CHAPTER 22

RURAL INDUSTRY

This chapter is divided into nine major parts:

Land tenure; Rural land use; Crops; Livestock and livestock products; Beekeeping; Rural improvements, conservation and consumption of fodder; Agricultural machinery on rural holdings; Rural employment; Assistance to, and control of, agriculture.

For more up-to-date and detailed information on the subjects dealt with in this chapter *see* the following mimeographed publications issued by the A.B.S.

Annual publications

Ref. No.

10.15 *Principal Agricultural Statistics, First Estimate*
10.63 *Principal Agricultural Statistics, Second Estimate*
10.57 *Crop and Fruit Statistics*
10.14 *Livestock Statistics*
10.11 *Fruit Growing Industry*
10.58 *Crop Statistics*
10.59 *Rural Land Use, Improvements, Agricultural Machinery and Labour*

10.36 *Wheat Industry: Estimates of Intended Sowings*
10.52 *Wheat Industry: Estimates of Area Sown*
10.53 *Wheat Industry: Estimates of Production*
10.35 *Wheat Industry*

10.38 *Wool Production and Utilisation*
10.3 *Beekeeping*
10.5 *Dairying Industry*
10.54 *Meat Industry*
10.78 *Mushroom Growing Statistics*
10.79 *Nursery Statistics*

10.24 *Value of Primary Commodities Produced, First Estimate*
10.25 *Value of Primary Commodities Produced, Second Estimate*
10.27 *Value of Primary Commodities Produced, Final*
10.77 *Estimates of Turnover Expenditure and Cash Operating Surplus of Agricultural producers*

10.10 *Apparent Consumption of Foodstuffs and Nutrients*
10.82 *Structural Statistics of the Agricultural Sector*
12.7 *Manufacturing Commodities*

Monthly and quarterly publications

10.6 *Wholemilk Production and Utilisation*
10.16 *Meat Industry*
10.44 *Chicken Hatchings and Poultry Slaughterings*
10.70 *Brokers and Dealers Receivals of Taxable Wool*
10.74 *Livestock Slaughtered and Meat Produced (Qtly)*
12.14 *Quarterly Bulletin of Production Statistics*

Particulars of rural holdings classified by size, main type of activity, etc. are published in *Classification of Rural Holdings by Size and Type of Activity* (10.28).

For estimated figures of rural debt to specified lenders for the years 1968–69 to 1972–73 *see* page 545 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.

LAND TENURE

Disposal of Crown lands

Land legislation and tenures

The following sections contain figures showing the extent of the different land tenures in the 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 States and the 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, 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
('000 hectares)

Year(a)	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
1971	6,373	(*b*)3,153	11,589	9,283	36,557	2,679	25,231	..	94,865
1972	6,340	(*b*)3,154	11,567	9,285	39,010	2,688	25,231	9	97,284
1973	6,331	6,776	11,336	9,285	39,099	2,431	26,587	10	101,855
1974	6,096	6,583	11,847	9,290	39,103	2,471	25,243	10	100,643
1975	6,034	6,561	n.a.	9,311	40,061	2,486	25,246	10	n.a.

(*a*) Data for States and Territories other than Queensland is at 30 June; Queensland data is at 31 December. (*b*) Excludes areas set aside for roads.

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

New South Wales. For travelling stock, 1,985,426 hectares; forest reserves, 521,258 hectares; water and camping reserves, 280,659 hectares; mining reserves, 378,890 hectares; recreation and parks, 318,338 hectares; other reserves, 2,549,516 hectares; total 6,034,087 hectares.

Victoria. Water reserves, 88,665 hectares; forest and timber reserves, 2,354,900 hectares; national parks, 227,320 hectares; water frontages, beds of streams and lakes, 342,535 hectares; native flora and fauna, 59,925 hectares; other reserves (including roads), 3,490,655 hectares; total 6,561,000 hectares.

Queensland. For timber reserves, 666,762 hectares; State forests and national parks, 4,396,310 hectares; Aboriginal reserves, 2,774,928 hectares; streets, surveyed roads and stock routes, 1,835,219 hectares; general reserves, 2,173,509 hectares; total, 11,846,727 hectares.

South Australia. Total area of surveyed roads, railways and other reserves, 9,311,281 hectares including 7,930,215 hectares set apart as Aboriginal reserves.

Western Australia. For State forests, 1,832,124 hectares; timber reserves, 82,684 hectares; other reserves, 38,146,123 hectares; total, 40,060,931 hectares.

Tasmania. For forest reserves, 2,040,000 hectares; national parks and state reserves, 446,000 hectares; total, 2,486,000 hectares.

Northern Territory. For Aboriginal, defence and public requirements, 25,246,000 hectares.

Australian Capital Territory. For public parks and recreation reserves, 10,114 hectares.

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 the progressive resumption of alienated land for the development of the Canberra City area has left less than 1.0 per cent of the area still alienated.

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
('000 hectares)

Year(a)	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Total*
1971 . .	44,973	2,240	138,404	60,562	101,328	357	80,588	98	428,550
1972 . .	44,931	2,253	140,404	60,167	102,017	247	80,967	96	431,082
1973 . .	44,663	2,305	134,183	59,914	101,819	212	77,695	84	420,875
1974 . .	44,184	2,467	133,513	60,354	100,572	200	78,375	78	419,743
1975 . .	43,480	2,435	n.a.	60,106	100,928	185	78,368	73	n.a.

(*a*) Data for States and Territories other than Queensland is at 30 June; Queensland data is at 31 December.
(*b*) 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 Government 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 5,640,000 hectares 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, of the alienation and occupation of Crown lands in 1975.

ALIENATION AND OCCUPATION OF CROWN LANDS 1975(*a*)

	Private lands				*Crown lands*				
	Alienated		*In process of alienation*		*Leased or licensed*		*Other(b)*		*Total area*
State or Territory	*'000 hectares*	*Per cent*	*'000 hectares*	*Per cent*	*'000 hectares*	*Per cent*	*'000 hectares*	*Per cent*	*'000 hectares*
N.S.W.	25,868	32.3	1,570	2.0	44,044	55.0	8,661	10.8	80,143
Vic.	13,642	59.9	123	0.5	2,435	10.7	6,561	28.8	22,760
Qld	12,604	7.3	16,434	9.5	133,696	77.4	10,065	5.8	172,800
S.A.	6,692	6.8	98	0.1	60,106	61.1	31,542	32.2	98,438
W.A.	15,165	6.0	4,340	1.7	99,899	39.5	133,358	52.8	252,762
Tas.	2,755	40.3	159	2.3	2,009	29.4	1,910	28.0	6,833
N.T.	79	0.1	..	..	78,368	58.2	56,173	41.7	134,620
A.C.T.(*c*)	..	..	2	0.9	73	30.1	168	69.0	243
Australia	**76,805**	**10.0**	**22,726**	**3.0**	**420,630**	**54.7**	**248,438**	**32.3**	**768,599**

(*a*) Queensland data is at 31 December 1974; Western Australia at 31 December 1975; all other States and Territories at 30 June 1975. (*b*) Occupied by Crown; reserved; unoccupied; unreserved. (*c*) Includes Jervis Bay.

RURAL LAND USE

Area of rural holdings

Statistics relating to the area of rural holdings are derived from the annual Agricultural Census conducted at 31 March each year.

A rural holding has been defined for the purpose of these statistics, as a holding of one hectare or more in extent used for the production of agricultural products (including fruit and vegetables), or for the raising of livestock including poultry) and the production of livestock products. Holdings of less than one hectare on which commercial market gardens, nurseries, poultry farms or hatcheries are operated are also generally included.

RURAL HOLDINGS: AREA
('000 hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1970–71	69,229	15,760	154,693	65,796	114,569	2,631	74,401	136	497,216
1971–72	69,001	15,884	154,404	65,146	114,471	2,607	77,889	133	499,535
1972–73	68,849	15,771	155,136	65,372	113,961	2,592	78,011	124	499,815
1973–74	68,881	15,485	154,506	64,843	114,653	2,561	79,486	106	500,522
1974–75	68,880	15,226	154,155	63,825	115,601	2,492	79,346	93	499,618

Land utilisation on 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
('000 hectares)

Year	Area used for crops(a)	Area under sown pastures and grasses	Balance of holdings(b)	Total area of holdings
1974–75—				
New South Wales	4,090	5,971	58,818	68,880
Victoria	1,772	6,565	6,889	15,226
Queensland	1,897	3,477	148,782	154,155
South Australia	2,257	3,641	57,928	63,825
Western Australia	3,754	7,850	103,997	115,601
Tasmania	67	921	1,504	2,492
Northern Territory	8	133	79,205	79,346
Australian Capital Territory	1	26	66	93
Australia	**13,845**	**28,585**	**457,188**	**499,618**
1973–74	15,060	27,315	458,147	500,522
1972–73	14,255	26,130	459,430	499,815
1971–72	14,240	27,705	457,590	499,533
1970–71	13,397	28,035	455,784	497,216

(a) Excludes (i) duplication on account of area double cropped, (ii) pastures and grasses cut for hay and seed which have been included in Area under sown pastures and grasses, and differs therefore from crop area figures shown later in this chapter. (b) Used for intermittent grazing, lying idle, fallow, not suitable for agriculture, 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. Information for the year 1973–74 is available in the mimeograph bulletin *Rural Land Use, Improvements, Agricultural Machinery and Labour* (Ref. No. 10.59) and in *Classification of Rural Holdings by Size and Type of Activity*, 1973–74 (Ref. No. 10.28).

CROPS

In this section statistics relating to crop areas and production are obtained from the annual Agricultural Census. In most instances, the figures shown relate to 1974–75.

The census returns are collected in all States, the Northern Territory and the Australian Capital Territory, 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.

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 twelve seasons 1963–64 to 1974–75.

AREA OF CROPS(*a*): 1860–61 TO 1974–75
('000 hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1860–61	100	157	2	145	10	62	..	..	475
1870–71	156	280	21	325	22	64	..	..	868
1880–81	245	627	46	846	26	57	..	..	1,846
1890–91	345	822	91	847	28	64	..	..	2,197
1900–01	990	1,260	185	959	81	91	..	..	3,567
1910–11	1,370	1,599	270	1,112	346	116	..	..	4,813
1920–21	1,807	1,817	316	1,308	730	120	..	1	6,099
1930–31	2,756	2,718	463	2,196	1,939	108	1	2	10,184
1940–41	2,580	1,808	702	1,722	1,630	103	..	2	8,546
1950–51	1,927	1,836	841	1,543	1,882	117	n.a.	2	8,148
1960–61	3,255	2,363	1,237	2,185	2,781	144	1	3	11,969
1963–64	3,641	2,469	1,483	2,418	2,798	154	1	3	12,968
1964–65	4,182	2,621	1,605	2,414	3,037	163	2	4	14,028
1965–66	3,663	2,517	1,667	2,440	3,513	156	2	3	13,961
1966–67	5,027	2,738	1,864	2,626	3,568	180	2	4	16,007
1967–68	4,590	2,208	1,883	2,191	3,592	106	6	2	14,578
1968–69	5,509	2,529	2,071	2,596	3,838	110	6	3	16,665
1969–70	4,999	2,212	2,208	2,290	3,912	98	6	2	15,728
1970–71	3,967	1,732	1,791	1,998	3,826	80	2	1	13,397
1971–72	4,185	1,934	2,017	2,278	3,751	66	7	1	14,240
1972–73	4,328	1,935	1,960	2,084	3,855	80	12	1	14,255
1973–74	4,628	1,980	1,787	2,451	4,133	74	5	1	15,060
1974–75	4,090	1,772	1,897	2,257	3,754	67	8	1	13,845

(*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.

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 country. 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, 1974-75
(hectares)

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2 row	237,293	238,272	142,771	679,811	305,463	11,191	..	..	1,614,801
6 row	89,303	4,680	13,548	20,854	81,535	829	..	..	210,749
Total	*326,596*	*242,952*	*156,319*	*700,665*	*386,998*	*12,020*	..	..	*1,825,550*
Canary seed	626	54	5,912	179	..	..	..	..	6,771
Grain sorghum	176,209	85	328,886	..	1,674	..	4,235	..	511,089
Maize	22,177	543	28,675	(a)	(a)	..	..	..	(b)51,395
Oats	269,913	197,807	25,406	134,861	262,347	6,069	..	130	896,533
Panicum and millet	807	1,880	19,418	..	..	..	..	..	22,105
Rice	72,925	..	2,637	..	(a)	..	(a)	..	(b)75,562
Rye	1,765	1,750	(a)	10,175	2,483	5	..	..	(b)16,178
Wheat	2,646,336	1,140,653	488,500	1,220,430	2,809,883	1,535	..	204	8,307,541
Legumes mainly for grain—									
Beans—									
Navy	280	..	3,349	..	..	101	..	..	3,730
Soy	12,788	108	33,013	..	..	..	..	..	45,909
Peas—									
Cow, field and poona	1,391	1,810	1,584	11,593	575	1,439	..	..	18,392
Other(c)	1,065	1,224	..	4,077	118,607	170	..	..	125,143
Crops for hay—									
Barley	1,591	1,302	695	5,805	3,085	191	..	..	12,669
Oats	19,305	38,250	3,353	34,951	52,880	1,381	..	8	150,128
Rye	255	1,002	..	229	77	257	..	..	1,820
Wheat	15,338	5,440	1,005	9,832	15,477	94	..	..	47,186
Other	158	121	2,645	..	1,251	3	34	..	4,212
Crops for green feed or silage—									
Rye	2,131	350	(a)	1,641	1,175	451	..	..	(b)5,748
Wheat	25,282	4,003	15,874	1,223	5,417	264	..	..	52,063
Forage sorghum	24,000	882	50,885	..	1,271	..	..	..	77,038
Barley	29,118	3,432	19,331	10,461	12,795	708	..	..	75,845
Vegetables for animal feed	5,158	5,311	1,639	651	245	7,240	87	..	20,331
Grain sorghum	..	477	25,665	..	158	..	51	..	26,351
Maize	3,810	485	2,490	14	133	19	..	..	6,951
Oats	208,819	21,446	209,719	44,998	51,468	12,217	..	200	548,867
Other	5,510	7,387	15,318	441	2,819	5,973	2,798	..	40,246
Sugar cane—									
Cut for crushing	9,911	..	243,231	..	..	..	..	..	253,142
Cut for plants	275	..	5,959	..	..	..	..	..	6,234
Other land under sugar cane	8,252	..	29,223	..	..	..	..	..	37,475
Tobacco	898	3,926	4,424	..	..	..	..	..	9,248
Cotton	27,511	..	7,386	..	3,642	..	..	..	38,539
Peanuts	204	..	23,742	..	185	..	(a)	..	(b)24,131
Linseed	18,237	4,924	8,543	3,165	693	..	..	..	35,562
Rapeseed	4,733	3,707	..	1,238	2,170	..	..	..	11,848
Safflower	5,487	2,813	27,575	363	(a)	..	..	..	36,238
Sunflower	94,085	8,013	104,923	2,417	158	36	..	..	209,632
Fruit—									
Tree	25,741	21,508	11,584	16,539	7,591	4,169	17	18	87,167
Small and berry	60	254	94	81	16	579	..	..	1,084
Other	5,796	22	8,471	..	215	..	5	..	14,509
Grapevines	14,463	22,348	1,537	30,366	2,602	..	..	..	71,316
Vegetables	27,745	30,190	24,942	10,177	5,797	11,521	129	53	110,554
All other crops—									
Nurseries	1,036	1,044	477	193	170	65	4	3	2,992
Broom millet	568	26	(a)	..	..	..	..	..	(b)594
Hops	..	478	..	..	(a)	662	..	..	(b)1,140
Other crops n.e.i.	1,128	943	5,623	403	449	1,490	651	..	10,687
Total area of crops (excluding pastures)	**4,119,483**	**1,778,949**	**1,950,053**	**2,257,168**	**3,754,506**	**68,659**	**8,023**	**616**	**13,937,457**
Area of above double-cropped	29,682	6,553	52,350	221	573	1,883	5	10	91,277
Total area used for crops (excluding pastures)	*4 089,801*	*1,772,396*	*1,897,703*	*2,256,947*	*3,753,933*	*66,776*	*8,018*	*606*	*13,846,180*
Pastures and grasses cut for hay	221,850	459,494	40,999	138,995	90,853	78,557	2,140	478	1,033,366
Pastures and grasses harvested for seed	26,045	8,324	10,112	30,611	22,878	2,219	273	..	100,462
Total area used for crops (including pastures)	**4,337,696**	**2,240,214**	**1,948,814**	**2,426,553**	**3,867,664**	**147,552**	**10,431**	**1,084**	**14,980,008**

(a) Not available for publication; included in "Other crops n.e.i.". (b) Incomplete; *see* footnotes to individual States. (c) Mainly lupins for processing.

AREA OF CROPS: AUSTRALIA
(hectares)

Crop	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Cereals for grain—					
Barley—					
2 Row	1,531,534	2,037,655	1,784,802	1,597,968	1,614,801
6 Row	468,523	497,765	355,100	296,506	210,749
Total	*2,000,058*	*2,535,421*	*2,139,902*	*1,894,474*	*1,825,550*
Canary seed	8,869	6,260	6,909	9,954	6,771
Grain sorghum	552,106	638,392	697,162	539,671	511,089
Maize	85,635	78,193	59,259	45,606	51,395
Oats	1,553,169	1,240,586	995,053	1,182,180	896,533
Panicum and millet	49,158	23,952	27,159	39,642	22,105
Rice	40,721	40,403	45,150	67,502	75,562
Rye	40,707	41,458	28,198	28,062	16,178
Wheat	6,478,418	7,137,852	7,604,082	8,948,257	8,307,541
Legumes mainly for grain—					
Beans—					
Navy	4,624	8,412	9,516	4,523	3,730
Soy	7,326	18,019	27,963	40,849	45,909
Peas—					
Cow, field and poona	32,211	36,187	22,645	18,558	18,392
Other	270	(a)34,447	(a)46,519	(a)67,080	(a)125,143
Crops for hay—					
Barley	23,375	19,680	32,713	21,296	12,669
Oats	236,533	234,486	291,483	227,955	150,128
Rye	2,887	1,780	1,526	2,689	1,820
Wheat	75,782	80,501	121,365	66,143	47,186
Other	10,239	4,610	6,173	6,878	4,212
Crops for green feed or silage—					
Rye	10,429	8,984	8,620	8,959	5,748
Wheat	77,327	34,829	48,262	50,701	52,063
Forage sorghum	168,359	110,537	168,274	114,840	77,038
Grain sorghum		28,346	24,398	33,225	26,351
Vegetables for animal feed	14,267	47,184	52,114	32,208	20,331
Barley	116,360	94,404	107,766	110,032	75,845
Maize	5,379	7,396	7,677	7,274	6,951
Oats	884,511	608,737	724,242	689,774	548,867
Other	119,187	57,515	62,335	50,301	40,246
Sugar cane—					
Cut for crushing	220,521	233,737	241,699	225,854	253,142
Cut for plants	5,232	5,191	5,045	5,028	6,234
Other land under sugar cane	50,347	38,787	36,520	50,310	37,475
Tobacco	10,900	10,045	9,598	9,278	9,248
Cotton	34,534	39,649	43,616	41,716	38,539
Peanuts	38,584	33,752	29,136	25,932	24,131
Linseed	41,626	19,923	16,300	17,777	35,562
Rapeseed	42,887	86,950	77,142	16,843	11,848
Safflower	27,674	33,809	10,624	12,311	36,238
Sunflower	75,716	295,011	241,840	150,578	209,632
Fruit—					
Tree	104,053	104,335	97,632	91,856	87,167
Small and berry	1,224	1,261	1,215	1,158	1,084
Other	17,742	17,492	16,653	15,789	14,509
Grapevines	63,782	66,817	68,547	69,988	71,316
Vegetables	107,611	116,899	110,947	105,475	110,554
All other crops—					
Nurseries	2,366	2,499	2,599	2,913	2.992
Broom millet	558	516	395	403	594
Hops	893	935	1,069	1,211	1,140
Other crops n.e.i.	8,578	8,598	8,627	8,003	106
Total area of crops (excluding pastures)	**13,452,735**	**14,294,776**	**14,385,669**	**15,161,056**	**13,937,457**
Area of above double cropped	55,340	54,611	130,992	102,031	91,277
Total area used for crops (excluding pastures)	*13,397,395*	*14,240,165*	*14,254,677*	*15,059,025*	*13,846,180*
Pastures and grasses cut for hay	1,011,437	1,147,619	924,414	1,311,858	1,033,366
Pastures and grasses harvested for seed	129,028	107,440	85,898	117,035	100,462
Total area for crops (including pastures)	**14,537,860**	**15,495,224**	**15,264,989**	**16,487,918**	**14,980,008**

(*a*) Mainly lupins for processing; not collected separately prior to 1971–72.

