference and the Government. The amendment provided for a Government contribution for wool research and promotion during the three years 1967-68 to 1969-70 on a \$1 for \$1 basis matching woolgrowers' contribution by levy, to a maximum of \$14 million in any one year. It provided for the grower levy and the Government grant to be apportioned annually between wool research and promotion by the Minister for Primary Industry after considering the recommendations of the Australian Wool Industry Conference. No change occurred in the legislation providing for the payment by woolgrowers of a levy at a rate not exceeding two per cent per annum.

When arrangements for Government financial support for wool research and promotion expired on 30 June 1970, the Government increased its contributions for these activities to an average of \$27 million a year for each of the three years 1970-71 to 1972-73. At the same time, as mentioned above, the levy on woolgrowers was reduced from 2 per cent to 1 per cent of the gross proceeds from the sale of shorn wool.

Australian Wool Marketing Corporation Pty Ltd.

The functions of this body, which began actual operations on 1 July 1970 were taken over by the Australian Wool Commission (see below) in November 1970. For details of the Marketing Corporation see previous issues of the Year Book.

The Australian Wool Commission

The Australian Wool Commission was established in November 1970 under the Australian *Wool Commission Act* 1970 to operate a flexible reserve price scheme for wool sold at auction and to perform a number of other functions aimed at improving the marketing of Australian wool.

It ceased to operate from 1 January 1973 when its functions were taken over by the Australian Wool Corporation (see page 810). For details of the Australian Wool Commission see Year Book No. 58, pages 802-3.

The working capital needed by the Commission (to purchase wool under its flexible reserve price scheme, to make advances to woolgrowers, etc.) was provided in the form of loans by the Commonwealth Government and by trading banks. The Commonwealth guaranteed loans made by trading banks to the Commission. All monies advanced to the Commission for this purpose were repaid from trading activities prior to its ceasing activities. In 1971-72 the Commission recorded a net trading profit of over \$10 million.

Under the Act, the operating costs of the Commission were met jointly by woolgrowers and the Commonwealth Government. The Government provided half of the funds required for the rehandling and brokers' administration charges for the elimination of small lots under the Price Averaging Plan, and was to meet any losses that may result from time to time on the resale of wool purchased by the Commission. The balance of the operating costs of the Commission were met by woolgrowers. Administrative expenses incurred by the Commission in operating the reserve price scheme were met by a levy on wool sold at auction. For 1971-72 this levy was 0.45 per cent of gross proceeds. From 1 July 1972 the rate was set at 0.40 per cent.

Emergency financial assistance for woolgrowers

In the 1970-71 Budget an amount of up to \$30 million was provided for emergency assistance to woolgrowers to offset to some extent the decline in wool income resulting from the drastic slump in wool prices between 1968-69 and 1969-70. About \$21.5 million was paid out in grants to over 21,000 woolgrowers during 1970-71 and 1971-72.

Wool Deficiency Payments Scheme

This scheme was introduced to give woolgrowers a guaranteed price for the 1971-72 wool selling season for all but specified low price low grade wools comprising the bottom 10 per cent of the clip. A deficiency percentage rate is calculated each week which, when applied to the gross sale price of all wool sold, brings the price up to the equivalent of an average for the whole Australian clip over the full season of 79.37 cents per kilo greasy. Payments to producers of wool are made by the Australian Wool Commission on behalf of the Commonwealth through wool brokers and merchants and other persons registered under the *Wool (Deficiency Payments) Act 1971*. More than \$52 million was paid out under this scheme in 1971-72. The scheme was extended to cover the 1972-73 season on the same basis but without excluding any inferior wools. No payments are expected in respect of wool sold in 1972-73.

Objective measurement of Wool

In 1969 the Australian Wool Board, through its Objective Measurement Technical Committee and Objective Measurement Policy Committee, began investigations into the objective measurement of wool and the significance of this development for the marketing of the Australian wool clip.

In 1970 the Commonwealth Government provided \$1.5 million for work on research and implementation of objective measurement techniques.

The findings of the Committees were presented to the Board in December 1972, and point to significant changes from the traditional processes involved in every stage of the marketing process. Savings of several dollars per bale could be achieved in the marketing of wool, especially through the separation of handling and selling centres for wool. The Committee noted that further refinements and developments in techniques would occur. The Department of Primary Industry is setting up a monitoring body, as recommended by the committee to ensure the maintenance of standards and accuracy in measurement of wool.

Wool production

Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed 'greasy wool'. The quantity of grease and other matter in a fleece differs not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. To allow for this factor, the weight of greasy wool is sometimes given on a 'clean' basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed 'clean yield'.

From 1946-47 to 1952-53 the Australian Wool Realisation Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.7 per cent and 57.7 per cent. It was 56.9 per cent in 1971-72.

Wool scoured, washed and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonised contains quantities of dirty and low-grade wool. The quantity of scoured and carbonised wool exported during 1971-72 was about 7.9 per cent of total raw wool exports in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (*see* page 814). In general, however, South Australia obtains from its large-framed merinos a much heavier fleece per sheep than the Australian average. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1967-68 to 1971-72. A graph showing the production of wool in relation to sheep numbers from 1880 onwards appears on plate 46 below.

PRODUCTION OF WOOL (GREASY BASIS): STATES AND TERRITORIES, 1967-68 TO 1971-72
(’000 kg)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	295,029	150,788	102,886	99,316	136,183	17,376	51	1,015	802,643
1968-69	305,512	165,267	112,041	108,011	170,394	21,299	50	934	883,506
1969-70	340,125	193,779	89,065	124,741	152,624	21,861	50	1,159	923,405
1970-71	314,317	195,444	76,554	117,537	158,969	21,671	36	1,000	885,528
1971-72	281,759	192,449	83,160	117,922	178,162	21,063	24	822	875,361

The bulk of the Australian wool production (about 90 per cent in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (less than one per cent) or is exported on skins (about 9 per cent). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED
AUSTRALIA, 1967-68 TO 1971-72

Year	Shorn (including crutchings)	Dead and fell- mongered	Exported on skins	Total production	
				Quantity	Value
	’000 kg	’000 kg	’000 kg	’000 kg	\$’000
1967-68	728,049	10,861	63,734	802,643	709,524
1968-69	804,328	11,441	67,737	883,506	838,651
1969-70	839,084	10,057	74,264	923,405	735,233
1970-71	801,168	7,818	76,540	885,528	537,504
1971-72	776,969	8,133	90,258	875,361	663,668

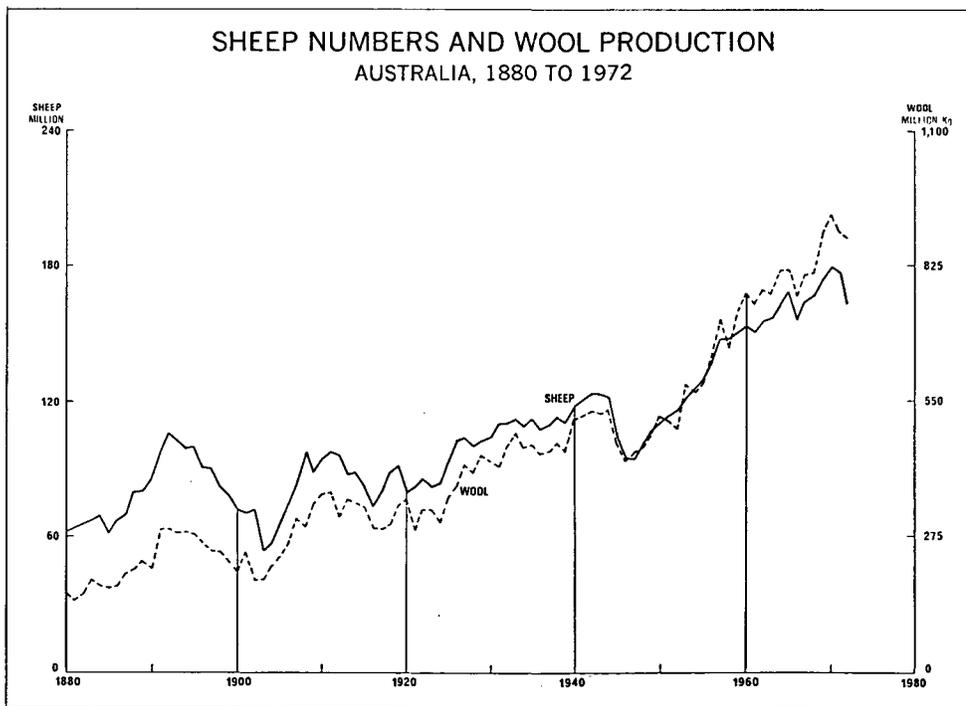


PLATE 46

Average fleece weight

AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)
STATES AND TERRITORIES, 1967-68 TO 1971-72

(kg)

State or Territory	Sheep					Lambs				
	1967-68	1968-69	1969-70	1970-71	1971-72	1967-68	1968-69	1969-70	1970-71	1971-72
N.S.W.	4.48	4.56	4.93	4.55	4.36	1.43	1.61	1.62	1.61	1.55
Vic.	4.12	4.44	4.84	4.67	4.52	1.16	1.34	1.37	1.39	1.36
Qld	4.82	5.10	4.69	4.69	4.99	1.85	1.96	1.92	2.05	2.16
S.A.	5.55	6.08	6.27	5.69	6.00	1.53	1.78	1.86	1.75	1.85
W.A.	4.79	5.31	4.70	4.68	5.10	1.34	1.57	1.35	1.38	1.57
Tas.	3.91	4.81	4.85	4.67	4.70	1.03	1.20	1.15	1.19	1.26
N.T.	4.94	4.89	4.89	4.29	6.00	..	..	..	..	..
A.C.T.	3.93	3.87	5.12	4.26	4.13	0.74	0.75	0.82	0.95	1.22
Aust.	4.59	4.90	4.99	4.74	4.78	1.40	1.59	1.55	1.54	1.58

Classification of wool according to quality

The following table provides a detailed analysis of wool sold at auction, according to quality, for the 1971-72 season. These data are compiled by the Wool Corporation on the basis of catalogues of auction sales. 'Quality' is a measure of the fineness and texture of wool for spinning purposes.

CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA
1971-72 SEASON

(Bales of approximately 136 kg)

Predominating quality (mean microns)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
19 and finer	89,236	32,331	3,166	159	973	6,113	131,978
20-21	299,344	245,071	83,257	27,751	144,181	6,322	805,926
22-23	529,126	410,619	312,250	211,553	434,411	23,666	1,921,625
<i>Total, 23's and finer</i>	<i>917,706</i>	<i>688,021</i>	<i>398,673</i>	<i>239,463</i>	<i>579,565</i>	<i>36,101</i>	<i>2,859,529</i>
24-25	116,679	244,701	65,732	239,927	182,433	39,283	888,755
26-27	76,508	181,823	9,540	100,884	69,903	23,459	462,117
28-32	99,039	166,382	3,850	30,571	18,498	18,639	336,979
33 and coarser	39,156	77,475	1,597	6,503	5,328	8,718	138,777
Oddments	24,168	22,564	14,760	8,323	26,146	2,347	98,308
Grand total	1,273,256	1,380,966	494,152	625,671	881,873	128,547	4,784,465

(a) All greasy wool sold at auction except 'wool re-offered account buyer.'

Price and value

During 1971-72 the price of greasy and scoured wool sold in the selling centres of Australia averaged 75.25c per kg compared with the average price of 64.68c per kg in 1970-71 and 82.78c per kg in 1969-70. These prices are as compiled by the National Council of Wool Selling Brokers and represent the average price realised for all greasy and scoured wool, of whatever type or quality, marketed during the years indicated.

Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46 the gross value of wool production was \$117,194,000, representing 17.4 per cent of the gross value of production of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at \$1,303,804,000 or 55.6 per cent of the total value of production for all rural industries. The value of wool production fluctuated considerably in subsequent years. In 1971-72 it was \$660,456,000 or 16.0 per cent of the gross value of production of rural industries.

**ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a)
STATES AND TERRITORIES, 1967-68 TO 1971-72**
(*\$'000*)

<i>Season</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68	265,527	133,213	94,874	79,925	119,146	15,609	41	1,189	709,524
1968-69	296,005	155,547	108,060	95,054	161,589	21,180	38	1,178	838,651
1969-70	275,385	154,693	69,783	91,224	124,829	18,081	30	1,208	735,233
1970-71	198,688	118,123	44,916	65,525	94,510	14,983	17	742	537,504
1971-72	222,598	134,514	61,732	85,701	137,269	18,001	13	628	660,456

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

Stocks of wool

Stocks of raw wool held in Australia at 30 June 1972 amounted to 205.8 million kg (greasy basis) of which 33.1 million kg (18.5 million kg as greasy and 14.6 million kg as scoured and carbonised) was held by woollen mills, wool scourers and fellmongers, and 172.7 million kg, assumed to be all greasy, was held by brokers and dealers. Of the wool held by brokers and dealers 53.2 million kg was unsold wool and 119.5 million kg was sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

Consumption of wool

Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonised wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1967-68 to 1971-72.

ESTIMATED CONSUMPTION OF RAW WOOL: AUSTRALIA, 1967-68 TO 1971-72
(*'000 kg*)

<i>Year</i>	<i>Greasy basis</i>			<i>Clean equivalent</i>		
	<i>Used on woollen and worsted systems</i>	<i>Used for felt manufacture (including hats)</i>	<i>Total</i>	<i>Used on woollen and worsted systems</i>	<i>Used for felt manufacture (including hats)</i>	<i>Total</i>
1967-68	58,242	1,148	59,390	33,132	545	33,677
1968-69	58,718	1,148	59,866	33,402	545	33,948
1969-70	59,459	1,148	60,606	33,824	545	34,369
1970-71	60,904	1,148	62,052	34,646	545	35,191
1971-72	58,822	1,148	59,970	33,462	545	34,007

As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series 'Estimated consumption of processed wool in Australia' provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1967-68 to 1971-72. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

ESTIMATED CONSUMPTION OF PROCESSED WOOL: AUSTRALIA
1967-68 TO 1971-72
(^{'000} kg)

Year	Greasy basis			Total	Clean equivalent			Total
	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)		Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	
1967-68 .	18,249	16,872	1,148	36,269	10,166	10,282	545	20,992
1968-69 .	17,600	16,576	1,148	35,323	9,798	10,100	545	20,443
1969-70 .	18,372	18,165	1,148	37,685	10,243	11,070	545	21,857
1970-71 .	19,564	19,158	1,148	39,870	10,907	11,675	545	23,127
1971-72p.	19,585	19,825	1,148	40,558	10,907	12,081	545	23,533

(a) Includes hand knitting yarns used. (b) Includes wool content of yarns containing a mixture of wool and other fibres.

Quantities of wool exported

Of the total shipments of greasy and slipe wool in 1971-72, 41 per cent went to Japan, 11 per cent to France, 8 per cent to Italy, 8 per cent to the Federal Republic of Germany, 5 per cent to the United Kingdom and 4 per cent to Belgium-Luxembourg.

EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA, 1967-68 TO 1971-72
(^{'000} kg actual weight)

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Belgium-Luxembourg	43,515	38,355	38,768	44,145	27,472
France	54,722	59,320	60,415	62,343	78,346
Germany, Federal Republic of	45,733	43,944	46,087	46,118	52,036
India	9,780	15,435	19,152	16,916	15,223
Italy	55,845	59,275	61,556	42,451	52,327
Japan	225,931	240,612	258,235	254,684	285,239
Poland	16,119	15,631	15,343	12,711	18,355
Taiwan	5,420	10,147	12,345	14,226	15,692
United Kingdom	65,133	52,552	62,620	34,173	33,011
U.S.S.R.	20,932	28,131	30,570	38,796	21,328
Yugoslavia	8,965	8,529	12,069	16,655	8,671
Other	80,393	95,311	95,615	67,494	81,605
Total	632,490	667,241	712,776	650,711	689,305

EXPORTS OF SCOURED AND WASHED, AND CARBONISED WOOL: AUSTRALIA
1967-68 TO 1971-72
(^{'000} kg actual weight)

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Canada	2,307	999	1,242	956	911
France	1,108	1,055	616	1,061	1,622
Germany, Federal Republic of	3,923	3,072	2,448	3,800	3,619
Hong Kong	1,220	2,064	1,972	1,799	1,458
Iran	2,145	1,865	2,214	1,896	3,117
Italy	3,950	3,372	3,780	3,529	4,840
Japan	1,793	1,653	1,680	968	1,443
Korea, Republic of	827	1,222	1,077	729	759
Taiwan	449	685	1,445	2,182	1,063
United Kingdom	8,587	6,128	6,056	6,104	5,823
United States of America	8,336	8,646	6,514	2,550	1,020
U.S.S.R.	1,667	3,512	6,966	1,046	10,246
Other	4,529	4,461	4,964	6,172	6,122
Total	40,841	38,734	40,973	32,791	42,043

EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE: AUSTRALIA
1967-68 TO 1971-72
 ('000 kg actual weight)

	1967-68	1968-69	1969-70	1970-71	1971-72
Carded or combed—Tops	10,304	10,943	9,940	8,892	9,949
Other . . . . .	..	3	4	14	90
Noils	1,763	1,536	1,183	1,367	1,453
Waste	1,304	1,026	1,012	1,455	2,545

The following table shows the estimated greasy weights of exports of raw and semi-processed wool for the years 1967-68 to 1971-72. As the figures in the following table are expressed on a 'greasy' basis, they differ from those in the preceding tables which represent actual weight shipped.

EXPORTS OF WOOL—GREASY BASIS: AUSTRALIA
1967-68 TO 1971-72
 ('000 kg)

	1967-68	1968-69	1969-70	1970-71	1971-72
Raw wool—					
Greasy and-slipe	632,952	667,588	712,985	650,883	689,619
Scoured and washed and carbonised	66,733	63,291	66,951	53,580	68,698
Exported on skins	63,734	67,737	74,264	76,540	90,258
Total raw wool	763,418	798,615	854,200	781,003	848,575
Semi-processed wool—					
Tops	19,902	21,229	19,284	17,251	19,302
Yarn	109	91	126	235	311
Total raw and semi-processed wool	783,429	819,935	873,609	798,489	868,186

Value of wool exported

The value of wool (other than wool on sheepskins) exported from Australia during 1971-72 was 12 per cent of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1971-72 averaged 18 per cent. The values for the five years ended 1971-72, together with the principal countries to which wool was exported, are shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA(a), 1967-68 TO 1971-72
 (\$'000)

Country of consignment	1967-68	1968-69	1969-70	1970-71	1971-72
Belgium-Luxembourg	32,712	32,709	28,026	24,486	16,149
France	49,430	59,991	53,615	42,155	53,087
Germany, Federal Republic of	46,517	48,994	48,202	39,246	45,555
Italy	60,182	70,127	63,928	33,863	42,012
Japan	245,882	263,320	259,766	198,276	220,300
United Kingdom	71,846	63,947	62,784	30,062	32,470
United States of America	47,058	49,753	36,386	14,672	13,133
U.S.S.R.	27,368	40,104	43,212	35,349	29,860
Other	134,736	166,562	165,124	125,718	129,630
Total	715,731	795,507	761,043	543,827	582,196

(a) Excludes wool exported on sheepskins.

World sheep numbers and wool production

The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred, and carpet type wool for the latest available years.

In 1971-72 Australia produced 33 per cent of the world total of all types of wool. Other principal wool producers were New Zealand with 12 per cent of the world total, Argentina, 7 per cent, South Africa, 4 per cent, and United States of America, 3 per cent. Production in the U.S.S.R., China, and eastern European countries together amounted to 22 per cent.

Australia's wool clip is predominantly merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL
1969-70 TO 1971-72**

(Source for countries other than Australia: Reports published by the Commonwealth Secretariat, London)

Country	Sheep numbers (million)			Wool production (million kg— greasy basis)		
	1969-70	1970-71	1971-72(a)	1969-70	1970-71	1971-72(a)
Australia	180	178	163	923	886	875
New Zealand	60	59	59	328	334	322
Argentina	44	43	39	201	200	189
South Africa	32	30	29	145	123	113
United States of America	20	20	19	88	85	82
Uruguay	20	19	18	80	78	54
United Kingdom	26	26	27	48	46	48
U.S.S.R., China, Eastern Europe(b)	236	244	246	560	589	596
Other	334	332	332	406	409	402
World total	952	951	932	2,779	2,750	2,681
Type of wool—						
Apparel type—						
Merino				1,148	1,106	1,067
Crossbred				1,055	1,061	1,035
Carpet type				576	583	579

(a) Provisional. (b) This group comprises Albania, Bulgaria, The People's Republic of China and Dependencies, Czechoslovakia, East Germany, Hungary, Outer Mongolia, Poland, Romania, Tibet, and U.S.S.R.

Principal importing countries and sources of supply

The following table, prepared from information published by the Commonwealth Secretariat, furnishes, in respect of the principal importing countries, details of their imports of wool for 1971 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of wool is quoted.

PRINCIPAL WOOL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1971

(Source: Information published by the Commonwealth Secretariat, London)

(Million kg)

Importing country	Quantity imported from(a)—					Total imports
	Australia	New Zealand	Argentina	South Africa	Other countries	
Japan	263	21	8	13	3	308
United Kingdom	33	58	7	12	41	151
France	84	52	6	19	10	171
Italy	53	11	3	6	16	89
Belgium	29	21	2	..	52	104
Germany, Federal Republic of	49	18	6	14	25	111
United States of America(b)	11	27	7	2	10	57

(a) Actual weight of greasy and scoured wool.

(b) Imports are in terms of estimated clean content of greasy and scoured wool.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

Pastoral products: meat

Australian Meat Board

The Australian Meat Board, which was re-constituted under the *Meat Industry Act 1964-1969*, is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. Powers and membership of the Board prior to 1964 are set out on page 801, Year Book No. 40. Following its reconstitution it consisted of five members representing meat producers, two representing meat exporters, one representing the Commonwealth Government, and an independent Chairman. The Meat Industry Act was amended in 1969 to provide for the appointment of an additional member to represent meat producers. The Board's primary function is to ensure that Australian meat exports are marketed in a manner which will safeguard the long-term interests of the Australian meat industry.

The Board regulates overseas marketing of Australian meat by means of an export licensing system. It has power of control over the kinds of meat that may be exported by licensed exporters to particular places, or to particular agents and representatives. The Board also has power to undertake measures to promote the sale and consumption of meat both in Australia and overseas, and it may purchase and sell meat in its own right for the purpose of market development. However, the exercise of this power is limited to activities aimed at meeting special marketing problems or circumstances which preclude the effective participation of private traders. The Board may also purchase and sell meat, with the approval of the Minister for Primary Industry, for the purpose of administering any international arrangements to which Australia may be a party.

Meat research schemes

In November 1965 the Commonwealth Parliament passed legislation providing for the extension of the cattle and beef research scheme to cover beef, mutton and lamb research. Details of the beef research scheme were set out on page 1050, Year Book No. 51. Under the new legislation the Cattle and Beef Research Committee was re-constituted as the Meat Research Committee, its powers and functions being similar to those of the former Committee extended to include mutton and lamb research. The Meat Research Committee consists of twelve members—seven meat producer representatives, the Chairman of the Australian Meat Board (Chairman), one representative from the universities engaged in meat research, the Commonwealth Scientific and Industrial Research Organization, the Australian Agricultural Council, and the Department of Primary Industry. The new Committee came into being in March 1966 and the Cattle and Beef Research Committee ceased to exist from that date.

The scheme is financed from the Livestock Slaughter Levy (*see below*). The Commonwealth makes a matching contribution on a \$1 for \$1 basis to meet expenditure on research. The research is conducted by such bodies as the universities, C.S.I.R.O., State Departments of Agriculture and the Bureau of Agricultural Economics.

The Minister for Primary Industry approved a beef research program of \$2,546,000, and a mutton and lamb research program of \$1,306,000 for 1972-73.

The Livestock Slaughter Levy

The *Livestock Slaughter Levy Act 1964-1966* imposed a levy on all cattle (over 200 lb dressed weight), sheep and lambs slaughtered within Australia for human consumption. These levies operated from 1 August 1964 and have replaced the charge imposed on meat exports and also subsumed the cattle levy for beef research purposes imposed in 1960 (*see page 909, Year Book No. 51*). In November 1968 legislation was passed amending the Act to provide for an additional levy to finance service and investigation activities relating to meat processing. The amended legislation (the *Livestock Slaughter Levy Act 1964-1971*) now provides three elements in the levy for each class of livestock—an amount to finance meat research; an amount to finance the operations of the Australian Meat Board; and, from 1 January 1969 until 31 December 1974, an amount to finance service and investigation activities relating to meat processing. The first two elements are paid by producers while the third element is paid by meat processors.