Production and yield per hectare of crops

PRODUCTION OF CROPS (EXCLUDING PASTURES, FRUIT AND VEGETABLES), 1974–75

Crop		*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Cereals for grain—										
Barley—										
2 row	'000 tonnes	297	314	274	*1,108*	252	25	..	..	2,272
6 row	,,	110	5	23	26	75	2	..	..	241
Total	,,	*408*	*319*	*297*	*1,134*	*327*	*27*	..	..	*2,513*
Canary seed	,,	1	..	6	..	..	..	..	..	6
Grain sorghum	,,	257	..	634	..	3	..	7	..	901
Maize	,,	60	2	72	(*a*)	(*a*)	..	..	..	(*b*)133
Oats	,,	293	186	28	112	250	5	..	..	874
Panicum and millet	,,	..	2	19	..	..	..	..	..	22
Rice	,,	376	..	12	..	..	..	(*a*)	..	(*b*)388
Rye	,,	1	1	(*a*)	2	1	..	..	..	(*b*)5
Wheat	,,	3,809	2,091	692	1,486	3,277	2	..	..	11,357
Legumes mainly for grain—										
Beans—										
Navy	tonnes	167	..	2,599	..	..	63	..	..	2,829
Soy	,,	21,102	79	52,542	..	..	..	..	..	73,723
Peas—										
Cow, field and poona	,,	912	1,961	536	13,364	398	2,959	..	..	20,130
Crops for hay—										
Barley	,,	3,239	3,589	1,460	16,265	8,469	946	..	..	33,968
Oats	,,	50,982	136,353	10,022	117,281	160,415	5,722	..	23	480,798
Rye	,,	474	3,724	..	520	237	1,242	..	..	6,197
Wheat	,,	42,713	15,220	2,514	33,790	40,948	372	..	..	135,557
Other	,,	315	457	7,834	..	3,485	6	60	..	12,157
Total	,,	*97,723*	*159,343*	*21,830*	*167,856*	*213,554*	*8,288*	*60*	*23*	*668,677*
Sugar cane cut for crushing	'000 tonnes	997	..	19,421	..	..	..	..	..	20,418
Tobacco	'000 kg	1,369	6,086	8,007	..	..	..	..	..	15,462
Cotton	,,	78,812	..	17,909	..	6,603	..	..	..	103,324
Peanuts	tonnes	494	..	31,323	..	152	..	..	..	31,969
Linseed	,,	14,997	3,812	10,720	3,162	358	..	..	..	33,049
Rapeseed	,,	3,696	2,288	..	1,781	768	..	..	..	8,533
Safflower	,,	2,005	1,269	26,949	279	(*a*)	..	..	..	30,502
Sunflower	,,	37,549	4,817	68,402	2,576	9	22	..	..	113,375
Grapes	,,	132,826	287,508	5,811	290,561	11,134	..	..	..	727,840
Broom millet(*c*)	,,	335	16	(*a*)	..	..	..	..	..	(*b*)351
Hops	'000 kg	..	831	..	..	(*a*)	1,439	..	..	(*b*)2,270

(*a*) Not available for publication. (*b*) Incomplete; *see* footnotes to individual States. (*c*) Comprises grain and fibre; not shown separately.

PRODUCTION OF CROPS (EXCLUDING PASTURES, FRUIT AND VEGETABLES)

Crop		*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Cereals for grain—						
Barley—						
2 row	'000 tonnes	1,783	2,571	1,441	2,076	2,272
6 row	,,	567	495	286	322	241
Total	,,	*2,351*	*3,065*	*1,727*	*2,397*	*2,513*
Canary seed	,,	5	4	4	7	6
Grain sorghum	,,	1,298	1,228	1,018	1,061	901
Maize	,,	212	214	139	106	133
Oats	,,	1,613	1,275	736	1,107	874
Panicum and millet	,,	57	26	26	35	22
Rice	,,	300	248	309	409	388
Rye	,,	22	22	9	8	5
Wheat	,,	7,890	8,606	6,590	11,987	11,357
Legumes mainly for grain—						
Beans—						
Navy	tonnes	1,121	6,504	1,799	2,539	2,829
Soy	,,	9,202	33,629	37,937	62,541	73,723
Peas—						
Cow, field and poona	,,	33,130	38,979	15,315	18,425	20,130
Crops for hay—						
Barley	,,	68,607	62,926	68,665	55,360	33,968
Oats	,,	925,455	893,317	831,416	760,062	480,798
Rye	,,	13,573	7,817	4,520	10,474	6,197
Wheat	,,	260,147	265,408	300,599	191,231	135,557
Other	,,	6,054	17,075	18,869	17,138	12,157
Total	,,	*1,273,836*	*1,246,543*	*1,224,069*	*1,034,265*	*668,677*
Sugar cane cut for crushing	'000 tonnes	17,645	19,391	18,928	19,278	20,418
Tobacco	'000 kg	17,128	16,015	15,421	14,886	15,462
Cotton	,,	56,751	131,971	96,641	86,393	103,324
Peanuts	tonnes	31,123	46,060	38,496	29,208	31,969
Linseed	,,	30,805	10,229	10,688	14,324	33,049
Rapeseed	,,	33,619	54,614	25,037	10,598	8,533
Safflower	,,	10,456	15,398	4,173	6,860	30,542
Sunflower	,,	58,049	147,531	102,069	84,324	113,375
Grapes	,,	547,399	831,879	598,365	552,383	727,840
Broom millet—						
Grain	,,	113	76	94	296	351
Fibre	,,	327	367	319		
Hops	'000 kg	1,706	1,847	2,113	2,864	2,270

YIELD PER HECTARE OF CROPS (EXCLUDING PASTURES, FRUIT AND VEGETABLES), AUSTRALIA

Crop		*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Cereals for grain—						
Barley—						
2 row	tonnes	1.164	1.262	0.807	1.299	1.407
6 row	,,	1.211	0.994	0.806	1.085	1.143
Total	,,	*1.175*	*1.209*	*0.807*	*1.265*	*1.377*
Canary seed	,,	0.578	0.635	0.554	0.724	0.923
Grain sorghum	,,	2.350	1.924	1.460	1.965	1.762
Maize	,,	2.471	2.736	2.343	2.320	2.594
Oats	,,	1.038	1.028	0.740	0.937	0.975
Panicum and millet	,,	1.165	1.080	0.974	0.880	0.976
Rice	,,	7.363	6.134	6.835	6.056	5.141
Rye	,,	0.544	0.529	0.305	0.268	0.304
Wheat	,,	1.218	1.206	0.846	1.340	1.367
Legumes mainly for grain—						
Beans—						
Navy	,,	0.242	0.773	0.189	0.561	0.758
Soy	,,	1.256	1.866	1.357	1.531	1.606
Peas—						
Cow, field and poona	,,	1.085	1.077	0.676	0.993	1.094
Crops for hay—						
Barley	,,	2.935	3.197	2.099	2.599	2.681
Oats	,,	3.913	3.810	2.852	3.334	3.203
Rye	,,	4.701	4.392	2.962	3.895	3.405
Wheat	,,	3.443	3.297	2.477	2.891	2.873
Other	,,	3.458	3.704	3.057	2.490	2.886
Sugar cane cut for crushing	,,	80.014	82.959	78.314	85.356	80.657
Tobacco	'000 kg	1.571	1.594	1.607	1.604	1.672
Cotton	,,	1.643	3.328	2.216	2.071	2.681
Peanuts	tonnes	0.807	1.365	1.321	1.126	1.325
Linseed	,,	0.740	0.513	0.656	0.806	0.929
Rapeseed	,,	0.784	0.628	0.325	0.629	0.720
Safflower	,,	0.338	0.455	0.393	0.551	0.839
Sunflower	,,	0.780	0.501	0.422	0.560	0.541
Grapes (*a*)	,,	10.266	14.721	10.014	7.815	10.209
Broom millet—						
Grain	,,	0.210	0.147	0.238	0.761	0.591
Fibre	,,	0.586	0.711	0.808		
Hops	'000 kg	1.910	1.975	1.977	2.365	1.991

(*a*) Yield per bearing hectare only.

Value of crop production

Further reference to the value of crop production and other industries in Australia as well as a brief explanation of the terms used may be found in Chapter 31, Miscellaneous.

GROSS VALUE OF CROPS, 1974-75

($'000)

Crop	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Cereals for grain—									
Barley	35,701	32,674	32,860	119,305	33,822	2,502	..	..	256,864
Canary seed	176	4	1,319	39	...	..	..	..	1,538
Grain sorghum	24,194	17	51,843	..	176	..	(a)	..	(c)76,230
Maize	5,227	171	6,254	...	(a)	...	..	..	(c)11,652
Oats	18,355	11,991	2,960	7,832	18,045	426	..	10	59,619
Panicum and millet	89	..	2,003	..	..	..	..	..	2,092
Rice	34,512	..	1,379	...	(a)	..	(a)	..	(c)35,891
Rye	101	69	(b)	116	83	...	..	..	(c)369
Wheat	420,159	231,457	79,276	163,986	361,294	242	..	27	1,256,441
Total cereals for grain	*538,515*	*276,383*	*177,894*	*291,278*	*413,421*	*3,170*	*553*	*37*	*1,701,251*
Legumes mainly for grain	4,339	422	10,365	2,269	74	525	..	..	17,994
Crops for hay—									
Oats	1,407	3,777	200	4,153	4,703	366	..	1	14,607
Wheat	1,257	282	50	1,197	1,347	24	..	..	4,157
Other	113	121	352	594	300	139	2	..	1,621
Total crops for hay	*2,777*	*4,180*	*603*	*5,944*	*6,350*	*530*	*2*	*1*	*20,387*
Sugar cane—									
Cut for crushing	17,507	..	473,189	..	..	..	..	..	490,696
Cut for plants	...	...	7,082	..	..	..	..	..	7,082
Tobacco (dried leaf)	4,349	18,119	26,544	..	...	..	..	..	49,012
Cotton	21,028	..	6,490	..	1,752	..	..	..	29,270
Peanuts	203	..	11,747	..	56	..	..	..	12,006
Linseed	3,347	781	2,735	533	57	..	..	..	7,453
Rapeseed	848	515	...	405	125	..	..	..	1,893
Safflower	419	292	6,755	45	(b)	..	..	..	(c)7,511
Sunflower	8,593	1,055	13,778	578	(b)	3	..	..	(c)24,007
Fruit—									
Tree	65,547	55,711	23,071	38,751	17,112	14,910	27	11	215,140
Small and berry	742	1,050	1,156	1,467	293	1,471	..	..	6,179
Other	20,920	50	22,508	..	1,768	..	39	..	45,285
Grapevines	21,375	37,453	2,989	37,502	2,072	...	..	..	101,391
Vegetables	58,558	65,507	60,852	36,576	19,973	15,071	147	186	256,870
All other crops—									
Nurseries	13,369	4,202	5,831	5,176	3,975	884	24	16	33,477
Hops	...	1,740	...	...	(b)	1,238	..	..	(c)2,978
Other crops n.e.i.	1,572	1,431	3,386	122	6,539	939	..	..	13,989
Total crops (excl. pastures and grasses)	*784,008*	*468,891*	*856,975*	*420,665*	*473,568*	*38,741*	*793*	*252*	*3,043,893*
Pastures and grasses—									
Cut for hay—									
Lucerne	22,545	7,825	9,019	2,172	400	903	10	63	42,937
Other	12,741	55,019	1,575	6,842	7,394	9,567	131	24	93,293
Total cut for hay	*35,286*	*62,844*	*10,594*	*9,014*	*7,794*	*10,470*	*140*	*87*	*136,229*
Harvested for seed—									
Lucerne	832	62	2	1,623	54	8	..	..	2,581
Clovers—									
Subterranean	1,002	203	(b)	603	1,531	(d)	..	..	(c)3,339
Other	32	22	(b)	841	213	(e)33	..	..	(c)1,141
Other n.e.i.	1,480	1,350	605	2,025	497	228	27	..	6,212
Total harvested for seed	*3,344*	*1,637*	*608*	*5,092*	*2,294*	*269*	*27*	..	*13,271*
Total pastures and grasses	*38,630*	*64,481*	*11,202*	*14,106*	*10,088*	*10,739*	*168*	*87*	*149,501*
Total crops	**822,638**	**533,372**	**868,177**	**434,771**	**483,656**	**49,480**	**960**	**339**	**3,193,393**

(a) Not available for publication; included in "Total cereals for grain". (b) Not available for publication; included in "other crops n.e.i." (c) Incomplete; *see* footnotes to individual States. (d) Included in "Other Clovers". (e) Includes "Subterranean Clovers".

GROSS VALUE OF CROPS, AUSTRALIA
($'000)

Crop	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Cereals for grain—					
Barley	110,789	124,177	90,876	190,482	256,864
Canary seed	481	398	570	1,260	1,538
Grain sorghum	57,382	51,092	58,957	80,398	76,230
Maize	10,393	10,375	8,684	8,956	11,652
Oats	54,283	37,391	31,540	66,801	59,619
Panicum and millet	3,107	1,549	2,290	3,802	2,092
Rice	13,720	11,942	24,995	50,450	35,891
Rye	1,048	817	481	510	369
Wheat	403,550	462,555	356,572	1,311,935	1,256,441
Total cereals for grain	*654,752*	*700,297*	*574,965*	*1,715,048*	*1,701,251*
Legumes mainly for grain	4,550	9,548	8,710	18,901	17,994
Crops for hay—					
Oats	17,390	15,065	23,849	22,083	14,607
Wheat	4,862	4,708	8,510	5,496	4,157
Other	2,179	1,566	2,739	2,309	1,621
Total crops for hay	*24,431*	*21,339*	*35,100*	*29,885*	*20,387*
Sugar cane—					
Cut for crushing	173,300	207,388	230,208	218,875	490,696
Cut for plants	3,248	3,429	3,966	3,453	7,082
Tobacco (dried leaf)	42,528	40,995	37,896	42,396	49,012
Cotton	13,293	30,117	32,625	26,636	29,270
Peanuts	7,998	12,234	10,539	10,885	12,006
Linseed	3,522	1,037	1,044	3,062	7,453
Rapeseed	2,944	5,120	2,916	1,480	1,893
Safflower	984	1,440	469	1,036	7,511
Sunflower	7,340	16,237	15,366	19,402	24,007
Fruit—					
Tree	163,220	149,395	176,476	178,196	215,140
Small and berry	4,537	4,075	5,004	4,739	6,179
Other	31,727	32,713	42,040	34,323	45,285
Grapevines	45,815	66,306	64,871	83,205	101,391
Vegetables	167,185	158,379	181,420	239,685	256,870
All other crops—					
Nurseries	19,828	21,702	23,184	26,740	33,477
Hops	3,133	3,621	4,263	5,174	2,978
Other crops, n.e.i.	2,364	5,659	3,979	4,951	13,989
Total crops (excluding pastures and grasses)	*1,376,701*	*1,491,032*	*1,455,042*	*2,668,074*	*3,043,893*
Pastures and grasses—					
Cut for hay—					
Lucerne	38,645	31,504	42,144	53,086	42,937
Other	52,719	54,533	61,328	105,331	93,293
Total cut for hay	*91,364*	*86,037*	*103,472*	*158,418*	*136,229*
Harvested for seed—					
Lucerne	2,037	2,043	3,084	4,115	2,581
Clovers—					
Subterranean	1,525	1,142	2,591	4,310	3,339
Other	524	636	656	1,481	1,141
Other, n.e.i.	5,274	4,194	4,877	9,698	6,212
Total harvested for seed	*9,360*	*8,016*	*11,209*	*19,603*	*13,271*
Total pastures and grasses	*100,724*	*94,053*	*114,681*	*178,022*	*149,501*
Total crops	**1,477,425**	**1,585,084**	**1,569,723**	**2,846,096**	**3,193,393**

Values of crop production in the various States and Territories are shown in the following table.

GROSS AND LOCAL VALUES OF CROP PRODUCTION
STATES AND TERRITORIES, 1974-75
($'000)

State or Territory	*Gross production valued at principal markets*	*Marketing costs*	*Local value of production*
New South Wales	822,638	114,725	707,913
Victoria	533,372	71,544	461,828
Queensland	868,177	64,686	803,491
South Australia	434,771	34,517	400,254
Western Australia	483,656	52,766	430,890
Tasmania	49,480	9,739	39,741
Northern Territory	960	..	960
Australian Capital Territory	339	49	290
Australia	**3,193,393**	**348,026**	**2,845,367**

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 five decades, the latest decade being one of considerable expansion.

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, however for the 1974–75 Season the term F.A.Q. was replaced with the description Australian Standard White (A.S.W.). In recent years the practice of segregation has been widely employed to enhance the marketability of Australian wheat. For the Season 1974–75 this resulted in 19 separate grades of wheat being available for export. 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 grade, samples of wheat are obtained each year and each mixed to give the 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 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. Following is a table showing the standard weight of the main wheat varieties over a five year period.

AUSTRALIAN STANDARD WEIGHTS FOR PRINCIPAL GRADES

(*Source:* Australian Wheat Board)

(kilograms per hectolitre)

Class and grade	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Australian Prime Hard—					
New South Wales	78.6	79.2	78.0	(*a*)77.0	(*a*)79.8
Queensland	79.6	78.6	80.2	76.3	82.3
Australian Hard—					
New South Wales Northern(*b*)	78.6	79.6	81.5	76.4	79.5
New South Wales Southern	(*c*)	79.2	81.5	77.6	80.0
Queensland	78.6	(*c*)	76.2	(*c*)	80.5
South Australia	77.7	76.8	80.7	77.0	78.0
Western Australia	(*c*)	(*c*)	78.6	79.0	79.1
A.S.W. (F.A.Q.)—					
New South Wales South Western	77.4	78.3	80.5	76.0	80.0
Victoria	81.1	80.5	82.3	77.6	81.2
South Australia	78.6	78.3	81.6	76.0	77.0
Western Australia	79.9	79.9	78.6	77.8	79.1
Australian Soft—					
Victoria	(*c*)	79.9	83.5	(*c*)	80.5

(*a*) Minimum protein 14%. (*b*) No. 1 grade only. (*c*) Not determined.