Under the Act the total levy may not exceed 75.0c a head for cattle or 7.5c a head for sheep and lambs. The amount levied for research may not exceed 25.0c a head for cattle or 3.3c a head for sheep and lambs while the amount for service and investigation activities relating to meat

processing is set for the period of its operation at 1.0c a head for cattle and 0.1c a head for sheep and lambs. The present operative rate for cattle is 46.0c (25.0c for research; 20.0c to the Australian Meat Board; 1.0c for service and investigation) and for sheep and lambs, 3.85c (1.75c for research; 2.00c to the Australian Meat Board; 0.10c for service and investigation).

United Kingdom long-term purchase arrangements

Details of the long-term meat contracts with the United Kingdom from 1939 to 1952 and of the Fifteen Year Meat Agreement (1952-67) are given on page 710, Year Book No. 41 and in earlier issues. In September 1953 the trade in meat between the United Kingdom and Australia reverted to private traders. The main features of the arrangements were given in Year Book No. 47, page 960. Details of minimum prices operating and deficiency payments received in recent years under private trading appear in Year Book No. 48 (page 973) and No. 50 (page 1068).

On 30 September 1967 the Fifteen Year Meat Agreement expired, and no new agreement has been negotiated. Australia retained duty-free entry for meat until 1 July 1971 when a variable levy system for beef and veal imports and duties on mutton and lamb were introduced by the United Kingdom Government in preparation for entry into the European Economic Community (E.E.C.).

The United Kingdom became part of an enlarged E.E.C. in 1973 and will progressively adopt the mechanism of the E.E.C. Common Agricultural Policy (C.A.P.) over the period up to 1977. Under the C.A.P., beef and veal imports are mainly controlled by a system of variable levies. At present the C.A.P. does not apply to mutton and lamb but the United Kingdom will gradually increase its duties on mutton and lamb until the level of the full E.E.C. duty (20 per cent) is reached in 1977.

Lamb Guarantee Scheme

The Australian Meat Board, under the scheme, guaranteed exporters a minimum price on all lambs 36 lb and under shipped to the United Kingdom. The scheme operated from 1962-63 lamb export season until it was discontinued by the Board in March 1972. Details of the scheme are shown in Year Book No. 58, page 811.

United States-Australia Meat Agreement

In February 1964 the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. (Details of the Agreement were given on page 820 of Year Book No. 56). In June 1970, the United States advised that it was terminating the Agreement at the end of 1970. Legislation enacted by the United States Congress in 1964, details of which were given in previous issues of the Year Book, provides for restrictions on imports of fresh, chilled and frozen beef, veal, mutton, and goatmeat from all sources if such imports are estimated by the United States Secretary of Agriculture to exceed a predetermined figure (the trigger point) calculated by a formula in the legislation. Should quotas be necessary the total permissible imports would be set some 10 per cent below the trigger point. Until 1968 the estimate of imports did not exceed the trigger point and quotas were not necessary. However, late in that year it appeared likely that quotas would be triggered and to avoid this all major suppliers agreed to restrain shipments. The total restraint level was set approximately half way between the quota level and trigger point. A similar situation arose in 1969 and 1970 and restraints again operated. However in June 1970 the estimate of imports exceeded the trigger point and the United States President suspended the operation of quotas and announced new higher restraint levels for all major suppliers. In 1971 the United States President exercised, as in 1970, his powers under the legislation and announced that the operation of quotas would be suspended as suppliers had agreed to enter into a restraint agreement with the United States to keep the import level to 517,900 tons. In June 1972, the President announced that the restraint arrangements for 1972 had been suspended for the remainder of the year in an effort to control increases in meat prices in the United States. In December 1972 it was announced that the suspension of restraint arrangements would continue into 1973, subject to quarterly review.

Cattle slaughtered

**CATTLE (INCLUDING CALVES) SLAUGHTERED: STATES AND TERRITORIES
1967-68 TO 1971-72
(^{'000})**

Year	Slaughtering passed for human consumption									Total slaughterings including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1967-68 . . .	1,447	1,713	1,664	245	333	172	74	10	5,656	5,731
1968-69 . . .	1,417	1,514	1,823	220	366	178	80	10	5,608	5,672
1969-70 . . .	1,545	1,709	1,680	249	402	178	83	15	5,861	5,921
1970-71 . . .	1,573	1,845	1,590	264	348	162	69	19	5,870	5,896
1971-72 . . .	1,717	2,074	1,708	291	389	185	77	20	6,461	6,514

Production of beef and veal

**PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT): STATES AND TERRITORIES
1967-68 TO 1971-72
(Tons)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68 . . .	220,879	223,307	310,478	33,074	59,249	25,084	15,879	1,692	889,642
1968-69 . . .	217,011	212,859	340,744	35,617	67,751	27,936	16,239	1,891	920,048
1969-70 . . .	273,358	249,574	309,771	40,059	71,902	31,011	16,147	2,636	994,458
1970-71 . . .	277,910	302,663	297,412	42,807	63,318	29,407	14,092	3,129	1,030,738
1971-72 . . .	300,877	331,187	339,367	49,277	76,070	34,246	15,176	3,242	1,149,442

Consumption of beef and veal

The highest post-war consumption of beef and veal (including canned beef and veal) was 132.7 lb per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960-61 amounted to only 88.3 lb. In 1971-72 consumption per head was 91.3 lb, of which 87.0 lb was carcass meat and 4.3 lb was canned meat (in terms of carcass equivalent).

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT)
AUSTRALIA, 1967-68 TO 1971-72**

Year	Net change in stocks	Pro- duction	Exports (a)	For canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68 . . .	- 6	890	381	38	478	89.7
1968-69 . . .	+12	920	380	34	495	91.3
1969-70 . . .	+ 5	994	481	35	473	85.6
1970-71 . . .	+ 1	1,031	491	44	494	87.5
1971-72 . . .	+11	1,149	585	54	500	87.0

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores.

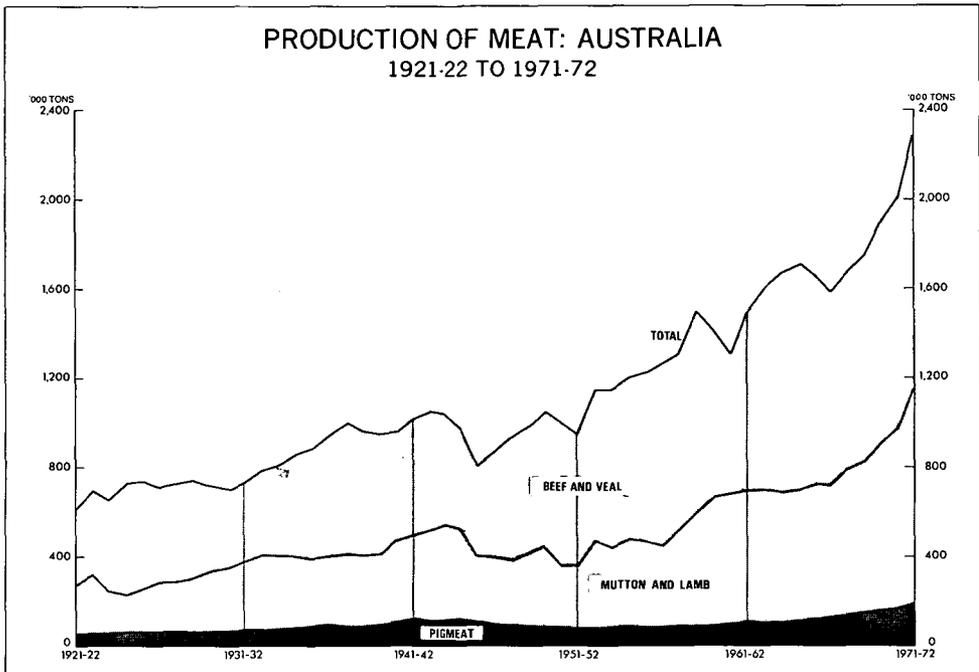
Exports of beef and veal

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1971-72 the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America. In 1971-72, the principal markets for Australian beef and veal exports were the United States (570,924,000 lb, valued at \$259,780,000); Japan (105,330,000 lb, valued at \$44,639,000); and the United Kingdom (89,215,000 lb, valued at \$34,421,000).

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL(a): AUSTRALIA
1967-68 TO 1971-72**

Year	<i>Exports of frozen and chilled beef</i>				<i>Exports of frozen veal</i>		<i>Exports of frozen and chilled beef and frozen veal</i>	
	<i>Bone-in</i>		<i>Boneless</i>		Quantity	Value	Quantity	Value
	Quantity	Value	Quantity	Value				
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1967-68.	7,950	2,845	546,473	191,679	9,645	4,064	564,068	198,588
1968-69.	7,218	3,045	548,768	204,247	8,389	3,681	564,375	210,973
1969-70.	29,490	9,068	681,602	277,858	11,804	5,200	722,896	292,126
1970-71.	71,302	21,277	663,114	275,806	12,415	5,768	746,831	302,851
1971-72	39,596	13,627	823,788	364,669	21,788	10,615	885,172	388,911

(a) Actual weight shipped, not carcass equivalent.



Sheep slaughtered

SHEEP (INCLUDING LAMBS) SLAUGHTERED: STATES AND TERRITORIES
1967-68 TO 1971-72

('000)

Year	Slaughtering passed for human consumption									Total slaugh- terings includ- ing boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1967-68	12,099	14,999	2,491	4,019	3,173	1,125	..	103	38,008	38,164
1968-69	12,950	12,882	2,724	2,977	3,808	1,241	..	130	36,712	36,803
1969-70	13,309	15,745	2,937	4,232	4,534	1,297	..	158	42,213	42,384
1970-71	14,948	16,434	2,906	5,101	4,416	1,394	2	196	45,397	45,709
1971-72	16,641	20,084	3,418	5,144	6,001	1,475	4	218	52,983	53,444

Production of mutton and lamb

PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT): STATES AND TERRITORIES
1967-68 TO 1971-72

(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	203,169	261,615	43,801	68,730	55,059	19,845	9	1,795	654,023
1968-69	223,945	247,972	48,208	56,824	67,713	22,452	1	2,240	669,355
1969-70	233,501	277,710	50,711	78,172	76,814	23,669	2	2,482	743,061
1970-71	258,567	307,534	49,390	90,471	77,401	25,661	33	3,163	812,220
1971-72	284,982	374,436	57,964	90,058	103,459	26,759	65	3,496	941,219

Consumption of mutton and lamb

In 1959-60 consumption of mutton and lamb, at 103 lb per head of population, exceeded that of beef and veal for the first time on record. Subsequently, it showed a continuous decline until 1965-66, when it fell to 82.8 lb per head. The 1971-72 figure was 99.0 lb per head or 12.0 lb per head more than beef and veal.

PRODUCTION AND DISPOSAL OF MUTTON AND LAMB
(CARCASS WEIGHT): AUSTRALIA, 1967-68 TO 1971-72

Year	Net change in stocks (^{'000} tons)	Pro- duction (^{'000} tons)	Exports (a) (^{'000} tons)	For canning (^{'000} tons)	Apparent consumption in Australia	
					Total (^{'000} tons)	Per head per year (lb)
MUTTON						
1967-68	+3	412	180	8	222	41.7
1968-69	+2	366	129	7	229	42.2
1969-70	+1	434	218	7	207	37.5
1970-71	+5	463	198	14	246	43.5
1971-72	+2	587	312	14	258	45.0
LAMB						
1967-68	..	242	11	..	230	43.2
1968-69	+1	303	43	..	259	47.8
1969-70	-1	309	47	..	262	47.5
1970-71	+1	349	51	..	297	52.7
1971-72	+2	354	43	..	310	54.0

(a) Includes carcass equivalent of boneless mutton exported.

Exports of frozen mutton and lamb

EXPORTS OF FROZEN MUTTON AND LAMB(a): AUSTRALIA, 1967-68 TO 1971-72

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb	\$'000	'000 lb	\$'000	'000 lb	\$'000
		f.o.b.		f.o.b.		f.o.b.
1967-68	232,317	44,141	20,336	5,546	252,653	49,687
1968-69	167,564	32,213	65,004	13,216	232,568	45,429
1969-70	300,908	60,912	91,289	20,470	392,197	81,382
1970-71	288,609	52,132	96,172	21,878	384,781	74,010
1971-72	442,943	89,283	82,965	17,774	525,908	107,057

(a) Actual weight shipped, not carcass equivalent.

In 1971-72 the principal buyers of Australian frozen mutton and lamb were Japan (153,518,000 lb, valued at \$28,494,000); the United States of America (70,546,000 lb, valued at \$18,716,000); Greece (70,280,000 lb, valued at \$15,251,000); and the United Kingdom (64,462,000 lb, valued at \$12,694,000).

Consumption of meat and meat products

The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1967-68 to 1971-72.

MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA, 1967-68 TO 1971-72

(lb per head per year)

Year	Beef and veal(a)	Mutton (a)	Lamb(a)	Pork(a)	Offal	Canned meat(b)	Bacon and ham(c)	Carcass equivalent of meat and products (d)	
1967-68	89.8	41.7	43.2	14.6	11.4	4.8	7.7	217.7	
1968-69	91.3	42.2	47.8	16.2	11.3	4.9	7.8	225.7	
1969-70	85.6	37.5	47.5	16.7	11.5	5.1	8.3	216.6	
1970-71	87.5	43.5	52.7	15.2	11.3	5.4	10.2	231.8	
1971-72	87.0	45.0	54.0	17.1	12.9	5.0	9.6	235.8	

(a) Carcass weight. (b) Canned weight. (c) Cured carcass weight. (d) Includes offal.

Other pastoral products

Tallow

Details of tallow consumption are collected from the principal factories using tallow. Recorded usage of inedible tallow in factories for the years 1968-69 and 1969-70 was as follows: for soap-making: 1968-69, 74,764,573 lb; 1969-70, 72,891,206 lb; for products other than soap: 1968-69, 24,714,887 lb; 1969-70, 25,966,499 lb. Particulars for 1970-71 were not collected. Figures for 1971-72 are not yet available. Details of edible tallow usage in factories are not available.

Particulars of exports of edible and inedible tallow of Australian origin are shown in the following table for the five years 1967-68 to 1971-72.

TALLOW: EXPORTS, AUSTRALIA, 1967-68 TO 1971-72
(cwt)

	1967-68	1968-69	1969-70	1970-71	1971-72
Edible	88,465	201,847	348,005	348,947	334,856
Inedible	1,654,071	2,035,529	3,019,497	2,739,091	3,930,480
Total	1,742,536	2,237,376	3,367,502	3,088,038	4,265,336

Overseas trade in hides and skins

The value of cattle and horse hides, sheep and other skins, and skin pieces sent overseas during 1971-72 amounted to \$82,073,000, compared with a total of \$73,566,000 in 1970-71 and \$89,360,000 in 1969-70.

EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA
1969-70 TO 1971-72

Country of assignment	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
France	147,042	169,168	189,076	35,495	29,887	33,573
Germany, Federal Republic of	14,697	11,213	13,899	3,664	2,642	2,753
Italy	50,404	40,551	41,119	15,179	8,489	6,922
Netherlands	3,664	3,464	5,374	874	608	841
Spain	5,323	1,901	6,612	1,555	381	1,029
United Kingdom	10,972	9,546	11,027	2,724	1,742	1,585
Yugoslavia	7,499	15,150	13,446	1,857	3,069	1,552
Other	7,738	8,120	11,100	2,308	2,451	2,686
Total	247,340	259,113	291,653	63,656	49,269	50,941
Number of skins ('000)	34,109	36,181	40,015	..	..	..

In 1971-72 a total of 2,244,000 sheepskins without wool were exported, valued at \$1,000,000. Of these, sheepskins without wool to the value of \$197,000 (20 per cent) were shipped to the United States of America, \$175,000 (18 per cent) to the United Kingdom and \$162,000 (16 per cent) to France.

The export trade in cattle hides and calfskins during 1971-72 was distributed among the main importing countries as follows: Japan, \$7,263,000, Poland, \$3,399,000, the Federal Republic of Germany, \$3,009,000, and Italy, \$2,518,000. The total quantity exported was 177,523,000 lb, valued at \$28,095,000.

The exports of furred skins in 1971-72 were valued at \$1,692,000, of which kangaroo and wallaby skins constituted \$1,355,000 and rabbit and hare skins \$165,000. In 1970-71 they accounted for \$1,847,000 and \$405,000 respectively, out of a total of \$2,399,000. The skins were shipped principally to the United States of America, Italy, the Federal Republic of Germany, and Japan; the values shipped to each in 1971-72 being \$660,000, \$424,000, \$223,000 and \$90,000 respectively.

The quantity of cattle hides, including calfskins, imported into Australia during the year 1971-72 amounted to 776,000 lb, valued at \$145,000. The chief source of supply was New Zealand.

OTHER RURAL INDUSTRIES: DAIRYING, PIG, POULTRY AND BEE FARMING

The dairying industry

Australian dairy cattle have shown steady improvement in quality, as demonstrated by milk yield, over the years. This is attributable to improved breeding, associated with herd recording, better feeding resulting from the use of improved pastures, and better farming methods arising from the development of modern farm machinery and the application of the results of research.

The Australian dairying industry is conducted under conditions ranging from tropical to temperate and mediterranean type climates, and in general, is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are now being adopted overseas. State Agricultural Departments give advice on approved methods of production and inspect animals, buildings and marketable produce, to ensure that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

Marginal Dairy Farms Reconstruction Scheme

The Marginal Dairy Farms Reconstruction Scheme was introduced in July 1970 and is to operate for a period of four years. It provides funds up to a maximum of \$25 million, to State Governments to purchase marginal dairy farms from producers who wish to leave the industry and to enable them to sell the land on favourable terms to neighbouring farmers who want to build up their holdings to an economic size. By the end of February 1973, 1,041 dairy farms had been offered to the States for acquisition; purchase and subsequent sale of 520 had been arranged; 323 applications had been rejected; and 170 applications had been withdrawn or had lapsed. The cost of purchase to that date amounted to \$13 million. The scheme has had its greatest impact in Queensland where 75 per cent of the build-ups effected have been located.

Marketing of dairy products

The export trade is regulated by the terms of the Commonwealth *Customs Act* 1901-1971 and the Commonwealth *Commerce (Trade Descriptions) Act* 1905-1966 and regulations thereunder. This legislation requires that the true trade descriptions, etc., be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

Details of the *Dairy Produce Export Control Act* 1924-1966 and of the Australian Dairy Produce Board constituted under it were given in earlier issues of the Year Book (see No. 48, pages 999-1000). The Act was amended in 1972 to clarify the general provisions enabling the Board to expand existing markets and secure new ones and to provide the Board with specific power to participate in commercial ventures as a means of expanding existing markets or securing new ones. The administrative expenses of the Australian Dairy Produce Board and other sundry expenditure were met from the proceeds of a levy imposed by the *Dairy Produce Export Charges Act* 1964 (see Year Book No. 51, page 1070). In 1965 this Act, together with the *Dairy Produce Levy Act* 1958, was replaced by the *Butter Fat Levy Act* 1965-1972 (see page 828).

Equalisation schemes

Reference is made to the butter and cheese equalisation schemes in Year Book No. 48, pages 998-9. Particulars of the returns realised on local and overseas sales and of the average equalisation rate for the years ended June 1968 to 1973 are given on page 834 of this issue. Details are also given on page 833 of the wholesale prices of butter and cheese for home consumption as determined by the Australian Dairy Industry Council.

An equalisation scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalisation Committee Ltd. Average realisations per cwt under the scheme were \$24.789 in 1969-70, \$24.283 in 1970-71, \$28.988 in 1971-72. For 1972-73 the interim rate is \$27.50 (Details of returns for earlier seasons are given in previous issues of the Year Book.)

From 1 July 1970 a skim milk powder equalisation scheme was commenced by the Commonwealth Dairy Produce Equalisation Committee Ltd. For 1970-71 the final rate was \$211.181 a ton and for 1971-72 \$286.088 a ton. For 1972-73 the interim rate is \$275.00.

Statutory support for the equalisation scheme was provided by legislation passed by Parliament during 1970 and ratified by producers at a referendum held in February 1971. The legislation consists of *The Dairying Industry Equalisation Act* 1970, *The Dairying Industry Levy Act* 1970, and *The Dairying Industry Levy Collection Act* 1970. (See Year Book No. 57, page 818).

The basic element of the legislation is the establishment of a fund by way of a levy on the production of butter, butteroil, cheese, casein and such other dairy produce as may be prescribed to provide the necessary finance for equalisation payments. The legislation has been designed to permit the imposition of the levy on one product or a number of products as circumstances warrant. It will not be implemented unless there is a specific need created such as by the withdrawal of an important manufacturer from the present voluntary equalisation scheme.

Commonwealth bounties and stabilisation plans

Butter and cheese. Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided bounties on milk supplied for the manufacture of butter and cheese. Bounties were paid on a seasonal basis prior to 1 April 1946, but from that date have been on a flat rate basis. Bounties are distributed by the Commonwealth Dairy Produce Equalisation Committee Ltd, through factories, to milk and cream producers by payments on butter and cheese manufactured. Details of the three five-year stabilisation plans which operated up to 30 June 1962, will be found in Year Book No. 49, page 1084. Information regarding the plan which operated during the five years ended 30 June 1967 appears in Year Book No. 52, page 961 and details of the plan which concluded on 30 June 1972 are given in Year Book No. 58 page 818.

A new five-year stabilisation plan came into operation on 1 July 1972 which provided for continued financial assistance for butter and cheese producers. The level of assistance is to be determined annually in the light of the needs and circumstances of the industry, but will be not less than \$27 million annually. In respect of 1972-73 season production, the assistance has been fixed at \$27 million. The underwriting of final minimum equalised returns on butter and cheese was not continued under the new plan, but for the 1972-73 season, the Government guaranteed to compensate the Commonwealth Dairy Produce Equalisation Committee Ltd, for any loss incurred, as a result of fixing an interim equalisation value, which would enable factories to pay suppliers of cream for butter manufacture an opening pay rate of 34 cents per lb for commercial butter. This undertaking was in respect of one year only.

Dairy industry stabilisation fund

Amounts realised on exports of butter and cheese were, in 1948-49 and 1949-50, in excess of the f.o.b. equivalent of the then guaranteed return and were credited to the Dairying Industry Stabilisation Fund, which was established in July 1948 for the purpose of stabilising returns from exports. During 1951-52 the Stabilisation Fund met the deficiency in respect of all exports which did not earn sufficient to meet the basic return to the factory. From 1 July 1952 to 30 June 1957 it was available to the industry to be used, in whatever manner it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent provided for under the Commonwealth Government's Five-year Stabilisation Plan. The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry, and this amendment was later extended by the *Dairying Industry Act 1967* to the present time. The balance of accumulated funds in the Dairying Industry Stabilisation Fund at 30 June 1972 totalled approximately \$6,595,000. The major portion of the fund represents capital and other investments in milk recombining plants now established by the Board in Bangkok, Cambodia, Djakarta and Manila.

Processed milk products. As part of the Five Year Stabilisation Plan the Government provided, under the *Processed Milk Products Bounty Act 1962-1972*, for the payment of a maximum amount of \$800,000 as a bounty on exports of processed milk products in each year. Details of earlier bounties are given in Year Book No. 58, page 818.

Whole milk. In addition to the bounties referred to above, the Commonwealth Government subsidised the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Year Book No. 38, page 1031.

Extension, research and promotion of the dairying industry

Dairy Industry Extension Grant. An annual grant of \$500,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1 July 1948. The grant was renewed at the same level until 30 June 1963 when it was increased to \$700,000 per annum. On 1 July 1966 the Dairy Industry Extension Grant became part of the new Commonwealth Extension Services Grant, and assistance to the State agricultural departments for extension services to the dairying industry continued to be maintained and enlarged from funds from this source.