The several A.S.W. 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

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*)

(*Source:* Bulk handling authorities in the various States, *see* above)

('000 tonnes)

State	*30 November*				
	1971	*1972*	*1973*	*1974*	*1975*
New South Wales	5,855	5,765	5,783	5,780	5,883
Victoria(*b*)	3,884	3,884	3,893	3,782	3,817
Queensland	1,129	1,189	1,265	1,249	1,268
South Australia	2,555	2,545	2,595	2,626	2,629
Western Australia	5,851	5,898	6,556	7,059	7,137
Tasmania	29	29	29	29	31
Australia	**19,303**	**19,310**	**20,121**	**20,525**	**20,765**

(*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.

Rural holdings growing wheat for grain

Particulars of the number of rural holdings growing wheat for grain during each of the years 1970–71 to 1974–75 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 RURAL HOLDINGS GROWING WHEAT FOR GRAIN(*a*)

State or Territory	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
New South Wales	18,537	18,723	17,777	18,220	16,179
Victoria	9,669	10,273	10,002	9,524	9,157
Queensland	2,816	4,503	3,439	4,258	4,487
South Australia	8,548	8,997	8,578	9,196	8,522
Western Australia	8,677	8,559	8,334	8,211	7,899
Tasmania	403	160	147	204	143
Australian Capital Territory	9	8	8	7	5
Australia	**48,659**	**51,223**	**48,285**	**49,620**	**46,392**

(*a*) Prior to 1973–74, comprised holdings approximately 8 hectares and over.

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. Data for 1973–74 may be obtained from the 1974–75 issue of *Rural Land Use, Improvements, Agricultural Machinery and Labour* (10.59) and from *Classification of Rural Holdings by size and type of activity*, 1973–74 (10.28).

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 1974–75 were as follows: New South Wales, Eagle (16.9), Timgalen (16.5), Olympic (11.6); Victoria, Halberd (45.2), Olympic (26.3), Summit (10.6); Queensland, Gatcher (31.8), Gamut (20.6), Timgalen (15.2); South Australia, Halberd (62.0), Gabo (5.4), Heron (4.8); and Western Australia, Gamenya (63.1), Falcon (11.3), Insignia (4.8). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry, (Preliminary)* (10.35).

Wheat area and production

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

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
			AREA ('000 HECTARES)					
1971–72	2,426	1,040	556	1,069	2,042	5	..	7,138
1972–73	2,618	1,087	471	986	2,437	4	..	7,604
1973–74	2,883	1,258	395	1,432	2,978	3	..	8,948
1974–75	2,646	1,141	489	1,220	2,810	2	..	8,308
1975–76p	2,774	1,073	576	958	3,166	3	..	8,550
			PRODUCTION ('000 TONNES)					
1971–72	2,410	1,894	722	1,407	2,165	8	1	8,606
1972–73	1,954	1,405	405	815	2,003	8	..	6,590
1973–74	3,962	1,490	526	1,795	4,211	4	..	11,987
1974–75	3,809	2,091	692	1,486	3,277	2	..	11,357
1975–76p	4,310	1,580	830	1,139	3,963	2	..	11,824

A graph showing the area sown to wheat for grain in Australia for the years 1900–01 to 1970–71 appears in Year Book No. 58, Plate 39, page 746, 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 47, below.

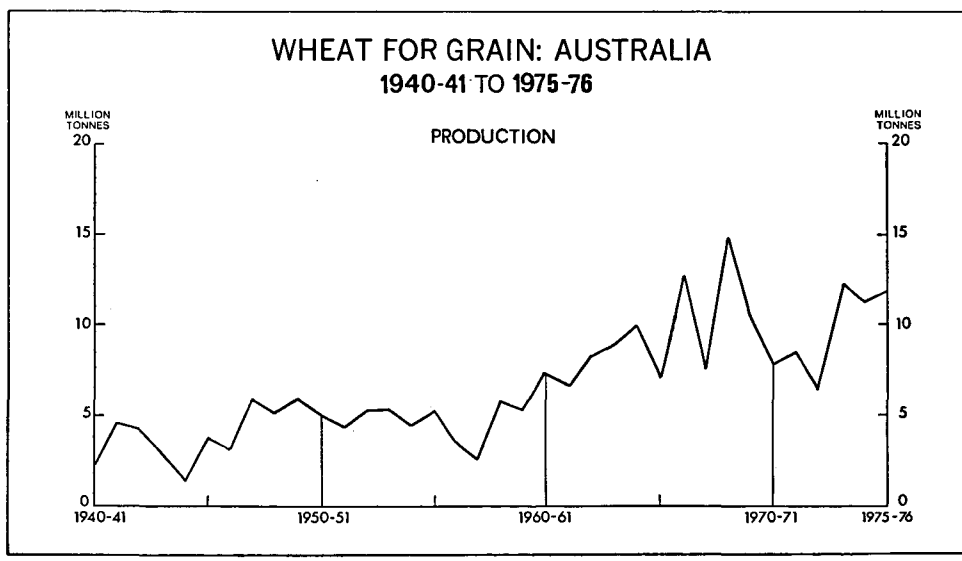


PLATE 47

Price of wheat

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

MONTHLY EXPORT WHEAT PRICES(*a*)

($ per tonne)

Month	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
July	46.99	52.50	49.05	92.46	118.45
August	47.40	51.53	51.17	131.91	117.73
September	49.19	49.88	61.18	138.98	120.10
October	50.94	48.92	71.51	134.67	150.56
November	51.99	48.55	73.99	134.67	156.00
December	52.27	48.13	83.09	134.94	149.35
January	53.19	47.95	82.44	141.92	131.08
February	52.87	47.95	72.71	148.31	116.41
March	52.87	47.95	70.18	150.74	107.80
April	52.68	48.73	70.23	149.27	103.48
May	52.50	48.96	73.90	123.78	95.52
June	52.31	48.69	83.13	110.23	92.83

(*a*) Australian Wheat Board average basis f.o.b. price quoted for A.S.W. 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.

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 1971 to 1974, and preliminary estimates for 1974–75.

RECEIVALS OF WHEAT BY THE AUSTRALIAN WHEAT BOARD

('000 tonnes)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
State of origin	*Pool*	*Pool*	*Pool*	*Pool*	*Pool*
New South Wales	2,646	2,097	1,508	3,683	3,625
Victoria	803	1,665	1,116	1,379	1,985
Queensland	90	666	325	474	658
South Australia	681	1,306	711	1,672	1,377
Western Australia	2,712	1,927	1,775	3,989	3,059
Tasmania	3	5	4	2	1
Total	**6,936**	**7,666**	**5,440**	**11,199**	**10,704**

Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board 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

(*Source:* Australian Wheat Board)

('000 tonnes)

State	*30 November*				
	1971	*1972*	*1973*	*1974*	*1975*
New South Wales	1,504.7	489.2	175.5	775.9	621.1
Victoria	655.1	399.3	130.3	340.2	486.6
Queensland	2.5	25.7	19.7	22.3	18.3
South Australia	430.0	278.9	42.7	125.7	168.5
Western Australia	798.6	244.7	95.9	612.5	354.8
Tasmania	13.4	12.9	13.7	5.4	8.0
Total	**3,404.3**	**1,450.7**	**477.7**	**1,881.9**	**1,657.5**

Particulars of the production and disposal of wheat during the years ended 30 November 1971 to 1975 are shown in the following table.

PRODUCTION, DISPOSAL AND STOCKS OF WHEAT: AUSTRALIA

('000 tonnes)

	Year ended 30 November				
	1971	*1972*	*1973*	*1974*	*1975*
Opening stocks (including flour as wheat)(*a*)(*b*)	7,222	3,404	1,451	478	1,882
Production	7,890	8,606	6,590	11,987	11,357
Total available supplies	**15,112**	**12,010**	**8,041**	**12,465**	**13,239**
Exports—					
Wheat(*b*)	8,595	7,426	3,855	7,124	8,254
Flour and wheat products(*b*),(*c*)	454	334	282	294	296
Local consumption—					
Flour(*b*)(*c*)	1,246	1,275	1,272	1,362	1,334
Breakfast foods and other products(*b*)(*c*)	39	38	36	46	55
Stock feed wheat sales(*b*)	395	534	935	911	1,007
Seed	444	544	602	506	529
Balance (including retained on farm for other than seed use)	510	396	548	282	124
Closing stocks (including flour as wheat)(*a*)(*b*)	3,404	1,451	478	1,882	1,658
Total disposals	**15,087**	**11,988**	**8,008**	**12,407**	**13,257**
Excess (+) or deficiency (−) of disposals in relation to total available supplies(*d*)	−25	−12	−33	−58	+18

(*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.

AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS
($'000)

	70/71 Pool	*71/72 Pool*	*72/73 Pool*	*73/74(a) Pool*	*74/75(a) Pool*
Paid to growers	310,798	317,047	262,728	1,087,399	1,027,887
Rail freight	50,994	47,636	36,498	77,300	85,000
Expenses	37,406	32,974	39,521	19,375	43,448
Wheat Industry Research Fund	713	689	555	1,232	1,175
Stabilisation Fund(a)	..	..	..	48,599	30,000
Total payments	**399,911**	**398,346**	**339,302**	**1,233,905**	**1,187,510**
Value of sales delivered	367,853	358,214	326,942	1,233,905	1,187,510

(a) Prior to the 1973–74 pool, the Commonwealth Government made payments into the fund of $32,058,000, $40,132,000 and $12,360,000 for the 1970–71, 1971–72 and 1972–73 Pools respectively. Payments since, have been made by the Wheat Board.

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 significant imports of wheat have since been recorded.

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
($'000 f.o.b.)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Wheat(a)	433,000	418,529	273,096	517,114	1,034,396
Flour(b)	21,374	15,091	14,579	23,082	51,479
Total	**454,374**	**433,620**	**287,675**	**540,196**	**1,085,875**

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

WHEAT: EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA

('000 tonnes)

Country to which exported	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Arab Republic of Egypt	1,275	1,801	777	715	861
Bangladesh	..	14	53	242	310
China (excluding Taiwan province)	1,310	..	324	1,163	1,423
India	116	55	..	666	236
Indonesia	..	105	72	115	598
Iran	295	397	..	..	424
Iraq	437	192	..	116	255
Japan	821	1,466	752	424	1,009
Malaysia	312	310	300	315	285
Pakistan, Islamic Republic of	159	30	19	23	539
Singapore	277	134	175	167	167
U.S.S.R.	..	502	908	18	635
Other(*a*)	4,086	3,454	2,013	1,165	1,184
Total	**9,089**	**8,460**	**5,391**	**5,128**	**7,926**

(*a*) Includes particulars of shipments made 'for orders' which could not be classified to country of consignment at the time of export.

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

FLOUR(*a*): EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA

(tonnes)

Country to which exported	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Fiji	33,631	33,948	31,606	16,263	6,734
Gilbert and Ellice Islands	1,611	1,737	1,876	2,044	2,482
Mauritius	13,542	17,295	17,517	17,162	16,024
Oman	4,727	6,204	5,169	6,600	6,620
Papua New Guinea	21,408	19,521	19,567	18,526	21,486
Philippines	1,597	786	8,179	8,154	5,467
Samoa (Western)	2,333	2,502	2,519	3,144	3,821
Saudi Arabia	10,570	9,530	10,017	11,029	7,956
Somali, Democratic Republic of	..	..	..	..	5,156
Sri Lanka	85,020	14,911	13,524	21,715	117,346
Tonga	2,979	3,402	4,089	3,227	3,401
United Arab Emirates	18,072	17,951	23,176	26,190	31,642
Other(*b*)	105,377	68,721	47,376	13,750	11,646
Total	**300,867**	**196,508**	**184,615**	**147,804**	**239,781**

(*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 country of consignment at the time of export.

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 1974–75 the Canadian harvest occurred from August to September 1974 and the Australian harvest from October 1974 to February 1975.

WHEAT: AREA, PRODUCTION, AND YIELD PER HECTARE IN VARIOUS COUNTRIES AND REGIONS(*a*)

(*Source for countries other than Australia:* International Wheat Council—*Review of the World Wheat Situation*)

Country and region	Area			Production			Yield per hectare		
	1973–74	*1974–75*	*1975–76p*	*1973–74*	*1974–75*	*1975–76p*	*1973–74*	*1974–75*	*1975–76p*
	'000 hectares	'000 hectares	'000 hectares	'000 tonnes	'000 tonnes	'000 tonnes	tonnes	tonnes	tonnes
Africa	9,570	9,017	n.a.	8,730	8,480	(*b*)8,475	0.912	0.940	n.a.
Asia—									
China—excl. Taiwan Province(*c*)	25,000	26,000	n.a.	27,000	31,200	32,000	1.080	1.200	n.a.
India	19,484	19,057	n.a.	24,735	22,073	26,000	1.270	1.158	n.a.
Pakistan	5,971	6,112	5,888	7,443	7,629	7,299	1.247	1.248	1.240
Turkey(*d*)	8,850	8,750	9,035	10,000	11,000	14,750	1.130	1.257	1.633
Total Asia(a)	*72,620*	*72,816*	*n.a.*	*79,200*	*82,759*	*92,450*	*1.091*	*1.137*	*n.a.*
Europe—									
European Economic Community	*10,832*	*11,223*	*10,476*	*41,443*	*45,346*	*38,072*	*3.826*	*4.040*	*3.634*
France	3,960	4,139	3,867	17,882	19,106	15,100	4.516	4.616	3.905
Germany, Federal Republic of(*d*)	1,603	1,631	1,571	7,134	7,761	6,976	4.450	4.758	4.440
Italy	3,590	3,712	3,553	8,920	9,695	9,600	2.485	2.612	2.702
Total Europe(a)	*26,536*	*27,335*	*n.a.*	*82,165*	*90,678*	*78,535*	*3.096*	*3.317*	*n.a.*
Canada	9,430	9,501	10,300	16,460	13,300	16,500	1.745	1.400	1.602
United States	21,923	26,427	27,900	46,407	48,807	58,200	2.117	1.847	2.086
Total North and Central America(a)	*32,033*	*36,736*	*39,040*	*64,930*	*64,880*	*(d)77,550*	*2.027*	*1.766*	*1.986*
Oceania—									
Australia	8,948	8,308	8,555	11,987	11,357	11,824	1.340	1.367	1.383
Total Oceania(a)	*9,021*	*8,367*	*n.a.*	*12,236*	*11,547*	*11,934*	*1.355*	*1.306*	*n.a.*
South America—									
Argentina	3,958	3,900	4,600	6,560	5,400	8,000	1.657	1.385	1.739
Total South America(a)	*6,500*	*7,400*	*n.a.*	*9,978*	*9,829*	*12,412*	*1.535*	*1.328*	(*b*)
U.S.S.R. (Europe and Asia)	63,200	59,700	61,000	109,700	83,800	70,000	1.736	1.404	1.148
World total(*a*)	219,480	221,371	n.a.	366,939	351,973	351,356	1.672	1.590	n.a.

(*a*) Totals include estimates for countries not listed. (*b*) International Wheat Council estimate. (*c*) United States Department of Agriculture estimate. (*d*) 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 1975–76 Australia's share of the world wheat exports has averaged 14 per cent.

WORLD EXPORTS OF WHEAT, AND WHEAT FLOUR IN TERMS OF WHEAT
1970-71 TO 1974-75

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

('000 tonnes)

Year and country of primary destination	Exporting country: Argentina	Australia	Canada	E.E.C.	U.S.A.	U.S.S.R.	Other	Total
1974–75*p*—								
Algeria	103	..	613	363	717	..	128	1,924
Arab Republic of Egypt	15	848	..	1,601	750	..	180	3,394
Bangladesh	18	299	332	631	790	..	50	2,120
Brazil	84	..	987	..	596	..	..	1,667
Chile	50	97	..	..	516	..	..	663
China—excl. Taiwan Province	210	1,244	2,366	180	1,496	..	..	5,496
Cuba	..	..	748	..	..	200	..	948
Czechoslovakia	..	..	..	1	..	600	75	676
E.E.C. (incl. U.K.)	217	..	2,555	..	2,158	..	322	5,252
German Democratic Republic	..	..	..	..	..	1,300	255	1,555
India	260	261	506	823	4,300	..	150	6,300
Indonesia	..	598	78	55	98	..	..	829
Iran	..	424	..	57	1,735	..	1	2,217
Japan	33	963	1,187	..	3,079	..	..	5,262
Korea, Republic of	..	..	..	..	1,733	..	..	1,733
Lebanon	16	88	180	55	95	..	200	634
Mexico	..	..	..	..	832	..	..	832
Morocco	90	..	17	373	456	..	51	987
Pakistan, Islamic Republic of	..	539	29	277	885	..	19	1,749
Peru	..	120	117	19	628	..	..	884
Philippines	..	18	159	15	323	..	..	515
Poland	..	..	74	..	52	1,000	161	1,287
Saudi Arabia	..	67	15	157	287	..	..	526
Sri Lanka	..	222	2	310	109	..	18	661
Turkey	..	..	..	285	675	..	50	1,010
U.S.S.R.	680	656	313	..	978	..	201	2,828
Venezuela	..	..	52	..	655	..	..	707
Vietnam	..	..	..	..	..	600	6	606
Other countries	402	1,605	838	1,991	4,382	300	649	10,167
Total 1974–75	2,178	8,049	11,168	7,193	28,325	4,000	2,516	63,429
1970–71	1,704	9,492	11,561	3,165	19,821	7,072	1,459	54,274
1971–72	1,328	8,736	13,761	4,656	16,907	5,478	1,668	52,534
1972–73	3,510	5,562	15,648	6,525	31,992	1,303	3,738	68,278
1973–74	1,106	5,509	11,737	5,467	31,068	5,035	3,149	63,071

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 759–60 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 Western Australia the grain is sold through a voluntary pool and in South Australia through private trading organisations.

Oats area, production and yield per hectare

Oats is usually next in importance to wheat and barley among the grain crops cultivated in Australia. However, while wheat grown for grain in 1974–75 accounted for 60 per cent of the area of all crops, oats grown for grain represented only 6 per cent.

OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER HECTARE

	N.S.W.	*Vic.*	*Qld*	*S.A*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
AREA ('000 HECTARES)								
1971–72	261	329	21	169	454	6	..	1,241
1972–73	285	255	10	142	297	6	..	995
1973–74	405	271	20	152	325	9	..	1,182
1974–75	270	198	25	135	262	6	..	897
1975–76p	289	243	12	119	320	4	..	987
PRODUCTION ('000 TONNES)								
1971–72	221	449	18	166	414	7	..	1,275
1972–73	196	238	8	74	212	7	..	736
1973–74	327	233	13	142	383	8	..	1,107
1974–75	293	186	28	112	250	5	..	874
1975–76p	350	282	13	107	385	4	..	1,141
YIELD PER HECTARE (TONNES)								
1971–72	0.847	1.364	0.857	0.982	0.912	1.097	0.851	1.028
1972–73	0.689	0.936	0.789	0.525	0.715	1.103	0.516	0.740
1973–74	0.808	0.858	0.677	0.935	1.179	0.899	1.181	0.937
1974–75	1.086	0.940	1.120	0.828	0.951	0.906	1.185	0.975
1975–76p	1.211	1.160	1.083	0.899	1.203	1.000	1.133	1.156

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 1945–46 to 1975–76 is shown in plate 48, page 763.