Dairy industry research and sales promotion. At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provided for a statutory levy on the manufacture of butter and cheese (the Dairy Produce Levy) which was initially set at rates of 0.104c per lb for butter and 0.052c per lb for cheese, the proceeds being divided equally between research and sales promotion. The rates of levy operative from November 1959 were 0.156c per lb for butter and 0.078c per lb for cheese, of which two-thirds was allocated to sales promotion and one-third to research.

In August 1964 the legislation was amended to include butter powder, at the same rates as for butter, and butteroil and ghee at 0.065c per lb for research and 0.130c per lb for sales promotion. In 1965 the Dairy Produce Levy Act was repealed and replaced by the *Butter Fat Levy Act 1965-1972* which provides for the amalgamation of the three levies into one levy on butterfat used in the manufacture of butter, cheese and related products. The maximum rate of levy in the Act is 48 cents per cwt of butterfat, and the prescribed rate operative since 1 October 1971 is 48 cents per cwt (24 cents for promotion and 24 cents for administration and overseas market development).

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the program of research, with a maximum contribution of \$1 for \$1 against funds raised by way of levy and allocated to research. The sales promotion program is financed solely by the levy. The following table lists the amounts of levies collected for research and sales promotion during the five years 1967-68 to 1971-72.

BUTTERFAT LEVY: AMOUNTS COLLECTED FOR RESEARCH AND SALES PROMOTION, 1967-68 TO 1971-72

(\$)

	1967-68	1968-69	1969-70	1970-71	1971-72
Research(a)	363,700	367,720	413,277	387,088	370,824
Sales promotion	804,300	811,860	908,521	923,494	886,911
Total collected(a)	1,168,000	1,179,580	1,321,798	1,310,582	1,257,735

(a) Excludes amounts contributed by the Commonwealth Government.

The research scheme is controlled by a statutory body, the Dairying Research Committee. Its function is to recommend to the Minister for Primary Industry on the operative rate of levy and on the allocation of the research funds. (The sales promotion program continues to be administered by the Australian Dairy Produce Board.) The Chairman of the Board is also Chairman of the Dairying Research Committee.

In February 1972, the Commonwealth Government agreed to industry proposals to broaden the scope of the research levy so that it would apply to all producers. Thus dairy farmers supplying milk for human consumption and for condensery products are now levied.

To implement the new scheme, five new Acts were passed by the Government: *Dairying Research Act 1972*; *Dairying Research Levy Act 1972*; *Dairying Research Levy Collection Act 1972*; *Dairy Produce Sales Promotion Act 1972*; *Butter Fat Levy Act 1972*.

The levies are payable either on a butterfat or gallonage basis, according to the normal method of payment to the producer by the dairy factory or authority. The maximum rate of levy is 12 cents per cwt butterfat or 0.04 cents per gallon of milk. The operative rates of levy are prescribed by Regulations. The new scheme came into operation on 1 July 1972.

The sums raised for research purposes from these levies will increase by approximately \$150,000 per year, which with matching contributions from the Commonwealth Government will make over \$1 million per annum available for dairying research.

Cattle for milk production

DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31 MARCH 1968 TO 1972

At 31 March	Cows and heifers used or intended for production of milk or cream for sale				
	Bulls dairy breed(a)	Cows (in milk and dry)	Heifers		House cows and heifers(c)
			One year and over(b)	Under one year	
1972—					
New South Wales	11,717	490,893	123,550	98,089	60,667
Victoria	31,210	1,256,541	320,057	307,612	21,408
Queensland	9,808	420,360	104,486	79,225	29,343
South Australia	5,016	144,573	39,070	36,531	6,782
Western Australia	2,580	96,532	35,706	33,516	5,885
Tasmania	2,724	154,825	36,967	36,093	3,861
Northern Territory	15	254	74	66	115
Australian Capital Territory	24	1,133	290	218	292
Australia	63,094	2,565,111	660,200	591,350	128,353
1971	64,919	2,601,138	687,104	613,985	144,567
1970	69,297	2,673,358	702,982	631,383	156,305
1969	76,651	2,700,635	768,781	624,290	164,548
1968	81,512	2,793,650	754,587	689,038	169,384

(a) Used or intended for service; excludes bull calves (under 1 year). (b) Springing (within 3 months of calving) and other. (c) Kept primarily for rural holdings' own milk supply.

A map showing the distribution of dairy cattle in Australia at 31 March 1963 appears facing page 1082, Year Book No. 50.

Milking machines

MILKING MACHINES ON RURAL HOLDINGS: NUMBER OF UNITS(a)
STATES AND TERRITORIES, 1968 TO 1972

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968	40,862	109,137	38,208	18,399	9,317	16,968	40	91	233,022
1969	39,557	112,618	35,401	17,908	9,036	17,057	24	97	231,698
1970	38,013	112,160	34,185	17,642	9,144	16,941	30	75	228,190
1971	(b)	(b)	(b)	17,082	(b)	(b)	(b)	(b)	(b)
1972	32,632	108,745	27,489	16,261	8,401	16,183	27	67	209,805

(a) The number of units indicates the number of cows that can be milked simultaneously, i.e. the cow capacity of installed milking machines. (b) Not collected.

Production of milk

The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for Australia prior to 1916 production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle and the increased application of scientific methods the 300 gallon average has been exceeded in each year since 1924. In the last five years an average of 551 gallons per cow per annum has been obtained. In 1971-72 the average yield was 577 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of cows in milk and dry and house cows at 31 March of that year and of the preceding year. They are, in effect, based on the approximate number of cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year, but it may be accepted as sufficiently reliable to show the general trend.

**AVERAGE MILK PRODUCTION PER COW: STATES AND AUSTRALIAN CAPITAL TERRITORY
1967-68 TO 1971-72
(Gallons)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	416	596	354	590	502	581	n.a.	465	497
1968-69	393	663	306	708	546	647	n.a.	486	525
1969-70	463	712	374	724	543	650	158	598	584
1970-71	442	708	348	707	520	618	183	569	574
1971-72	461	687	363	687	568	638	214	501	577

In the following table particulars of the production of whole milk in the various States and Territories are shown for the years 1967-68 to 1971-72. Victoria is the principal milk-producing State, and in 1971-72 the output from that State, 874 million gallons, represented 56 per cent of total production. Output from New South Wales in 1971-72 was 265 million gallons (17 per cent of the total) and that of Queensland 167 million gallons (11 per cent). Production in the remaining States and Territories accounted for 16 per cent.

**TOTAL PRODUCTION OF WHOLE MILK: STATES AND TERRITORIES
1967-68 TO 1971-72
(^{'000} gallons)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967-68	310,056	734,203	217,202	88,822	55,411	90,793	97	900	1,497,484
1968-69	278,930	817,290	171,686	102,808	58,222	102,164	97	898	1,532,096
1969-70	310,876	886,116	191,401	106,236	55,873	103,213	97	939	1,654,751
1970-71	272,177	893,530	169,453	103,336	56,277	98,940	70	773	1,594,555
1971-72	265,343	874,219	167,254	101,572	58,360	100,855	70	704	1,568,378

**UTILISATION OF WHOLE MILK: STATES AND TERRITORIES, 1971-72
(^{'000} gallons)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Milk used for—										
Butter	92,584	594,895	79,965	27,535	26,702	69,181	..	..	890,863
Cheese	13,415	77,251	17,766	40,841	3,579	13,025	..	..	165,878
Processed milk products	21,167	90,482	69,522	33,196	1,288	26,791	18,649	70	704	124,807
Other purposes	138,177	111,591								
Total	265,343	874,219	167,254	101,572	58,360	100,855	70	704	1,568,378	

In 1971-72, 56.8 per cent of the total milk supply was used for butter, 10.6 per cent for cheese, 8.0 per cent for processed milk products, and 24.7 per cent for other purposes.

**PRODUCTION AND UTILISATION OF WHOLE MILK: AUSTRALIA
1967-68 TO 1971-72
(^{'000} gallons)**

Year	Quantity used for—				
	Total production	Factory butter	Factory cheese	Processed milk products(a)	Other purposes(b)
1967-68	1,497,484	892,898	149,444	98,555	356,587
1968-69	1,532,096	907,878	158,583	98,945	366,690
1969-70	1,654,751	1,021,105	160,594	103,557	369,494
1970-71	1,594,555	926,626	164,150	129,080	374,699
1971-72	1,568,378	890,863	165,878	124,807	386,830

(a) Quantities of milk used to produce two or more products (for example, initially as full cream milk and subsequently as skim milk) are counted once only. (b) Principally fluid milk for domestic purposes. Includes milk used for farm production of butter and cheese.

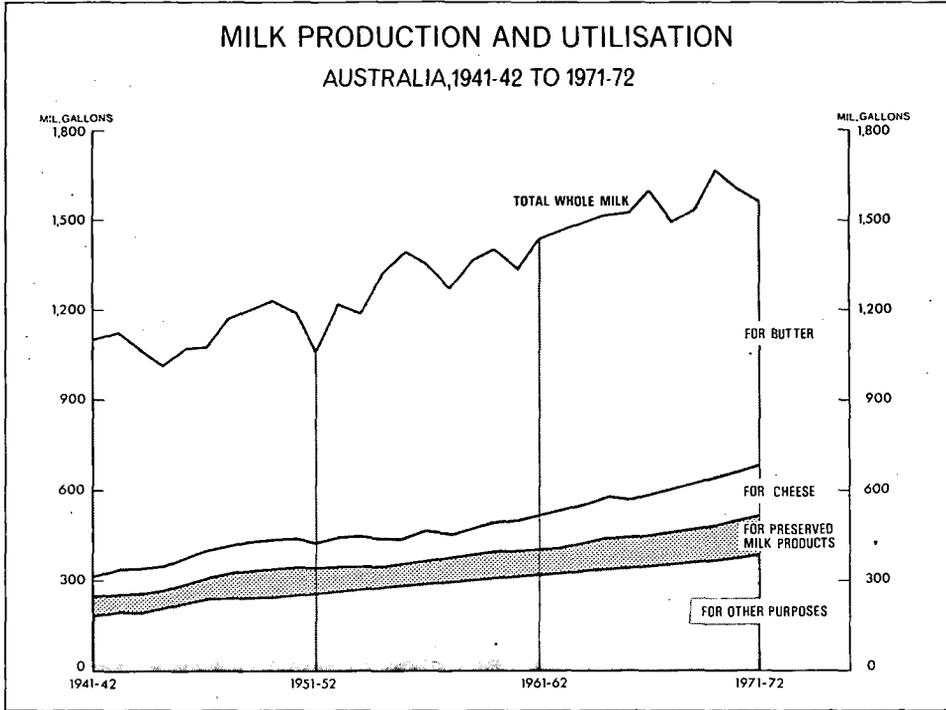


PLATE 48

Production of butter, cheese and processed milk products

In 1971-72 factories classified to the industry group Milk Products comprising A.S.I.C. classes 2121 Liquid milk and cream factories, 2122 Butter factories, 2123 Cheese factories, 2124 Ice cream and frozen confections factories and 2125 Milk products n.e.c. factories numbered 388 and were distributed among the States, as follows: New South Wales, 97; Victoria, 142; Queensland, 60; South Australia, 41; Western Australia, 23; Tasmania, 22; Northern Territory, 1 and Australian Capital Territory, 2. Details for 1970-71 were not collected.

Factory production of butter in 1971-72 was 431,579,000 lb. This was 59,960,000 lb (12.2 per cent) below the record of 491,539,000 lb attained in 1969-70.

BUTTER PRODUCTION IN FACTORIES: STATES, 1967-68 TO 1971-72
(*000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68	71,281	241,240	63,546	12,133	13,248	30,865	432,313
1968-69	52,172	278,646	42,916	14,292	13,870	34,966	436,862
1969-70	63,854	312,200	49,888	17,087	12,941	35,568	491,539
1970-71	46,933	299,486	41,387	14,588	11,959	33,671	448,024
1971-72	42,634	287,797	40,108	14,093	13,178	33,770	431,579

Factory production of cheese in 1971-72 reached a record level of 174,556,000 lb, which was 3,552,000 lb (2.1 per cent) more than the previous record of 1970-71.

CHEESE PRODUCTION IN FACTORIES: STATES, 1967-68 TO 1971-72
(*000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68	12,074	73,570	22,181	32,773	4,373	10,414	155,386
1968-69	12,285	75,281	17,813	42,311	(a)	(a)	164,972
1969-70	18,895	73,722	20,492	39,302	3,912	11,896	168,219
1970-71	16,975	78,935	15,947	41,681	4,226	12,239	171,004
1971-72	16,504	85,513	18,190	40,662	4,363	13,058	178,290

(a) Not available for publication.

**FACTORY PRODUCTION OF CHEESE BY VARIETIES: AUSTRALIA
1967-68 TO 1971-72**

('000 lb)

	1967-68	1968-69	1969-70	1970-71	1971-72
Fetta	1,124	1,085	1,298		1,250
Cheddar	137,616	146,116	149,645		128,784
Cottage	2,215	2,612	3,274		3,427
Edam	691				
Blue Vein	102	8,220	6,123	n.a.	(b)
Grating	9,790	(a)	(a)		
Soft					
Gouda	(a)	868	1,039		6,590
Other	3,848	6,070	6,840		38,239
Total cheese	155,386	164,972	168,219	171,004	178,290

(a) Not collected separately. (b) Included with 'Other'.

Processed milk products are manufactured mainly in Victoria, which produced 73 per cent of the total (in terms of whole milk equivalent) in 1971-72. New South Wales accounted for 17 per cent and the remaining States for 10 per cent.

PRODUCTION OF PROCESSED MILK PRODUCTS: AUSTRALIA, 1967-68 TO 1971-72

('000 lb)

	1967-68	1968-69	1969-70	1970-71	1971-72
Condensed, concentrated and evaporated milk—					
Full cream—					
Sweetened(a)	47,316	40,452	36,551	36,809	36,828
Unsweetened	87,946	89,111	125,945	136,240	151,269
Skim	18,932	19,990	46,715	31,633	24,694
Ice cream mix (liquid)	9,065	15,830	19,243	9,632	7,751
Infants', invalid and health beverages—					
Infants' milk powder	16,233	17,474	20,389	17,485	26,476
Other(b)	32,001	36,919	34,445	35,376	33,664
Casein	44,815	64,982	71,237	62,788	67,040
Powdered milk—					
Full cream—					
Spray	46,125	52,249	49,533	55,335	63,485
Roller	1,147	1,341	1,126	1,176	1,816
Skim—					
Without added ingredients—					
Spray	161,071	123,576	169,214	164,835	164,168
Roller	18,606	15,140	13,724	12,972	16,240
With added ingredients—					
Baker's powder	5,937	5,765	8,192	6,666	5,475
Other	10,415	13,404	16,119	17,265	20,981
Buttermilk or mixed skim and buttermilk—					
Spray	15,836	14,918	21,942	20,318	13,540
Roller	17,756	19,019	18,548	17,547	17,563
Total powdered milk	276,893	245,412	298,398	296,114	303,268

(a) Includes 'coffee and milk'. (b) Includes malted milk and milk sugar (lactose).

Wholesale prices of butter and cheddar cheese in Australia

Details of prices operating in each of the States since 1 July 1958 are shown in the following table. The prices included are those determined by the Australian Dairy Industry Council for choicest grade bulk butter and cheddar cheese.

WHOLESALE PRICES OF BUTTER AND CHEDDAR CHEESE: AUSTRALIA
(\$ per cwt)

<i>Date from which prices became effective</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
Butter—						
1 July 1958	48.53	48.53	48.42	48.42	48.53	48.53
1 July 1960	50.17	50.17	50.05	50.17	50.17	50.17
19 June 1964	51.80	51.80	51.80	51.80	51.80	51.80
14 February 1966	52.08	52.08	52.08	52.08	52.08	52.08
31 March 1969	54.60	54.60	54.60	54.60	54.60	54.60
3 August 1971	56.84	56.84	56.84	56.84	56.84	56.84
Cheddar cheese—						
1 July 1958	29.17	29.17	29.17	29.17	29.17	29.17
1 July 1960	29.63	29.63	29.63	29.63	29.63	29.63
19 June 1964	30.57	30.57	30.57	30.57	30.57	30.57
14 February 1966	30.80	30.80	30.80	30.80	30.80	30.80
7 November 1966	33.04	33.04	33.04	33.04	33.04	33.04
10 November 1970	34.16	34.16	34.16	34.16	34.16	34.16
3 August 1971	35.28	35.28	35.28	35.28	35.28	35.28
8 November 1971	38.64	38.64	38.64	38.64	38.64	38.64
15 May 1972	42.00	42.00	42.00	42.00	42.00	42.00

Local consumption of butter and cheese

Following the cessation of butter rationing after the 1939–45 War, consumption per head rose to 31.2 lb in 1951–52. However, in later years it gradually declined, and in 1971–72, at 19.2 lb per head, it reached its lowest level since the war. Consumption of cheese per head has risen steadily in recent years and by 1971–72 it attained a record figure of 9.2 lb per head.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE
AUSTRALIA, 1967-68 TO 1971-72

<i>Year</i>	<i>Change in stocks(a)</i> (‘000 lb)	<i>Factory production</i> (‘000 lb)	<i>Exports(b)</i> (‘000 lb)	<i>Apparent consumption in Australia</i>	
				<i>Total</i> (‘000 lb)	<i>Per head per year</i> (lb)
BUTTER					
1967–68	– 3,068	432,313	177,331	258,050	21.6
1968–69	+11,471	439,220	170,709	257,040	21.1
1969–70	+12,974	494,206	226,075	255,157	20.5
1970–71	–15,165	448,024	205,187	258,002	20.4
1971–72	+48,642	431,579	135,928	247,009	19.2
CHEESE					
1967–68	–10,527	155,385	76,249	89,663	7.5
1968–69	+12,375	164,833	56,494	95,968	7.9
1969–70	–22,532	168,206	90,199	100,540	8.1
1970–71	–23,546	171,004	80,571	113,979	9.0
1971–72	–17,617	174,556	73,586	118,587	9.2

(a) Balance figure (includes imports). (b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter.

Average returns from butter and cheddar cheese sold

The table below shows rates realised on local, interstate and overseas sales and the average equalisation and subsidy rates in operation for the years ended June 1968 to 1973.

BUTTER AND CHEDDAR CHEESE: RATES REALISED ON SALES, AVERAGE EQUALISATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRYING INDUSTRY ACTS, 1967-68 TO 1972-73

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(\$ per cwt)

Year	Rates realised on sales				Average equalisation rate	Rate of subsidy	Rate of overall return to manufacturer
	Intrastate	Interstate	Manufacturing	Overseas			
Butter—							
1967-68 . . .	49.22	47.17	31.87	27.60	39.50	6.31	45.81
1968-69 . . .	49.75	47.54	32.02	26.67	38.91	6.02	44.93
1969-70 . . .	51.53	48.57	32.17	26.93	38.21	5.40	43.61
1970-71 . . .	51.44	49.21	32.13	26.21	38.90	9.40	48.30
1971-72 . . .	(a)	(a)	(a)	(a)	(b)42.50	(b)8.95	(b)51.45
1972-73 . . .	(a)	(a)	(a)	(a)	(b)39.50	(b)9.75	(b)45.25
Cheddar cheese—							
1967-68 . . .		31.53		17.81	25.04	2.38	27.42
1968-69 . . .		31.50		17.73	24.84	2.87	27.71
1969-70 . . .		31.57		19.81	26.01	2.58	28.59
1970-71 . . .		32.41		18.51	26.62	4.24	30.86
1971-72 . . .		(a)		(a)	(b)30.50	(b)4.27	(b)34.77
1972-73 . . .		(a)		(a)	(b)30.20	(b)2.75	(b)32.95

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS AUSTRALIA, 1967-68 TO 1972-73

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(Cents per lb)

Year	Rate of overall return to manufacturer	Estimated manufacturing cost	Return to dairy farmer
1967-68	40.904	4.583	36.321
1968-69	40.114	4.750	35.364
1969-70	38.933	4.911	34.022
1970-71	43.125	5.161	37.964
1971-72	(a)45.938	5.161	40.777
1972-73	(a)40.402	5.357	35.045

(a) Interim rates.

Overseas trade in dairy products

The production of butter and cheese in Australia is considerably in excess of local requirements, and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon seasonal conditions.

Exports of butter in 1971-72 amounted to 78.3 million lb, compared with 155.4 million lb in 1970-71. Exports of cheese in these years were 73.5 million lb and 80.4 million lb respectively. The principal importing country for Australian butter in 1971-72 was the United Kingdom, accounting for 30.2 per cent of total exports. In 1971-72 Japan was the principal importing country for Australian cheese with 42.3 per cent of total shipments.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to supervision, inspection and examination by officers appointed for that purpose. These commodities are graded according to quality, which has been fixed by regulation

as follows: flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; butter at 88 to 89, cheese at 86 to 89 points, second quality; and butter at 83 to 85 points, pastry or cooking quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details for 1969-70, which include actual quantities by States, will be found in *Rural Industries*, Bulletin No. 8.

BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA, 1969-70 TO 1971-72

Grade	Quantity ('000 lb)			Per cent		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
BUTTER(a)						
Choicest quality	176,642	129,074	73,425	87.7	87.2	90.0
First quality	18,716	14,301	6,430	9.3	9.7	7.9
Second and pastry quality(b)	6,002	4,557	1,752	3.0	3.1	2.1
Total	201,360	147,932	81,607	100.0	100.0	100.0
CHEESE						
Bulk cheddar—						
Choicest quality	22,723	24,131	26,258	28.0	30.8	34.2
First quality	34,248	28,285	18,008	42.3	36.2	23.4
Second quality(b)	4,236	2,227	1,655	5.2	2.8	2.1
Other cheese	19,831	23,671	30,951	24.5	30.2	40.3
Total	81,038	78,314	76,872	100.0	100.0	100.0

(a) Includes unsalted. (b) Includes rejected.

Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

EXPORTS OF DAIRY PRODUCTS: AUSTRALIA, 1969-70 TO 1971-72

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Butter(a)	179,827	155,444	78,329	43,750	38,148	31,093
Cheese(b)—						
Processed(c)	20,367	18,902	20,440	6,580	6,772	8,727
Other—						
Cheddar and epicure cheddar	62,016	51,087	43,537	11,027	9,436	10,805
Parmesan (incl. parmigiano and reggiono)	70	154	366	33	82	178
Other	7,584	10,237	9,138	1,928	2,088	2,710
Total cheese	90,037	80,380	73,481	19,570	18,378	22,421
Other milk products(b)—						
Preserved, condensed, concentrated, etc.—						
Sweetened	10,606	8,915	9,346	1,385	1,234	1,521
Unsweetened	13,130	11,922	9,792	1,504	1,445	1,409
Infants' and invalids' food (essentially of milk)(d)	12,415	14,994	14,631	3,395	4,330	4,622
Casein	66,812	59,301	65,670	12,094	11,562	16,602
Dried or powdered—						
Full cream	33,789	37,425	32,769	7,557	8,554	9,400
Skim	116,751	109,843	92,339	8,316	9,184	13,879

(a) Excludes butter concentrate, ghee and ship's stores. (b) Excludes ships' stores. (c) Includes pastes and spreads. (d) Includes malted milk.

The pig industry

In line with the general trend of increased specialisation common to most of the rural industries, pig farming has developed into a separate industry being no longer mainly associated with the dairy industry.

In 1971, a research scheme was established for the Australian Pig Industry. It is similar to those already operating for the benefit of other major rural industries such as wool, meat, wheat, dairy, tobacco, poultry and the dried fruit industries. Finance is provided from a levy of 5 cents per head on all pig slaughtering and this is matched, on a dollar for dollar basis from Commonwealth sources. Funds currently available for research are \$237,400.

The research program is administered by a Pig Industry Research Committee. This Committee, which is representative of the industry and research organisations, makes recommendations to the Minister for Primary Industry relating to the rate of levy and expenditure from the Pig Industry Research Trust Fund.

At 31 March 1972 the number of pigs in Australia reached a record level of 3,198,683 which represented an increase of 608,488 (23.5 per cent) on the previous record at 31 March 1971 (2,590,195).

PIGS: NUMBERS IN STATES AND TERRITORIES, 1968 TO 1972

<i>At 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.(a)</i>
1968 . . .	645,196	376,990	520,141	242,319	182,507	86,517	1,999	2,055,669
1969 . . .	690,226	421,655	535,496	288,019	219,787	95,363	2,488	2,253,034
1970 . . .	707,703	495,128	479,586	350,748	250,051	111,275	3,873	2,398,364
1971 . . .	796,184	519,779	491,328	389,417	277,501	112,636	3,229	2,590,195
1972 . . .	1,059,331	589,992	534,502	478,874	427,061	103,934	4,862	3,198,683

(a) Incomplete; excludes Australian Capital Territory.