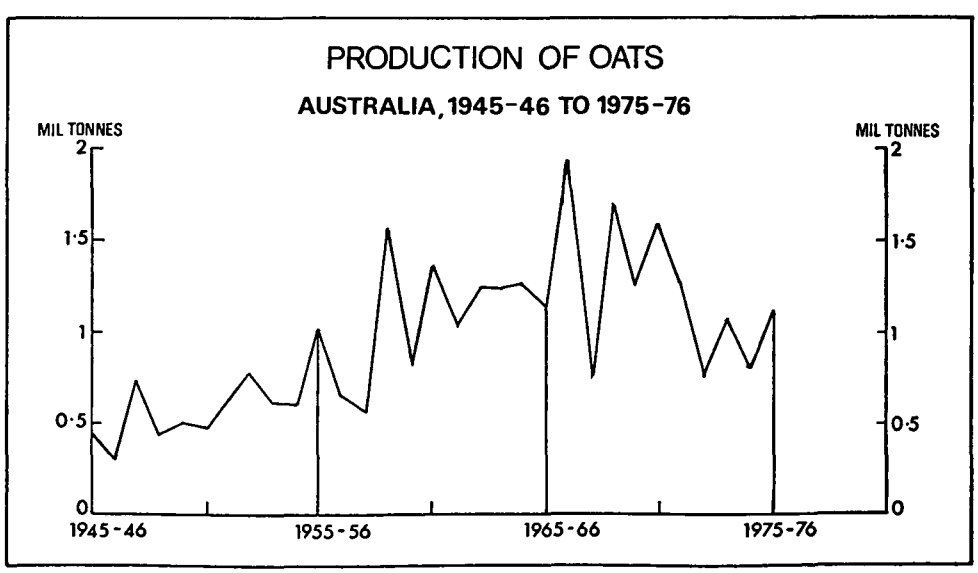


PLATE 48

Exports of Oats

OATS: EXPORTS, AUSTRALIA

		1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Quantity	tonne	555,917	328,979	114,534	180,655	267,271
Value	S'000 f.o.b.	23,827	12,425	5,016	13,582	19,768

In 1974–75 the principal countries of destination were Japan (157,811 tonnes), Germany, F.R. (59,527 tonnes), Malaysia (5,149 tonnes) and the United Kingdom (2,859 tonnes).

World production of oats

The world production of oats for the 1974–75 season, according to estimates by the Bureau of Agricultural Economics, Canberra, amounted to 51 million tonnes. This represents a 5 per cent decrease in production over the previous year. The main producers are the Union of Soviet Socialist Republics, the United States, Canada, Germany F. R., and Poland, with Australia producing about 1.7 per cent of the world total. Australia is one of the world's largest exporters of oats.

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 New South Wales, Victoria, Queensland and South Australia. The Western Australian Barley Marketing Board was abolished at the end of 1975 and the marketing of barley in Western Australia is now the responsibility of the Grain Pool of Western Australia.

Barley Boards

The bulk of the barley crop is acquired and marketed by grower-controlled boards. (In Western Australia these functions are carried out by the Grain Pool of Western Australia.) 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 New South Wales Boards and the Grain Pool of Western Australia handle the crops of their respective States. 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.
1970–71 TO 1974–75

Pool	*Quantity received*	*Quantity sold*	*Total advances per tonne(a)*	*Net payments to growers*
	tonnes	tonnes	$	$'000
No. 32 (1970–71 Crop)	827,829	826,083	48.54	34,551
,, 33 (1971–72 ,,)	1,135,065	1,132,104	42.49	38,302
,, 34 (1972–73 ,,)	441,949	442,001	56.01	21,949
,, 35 (1973–74 ,,)	911,481	910,293	82.15	70,128
,, 36 (1974–75p ,,)	1,350,645	1,346,255		117,533

(*a*) 2-row No. 1 Grade (bulk) less freight.

Barley area, production and yield per hectare

The production of barley for grain in 1974–75, 2,513,000 tonnes, was 18 per cent less than the previous record production of 3,065,000 tonnes in 1971–72. The area, production and yield per hectare of barley for grain in the States for the years 1971–72 to 1975–76 are shown in the following table.

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER HECTARE

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
	AREA ('000 HECTARES)							
1971–72	373	296	159	784	911	13	..	2,535
1972–73	336	277	78	692	744	13	..	2,140
1973–74	386	222	139	627	510	11	..	1,894
1974–75	327	243	156	701	387	12	..	1,826
1975–76p	486	344	236	832	419	12	..	2,329

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

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*A.C.T.*	*Aust.*
PRODUCTION ('000 TONNES)								
1971–72	346	395	249	1,047	1,000	28	..	3,065
1972–73	266	214	80	509	640	19	..	1,727
1973–74	448	285	221	793	626	24	..	2,397
1974–75	408	319	297	1,134	329	28	..	2,515
1975–76p	697	445	419	1,094	507	18	..	3,180
YIELD PER HECTARE (TONNES)								
1971–72	0.927	1.336	1.568	1.336	1.098	2.202	..	1.209
1972–73	0.792	0.771	1.026	0.735	0.861	1.462	..	0.807
1973–74	1.162	1.287	1.592	1.264	1.228	2.139	..	1.265
1974–75	1.248	1.314	1.902	1.619	0.850	2.333	..	1.382
1975–76p	1.434	1.294	1.775	1.315	1.210	1.500	..	1.365

The production of barley in Australia since 1945–46 is shown in plate 49, 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 Year Book No. 58, plate 39, page 746.

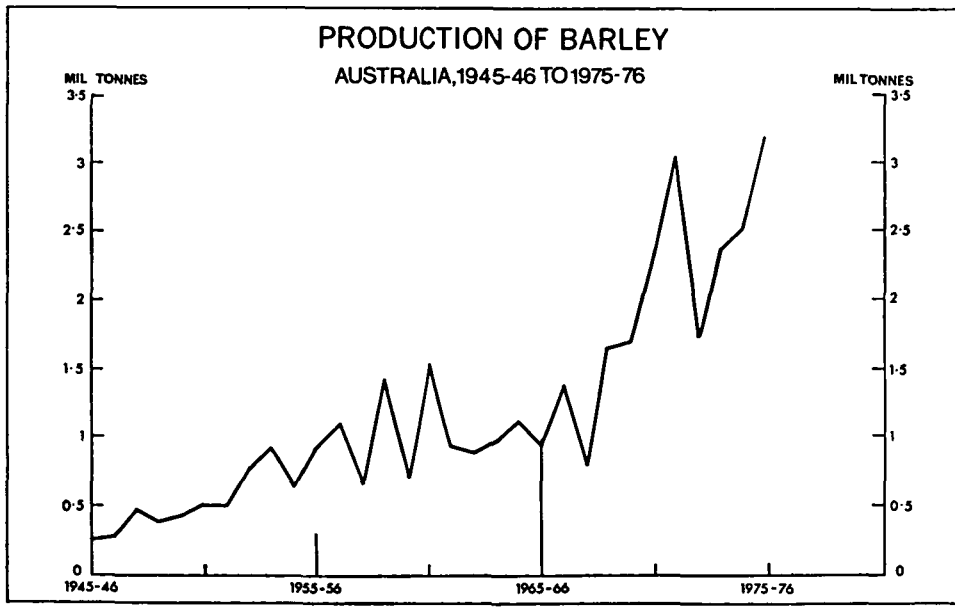


PLATE 49

Exports of barley

South Australia is the principal exporting State, and the Republic of Korea, Taiwan Province and Japan were the principal countries to which barley was shipped in 1974–75. Particulars of exports of Australian-produced barley for the years 1970–71 to 1974–75 are shown in the following table.

BARLEY: EXPORTS, AUSTRALIA

		1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Quantity	tonne	1,122,970	1,816,765	804,122	508,467	1,759,700
Value	$'000 f.o.b.	50,820	74,344	38,512	68,463	186,682

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1974–75 amounting to 917,285 kgs, valued at $195,146, the main country of consignment being Peru.

Barley malt

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 149,373 tonnes (value $20,706,000) and 213,645 tonnes (value $35,711,000) were recorded in 1973–74 and 1974–75 respectively.

World production of barley

In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1974 were the Union of Soviet Socialist Republics, China (excluding Taiwan Province), France, United Kingdom, Canada, the Federal Republic of Germany and the United States of America. Australian production in 1974–75 was approximately 2 per cent of the world total.

According to preliminary estimates made by the Bureau of Agricultural Economics, Canberra, world production of barley in the year 1974 amounted to 171 million tonnes. This compared with the production of 169 million tonnes in the previous year.

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 broom 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 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 plains are the main areas.

In Central Queensland orderly marketing of the crop is arranged through the Central Queensland Grain Sorghum Marketing Board and in Southern Queensland 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 HECTARE

	Area			*Production*			*Yield per hectare*		
Year	*N.S.W.*	*Qld*	*Aust.(a)*	*N.S.W.*	*Qld*	*Aust.(a)*	*N.S.W.*	*Qld*	*Aust.(a)*
	hectares	hectares	hectares	'000 tonnes	'000 tonnes	'000 tonnes	tonnes	tonnes	tonnes
1970–71 .	180,365	368,717	552,184	487	806	1,297	2.697	2.186	2.350
1971–72 .	207,793	423,234	638,392	371	833	1,228	1.786	1.969	1.924
1972–73 .	269,002	414,133	697,162	372	622	1,018	1.382	1.502	1.460
1973–74 .	201,469	331,656	539,671	394	654	1,061	1.954	1.973	1.965
1974–75 .	176,209	328,886	511,089	257	634	901	1.457	1.928	1.762

(*a*) Includes small areas sown and quantities produced in other States and Territories.

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 hectare 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. Marketing of maize in New South Wales has in the past been conducted by private merchants. A poll of growers in 1975 voted for the formation of a marketing board in that State and the Board is expected to commence operation with the 1977 crop.

Production of maize in Australia is small, totalling only 133,000 tonnes in 1974–75. This produce is mostly consumed domestically with a small proportion going to the export market.

Maize area, production and yield per hectare

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER HECTARE

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
AREA (HECTARES)									
1970–71	33,313	535	51,725	..	62	..	..	..	85,635
1971–72	33,243	375	44,546	..	29	..	..	..	78,193
1972–73	23,850	496	34,913	..	(*a*)	..	(*a*)	..	(*b*)59,259
1973–74	17,950	654	27,002	(*a*)	(*a*)	..	..	..	(*b*)45,606
1974–75	22,177	543	28,675	(*a*)	(*a*)	..	..	..	(*b*)51,395
PRODUCTION ('000 TONNES)									
1970–71	106	2	104	..	..	..	..	..	212
1971–72	114	2	97	..	..	..	..	..	214
1972–73	67	2	70	..	(*a*)	..	(*a*)	..	(*b*)139
1973–74	48	2	56	(*a*)	(*a*)	..	..	..	(*b*)106
1974–75	60	2	72	(*a*)	(*a*)	..	..	..	(*b*)133
YIELD PER HECTARE (TONNES)									
1970–71	3.195	2.950	2.002	..	0.645	..	..	..	2.471
1971–72	3.443	5.117	2.188	..	3.828	..	..	..	2.736
1972–73	2.822	3.036	2.005	..	(*a*)	..	(*a*)	..	2.343
1973–74	2.669	2.890	2.074	(*a*)	(*a*)	..	..	..	(*b*)2.320
1974–75	2.689	3.536	2.503	(*a*)	(*a*)	..	..	..	(*b*)2.594

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

Exports of maize

MAIZE: EXPORTS, AUSTRALIA

		1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Quantity	tonne	22,375	38,469	9,191	2,693	1,272
Value	$'000 f.o.b.	1,203	2,283	493	230	155

World production of maize

According to figures issued by the Bureau of Agricultural Economics, Canberra, world production of maize in the year 1974–75 season amounted to 282 million tonnes. This compared with production in the previous year of 312 million tonnes.

The United States of America is the most important maize-producing country in the world, and accounted for 41 per cent (118 million tonnes) of total world production in 1974–75.

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. Favoured by high average yields, rice culture made rapid progress in the Murrumbidgee Irrigation Areas until local requirements were met and a surplus became available for export. The area sown in the Murrumbidgee Irrigation Areas 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 the Burdekin area of Queensland. In 1974–75, the largest purchasers of Australian rice were Papua New Guinea, the Pacific Islands, Indonesia and Hong Kong. Details relating to area, production, and Australian-produced exports for recent years are shown in the following table.

RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(*a*)

Year	*Area*	*Production (paddy rice)* *Quantity*	*Average yield (paddy) per hectare*	*Imports*	*Exports*
	hectares	'000 tonnes	tonnes	tonnes	tonnes
1970–71	40,721	300	7.363	438	102,428
1971–72	40,403	248	6.134	384	108,555
1972–73	45,150	309	6.835	414	157,611
1973–74	67,502	409	6.056	371	136,520
1974–75	75,562	388	5.141	527	174,332

(*a*) For some years particulars of area and production for Western Australia and the Northern Territory are not available for publication, and are excluded.

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.

HAY: AREA, PRODUCTION AND YIELD PER HECTARE

Season	*N.S.W.*	*Vic.*	*Qld*	*S.A*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
AREA ('000 HECTARES)									
1970–71	47	80	16	84	116	4	1	..	349
1971–72	65	88	13	78	95	2	..	..	341
1972–73	74	139	13	89	133	4	..	..	453
1973–74	49	70	10	80	113	3	..	..	325
1974–75	37	46	8	51	73	2	..	..	216
PRODUCTION ('000 TONNES)									
1970–71	185	355	26	284	401	21	..	1	1,274
1971–72	193	363	48	296	332	13	..	..	1,247
1972–73	175	442	34	203	351	17	1	..	1,224
1973–74	131	234	23	263	367	13	2	..	1,034
1974–75	98	159	22	168	214	8	..	..	669
YIELD PER HECTARE (TONNES)									
1970–71	3.935	4.442	1.597	3.367	3.456	5.016	0.600	3.931	3.650
1971–72	2.978	4.108	3.833	3.813	3.507	5.240	2.727	1.753	3.655
1972–73	2.368	3.169	2.644	2.277	2.646	3.923	2.735	1.474	2.701
1973–74	2.817	3.359	2.483	3.270	3.279	4.311	6.510	5.227	3.218
1974–75	2.667	3.455	2.844	3.303	2.935	4.307	2.400	2.875	3.096

HAY: AREA OF VARIOUS TYPES GROWN 1974–75

(Hectares)

State or Territory	*Oats*	*Wheat*	*Other*	*Total*
New South Wales	19,305	15,338	2,004	36,647
Victoria	38,250	5,440	2,425	46,115
Queensland	3,353	1,005	3,340	7,698
South Australia	34,951	9,832	6,034	50,817
Western Australia	52,880	15,477	4,413	72,770
Tasmania	1,381	94	451	1,926
Northern Territory	..	..	34	34
Australian Capital Territory	8	..	..	8
Australia	**150,128**	**47,186**	**18,701**	**216,015**

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 1974–75 exports amounting to 9,871 tonnes, valued at $582,000, were made, principally to Kuwait, Iran, Singapore and New Caledonia. Imports of hay are not recorded separately, but are considered to be negligible.

GREEN FEED OR SILAGE: AREA

('000 hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1970–71	495	105	487	132	144	32	..	..	1,396
1971–72	325	57	364	85	144	22	1	..	998
1972–73	402	73	480	88	124	34	1	1	1,204
1973–74	412	65	404	71	114	31	..	..	1,097
1974–75	304	44	341	59	75	27	3	..	853

SILAGE: PRODUCTION

(Tonnes)

Period	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Production during									
1970–71 season	389,639	212,067	126,990	46,549	69,907	47,343	(*a*)	67	(*b*)892,562
1971–72 ,,	240,521	246,118	78,202	58,651	76,395	64,377	1,270	1,301	766,835
1972–73 ,,	180,648	148,494	50,546	22,878	50,567	25,017	5,269	211	483,630
1973–74 ,,	361,945	289,393	47,719	46,777	81,186	57,055	3,560	670	888,305
1974–75 ,,	211,307	139,891	36,641	35,298	49,057	50,146	6,731	3,000	532,071

(*a*) Not collected. (*b*) Incomplete; *see* footnote (*a*).

Soybeans

The soybean is cultivated widely throughout the world in temperate zones where hot damp summers provide adequate growing conditions. Although large quantities of beans are directly consumed in countries such as Japan, China (excluding Taiwan Province) and Indonesia, the greater part of world output is crushed for meal and oil. Major soybean producing countries are the United States of America, Brazil and China (excluding Taiwan Province).

The greater part of Australian production takes place in the Darling Downs, Burnett and Lockyer districts of Queensland and the Moree and Gunnedah districts of New South Wales. Production has risen rapidly in recent years to reach 73,723 tonnes in 1974–75.

Lupins

The lupin is an annual legume with a growing season closely following that of winter cereals. It prefers well drained soil but is otherwise fairly adaptable. In the past a small amount has been grown for grazing but a recent rapid expansion has followed the development in Australia of lupins with alkaloid-free seed. The seed has a high protein content and is finding use as a substitute for soya protein in human and animal food preparations. The main producing area is in the south-west of Western Australia where production reached 77,151 tonnes in 1974–75.

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 renders a useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilisers, etc., and by producing and distributing improved varieties of cane. Although the Bureau of Sugar Experiment Stations undertake some work relating to milling technology, Sugar Research Ltd, of Mackay, is the main body undertaking technological research in raw sugar milling practices.

Bulk handling of sugar

Bulk handling of raw sugar is now in operation throughout the Australian sugar industry. The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. In Queensland, 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. The capacity and handling rates of the terminals have been continually upgraded. Total bulk storage capacity at present is 1,475,000 tonnes. From the proceeds of the 1974 season's sugar the industry allocated $50,000,000 to finance upgrading of port and bulk storage facilities at Bundaberg and Lucinda. Bulk receiving facilities are in operation at all Australian refineries.

Mechanisation

For some years now practically the whole of the Queensland crop has been mechanically harvested. In New South Wales the changeover from manual to mechanical cutting was somewhat slow initially, but has advanced rapidly in recent years, 95 per cent of the crop having been cut by machines in 1975 compared with 22.4 per cent in 1972.

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 recent seasons is shown in the following table. 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

(Hectares)

	New South Wales			*Queensland*			*Australia*			
Year	*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*	*Total*
1971–72 . .	9,330	7,418	268	224,407	31,369	4,923	233,737	38,787	5,191	277,714
1972–73 . .	9,361	6,497	192	232,338	30,023	4,853	241,699	36,520	5,045	283,264
1973–74 . .	9,917	7,056	201	215,937	43,254	4,827	225,854	50,310	5,028	281,192
1974–75 . .	9,911	8,252	275	243,231	29,223	5,959	253,142	37,475	6,234	296,851
1975–76p . .	11,000	n.a.	n.a.	245,800	n.a.	n.a.	256,800	n.a.	n.a.	n.a.

In 1975 the Queensland Government approved an increase of 13 per cent in the area assigned to the growing of cane in Queensland. This increase, which was allocated among existing cane growers, will provide, an additional 38,202 hectares, of cane land. Much of this new area is already growing cane which will be available for harvest in 1976–77.

Production of cane and sugar

The production of sugar cane in 1974–75 was a record 20,417,723 tonnes, one million tonnes greater than the previous record 1971–72 season. The production of raw sugar from 1945–46 is shown in plate 50 following.

SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR

(Tonnes)

Year	*New South Wales*		*Queensland*		*Australia*	
	Cane	*Sugar(a)*	*Cane*	*Sugar(a)*	*Cane*	*Sugar(a)*
1971–72 . . .	980,196	123,813	18,410,311	2,669,622	19,390,506	2,793,435
1972–73 . . .	841,106	102,941	18,087,205	2,714,062	18,928,311	2,817,003
1973–74 . . .	999,486	121,140	18,278,504	2,405,006	19,277,990	2,526,146
1974–75 . . .	996,654	121,008	19,421,069	2,727,533	20,417,723	2,848,541
1975–76p . . .	890,000	n.a.	21,069,000	n.a.	21,959,000	n.a.