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (see page 803). A map showing the distribution of pigs in Australia at 31 March 1963 faces page 1083, Year Book No. 50 and a graph showing the number of pigs in Australia from 1880 onwards appears on plate 45 of this Year Book (see page 805).

PIGS SLAUGHTERED: STATES AND TERRITORIES, 1967-68 TO 1971-72 (^{'000})

<i>Year</i>	<i>Slaughtering passed for human consumption</i>								<i>Total slaughtering (including boiled down)</i>	
	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>		<i>Aust.</i>
1967-68 . . .	908	700	735	310	242	143	3	9	3,049	3,058
1968-69 . . .	1,008	771	800	317	263	139	3	10	3,310	3,319
1969-70 . . .	1,065	895	757	386	316	160	3	12	3,593	3,605
1970-71 . . .	1,093	941	742	436	316	171	3	16	3,717	3,729
1971-72 . . .	1,094	1,051	794	436	367	165	4	17	3,928	3,942

Production of pigmeat, bacon and ham

PRODUCTION OF PIGMEAT (CARCASS WEIGHT): STATES AND TERRITORIES 1967-68 TO 1971-72 (Tons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967-68 . . .	41,129	33,204	36,739	15,787	13,159	6,890	93	385	147,386
1968-69 . . .	46,313	36,582	39,168	15,939	14,006	7,024	107	460	159,599
1969-70 . . .	49,032	40,355	37,280	19,765	16,718	7,881	87	386	171,504
1970-71 . . .	49,438	44,840	36,833	22,181	16,470	8,395	104	522	178,783
1971-72 . . .	48,936	50,692	40,501	22,729	19,647	8,135	130	632	191,402

**PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT): STATES
1967-68 TO 1971-72**

(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967-68 . . .	15,134	9,340	14,103	4,110	5,128	1,281	49,096
1968-69 . . .	14,748	9,872	15,189	3,998	5,417	1,394	50,618
1969-70 . . .	15,947	11,891	14,068	4,607	5,678	1,381	53,572
1970-71(a)—							
(bone in) . . .	10,705	4,409	5,527	1,097	4,792	901	27,430
(bone out) . . .	4,895	8,649	5,531	3,451	1,290	537	24,351
1971-72—							
(bone in) . . .	10,322	3,394	4,982	1,034	4,853	743	25,328
(bone out) . . .	5,757	9,890	6,976	3,871	1,534	755	28,783

(a) Statistics on a bone in/bone out basis are not available prior to 1970-71.

Consumption of pigmeat, bacon and ham

The apparent consumption of pigmeat increased from 15.2 lb per head in 1970-71 to 17.1 lb in 1971-72.

**PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA
1967-68 TO 1971-72**

Year	Change in stocks(a)	Production	Exports	Curing and canning	Apparent consumption (as pork or smallgoods) in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68	+0.9	147.4	0.6	68.1	77.9	14.6
1968-69	+0.4	159.6	1.2	70.3	87.7	16.2
1969-70	-0.2	171.5	5.1	74.1	92.6	16.7
1970-71	-0.9	178.8	1.7	91.8	86.2	15.2
1971-72	+1.7	191.4	3.7	87.8	98.1	17.1

(a) Includes allowance for imports.

PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS WEIGHT): AUSTRALIA, 1967-68 TO 1971-72

Year	Change in stocks	Production	Exports	Canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1967-68	+0.1	49.1	0.2	7.7	41.1	7.7
1968-69 . . . . .	..	50.6	0.2	8.1	42.4	7.8
1969-70	+0.3	53.6	0.2	7.3	45.8	8.3
1970-71 . . . . .	..	66.2	0.3	8.1	57.8	10.2
1971-72	+0.1	63.3	0.3	7.9	55.0	9.6

Exports of pigs and pig products

EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA, 1969-70 TO 1971-72

		Quantity			Value (\$'000 f.o.b.)		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Bacon and ham (including canned)	'000 lb	572	877	846	415	593	604
Lard	'000 lb	35	231	32	6	23	7
Frozen pork	'000 lb	11,358	3,808	11,384	4,050	1,425	2,776
Pigs, live	number	933	1,877	1,811	47	107	97

The poultry industry

Once part of the mixed farming sector, the poultry industry is now a highly specialised and distinct industry. The bulk of production is obtained from this commercial source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic needs and some supplies from this source are also marketed. Because the data from this latter sector is incomplete, details of poultry numbers throughout Australia are not published. There is an increasing tendency for specialisation within the industry into hatcherymen, egg producers and broiler producers. These sectors of the industry each have separate statistics. There are also separate research schemes for the egg and meat chicken industries. Both sectors are good examples of the general movement towards specialised, large scale capital intensive production which is common to all rural industries.

Stabilisation scheme for the egg industry

A Commonwealth industry stabilisation scheme for the egg industry has been in operation since 1 July 1965. The principal features of the scheme are embodied in three Commonwealth Acts—*Poultry Industry Levy Act 1965-1966*, *Poultry Industry Levy Collection Act 1965-1966*, and *Poultry Industry Assistance Act 1965-1966*.

The scheme provides for the imposition of a levy on hens over six months of age kept for commercial purposes. The money obtained from the levy is used to meet trading losses on surplus eggs. Previously, returns to producers were equalised by State Egg Boards, who imposed an equalisation deduction to cover deficits which resulted from sales to overseas markets.

In determining the rate of the hen levy, the Minister for Primary Industry is required to take into consideration any recommendations by the Council of Egg Marketing Authorities of Australia (which consists of all members of the State Egg Marketing Boards) and is precluded from prescribing a rate in excess of such recommendations. The maximum rate of levy permitted under the legislation is \$1 per hen per annum. The levy is payable fortnightly by the owner of the hen. The levy operated at its maximum in 1970-71 and 1971-72. The fortnightly rate of levy in accordance with the recommendations of the Council of Egg Marketing Authorities of Australia was 4 cents for the first 24 fortnights of 1970-71 and 2 cents per fortnight for the remaining two fortnights. The rate of levy for 1971-72 reverted to 4 cents except for the last fortnight of 1971-72 when no levy was imposed.

Exemptions from payment are granted on the first twenty hens in each flock and also on a substantial proportion of broiler breeder hens. The eggs produced by broiler breeder hens which are not used for hatching determine the proportion of those hens on which the levy becomes payable in accordance with a formula incorporated in the legislation.

By arrangement between the Commonwealth and State Governments, the State Egg Boards collect the levy due in each State from individual producers and remit the total amount to the Commonwealth (the Department of Primary Industry collects the levy in the Australian Capital Territory). The Commonwealth Government pays into the Poultry Industry Trust Fund amounts equal to the receipts obtained from the hen levy. These amounts totalled \$12,991,000 in 1971-72 (\$12,755,000 in 1970-71). Payments from the Fund are made to the State Governments for financial assistance to the poultry industry, and are authorised by the Minister for Primary Industry, after consideration has been given to the recommendations by the Council of Egg Marketing Authorities of Australia. Payments from the Trust Fund totalled \$13,225,000 in 1971-72 (\$12,505,000 in 1970-71).

Research

The *Poultry Industry Assistance Act 1965-1966* permits expenditure from the Poultry Industry Trust Fund to be made for research. The Commonwealth Government has agreed to match expenditure from this Fund on a \$1 for \$1 basis with a limit to its contribution of \$100,000 per annum. There is no restriction on the amount which may be expended from the Fund for research purposes.

Research projects are recommended by the Council of Egg Marketing Authorities of Australia for approval by the Minister for Primary Industry. Expenditure may be approved for scientific, technical or economic research, the publication of reports thereon, the training of persons for research, and the dissemination of information and advice on scientific, technical or economic matters.

Chicken Meat Research

In June 1969, a research scheme for the chicken meat industry was established along lines similar to those operating for the wool, wheat, dairy, meat, tobacco and poultry industries. The operative Acts are the *Chicken Meat Research Act, 1969*, the *Meat Chicken Levy Act, 1969* and the *Meat Chicken Collection Act, 1969*. This legislation provides for a levy of one-tenth of a cent on each meat chicken hatched before 1 July 1972 and, thereafter, for a levy at a prescribed rate not exceeding one-quarter of a cent per meat chicken hatched. Hatcheries, hatching less than 20,000 meat chickens per annum, are exempt from the levy. The legislation also provides that the industry levy be paid into a Trust Account and that research expenditure therefrom be matched on a \$1 for \$1 basis by the Commonwealth. On this basis, it is estimated that funds currently available for research will be approximately \$240,000 per annum.

Marketing of eggs

Details of the *Egg Export Control Act 1947-1966* were given in earlier issues of the Year Book (see No. 47, page 997).

Chicken hatching and poultry slaughterings

Statistics shown in the following section have been compiled on a Commonwealth basis since 1965-66 from returns supplied by commercial chicken hatcheries (i.e. those making sales of day-old chicks) and by commercial poultry slaughtering establishments. Poultry farmers hatching chicks solely for replenishing their own flocks, producers in the Northern Territory and the many very small producers are excluded from the collection. However, the statistics represent a high level of coverage in respect of commercial hatcheries and slaughtering establishments.

Poultry slaughtered for human consumption

No allowance has been made in the following figures for interstate movement of dressed poultry or changes in stocks held, and figures therefore do not necessarily represent the level of consumption in the States concerned.

Statistics for poultry slaughtered in Queensland are based on numbers slaughtered as collected by the Queensland Department of Primary Industries. From 1968-69, New South Wales slaughtering statistics include poultry slaughterings by producers in the Australian Capital Territory. Prior to that year, Australian Capital Territory slaughtering statistics were not collected.

NUMBERS OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION 1967-68 TO 1971-72 ('000)

Year	Chickens(a)	Other fowls(b)	Ducks and drakes	Turkeys
1971-72				
New South Wales	51,632	3,816	913	1,172
Victoria	23,345	2,140	322	147
Queensland	15,525	1,509	43	9
South Australia	9,887	502	45	10
Western Australia	11,504	698	(c)	(c)
Tasmania	1,402	139	(c)	(c)
Australia	113,298	8,803	1,356	1,353
1970-71	103,907	7,581	1,214	1,440
1969-70	84,644	6,681	968	1,331
1968-69	75,174	6,025	1,010	916
1967-68	76,361	5,403	790	660

(a) Comprises broilers, fryers and roasters. (b) Comprises hens, roosters, etc. (c) Not available for publication.

DRESSED WEIGHT OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION(a)
1967-68 TO 1971-72
('000 lb)

<i>Year</i>	<i>Chickens(b)</i>	<i>Other fowls(c)</i>	<i>Ducks and drakes</i>	<i>Turkeys</i>	<i>Total</i>
1971-72—					
New South Wales	143,652	13,422	3,309	9,430	169,813
Victoria	66,414	7,685	1,080	1,225	76,404
Queensland(d)	45,062	5,727	142	59	50,990
South Australia	24,420	1,763	184	101	26,469
Western Australia	29,388	2,623	(e)	(e)	32,202
Tasmania	3,462	454	(e)	(e)	4,021
Australia	312,397	31,674	4,875	10,953	359,899
1970-71	288,909	27,300	4,560	13,272	334,041
1969-70	232,432	23,891	3,605	13,101	273,029
1968-69	206,651	21,875	3,849	8,335	240,709
1967-68	197,350	19,671	3,099	6,363	226,482

(a) Dressed weight of all birds, including pieces and giblets, as reported in all States except Queensland. (b) Comprises dressed weight of broilers, fryers and roasters. (c) Comprises dressed weight of hens, roosters, etc. (d) Estimated. (e) Not available for publication.

Chicken hatchings in commercial hatcheries

Details contained in the following tables relate to all eggs set and to chicks hatched in commercial hatcheries whether for sale as day-old chicks or for replenishment of own flocks.

NUMBER OF EGGS SET(a) IN COMMERCIAL HATCHERIES: STATES, 1967-68 TO 1971-72
('000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
MEAT STRAINS							
1967-68	54,270	20,655	17,969	7,407	(b)	(b)	112,484
1968-69	51,667	20,120	18,381	6,546	(b)	(b)	109,832
1969-70	60,438	21,946	20,233	8,090	(b)	(b)	124,529
1970-71	76,536	29,401	23,127	11,891	(b)	(b)	158,953
1971-72	73,707	35,097	21,647	13,253	(b)	(b)	161,645
EGG STRAINS							
1967-68	19,510	12,578	8,823	5,060	3,256	1,024	50,251
1968-69	19,971	13,104	8,909	5,049	3,660	904	51,597
1969-70	22,447	14,440	9,925	5,971	3,665	1,206	57,654
1970-71	19,333	15,343	9,971	5,885	4,444	849	55,827
1971-72	18,238	14,251	10,755	4,933	3,606	977	52,759

(a) Includes eggs which failed to hatch. (b) Not available for publication.

CHICKENS HATCHED(a) IN COMMERCIAL HATCHERIES: STATES, 1967-68 TO 1971-72
(^{'000})

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
INTENDED FOR CHICKEN MEAT—MEAT STRAINS (Unsexed)							
1967-68 . .	37,629	15,806	13,456	5,218	(b)	(b)	80,874
1968-69 . .	35,563	15,546	13,765	5,053	(b)	(b)	79,538
1969-70 . .	41,464	17,334	14,882	6,173	(b)	(b)	89,835
1970-71 . .	54,462	22,105	16,548	9,101	(b)	(b)	114,999
1971-72 . .	54,209	26,951	16,360	10,431	(b)	(b)	121,563

INTENDED FOR CHICKEN MEAT—EGG STRAINS (Crossbred and other cockerels)(c)							
1967-68 . .	1,545	1,567	759	134	105	43	4,153
1968-69 . .	1,191	880	457	180	66	19	2,794
1969-70 . .	1,846	1,462	431	373	58	7	4,177
1970-71 . .	975	1,096	464	300	52	19	2,906
1971-72 . .	517	431	507	117	49	50	1,670

INTENDED FOR EGG PRODUCTION—EGG STRAINS (Pullets)(c)							
1967-68 . .	6,093	4,251	2,862	1,904	1,143	371	16,624
1968-69 . .	6,310	4,455	2,922	1,854	1,246	299	17,085
1969-70 . .	7,110	4,977	3,169	2,136	1,314	408	19,115
1970-71 . .	6,325	5,350	3,176	2,125	1,560	268	18,803
1971-72 . .	5,889	4,861	3,484	1,876	1,268	302	17,680

(a) Excludes chicks destroyed. (b) Not available for publication. (c) Includes (for States other than Queensland) a proportion of unsexed egg strain chicks.

Recorded production of eggs and egg products

Statistics of the production and disposal of eggs in Australia are recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.

SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS
STATES, 1967-68 TO 1971-72
(^{'000} dozen)

<i>State</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
New South Wales(b)	74,682	76,062	82,021	89,663	91,100
Victoria	38,231	41,147	47,613	53,339	55,518
Queensland	21,393	20,854	23,837	25,305	25,031
South Australia	15,813	15,692	16,655	19,440	20,515
Western Australia	11,583	11,491	12,716	14,501	16,897
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total(c)	161,702	165,247	182,842	202,249	209,061

(a) Receipts from consignors and sales by producer agents. (b) Includes Australian Capital Territory. (c) Excludes Tasmania.

Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.

**LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS
STATES, 1967-68 TO 1971-72**
(^{'000} lb)

State	1967-68	1968-69	1969-70	1970-71	1971-72
New South Wales	14,532	15,691	22,009	28,488	22,777
Victoria	8,841	10,093	13,930	18,373	20,110
Queensland	7,877	5,288	7,988	7,582	6,072
South Australia	7,024	5,370	6,074	8,137	9,206
Western Australia	1,802	1,510	1,964	2,982	5,384
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total(a)	40,076	37,952	51,965	65,562	63,549

(a) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded for liquid egg whites and liquid egg yolks. Output in 1971-72 amounted to 12,489,000 lb and 9,008,000 lb respectively, compared with 8,329,000 lb and 5,699,000 lb respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

Consumption of eggs and egg products

Because of the operation of producers outside the control of the Egg Boards and the extent of 'back-yard' poultry-keeping, for which no statistics are collected, figures relating to total egg production must be accepted with some reserve. The production shown in the following table, together with details of exports and consumption, is based upon the records of Egg Boards for production from areas under their control, plus estimates of production from uncontrolled areas and from 'back-yard' poultry-keepers.

**ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL
AUSTRALIA, 1967-68 TO 1971-72**

Year	Change in stocks	Estimated total production	Exports(a)	For drying and pulping(b)	Apparent consumption in Australia	
					Total	Per head per year
	mil. doz	mil. doz	mil. doz	mil. doz	mil. doz	doz
1967-68	-0.3	253.3	6.5	42.3	204.7	17.2
1968-69	-0.1	257.4	7.6	41.0	208.9	17.2
1969-70 . . . . .	..	272.4	5.1	53.6	213.6	17.2
1970-71	+0.2	287.0	5.1	64.8	216.9	17.2
1971-72	+0.4	296.1	6.9	67.9	220.9	17.2

(a) Includes ships' stores. (b) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE
FOR CONSUMPTION: AUSTRALIA, 1967-68 TO 1971-72**
(Per head per year)

Year	Eggs in shell	Liquid whole egg and egg powder(a)	Total	
			Number	Weight(b)
	number	number		lb
1967-68	206	14	221	27.6
1968-69	206	14	220	27.5
1969-70	206	14	220	27.5
1970-71	206	14	220	27.5
1971-72	206	14	220	27.5

(a) In terms of number of eggs in shell. (b) The average weight of an egg in Australia is taken as 2 oz.

Overseas trade in poultry products

Australian exports of shell eggs in 1971-72 amounted to 5,909,000 dozen compared with 3,990,000 dozen in 1970-71. The main outlets for Australian eggs in 1971-72 were Hong Kong (1,713,000 dozen), Kuwait (1,029,000 dozen), the Union of Arab Emirates (1,238,000 dozen), and Bahrain (600,000 dozen).

**EXPORTS OF POULTRY PRODUCTS: AUSTRALIA
1969-70 TO 1971-72**

		Quantity			Value (\$'000 f.o.b.)		
		1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Eggs in shell	'000 doz	3,956	3,990	5,909	987	1,038	1,455
Eggs not in shell—							
In liquid form	'000 lb	38,493	43,129	36,554	6,211	7,052	6,261
Dry	'000 lb	125	842	669	94	357	380
Frozen poultry	'000 lb	3,682	5,168	6,915	1,098	1,504	2,077
Poultry, live(a)	number	418,987	369,821	369,589	125	161	173

(a) Includes day-old chicks.

Imports of canned poultry in 1971-72 amounted to 273,000 lb, valued at \$76,000, compared with 470,000 lb, valued at \$116,000, in 1970-71.

The bee-farming industry**Production of honey and bees-wax**

Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming. A feature of the industry is that it consists mainly of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. Production of honey in 1971-72 amounted to 44,621,000 lb (116.2 lb per productive hive) compared with 42,165,000 lb (112.3 lb per productive hive) in 1970-71. Bees-wax produced in 1971-72 was 582,000 lb compared with 587,000 lb in the previous year.

In the following tables, statistics for 1971-72 for each State are confined to apiarists with five or more hives, except in New South Wales where details relate to beekeepers with six or more hives.

BEEHIVES, HONEY AND BEES-WAX: STATES AND A.C.T., 1971-72

State or Territory	Beehives(a)			Honey produced		Bees-wax produced	
	Pro- ductive	Unpro- ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb	\$'000	000 lb	\$'000
New South Wales	151	55	206	18,900	2,627	235	132
Victoria	68	38	106	4,783	793	53	32
Queensland	48	21	69	4,447	568	60	27
South Australia	73	14	87	9,428	1,287	133	77
Western Australia	34	9	42	6,110	685	86	44
Tasmania	10	3	12	874	159	14	7
Australian Capital Terri- tory	1	1	1	77	17	1	1
Australia	384	139	524	44,621	6,136	582	320

(a) At 30 June 1972.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

HONEY AND BEES-WAX PRODUCTION: STATES AND A.C.T., 1967-68 TO 1971-72
(^{'000} lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
HONEY								
1967-68	21,014	7,580	4,116	6,844	3,410	841	153	43,958
1968-69	10,654	3,638	1,718	5,770	6,553	671	78	29,081
1969-70	18,731	8,220	3,144	10,638	7,409	821	109	49,072
1970-71	17,456	9,804	3,773	7,032	3,025	1,002	74	42,165
1971-72	18,900	4,783	4,447	9,428	6,110	874	77	44,621
BEES-WAX								
1967-68	281	92	66	105	49	13	2	609
1968-69	145	50	32	92	94	11	1	425
1969-70	254	103	49	157	99	13	1	676
1970-71	241	120	58	102	52	14	1	587
1971-72	235	53	60	133	86	14	1	582

Honey levy

A levy is imposed on domestic sales of honey for the purposes of financing the operations of the Australian Honey Board. The current rate of levy which became effective on 1 November 1971, is, five-tenths of a cent per lb, but under the provisions of the *Honey Levy Act* 1962-65, it can be increased by regulation to a maximum of one cent per lb. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1969-70, 1970-71 and 1971-72, collections amounted to \$103,000, \$108,000 and \$122,000 respectively. The sum made available for research (\$5,000 per annum in recent years) is matched by the Commonwealth with funds from the Special Research Grant.

Overseas trade in bee products

The principal importer of Australian honey in 1971-72 was the United Kingdom, accounting for 43.8 per cent, by value, of total exports.

Bees-wax was exported mainly to the United Kingdom and Japan in 1971-72.

EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA, 1969-70 TO 1971-72

	Quantity (^{'000} lb)			Value (\$ ^{'000} f.o.b.)		
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72
Honey	14,695	22,076	19,475	1,775	3,051	3,633
Bees-wax	250	345	213	166	218	135

Value of dairy, poultry and bee-farming production

Value of dairy, poultry and bee-farming production

Value of dairy, poultry and bee-farming production for 1971-72 and earlier years are shown in the following tables. Further information on values, including definitions of the terms used, is given in Chapter 29 Miscellaneous.

GROSS VALUE OF DAIRY, POULTRY AND BEE-FARMING PRODUCTION: AUSTRALIA
1967-68 TO 1971-72
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
DAIRYING					
Whole milk used for—					
Butter(a)	134,089	148,148	172,762	156,798	176,897
Cheese(a)	31,148	29,994	29,344	30,825	35,119
Processed milk products	23,084	23,245	23,075	28,812	34,054
Other purposes	154,280	154,547	161,283	170,487	177,640
Subsidy paid on whole milk for—					
Butter	24,100	23,313	23,581	37,200	34,204
Cheese	2,900	3,687	3,419	5,682	5,796
<i>Total, whole milk (including subsidy)</i>	<i>369,602</i>	<i>382,935</i>	<i>413,466</i>	<i>429,805</i>	<i>463,710</i>
Pigs slaughtered	89,598	86,842	96,066	104,992	111,199
Dairy cattle slaughtered	44,849	43,967	37,703	32,191	32,413
Total dairying	504,050	513,742	547,239	566,989	607,323
POULTRY					
Total poultry	169,342	176,167	184,401	195,322	200,715
BEE-FARMING					
Honey	4,259	2,760	4,427	4,362	6,136
Bees-wax	367	259	397	337	320
Total bee-farming	4,627	3,021	4,824	4,702	6,456

(a) Excludes Commonwealth subsidy which is shown separately.

GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION
STATES AND TERRITORIES, 1971-72
(\$'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Local value of production	Value of materials used in process of production	Net value of production (a)
New South Wales	156,621	13,790	142,831	(b)21,130	121,700
Victoria	266,880	17,068	249,812	38,368	211,444
Queensland	75,630	4,623	71,007	7,764	63,243
South Australia	47,262	1,052	46,210	14,047	32,163
Western Australia	28,262	1,593	26,668	16,744	9,924
Tasmania	32,103	905	31,198	4,426	26,772
Northern Territory	175	n.a.	175	n.a.	175
Australian Capital Territory	390	19	370	90	280
Australia	607,323	39,050	568,271	102,569	465,701

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

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

Indexes of quantum and price of dairy, poultry and bee-production

For details of these indexes see Chapter 29, Miscellaneous.