(*a*) Raw sugar at 94 net titre.

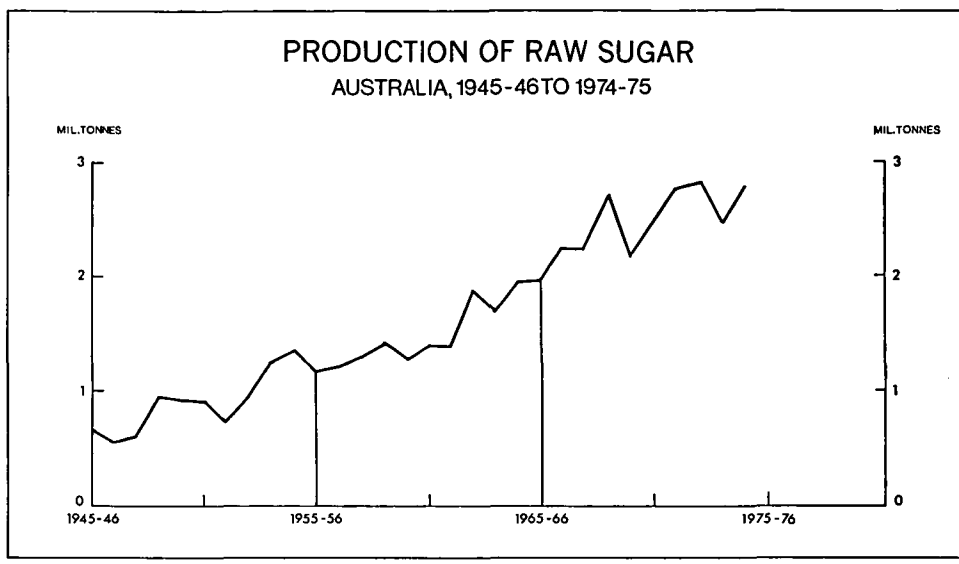


PLATE 50

Climatic conditions in some New South Wales areas 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 hectare for recent years 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 HECTARE

(Tonnes)

Year	*New South Wales*			*Queensland*			*Australia*		
	Cane per hectare crushed	*Sugar per hectare crushed*	*Cane to each tonne of sugar*	*Cane per hectare crushed*	*Sugar per hectare crushed*	*Cane to each tonne of sugar*	*Cane per hectare crushed*	*Sugar per hectare crushed*	*Cane to each tonne of sugar*
1971–72 . .	105.06	13.27	7.92	82.04	11.90	6.89	82.96	11.95	6.94
1972–73 . .	89.85	12.94	6.94	77.85	11.68	6.67	78.31	11.73	6.68
1973–74 . .	100.79	12.22	8.25	84.65	11.14	7.60	85.36	11.18	7.64
1974–75 . .	100.56	12.21	8.24	79.85	11.21	7.12	80.66	11.25	7.17
1975–76p . .	80.91	n.a.	n.a.	85.72	n.a.	n.a.	85.51	n.a.	n.a.

Production and utilisation of sugar

Details of the production and utilisation of sugar are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

SUGAR: PRODUCTION AND UTILISATION, AUSTRALIA

Year	Changes in stocks(a)	Production (raw)(b)	Exports(c)	Miscellaneous uses(d)	Consumption in Australia(e)	
					Total	Per head
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	kg
1969–70	n.a.	2,201.9	1,386.6	n.a.	618.9	49.7
1970–71	n.a.	2,451.7	1,596.8	n.a.	636.3	50.8
1971–72	n.a.	2,579.4	2,033.0	n.a.	645.6	50.2
1972–73	n.a.	2,671.4	2,134.7	n.a.	664.4	50.8
1973–74	n.a.	2,519.4	1,812.2	n.a.	666.0	50.2

(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.

Sugar prices and returns

RAW SUGAR(a), AUSTRALIA

Year	Proportion exported	Average return per tonne received by millers and growers for (b)—			Estimated value of crop
		Home consumption	Exports	Whole crop	
	per cent	$	$	$	$'000
1970–71	72.36	138.08	86.44	100.72	254,191
1971–72	75.09	136.51	99.35	108.61	303,290
1972–73	74.87	134.93	112.26	117.96	332,184
1973–74	70.94	132.40	129.55	130.38	329,336
1974–75	73.65	129.90	304.82	258.72	(c)736,821

(a) 94 net titre. (b) Includes repayments of Commonwealth Government loan. (c) Excludes the sum of $50 million retained from export sales proceeds to finance port and storage developments.

The estimated values stated, comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges. The deductions include concessions to the fruit industry and other rebates, which in 1974–75 amounted to $15,745 and also payment of the first instalment of the repayable Commonwealth Government arranged loan. The residual value thus obtained represents the net market value of all raw sugar sold, which is divided between the growers and millers in the approximate proportions of two-thirds and one-third respectively.

The wholesale price of refined sugar to the retailer of $203.46 per tonne and the capital cities retail price of 23 cents per kg remained unchanged from 19 June 1967 to 1 February 1975 when the two prices were raised to $219.50 and 27 cents respectively.

Exports of sugar

RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA

		1971–72	*1972–73*	*1973–74*	*1974–75*	*1975–76*
Quantity	tonnes	2,007,983	2,084,430	1,781,478	1,995,667	2,012,538
Value	$'000 f.o.b.	210,593	249,759	223,313	644,499	569,722

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.

Tobacco area and production

The area planted to tobacco in 1974–75 was 28.6 per cent below the record area established in 1962-63. Production at 15,462,000 kg was 11.1 per cent below the previous record established in 1970–71. The following table shows the area and production of tobacco in the tobacco growing States in the last five years.

TOBACCO: AREA AND PRODUCTION

Year	N.S.W.	Vic.	Qld	Aust.
	AREA (HECTARES)			
1970–71	1,231	4,242	5,427	10,900
1971–72	1,273	3,844	4,928	10,045
1972–73	898	4,068	4,632	9,598
1973–74	837	3,940	4,501	9,278
1974–75	898	3,926	4,424	9,248
	PRODUCTION OF DRIED LEAF ('000 kg)			
1970–71	1,270	6,902	8,956	17,128
1971–72	1,855	5,765	8,395	16,015
1972–73	1,449	5,769	8,203	15,421
1973–74	1,252	5,634	8,000	14,886
1974–75	1,369	6,086	8,007	15,462

Imports and exports of tobacco

Imports of tobacco and tobacco manufactures into Australia during 1974–75 were valued at $41.6 million. This included 13.1 million kg of unmanufactured tobacco valued at $26.1 million. Exports of tobacco and tobacco manufactures during 1974–75 were valued at $4,128,000, including Australian produce, $3,134,000.

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 with the remainder produced in Queensland. In 1963 cotton was introduced into the Ord River area of Western Australia, but due to rising production costs and the continuing problem of insect infestation the commercial production of cotton in that area ceased with the 1975 crop. Nearly all Australian cotton is now grown with the assistance of irrigation and 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. Raw cotton production in 1975 was 146,586 bales (a bale is approximately 225 kg in weight) compared with 135,536 bales produced in the previous year. The 1976 crop was reduced by floods and the preliminary estimates place this year's crop at only 113,560 bales. Some 69,689 bales of cotton were exported from the 1975 crop compared with 32,892 bales in the previous year. It is estimated that only about 10,000 bales will be available for export from the 1976 crop. The high level of exports in the previous year reflected the decrease in the demand for cotton on the domestic market due to difficulties experienced in the textile industry.

Cotton area, production and yield per hectare

COTTON: AREA, PRODUCTION AND YIELD PER HECTARE

Year	*N.S.W.*	*Qld*	*W.A.*	*Aust.*
	AREA (HECTARES)			
1970–71	26,403	5,213	2,918	34,534
1971–72	29,310	6,897	3,442	39,649
1972–73	31,747	8,008	3,861	43,616
1973–74	31,020	7,105	3,591	41,716
1974–75	27,511	7,386	3,642	38,539
	PRODUCTION (UNGINNED)(*a*)('000 kg)			
1970–71	38,611	8,705	9,435	56,751
1971–72	100,822	18,585	12,564	131,971
1972–73	71,906	13,464	11,271	96,641
1973–74	58,806	18,390	9,197	86,393
1974–75	78,812	17,909	6,603	103,324
	YIELD PER HECTARE (kg)			
1970–71	1,462	1,670	3,233	1,643
1971–72	3,440	2,695	3,650	3,328
1972–73	2,265	1,681	2,919	2,216
1973–74	1,896	2,588	2,561	2,070
1974–75	2,865	2,425	1,813	2,681

(*a*) Unginned cotton is seed cotton prior to being converted in the ginnery to raw (or lint) cotton.

Production of ginned cotton for each of the three years 1971–72 to 1973–74 was 38,960,000 kg, 33,669,000 kg and 28,496,000 kg respectively. Figures for 1970–71 are not available.

The gross value of cotton for each of the five years from 1970–71 to 1974–75 was $13,293,000, $30,117,000, $32,625,000, $26,636,000 and $29,270,000 respectively.

Imports and exports of raw cotton

RAW COTTON(*a*): IMPORTS AND EXPORTS, AUSTRALIA

		1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Imports—						
Quantity	'000 kg	6,995	8,939	3,830	8,401	4,021
Value	$'000 f.o.b.	4,313	5,784	2,673	9,297	4,804
Exports—						
Quantity	'000 kg	7,416	2,421	22,290	3,051	7,663
Value	$'000 f.o.b.	3,431	1,555	11,347	1,927	5,362

(*a*) Excludes linters.

Japan and Hong Kong were the principal importing countries, taking 3,247,913 kg and 2,661,377 kg respectively in 1974–75.

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

	Area (hectares)			*Production ('000 kg)*		
Year	*N.S.W.*	*Qld*	*Aust.*	*N.S.W.*	*Qld*	*Aust.*
1970–71	158	38,403	(*a*)38,584	262	30,846	(*a*)31,123
1971–72	227	33,485	(*a*)33,752	242	45,774	(*a*)46,060
1972–73	336	28,787	(*a*)29,136	504	37,992	(*a*)38,496
1973–74	18	25,724	25,932	86	29,119	29,208
1974–75	204	23,742	24,131	494	31,323	31,969

(*a*) Incomplete; excludes Western Australia.

The gross value of the 1974–75 crop was $12,006,000 which was approximately $1,121,000 more than in 1973–74. Total supplies available for consumption in Australia in 1973–74 were 20,736 tonnes in shell equivalent. Exports of peanuts and peanut products for 1974–75 were 9,920 tonnes.

Linseed

The flax plant is a summer-growing annual. Varieties have been developed for the production of either fibre or linseed. Linseed, 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 1974–75 was 33,049 tonnes.

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, the Darling Downs in Queensland, and the south-eastern district of South Australia.

LINSEED: AREA AND PRODUCTION

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Aust.*
Area (hectares)—						
1970–71	20,538	6,830	3,556	281	10,421	41,626
1971–72	9,391	3,694	1,872	172	4,794	19,923
1972–73	6,762	5,843	2,907	534	254	16,300
1973–74	10,508	4,336	1,852	829	252	17,777
1974–75	18,237	4,924	8,543	3,165	693	35,562
Production (tonnes of linseed)—						
1970–71	17,189	6,472	1,968	258	4,918	30,805
1971–72	3,713	3,388	1,301	92	1,735	10,229
1972–73	1,889	5,471	1,948	419	64	9,791
1973–74	7,200	4,668	1,504	829	123	14,324
1974–75	14,997	3,812	10,720	3,162	358	33,049

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 in the south-east, and the Scottsdale-Ringarooma district in the north-east 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 recent years. Exports of hops are negligible and are not recorded separately.

HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA

Year	*Production(a)*	*Imports*	*Net available supplies(b)*	*Quantity used in breweries*
	'000 kg	'000 kg	'000 kg	'000 kg
1970–71 . . .	1,706	18	1,724	1,761
1971–72 . . .	1,847	20	1,867	1,553
1972–73 . . .	2,113	37	2,150	1,294
1973–74 . . .	2,864	16	2,880	1,335
1974–75 . . .	2,270	20	2,270	n.a.

(*a*) Excludes production in Western Australia. (*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 from 1970–71 to 1972–73 and the buoyant world market for oilseeds brought about an expansion of areas sown to rape in New South Wales, Western Australia, Victoria and South Australia.

Domestic production increased from 4,464 tonnes in 1969–70 to 54,614 tonnes in 1971–72 and 25,037 tonnes in 1972–73 but subsequently declined to 12,750 tonnes for 1973–74 and 8,533 tonnes in 1974–75 as a result of disease problems.

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 headers 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

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
				AREA (HECTARES)					
1970–71	19,834	5,071	2,053	170	546	..	..	..	27,674
1971–72	18,675	1,272	12,482	197	1,183	..	..	..	33,809
1972–73	5,782	556	3,257	74	955	..	..	..	10,624
1973–74	1,584	971	9,575	181	138	..	..	..	12,449
1974–75	5,487	2,813	27,575	363	(a)	..	..	..	36,238
				PRODUCTION (TONNES)					
1970–71	8,291	1,569	371	83	142	..	..	..	10,456
1971–72	10,592	722	3,462	81	541	..	..	..	15,398
1972–73	1,538	328	2,126	46	135	..	..	..	4,173
1973–74	320	520	5,928	82	10	..	..	..	6,860
1974–75	2,005	1,269	26,949	279	(a)	..	..	..	30,502

(a) Not available for publication.

Imports of crude safflower seed oil in 1973–74 and 1974–75 totalled 1,130 and 4,652 tonnes 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 the major oilseed crop.

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 resulted in an increase in Australian production from 13,248 tonnes in 1969–70 to a record 147,531 tonnes in 1971–72. Production in 1974–75 amounted to 113,375 tonnes.

Vegetables for human consumption

Area, production and trade

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. 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 *Crop Statistics* (10.58). Details of the estimated consumption of vegetables for a series of years are given in the chapter Miscellaneous.

VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA

Vegetable	1972–73		1973–74		1974–75	
	Area sown	Production	Area sown	Production	Area sown	Production
	hectares	tonnes	hectares	tonnes	hectares	tonnes
Asparagus	2,450	6,756	2,015	5,516	1,798	4,626
Beans, french and runner	7,512	35,533	8,312	40,226	8,601	40,862
Beetroot	832	22,802	886	25,988	850	27,417
Cabbages and brussel sprouts	2,629	70,738	2,761	72,927	2,903	84,638
Carrots	2,935	81,574	3,155	86,546	3,512	97,551
Cauliflowers	2,568	77,829	2,464	72,804	2,495	71,901
Celery	390	21,678	332	15,953	495	21,599
Cucumbers	1,089	13,665	1,105	13,457	1,014	11,452
Lettuce	2,183	36,419	2,294	35,751	1,978	32,555
Onions	4,464	93,234	4,189	93,686	4,395	108,102
Parsnips	436	9,117	447	8,128	457	8,739
Peas, green	21,540	106,743	19,362	102,900	18,500	121,579
Potatoes	36,607	720,704	34,113	649,197	37,626	735,975
Tomatoes	7,656	177,522	7,082	135,647	7,868	168,933
Turnips, swede and white	803	10,308	591	7,159	747	9,252
All other	16,852	..	16,367	..	17,315	..
Total	**110,947**	..	**105,475**	..	**110,554**	..

Processed vegetables

Total production of canned vegetables in 1974–75 amounted to 132,380,000 kg. The principal type produced were baked beans (including pork and beans), 23,917,000 kg; beetroot, 28,119,000 kg; green peas (excluding mint processed peas), 10,597,000 kg; tomatoes, 9,127,000 kg; asparagus, 3,588,000 kg; and sweet corn, 10,785,000 kg. Production of potato crisps, chips and flakes during 1974–75 was 16,073,000 kg.

There has been rapid development in the quick-frozen vegetable industry. In 1974–75 the production was 105,540,000 kg, of which 43,633,000 kg were peas, 26,760,000 kg were beans and 15,506,000 kg were potatoes.

Exports and imports of vegetables

Overseas exports of fresh and frozen vegetables during 1974–75 amounted to 34,053,733 kg valued at $7,927,395; dried vegetables, 5,195,922 kg valued at $1,524,851; perserved vegetables, 452,248 kg valued at $339,884; and other prepared or preserved vegetables, 2,660,499 kg valued at $1,606,482.

Imports of fresh and frozen vegetables during 1974–75 were valued at $47,010,727.

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. While potatoes require only moderate temperatures for growth, the greatest proportion of Australia's potatoes are grown as a summer crop because potato plants are killed by heavy frosts. In recent years an increasing proportion of potatoes has been grown under irrigation and potato growing has become increasingly mechanised with individual growers having larger areas and becoming more specialised.

Seed certification schemes or approvals which operate in most States provide supplies of seed. In Australia potatoes are used almost entirely for human consumption or seed. Approximately 25 per cent of Australian potato consumption is in a processed form and this proportion is rising. The main processing potato products are crisps, frozen chips, dehydrated granule and flake, soup, baby foods, salads and canned potatoes.

POTATOES: AREA, PRODUCTION AND YIELD PER HECTARE

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (HECTARES)									
1970–71	8,944	14,150	6,445	2,898	2,528	3,640	9	5	38,619
1971–72	9,987	13,986	7,365	2,775	2,684	3,593	11	(a)	(b)40,401
1972–73	9,134	13,120	5,960	2,673	2,378	3,330	12	(a)	(b)36,607
1973–74	8,502	12,474	5,279	2,477	2,242	3,127	12	(a)	(b)34,113
1974–75	9,302	13,010	6,068	2,747	2,356	4,143	(a)	(a)	(b)37,626
PRODUCTION (TONNES)									
1970–71	145,688	303,900	110,403	72,526	69,150	72,591	(a)	46	(b)774,304
1971–72	171,801	306,708	132,618	71,741	68,420	70,370	144	(a)	(b)821,802
1972–73	130,301	286,990	92,164	69,483	63,282	78,286	198	(a)	(b)720,704
1973–74	124,586	254,021	86,529	60,491	60,603	62,866	101	(a)	(o)649,197
1974–75	117,903	282,547	107,587	70,849	61,479	95,610	(a)	(a)	(b)735,975
YIELD PER HECTARE (TONNES)									
1970–71	16.289	21.477	17.130	25.026	27.354	19.943	(a)	9.200	(b)20.050
1971–72	17.202	21.930	18.007	25.853	25.492	19.585	13.091	(a)	(b)20.341
1972–73	14.265	21.874	15.464	25.994	26.611	23.509	16.500	(a)	(b)19.688
1973–74	14.654	20.364	16.391	24.421	27.031	20.104	8.417	(a)	(b)19.031
1974–75	12.675	21.718	17.730	25.791	26.095	23.078	(a)	(a)	(b)19.560

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

The production of potatoes from 1945–46 is shown in plate 51, below.

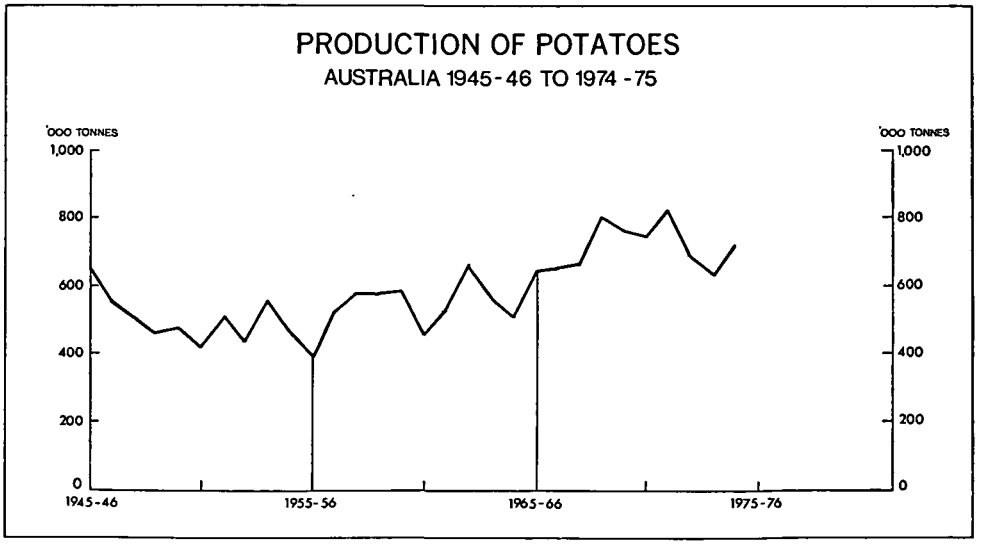


PLATE 51

Potato marketing. The majority of table potatoes are marketed through potato merchants and agents. In some instances they are marketed through a primary merchant and then a secondary merchant (wholesale). In South Australia and Western Australia potato marketing is controlled by potato marketing boards.

Overall, probably more than half of the potatoes used for processing are purchased by forward contract made directly by the processor with the grower. The remainder of the processors' requirements are usually purchased from merchants and in some instances merchants' contracts with growers as agents for processors. Seed potatoes are purchased either through a merchant or directly from a seed grower.

Consumption and export of potatoes. The annual consumption of potatoes in Australia during each of the three years 1971–72 to 1973–74 amounted to 758,900 tonnes, 635,900 tonnes and 571,200 tonnes respectively or 58.8 kg, 48.6 kg and 43.1 kg respectively per head of population. These figures exclude the quantities used for seed, which averaged about 42,600 tonnes annually over this period. Details showing exports and imports for recent years are given in the following table.

POTATOES: EXPORTS AND IMPORTS, AUSTRALIA

	Exports		*Imports*	
Year	*Quantity*	*Value*	*Quantity*	*Value*
		$'000		$'000
	tonnes	f.o.b.	tonnes	f.o.b.
1970–71	11,659	978	..	..
1971–72	11,952	1,039	..	..
1972–73	10,558	952	..	..
1973–74	11,351	1,387	583	71
1974–75	12,429	1,425	..	..

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

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 fruits 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 fruits. 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.

Area and production of fruit

The total area under fruit in Australia in 1974–75 was 102,760 hectares, 18.3 per cent less than the record area established in 1965–66.

FRUIT (EXCLUDING GRAPEVINES): AREA(*a*)

(hectares)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1970–71	37,448	26,958	22,157	18,333	9,627	8,432	49	15	123,019
1971–72	39,215	27,206	22,424	17,190	9,129	7,822	88	14	123,088
1972–73	34,887	25,785	22,111	16,730	8,680	7,223	70	14	115,500
1973–74	33,679	23,066	21,113	16,906	7,966	5,996	62	15	108,803
1974–75	31,597	21,784	20,149	16,620	7,822	4,748	23	18	102,760

(*a*) Bearing and not bearing.

ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), TOTAL NUMBER OF TREES 1974–75 ('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Citrus—									
Oranges—									
Navel	888	249	91	562	123	..	..	..	1,913
Valencia	1,476	411	97	887	195	..	..	..	3,065
Other	31	8	43	13	2	..	..	..	97
Total oranges	*2,395*	*668*	*231*	*1,461*	*320*	..	*1*	..	*5,076*
Lemons and limes	361	131	39	128	45	..	..	..	705
Mandarins	153	58	226	79	54	..	..	..	570
Grapefruit	146	73	25	79	16	..	..	..	339
Pome—									
Apples	1,356	1,363	1,121	591	1,042	1,525	..	5	7,004
Pears	205	1,587	108	178	90	79	..	(a)	(b)2,246
Quinces	1	4	(a)	2	..	..	..	..	(b)8
Stone—									
Apricots	101	241	43	420	16	34	..	..	855
Cherries	330	156	1	65	8	7	..	..	567
Nectarines	38	47	45	26	9	2	..	..	167
Peaches	494	886	135	359	64	3	..	(a)	(b)1,940
Plums and prunes	440	140	141	74	80	3	..	(a)	(b)879
Other orchard n.e.i.—									
Custard apples	1	..	16	..	(a)	..	(a)	..	(b)16
Figs	2	1	(a)	6	1	..	..	..	(b)9
Mangoes	..	..	53	..	1	..	..	..	54
Olives	13	111	..	63	14	..	..	..	200
Nuts—									
Almonds	2	109	..	716	1	..	..	..	827
Macadamia	63	..	141	..	..	..	..	..	204
Walnuts	1	8	..	6	2	..	..	..	17

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

ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), PRODUCTION 1974–75 (Tonnes)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Citrus—									
Oranges—									
Navel	49,210	14,594	9,236	50,307	2,730	..	(a)	..	(b)126,077
Valencia	93,673	25,514	8,934	75,325	5,328	..	(a)	..	(b)208,774
Other	1,422	579	3,095	821	42	..	..	..	5,959
Total oranges	*144,306*	*40,687*	*21,265*	*126,456*	*8,099*	..	*26*	..	*340,839*
Lemons and limes	15,392	5,667	3,980	7,360	2,460	..	12	..	34,871
Mandarins	5,298	2,762	13,550	3,371	1,152	..	4	..	26,137
Grapefruit	6,309	3,561	1,842	5,692	366	..	11	..	17,781
Pome—									
Apples	76,638	82,238	38,344	23,181	52,023	95,502	..	48	367,974
Pears	9,580	125,498	3,365	11,380	4,930	3,220	..	(a)	(b)157,973
Quinces	26	143	(a)	117	2	4	..	..	(b)292
Stone—									
Apricots	4,294	8,950	788	12,535	478	292	..	..	27,337
Cherries	5,438	3,504	6	779	31	45	..	..	9,803
Nectarines	1,007	820	623	958	300	29	..	..	3,737
Peaches	25,262	38,444	1,933	22,671	2,163	34	..	..	90,507
Plums and prunes	11,651	3,276	2,789	1,392	3,931	133	..	..	23,172
Other orchard n.e.i.—									
Custard apples	1	..	220	..	..	..	(a)	..	(b)221
Figs	192	25	(a)	145	9	..	..	..	(b)371
Mangoes	11	..	1,139	..	8	..	32	..	1,190
Olives	460	1,120	..	737	204	..	..	..	2,521
Nuts—									
Almonds	2	15	..	996	..	..	..	..	1,013
Macadamia	28	..	123	..	..	..	..	..	150
Walnuts	1	71	..	11	6	..	..	..	88

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

BERRY AND OTHER FRUITS (EXCLUDING GRAPEVINES) 1974–75

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
TOTAL AREA BEARING AND NOT BEARING (HECTARES)									
Small and berry fruit—									
Currants (black, red)	..	..	..	(a)	..	324	..	..	(b)324
Raspberries	..	35	..	4	..	190	..	..	229
Strawberries	49	153	70	69	13	18	..	..	372
Other	11	66	24	7	3	47	..	..	158
Other fruit—									
Bananas	5,676	..	2,109	..	186	..	11	..	7,982
Papaws	12	..	273	..	..	..	(a)	..	(b)285
Passionfruit	73	20	252	..	29	..	..	..	374
Pineapples	35	..	5,816	..	(a)	..	(a)	..	(b)5,851
PRODUCTION (TONNES)									
Small and berry fruit—									
Currants (black, red)	..	..	..	(a)	..	1,086	..	..	(b)1,086
Raspberries	..	114	..	15	..	1,216	..	..	1,345
Strawberries	328	1,138	756	520	188	94	..	..	3,024
Other fruit—									
Bananas	80,847	..	31,621	..	5,720	..	138	..	118,326
Papaws	28	..	2,348	..	..	..	(a)	..	(b)2,376
Passionfruit	357	25	3,005	..	96	..	..	..	3,483
Pineapples	333	..	110,118	..	(a)	..	3	..	(b)110,454

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

Principal fruit crops

PRINCIPAL FRUIT CROPS: PRODUCTION AND GROSS VALUE OF PRODUCTION, AUSTRALIA

Year	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Pineapples	Plums and prunes
	PRODUCTION ('000 TONNES)							
1970–71	443	53	133	322	123	188	118	31
1971–72	360	47	128	291	120	186	128	24
1972–73	431	44	124	352	116	190	126	27
1973–74	335	37	125	310	81	162	115	23
1974–75	368	27	118	341	91	158	110	23
	GROSS VALUE OF PRODUCTION ($'000)							
1970–71	58,339	9,392	20,033	33,030	15,760	20,855	9,722	6,360
1971–72	50,310	7,764	20,958	30,423	15,876	19,448	9,629	5,228
1972–73	63,483	9,170	28,217	33,556	17,678	23,942	12,197	5,974
1973–74	63,733	9,141	21,878	33,661	14,494	24,938	11,028	7,031
1974–75	73,617	9,032	31,323	43,301	24,199	26,199	11,914	8,463

Production and consumption of jams and jellies and preserved fruit

During 1974–75 output of jams, conserves, fruit spreads, etc., amounted to 30,285,000 kg, while output of preserved fruit amounted to 240,784,000 kg. Of the latter figure, peaches accounted for 72,094,000 kg, pears 53,342,000 kg, pineapples 31,344,000 kg and mixed fruits 42,228,000 kg.

Details of the estimated consumption of fruit and fruit products for a series of years are shown in the chapter, Miscellaneous.

Imports and exports of fruit and fruit products

The imports of fresh fruit into Australia are negligible, while those of dried fruit consist mainly of dates, approximately 90 per cent of which are obtained from Iraq and Iran, the bulk of the remainder coming from the United States of America and China (excluding Taiwan Province). 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 1974–75 amounted to $28,899,000 for fresh and chilled fruit, and $21,405,000 for dried fruit. Apples constitute over half of the fresh fruit exported, although exports of pears and citrus fruits are considerable.

FRESH AND CHILLED FRUIT: EXPORTS, AUSTRALIA

Year	*Apples*		*Pears*		*Citrus*		*Total value(a)*
	Quantity	*Value*	*Quantity*	*Value*	*Quantity*	*Value*	
	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	$'000 f.o.b.
1970–71	142,073	21,881	34,486	6,411	26,998	3,721	32,971
1971–72	98,326	15,889	34,434	6,969	34,712	4,824	28,680
1972–73	116,974	18,016	42,309	9,141	32,554	4,682	32,929
1973–74	124,789	20,076	36,694	7,665	46,624	4,395	32,956
1974–75	78,548	16,085	28,063	8,200	15,362	3,286	28,900

(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, are shown below.

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

Year	*Imports*		*Exports*	
	Quantity	*Value*	*Quantity*	*Value*
	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.
1970–71	3,906	989	2,281	1,537
1971–72	3,830	1,046	3,422	2,208
1972–73	4,897	1,165	2,917	2,313
1973–74	4,701	1,273	1,944	2,119
1974–75	4,980	2,336	899	1,284

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

Exports of jams and jellies in 1974–75 were 2,844,000 kg valued at $1,522,000, compared with 4,698,000 kg, valued at $1,556,000 in 1973–74. Imports of jams and jellies in 1974–75 were 2,088,000 kg, valued at $1,205,000, compared with 2,022,000 kg, valued at $848,000 in 1973–74.

EXPORTS OF CANNED OR BOTTLED FRUIT: AUSTRALIA

Year	Peaches		Pears		Fruit salad		Apricots		Total Value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	$'000 f.o.b.
1970–71	49,986	13,971	51,377	14,380	21,377	7,201	6,697	1,924	42,891
1971–72	47,729	13,202	37,825	10,809	18,159	6,337	5,470	1,623	36,462
1972–73	69,112	18,638	53,386	15,499	19,855	6,845	6,843	2,102	48,223
1973–74	69,312	16,832	62,965	15,395	19,827	5,959	7,132	1,842	44,542
1974–75	25,351	9,743	32,323	11,949	12,245	5,714	3,485	1,464	33,581

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

Exports of pulped fruit during 1974–75 amounted to 251,000 kg valued at $120,000.

The total value of preserved fruit and fruit preparations (including fruit juices) imported into Australia during 1974–75 was $6,565,000. The value of exports of fruits juices in 1974–75 was $2,951,000.

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 1974–75 season in Victoria and South Australia constituted 74 per cent of the total area of the vineyards.

VINEYARDS: AREA(a)
(Hectares)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1970–71	11,247	20,612	1,556	27,653	2,714	63,782
1971–72	12,956	20,794	1,571	28,769	2,727	66,817
1972–73	13,275	21,618	1,560	29,528	2,566	68,547
1973–74	14,719	21,594	1,594	29,602	2,479	69,988
1974–75	14,463	22,348	1,537	30,366	2,602	71,316

(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 1974–75, production of unfortified wines exceeded fortified wines by 98 million litres.

Production and consumption of wine and brandy

In 1974–75 the total production of wine (beverage and distillation) in Australia was 361.2 million litres, while total consumption of beverage wine was 168.0 million litres (12.5 litres per head of population). Similar particulars for 1973–74 were 294.7 million litres and 148.1 million litres (11.2 litres per head of population) respectively.

WINE: PRODUCTION(a)
('000 litres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.(b)
1970–71	46,409	30,079	(c)	173,899	(c)	254,965
1971–72	66,545	35,835	(c)	183,276	(c)	290,239
1972–73	61,580	25,840	(c)	188,315	(c)	279,943
1973–74	76,541	46,089	(c)	167,611	(c)	294,666
1974–75	74,314	54,278	(c)	227,861	(c)	361,177

(a) Beverage and distillation wine. (b) Includes Tasmania. (c) Not available for publication.

BRANDY: PRODUCTION, SOUTH AUSTRALIA AND AUSTRALIA
('000 litres alcohol)

Year	S.A.	Aust.(a)
1970–71	3,496	3,849
1971–72	3,840	4,485
1972–73	3,064	3,589
1973–74	1,871	2,152

(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 New Zealand. During 1974–75 these countries received 832,000 litres, 2,201,000 litres and 801,000 litres respectively. Exports of Australian-produced wine and imports of wine for recent years are shown in the following table.

WINE: EXPORTS AND IMPORTS, AUSTRALIA

Year	Quantity			Value f.o.b.		
	Sparkling ('000 litres)	Other ('000 litres)	Total ('000 litres)	Sparkling ($'000)	Other ($'000)	Total ($'000)
EXPORTS						
1970–71	395	6,169	6,564	391	3,188	3,579
1971–72	386	7,587	7,973	401	3,844	4,245
1972–73	547	4,110	4,657	550	2,670	3,220
1973–74	511	7,667	8,178	537	5,104	5,641
1974–75	392	6,154	6,546	476	4,867	5,343
IMPORTS						
1970–71	536	1,850	2,386	780	1,801	2,581
1971–72	555	1,927	2,482	781	2,070	2,851
1972–73	672	2,237	2,909	1,002	2,523	3,525
1973–74	1,211	3,098	4,309	2,058	3,472	5,530
1974–75	1,286	4,009	5,295	1,747	4,728	6,475

During 1974–75 Italy supplied 1,958,000 litres valued at $1,989,000, Portugal 1,295,000 litres valued at $1,261,000 and the Federal Republic of Germany 996,000 litres valued at $1,431,000.

Exports of Australian-produced brandy in 1974–75 amounted to 217,000 litres alcohol, valued at $389,000. Imports of brandy, mainly from France, amounted to 701,000 litres alcohol, valued at $1,984,000.

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.

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. Since the International Sultana Agreement was terminated in 1971 a Conference of Sultana (Raisin) Producing Countries has been held annually to maintain a high level of co-operation between the major producing countries.

DRIED VINE FRUIT: PRODUCTION

(Tonnes)

	N.S.W.		*Vic.*		*S.A.*		*W.A.*		*Aust.*	
Year	*Raisins (a)*	*Currants*	*Raisins (a)*	*Currants*	*Raisins (a)*	*Currants*	*Raisins (a)*	*Currants*	*Raisins (a)*	*Currants*
1970–71	9,389	640	41,237	3,083	1,334	3,201	29	1,513	51,989	8,437
1971–72	15,182	583	71,521	3,244	8,551	3,098	37	1,232	95,291	8,153
1972–73	7,443	373	40,158	2,323	3,712	2,026	36	936	51,349	5,658
1973–74	8,016	287	33,645	1,255	2,109	1,041	31	1,032	43,801	3,615
1974–75	8,098	383	48,040	2,347	2,414	2,370	31	1,217	58,583	6,317

(*a*) Includes sultanas and lexias.

DRIED VINE FRUIT(*a*): EXPORTS, AUSTRALIA

	Raisins, sultanas and lexias		*Currants*		*Total*	
Year	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*	*Quantity*	*Value f.o.b.*
	tonnes	$'000	tonnes	$'000	tonnes	$'000
1970–71	55,663	17,140	4,261	1,322	59,924	18,462
1971–72	51,678	16,120	4,590	1,378	56,268	17,498
1972–73	69,974	25,213	2,617	897	72,591	26,110
1973–74	27,020	17,172	1,399	698	28,419	17,870
1974–75	31,554	20,008	172	114	31,726	20,122

(*a*) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruits are the United Kingdom, Canada, New Zealand and the Federal Republic of Germany. The quantities exported to these countries in 1974–75 were 6,034 tonnes, 9,895 tonnes, 4,234 tonnes and 3,362 tonnes respectively.

Table grapes

Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 3 per cent of the productive area of vines in 1974–75.

LIVESTOCK AND LIVESTOCK PRODUCTS

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 1971, and from 1973 onwards in single years, are given in the following table, and are shown continuously since 1880 on the graph on plate 52, page 793.

LIVESTOCK: AUSTRALIA, 1861 TO 1976
('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	1971	n.a.	24,373	177,792	2,590
1901	1,610	8,640	70,603	950	1973	n.a.	29,101	140,029	3,259
1911	2,166	11,745	98,066	1,026	1974	n.a.	30,839	145,175	2,505
1921	2,416	13,500	81,796	764	1975	n.a.	32,793	151,652	2,197
1931	1,793	11,721	110,568	1,072	1976p	n.a.	33,434	148,643	2,173

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, 1976 (33,434,000); sheep, 1970 (180,080,000); and pigs, 1973 (3,259,000).

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.

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 1973 as producers turned off large numbers for slaughter and moved from wool-growing towards beef production; by 1976, however, the numbers had increased to 148,642,000.

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 52 and 53 of this Year Book (pages 793 and 795).

NUMBER OF SHEEP
('000)

At 31 March	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1972	62,000	29,496	14,604	17,970	34,405	4,237	7	192	162,910
1973	52,037	24,105	13,346	15,651	30,919	3,824	3	143	140,029
1974	53,296	25,787	13,119	16,431	32,451	3,964	1	126	145,175
1975	54,983	26,410	13,908	17,621	34,476	4,136	1	117	151,652
1976	53,200	25,395	13,599	17,279	34,771	4,249	1	148	148,643

The percentage distribution of sheep and lambs in the several States in 1976 was: New South Wales, 36; Victoria, 17; Queensland, 9; South Australia, 12; Western Australia, 23; and Tasmania, 3.

Movement in sheep numbers

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA
('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
1972	177,792	51,705	807	52,198	13,582	162,910
1973	162,910	39,787	1,135	46,960	14,573	140,029
1974	140,029	42,962	1,060	26,541	10,215	145,175
1975	145,175	46,232	1,350	26,618	11,789	151,652
1976p	151,652	44,122	1,778	31,268	14,085	148,643

(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 800.

Classification of sheep according to age, sex, and breed

SHEEP, BY AGE AND SEX: AUSTRALIA
('000)

Description	31 March 1972	1973	1974	1975	1976p
Rams (1 year and over)	2,060	1,844	1,820	1,895	1,870
Breeding ewes (1 year and over)	75,611	68,687	70,035	70,647	68,471
Other ewes (1 year and over)	9,089	6,688	5,807	7,035	7,692
Wethers (1 year and over)	39,777	34,660	34,592	37,055	37,534
Lambs and hoggets (under 1 year)	36,374	28,149	32,921	35,020	33,077
Total sheep and lambs	**162,910**	**140,029**	**145,175**	**151,652**	**148,643**

Particulars of the principal breeds of sheep at 31 March 1974 (details are collected on a triennial basis) are shown in the following table.

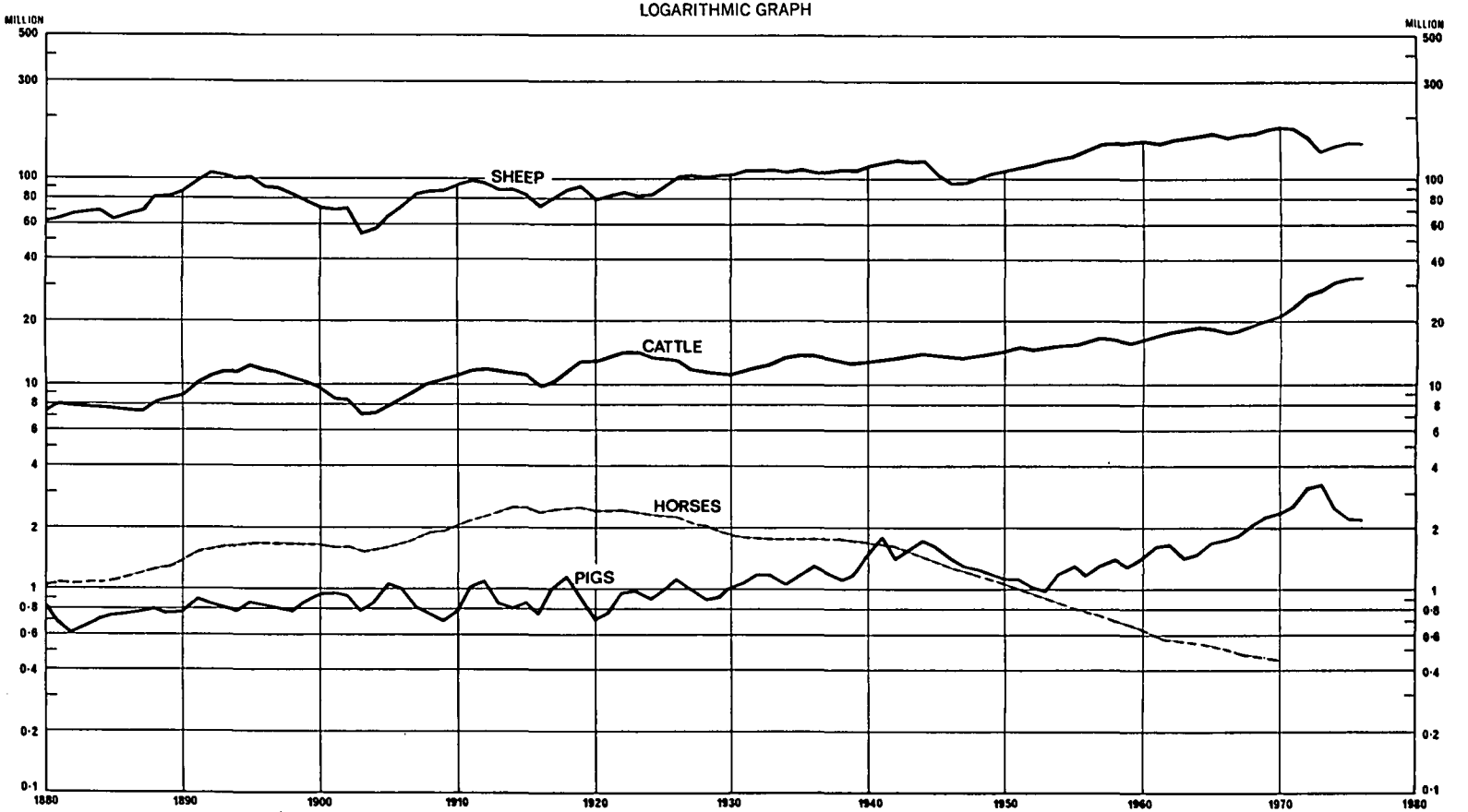
BREEDS OF SHEEP: 31 MARCH 1974
('000)

Breed	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Merino	39,765	12,256	12,898	14,212	30,337	424	1	105	109,997
Other recognised breeds	5,809	5,111	86	936	1,260	2,540	1	6	15,748
Merino comeback(a)	1,103	1,888	16	134	252	588	..	..	3,982
Crossbreds(b)	6,619	6,533	119	1,149	602	411	..	15	15,449
Total	**53,296**	**25,787**	**13,119**	**16,431**	**32,451**	**3,964**	**1**	**126**	**145,175**

(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.

LIVESTOCK: AUSTRALIA, 1880 TO 1976

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.
FIGURES FOR HORSES HAVE NOT BEEN COLLECTED SINCE 1970

Wool

With about one-seventh of the world's woolled sheep, Australia produces about 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 800.

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 has 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 was 59.93 per cent in 1974–75, the highest so far assessed.

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 1974–75 was about 8.4 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 795). 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 recent years. A graph showing the production of wool in relation to sheep numbers from 1880 onwards appears on plate 53, page 795.

PRODUCTION OF WOOL (GREASY BASIS)
('000 kg)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1970–71	314,316	201,287	76,554	116,150	158,969	21,671	36	1,000	889,983
1971–72	281,759	197,512	83,160	119,233	178,162	21,063	24	822	881,735
1972–73	226,186	172,323	70,195	100,930	146,860	18,153	10	555	735,213
1973–74	213,224	155,361	63,833	100,939	149,439	17,549	7	540	700,892
1974–75	254,268	165,543	66,262	107,983	179,975	18,888	14	546	793,479

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

Year	Shorn (including crutchings)	Dead and fell-mongered	Exported on skins	Total production	
				Quantity	Value
	'000 kg	'000 kg	'000 kg	'000 kg	$'000
1970–71	800,185	7,985	81,813	889,983	537,504
1971–72	778,566	8,437	94,732	881,735	660,456
1972–73	643,600	7,780	83,834	735,213	1,242,630
1973–74	644,257	3,987	52,648	700,892	1,229,296
1974–75	725,298	68,181		793,479	952,724

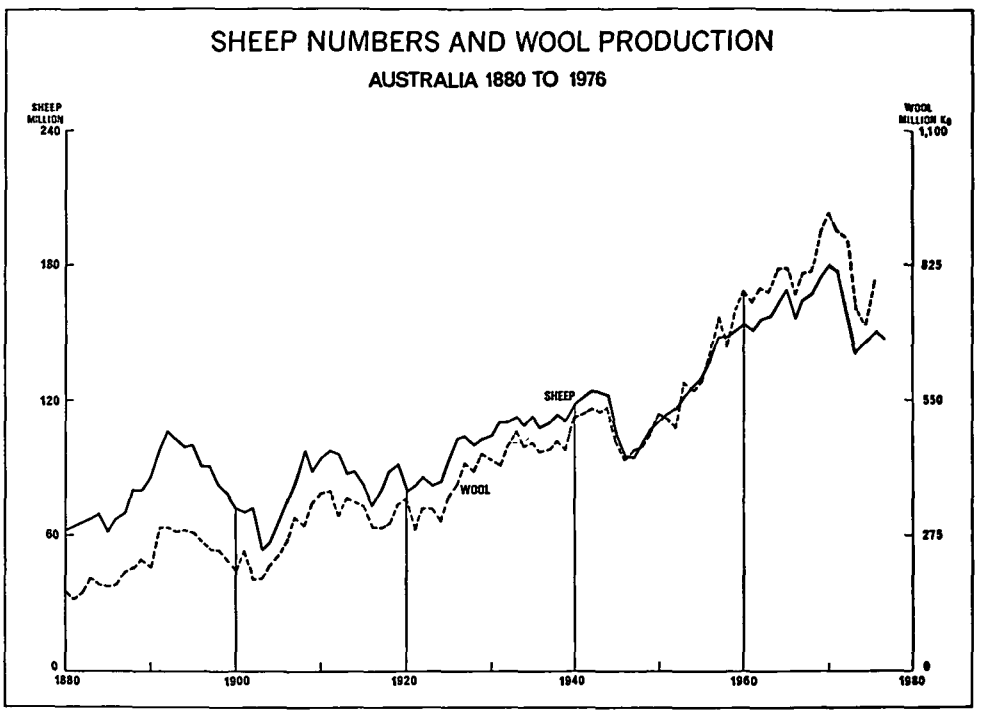


PLATE 53

Average fleece weight

AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)

(kg)

State or Territory	Sheep					Lambs				
	1970–71	1971–72	1972–73	1973–74	1974–75	1970–71	1971–72	1972–73	1973–74	1974–75
New South Wales	4.55	4.36	4.34	4.60	4.87	1.61	1.55	1.45	1.60	1.68
Victoria	4.67	4.52	4.45	4.92	4.87	1.39	1.36	1.24	1.38	1.50
Queensland	4.69	4.99	4.99	4.89	4.83	2.05	2.16	2.11	1.99	2.07
South Australia	5.69	6.00	5.98	6.20	6.39	1.75	1.85	1.72	1.87	1.97
Western Australia	4.68	5.10	4.64	4.59	5.31	1.38	1.57	1.38	1.36	1.44
Tasmania	4.67	4.70	4.41	4.58	4.74	1.19	1.26	1.12	1.23	1.31
Northern Territory	4.29	6.00	3.86	4.75	4.75	..	..	..	..	..
Australian Capital Territory	4.26	4.13	4.07	4.64	4.70	0.95	1.22	1.02	1.09	1.70
Australia	4.74	4.78	4.67	4.87	5.13	1.54	1.58	1.45	1.54	1.64

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 n 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, wool buyers, the Australian Wool Corporation, selling brokers, and unions on the basis of 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. However, an increasing proportion of the clip is sold on the basis of laboratory-determined specifications ('objective measurements'). 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.

Price and value

During 1974–75 the price of greasy and scoured wool sold in the selling centres of Australia averaged 127.03c per kg compared with the average price of 181.16c per kg in 1973–74. 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. The amount of scoured wool sold at auctions is now negligible.

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 1974–75 it was $952,724,000 or 16.2 per cent of the gross value of production of rural industries.

ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(*a*)
($'000)

Season	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
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
1972–73	429,825	254,434	123,512	164,577	231,559	37,481	17	1,224	1,242,629
1973–74	408,019	248,232	107,417	173,180	259,389	31,973	n.a.	1,086	1,229,296
1974–75	306,110	193,623	81,301	122,180	224,898	23,890	n.a.	722	952,724

(*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 1975 amounted to 447.6 million kg (greasy basis) of which 17.2 million kg (9.5 million kg as greasy and 7.7 million kg as scoured and carbonised) was held by woollen mills, wool scourers and fellmongers, and 190.9 million kg, assumed to be all greasy, was held by brokers and dealers and the Australian Wool Corporation. Of the wool held by brokers and dealers 28.5 million kg was unsold wool and 162.4 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.

ESTIMATED CONSUMPTION OF RAW WOOL: AUSTRALIA
('000 kg)

	Greasy basis			*Clean equivalent*		
Year	*Used on woollen and worsted systems*	*Used for felt manufacture (including hats)*	*Total*	*Used on woollen and worsted systems*	*Used for felt manufacture (including hats)*	*Total*
1970–71	59,031	1,148	60,179	34,617	545	35,162
1971–72	54,108	1,148	55,256	30,965	545	31,510
1972–73	55,061	1,148	56,209	31,702	545	32,247
1973–74	44,490	1,148	45,638	25,461	545	26,006
1974–75	28,877	1,148	30,025	16,526	545	17,071

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. 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
('000 kg)

	Greasy basis				*Clean equivalent*			
Year ended 30 June	*Worsted yarn used (a) (b)*	*Woollen yarn used (b)*	*Scoured wool used for felt manufacture (including hats)*	*Total*	*Worsted yarn used (a) (b)*	*Woollen yarn used (b)*	*Scoured wool used for felt manufacture (including hats)*	*Total*
1971	19,735	18,030	1,148	38,913	12,210	10,913	545	23,668
1972	21,576	18,558	1,148	41,282	12,105	10,996	545	23,646
1973	18,894	18,736	1,148	38,778	10,627	10,493	545	21,665
1974	14,978	17,716	1,148	33,842	8,408	9,935	545	18,888
1975	9,411	13,779	1,148	24,338	5,283	7,804	545	13,632

(*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 1974–75, 30 per cent went to Japan, 13 per cent to the U.S.S.R., 12 per cent to France, 7 per cent to the Federal Republic of Germany, 6 per cent to Italy and 4 per cent to Poland.

EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA
('000 kg actual weight)

Country of consignment	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Belgium-Luxembourg	44,145	27,472	26,824	17,137	16,380
China—excluding Taiwan Province	2,439	6,478	8,812	8,198	1,124
—Taiwan Province only	14,226	15,692	15,691	5,718	6,201
France	62,343	78,346	57,343	50,176	56,502
Germany, Federal Republic of	46,118	52,036	41,022	22,840	32,050
India	16,916	15,223	6,868	10,075	11,781
Italy	42,451	52,327	43,278	32,121	29,405
Japan	254,684	285,239	299,163	175,266	138,544
Poland	12,711	18,355	22,555	16,945	17,912
United Kingdom	34,173	33,011	29,736	18,707	13,766
U.S.S.R.	38,795	21,328	30,264	59,828	60,876
Yugoslavia	16,655	8,671	19,665	21,480	12,347
Other	65,054	75,127	65,008	49,528	59,941
Total	**650,701**	**689,305**	**666,229**	**488,019**	**456,829**

EXPORTS OF SCOURED AND CARBONISED WOOL: AUSTRALIA
('000 kg actual weight)

Country of consignment	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Canada	956	911	814	457	913
China—excluding Taiwan Province	103	231	590	1,015	277
—Taiwan Province only	2,182	1,063	1,523	1,312	490
France	1,061	1,622	691	684	1,427
Germany, Federal Republic of	3,800	3,619	3,624	2,867	4,968
Hong Kong	1,799	1,458	2,131	1,133	506
Iran	1,896	3,117	2,041	307	2,920
Italy	3,529	4,840	2,679	3,442	4,152
Japan	968	1,443	3,119	4,184	6,332
Korea, Republic of	729	759	1,679	1,058	1,303
United Kingdom	6,104	5,823	6,335	3,164	4,676
United States of America	2,550	1,020	2,967	2,186	1,935
U.S.S.R.	1,046	10,246	2,284	163	3,667
Other	6,069	5,891	3,797	5,099	4,712
Total	**32,791**	**42,043**	**34,274**	**27,071**	**38,278**

EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE: AUSTRALIA
('000 kg actual weight)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Carded or combed—Tops	8,892	9,949	9,070	5,842	4,870
Other	14	90	67	118	104
Noils	1,367	1,453	1,179	1,111	682
Waste	1,455	2,545	1,844	1,136	957

The following table shows the estimated greasy weights of exports of raw and semi-processed wool. As the figures in the 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

('000 kg)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Raw wool—					
Greasy and slipe	650,875	689,619	666,519	488,118	456,862
Scoured and carbonised	52,298	66,947	54,720	42,278	58,030
Exported on skins	81,813	94,732	83,834	52,648	66,225
Total raw wool	*784,986*	*851,298*	*805,073*	*583,044*	*581,117*
Semi-processed wool—					
Tops	17,073	18,903	17,208	10,859	9,253
Yarn	243	331	159	299	159
Total raw and semi-processed wool	**802,302**	**870,532**	**822,440**	**594,202**	**590,529**

Overseas trade in sheepskins

EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA

	Quantity ('000 kg)			*Value ($'000 f.o.b.)*		
Country of consignment	*1972–73*	*1973–74*	*1974–75*	*1972–73*	*1973–74*	*1974–75*
France	75,473	47,597	52,586	69,103	61,381	40,652
Germany, Federal Republic of	5,886	3,452	3,849	4,425	2,971	3,409
Italy	16,486	7,682	6,540	15,686	10,825	5,884
Netherlands	2,620	1,275	1,162	1,189	1,057	955
Spain	2,649	1,217	863	1,852	1,552	629
United Kingdom	6,501	2,848	3,138	5,493	3,159	2,177
Yugoslavia	4,686	3,901	3,886	2,630	3,849	3,243
Other	8,615	6,635	4,464	6,112	6,593	4,132
Total	**122,916**	**74,607**	**76,488**	**106,490**	**91,390**	**61,081**
Number of skins ('000)	**39,931**	**24,387**	**24,077**	..	..	..

In 1974–75 a total of 721,000 sheepskins without wool were exported, valued at $1,149,000. Of these, sheepskins without wool to the value of $422,000 (37 per cent) were shipped to France, $194,000 (17 per cent), to Italy and $148,000 (13 per cent) to the United States of America.

Value of wool exported

The value of wool (other than wool on sheepskins) exported from Australia during 1974–75 was 9 per cent of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1974–75 averaged 14 per cent. The values for the five years ended 1974–75, together with the principal countries to which wool was exported, are shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA(a)
($'000)

Country of consignment	1970–71	1971–72	1972–73	1973–74	1974–75
Belgium-Luxembourg	24,486	16,149	33,267	29,152	19,103
France	42,155	53,087	82,441	92,846	68,827
Germany, Federal Republic of	39,246	45,555	67,052	56,234	58,279
Italy	33,863	42,012	67,829	70,499	47,572
Japan	198,276	220,300	495,310	426,480	231,215
United Kingdom	30,062	32,470	55,869	43,064	24,619
United States of America	14,672	13,133	18,093	12,466	9,536
U.S.S.R.	35,349	29,860	70,269	147,271	98,485
Other	125,718	129,630	264,114	278,552	195,846
Total	**543,827**	**582,196**	**1,154,244**	**1,156,564**	**753,482**

(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 1973–74 Australia produced 28 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 (excluding Taiwan Province) 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
(*Source* for countries other than Australia: Reports published by Australian Meat Board and by the Commonwealth Secretariat, London)

	Sheep numbers (million)			*Wool production (million kg—greasy basis)*		
Country	*1971–72*	*1972–73*	*1973–74(a)*	*1971–72*	*1972–73*	*1973–74(a)*
Australia	**163**	**140**	**145**	**882**	**735**	**701**
New Zealand	61	57	56	322	309	286
Argentina	40	41	42	189	177	180
South Africa	30	33	34	116	108	108
United States of America	19	18	16	82	78	72
Uruguay	16	17	17	54	60	60
United Kingdom	19	20	20	47	48	49
U.S.S.R.	140	139	142	429	420	433
Other	534	535	539	590	583	586
World total	**1,022**	**1,000**	**1,011**	**2,711**	**2,519**	**2,474**

(a) Provisional.

Mutton and lamb

Sheep slaughtered

SHEEP (INCLUDING LAMBS) SLAUGHTERED
('000)

	Slaughterings passed for human consumption									*Total slaughterings including boiled down*
Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*	
1971–72	16,641	20,084	3,418	5,144	6,001	1,475	4	218	52,983	53,444
1972–73	12,598	14,529	2,452	4,539	5,548	1,278	..	190	41,133	41,399
1973–74	7,709	8,392	1,321	2,595	3,756	825	..	145	24,743	24,886
1974–75	8,795	9,832	1,279	2,984	4,308	980	..	178	28,356	28,545
1975–76p	9,154	11,257	1,436	3,598	5,974	1,072	..	198	32,687	n.a.

Production of mutton and lamb

PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT)
(Tonnes)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1971–72	289,557	380,447	58,896	91,504	105,117	27,188	65	3,554	956,328
1972–73	214,041	264,159	40,570	76,263	92,916	22,528	2	2,916	713,395
1973–74	142,182	157,600	23,206	50,116	66,154	14,768	..	2,510	456,536
1974–75	161,733	184,018	22,581	54,818	76,018	17,492	2	3,157	519,819
1975–76p	165,746	204,349	24,901	64,344	102,572	18,905	4	3,351	584,172

Value of sheep slaughtered

GROSS VALUE OF SHEEP AND LAMBS SLAUGHTERED(*a*), 1974–75
($'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
58,835	56,064	537	22,212	34,177	6,359	(*b*)	82	178,266

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock. (*b*) Not available for publication; excluded from total.

GROSS VALUE OF SHEEP AND LAMBS SLAUGHTERED (*a*): AUSTRALIA
($'000)

1970–71	1971–72	1972–73	1973–74	1974–75
178,431	215,747	306,109	321,400	178,266

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock.

Consumption of mutton and lamb

In 1959–60 consumption of mutton and lamb, at 46.7 kg 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 37.6 kg per head. The 1974–75 figure was 26.6 kg per head or 37.8 kg per head less than beef and veal.

PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (CARCASS WEIGHT): AUSTRALIA

Year	Net change in stocks ('000 tonnes)	Production ('000 tonnes)	Exports(*a*) ('000 tonnes)	For canning ('000 tonnes)	Apparent consumption in Australia: Total ('000 tonnes)	Apparent consumption in Australia: Per head per year (kg)
MUTTON						
1970–71	+5	470	201	14	250	19.7
1971–72	+3	596	317	14	263	20.4
1972–73	−7	435	238	11	193	14.8
1973–74	−6	221	107	11	109	8.2
1974–75	+3	250	121	11	115	8.6
LAMB						
1970–71	+1	355	52	..	302	23.8
1971–72	+2	360	43	..	315	24.4
1972–73	−4	278	38	..	244	18.7
1973–74	..	235	25	..	210	15.9
1974–75	+2	269	25	..	243	18.0

(*a*) Includes carcass equivalent of boneless mutton exported.

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.

MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA

(kg 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 meat products (d)*
1970–71	39.7	19.7	23.8	6.9	5.2	2.6	4.6	105.0
1971–72	39.5	20.4	24.4	6.9	5.8	2.6	5.0	106.8
1972–73	39.1	14.8	18.7	7.9	5.7	2.6	5.5	97.0
1973–74	40.7	8.2	15.9	6.8	4.4	2.4	5.5	86.6
1974–75	64.4	8.6	18.0	5.2	5.2	2.2	5.0	111.0

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

Exports of mutton and lamb

EXPORTS OF FRESH, CHILLED OR FROZEN MUTTON AND LAMB(*a*): AUSTRALIA

Year	*Mutton exports*		*Lamb exports*		*Mutton and lamb exports*	
	Quantity	*Value*	*Quantity*	*Value*	*Quantity*	*Value*
	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.
1970–71	130,910	52,192	43,623	21,878	174,533	74,070
1971–72	200,937	89,283	37,632	17,774	238,569	107,057
1972–73	156,737	100,562	31,657	17,920	188,394	118,482
1973–74	103,556	62,512	22,486	16,678	126,042	79,190
1974–75	120,738	48,856	24,623	15,508	145,361	64,364

(*a*) Actual weight shipped, not carcass equivalent.

In 1974–75 the principal buyers of Australian mutton and lamb were Japan (43,771,000 kg, valued at $24,980,000); Iran (13,297,000 kg, valued at $9,012,000); and the United Kingdom (10,195,000 kg, valued at $5,883,000).

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 slaughterings, 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 a continuous increase in the total number of cattle in Australia since 1967.

For a graph showing the number of cattle in Australia from 1880 onwards *see* plate 52 page 793.

NUMBER OF CATTLE AT 31 MARCH
('000)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1972	7,410	5,457	9,022	1,495	1,975	829	1,166	20	27,373
1973	7,918	5,464	9,795	1,583	2,182	900	1,237	19	29,101
1974	8,456	5,840	10,297	1,692	2,330	884	1,321	19	30,839
1975	8,935	6,192	10,879	1,869	2,544	921	1,434	18	32,793
1976	9,138	5,868	11,347	1,891	2,654	909	1,603	23	33,434

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: 31 MARCH 1976p
('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	9	31	8	4	2	3	..	..	57
Beef breeds	142	86	196	35	53	13	39	..	564
Total	*151*	*117*	*204*	*39*	*55*	*16*	*39*	..	*621*
Proportion of Aust. total (per cent)	24.3	18.8	32.9	6.3	8.9	2.6	6.3	..	100.0
Cattle used or intended for production of—									
Milk or cream for sale—									
Cows in milk and dry	384	1,258	330	135	93	143	..	1	2,345
Heifers—									
1 year and over	109	300	81	34	36	36	1	..	595
Calves (under 1 year)	72	254	50	29	29	32	..	..	467
Milk or cream for use on rural holdings—									
House cows and heifers	54	19	32	7	6	3	..	..	122
Total	*620*	*1,831*	*493*	*204*	*164*	*214*	*1*	*1*	*3,528*
Proportion of Aust. total (per cent)	17.6	51.9	14.0	5.8	4.7	6.1	..	..	100.0
Cattle for other purposes (a)—									
Cows and heifers (1 year and over)	4,400	2,049	5,323	896	1,316	320	886	12	15,202
Calves (under 1 year) (b)	2,682	1,139	2,565	542	664	238	357	8	8,194
Other (1 year and over) i.e. steers, bullocks, spayed cows, etc.	1,285	733	2,762	210	455	121	320	2	5,888
Total	*8,368*	*3,920*	*10,650*	*1,648*	*2,435*	*679*	*1,563*	*21*	*29,285*
Proportion of Aust. total (per cent)	28.6	13.4	36.4	5.6	8.3	2.3	5.3	0.1	100.0
Total cattle and calves for all purposes	**9,138**	**5,868**	**11,347**	**1,891**	**2,654**	**909**	**1,603**	**23**	**33,434**
Proportion of Aust. total (per cent)	27.3	17.6	33.9	5.7	7.9	2.7	4.8	0.1	100.0

(*a*) Mainly for meat production. (*b*) Includes bull calves under 1 year.

CATTLE CLASSIFIED ACCORDING TO PURPOSE, AGE AND SEX: AUSTRALIA
('000)

Classification	31 March 1972	1973	1974	1975	1976
Bulls (1 year and over) used or intended for service—					
Dairy breeds	63	60	57	60	57
Beef breeds	462	489	516	562	564
Total	*525*	*549*	*574*	*622*	*621*
Cattle used or intended for production of—					
Milk or cream for sale—					
Cows (in milk and dry)	2,565	2,523	2,371	2,355	2,345
Heifers—					
1 year and over	660	655	633	634	595
Calves (under 1 year)	591	601	554	537	467
Milk or cream for use on rural holdings—					
House cows and heifers	128	124	121	122	122
Total	*3,945*	*3,902*	*3,679*	*3,649*	*3,528*
Cattle for other purposes(*a*)—					
Cows and heifers (1 year and over)	11,873	12,660	13,800	14,897	15,202
Calves (under 1 year) (*b*)	6,555	7,100	7,235	7,909	8,194
Other (1 year and over), i.e. steers, bullocks, spayed cows, etc.	4,475	4,889	5,551	5,716	5,888
Total	*22,903*	*24,650*	*26,586*	*28,522*	*29,285*
Total cattle and calves for all purposes	**27,373**	**29,101**	**30,839**	**32,793**	**33,434**

(*a*) Mainly for meat production. (*b*) Includes bull calves under 1 year

Exports and imports of cattle

In 1974–75 the number of cattle exported was 11,223, valued at $3,107,000 (1973–74, 24,754 valued at $7,680,000). 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: F.A.O. *Production Yearbook*)

('000)

Country	*Year*	*Number*
India(*a*)	1974	179,900
United States of America	1974	189,966
U.S.S.R.	1974	106,266
Brazil(*b*)	1974	88,000
Argentina(*b*)	1974	58,000
Bangladesh	1974	26,698
China—excluding Taiwan Province(*a*)	1974	63,487
Pakistan(*a*)	1974	13,154
Australia	**1975**	**32,793**
Ethiopia(*a*)	1974	24,663
Mexico	1974	27,500
France	1974	22,864
Colombia	1974	23,032
Germany, Federal Republic of	1974	14,364
United Kingdom	1974	15,227
Turkey(*a*)	1974	12,408
South Africa, Republic of(*a*)	1974	10,600

(*a*) F.A.O. estimate. (*b*) Unofficial figure.

Cattle slaughtered

CATTLE (INCLUDING CALVES) SLAUGHTERED

('000)

Year	*Slaughterings 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.*	
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
1972–73	2,349	2,560	2,005	393	478	261	78	25	8,148	8,199
1973–74	1,925	2,260	1,740	359	487	259	67	24	7,120	7,145
1974–75	2,389	2,498	2,046	465	541	262	62	34	8,297	8,321

Production of beef and veal

PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT)

(Tonnes)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1970–71	282,370	307,520	302,185	43,494	64,336	29,877	14,317	3,179	1,047,278
1971–72	305,705	336,503	344,814	50,069	77,290	34,795	15,418	3,295	1,167,889
1972–73	416,418	416,463	384,088	64,254	90,052	47,471	15,178	4,021	1,437,945
1973–74	359,455	380,811	349,137	63,211	94,106	46,282	12,729	4,244	1,309,975
1974–75	442,343	402,549	431,184	84,650	106,117	48,313	13,174	5,434	1,533,764

Value of cattle and calves slaughtered

GROSS VALUE OF CATTLE AND CALVES SLAUGHTERED AND OTHER DISPOSALS(*a*), 1974-75
($'000)

N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
155,276	114,554	144,220	43,415	38,555	17,753	9,445	179	523,397

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock.

GROSS VALUE OF CATTLE AND CALVES SLAUGHTERED AND OTHER DISPOSALS(*a*), AUSTRALIA
($'000)

1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
642,337	717,598	1,021,703	1,069,123	523,397

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock.

Consumption of beef and veal

Consumption of beef and veal (including canned beef and veal) reached a peak of 60.2 kg 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 40.1 kg. In 1974–75 consumption per head reached a post war record level of 66.2 kg of which 64.4 kg was carcass meat and 1.8 kg was canned meat (in terms of carcass equivalent).

A table showing the consumption of all types of meat appears on page 802.

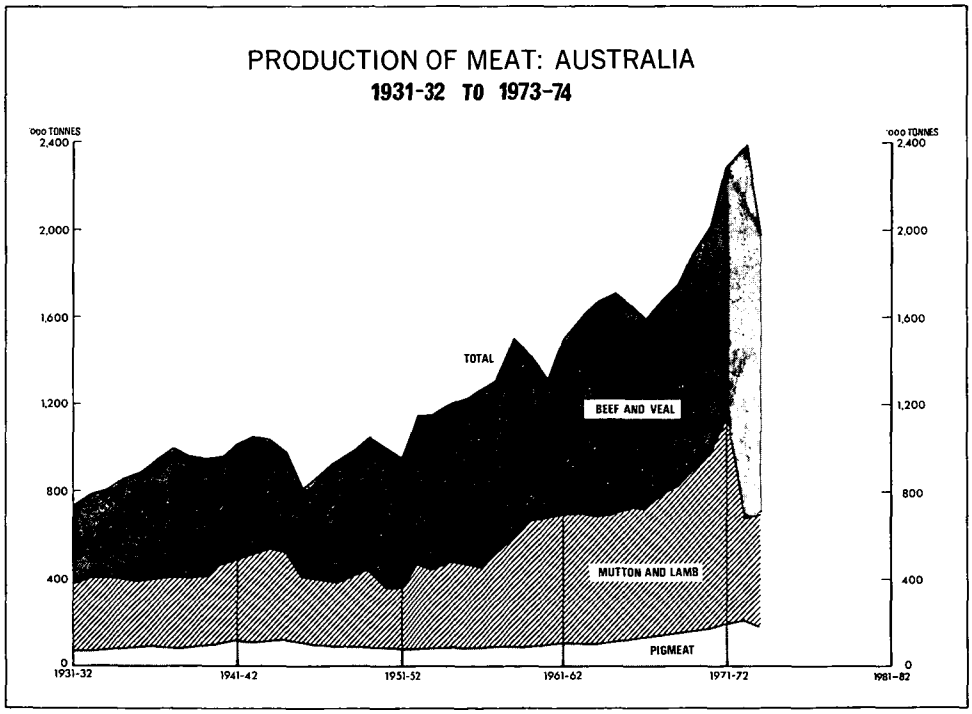


PLATE 54

PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT) AUSTRALIA

Year	Net change in stocks	Production	Exports(a)	For canning	Apparent consumption in Australia: Total	Apparent consumption in Australia: Per head per year
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	kg
1970–71	+ 2	1,047	499	45	502	39.7
1971–72	+11	1,168	594	55	508	39.5
1972–73	+ 4	1,438	872	50	512	39.1
1973–74	−19	1,310	733	55	540	40.7
1974–75	+11	1,534	611	44	868	64.4

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

Exports of beef and veal

In 1974–75, the principal markets for Australian beef and veal exports were the United States (287,350,000 kg, valued at $215,444,000); Canada (27,790,000 kg, valued at $24,526,000); Japan (15,146,000 kg, valued at $14,571,000); and United Kingdom (16,332,000 kg, valued at $13,434,000).

EXPORTS OF FRESH, CHILLED OR FROZEN BEEF AND VEAL(a): AUSTRALIA

Year	Beef exports: Bone-in: Quantity	Beef exports: Bone-in: Value	Beef exports: Boneless: Quantity	Beef exports: Boneless: Value	Veal exports: Quantity	Veal exports: Value	Beef and veal exports: Quantity	Beef and veal exports: Value
	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.	'000 kg	$'000 f.o.b.
1970–71	32,351	21,288	300,811	275,831	5,632	5,768	338,794	302,887
1971–72	17,961	13,627	373,685	364,681	9,883	10,615	401,529	388,923
1972–73	12,291	13,509	542,830	609,449	26,590	29,246	581,711	652,204
1973–74	13,260	17,963	460,968	592,638	18,688	25,141	492,916	635,742
1974–75	21,412	13,792	386,522	302,143	7,985	6,416	415,919	322,351

(a) Actual weight shipped, not carcass equivalent.

Exports and imports of cattle hides

The export trade in cattle hides and calfskins during 1974–75 was distributed among the main importing countries as follows; Japan, $8,477,000, Poland, $6,934,000, the Federal Republic of Germany, $5,366,000 and Italy, $3,627,000. The total quantity exported was 125,609,000 kg, valued at $39,771,000.

The quantity of cattle hides, including calfskins, imported into Australia during the year 1974–75 amounted to 333,000 kg, valued at $204,000. The chief source of supply was New Zealand.

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.

A significant development in recent years has been the shift away from on-farm separation and delivery of cream to factories, to a widespread system of refrigerated bulk milk delivery. The Commonwealth Government encouraged this transformation by providing interest-free loans under the Australian Dairy Adjustment Program.

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.

Cattle for milk production

DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31 MARCH 1972 TO 1976

('000)

At 31 March	Bulls dairy breed(a)	Cows and heifers used or intended for production of milk or cream for sale			House cows and heifers(b)
		Cows (in milk and dry)	Heifers		
			One year and over	Under one year	
1976—					
New South Wales	9	384	109	72	54
Victoria	31	1,258	300	254	19
Queensland	8	330	81	50	32
South Australia	4	135	34	29	7
Western Australia	2	93	36	29	6
Tasmania	3	143	36	32	3
Northern Territory	..	..	1	..	..
Australian Capital Territory	..	1	..	..	..
Australia	**57**	**2,345**	**595**	**467**	**122**
1975	60	2,355	634	537	122
1974	57	2,371	633	554	121
1973	60	2,523	655	601	124
1972	63	2,565	660	591	128

(a) Used or intended for service; excludes bull calves (under 1 year). (b) One year and over, 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.

Production of milk

In the following table particulars of the production of whole milk in the various States and Territories are shown. Victoria is the principal milk-producing State, and in 1974–75 the output from that State, 3,745 million litres, represented 58 per cent of total production. Output from New South Wales in 1974–75 was 958 million litres (15 per cent of the total) and that of Queensland 658 million litres (10 per cent). Production in the remaining States and Territories accounted for 17 per cent.

TOTAL PRODUCTION OF WHOLE MILK

('000 litres)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
1971–72	1,170,819	3,973,122	767,866	457,732	254,682	451,127	318	3,201	7,078,867
1972–73	1,176,962	3,944,600	736,790	424,265	242,060	423,841	318	2,672	6,951,509
1973–74	1,068,826	3,916,529	665,202	438,829	241,157	421,813	318	2,841	6,755,515
1974–75	958,254	3,744,632	658,243	426,371	245,895	460,521	318	2,559	6,496,795
1975–76p	979,948	3,516,234	703,066	397,500	241,103	435,186	318	2,658	6,276,013

Milking machines

Statistics relating to the number of milking machines on rural holdings at 31 March 1972 and 1973 are shown in the section Agricultural Machinery.

Value of whole milk production

GROSS VALUE OF WHOLE MILK PRODUCTION(*a*): 1974–75

($'000)

N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
114,232	267,337	57,178	31,498	20,458	29,358	167	625	520,853

(*a*) Includes subsidy.

GROSS VALUE OF WHOLE MILK PRODUCTION(*a*): AUSTRALIA

($'000)

1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
425,640	459,336	465,621	469,642	520,853

(*a*) Includes subsidy.

UTILISATION OF WHOLE MILK: 1974-75p
('000 litres)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Milk used for—									
Butter	261,837	2,435,763	206,502	88,967	99,630	248,075	..	..	3,340,774
Cheese	77,007	420,693	98,622	194,335	20,751	123,781	..	..	935,189
Processed milk products	66,819	415,585	(a)	..	5,452	(a)	..	..	568,338
Other purposes	552,591	472,591	(a)	143,070	115,864	(a)	318	2,559	1,644,617
Total	**958,254**	**3,744,632**	**654,564**	**426,371**	**241,697**	**460,521**	**318**	**2,559**	**6,488,917**

(a) Not available for publication.

In 1974–75, 51.5 per cent of the total milk supply was used for butter, 14.4 per cent for cheese, 8.8 per cent for processed milk products, and 25.3 per cent for other purposes.

PRODUCTION AND UTILISATION OF WHOLE MILK: AUSTRALIA
('000 litres)

		Quantity used for—			
Year	Total production	Factory butter	Factory cheese	Processed milk products(a)	Other purposes(b)
1970–71	7,248,995	4,212,524	746,240	586,814	1,703,417
1971–72	7,078,867	4,055,604	754,840	586,405	1,682,019
1972–73	6,951,509	3,817,112	871,027	536,858	1,726,513
1973–74	6,755,515	3,623,895	889,160	535,367	1,707,094
1974–75p	6,488,917	3,340,774	935,189	568,338	1,644,617

(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.

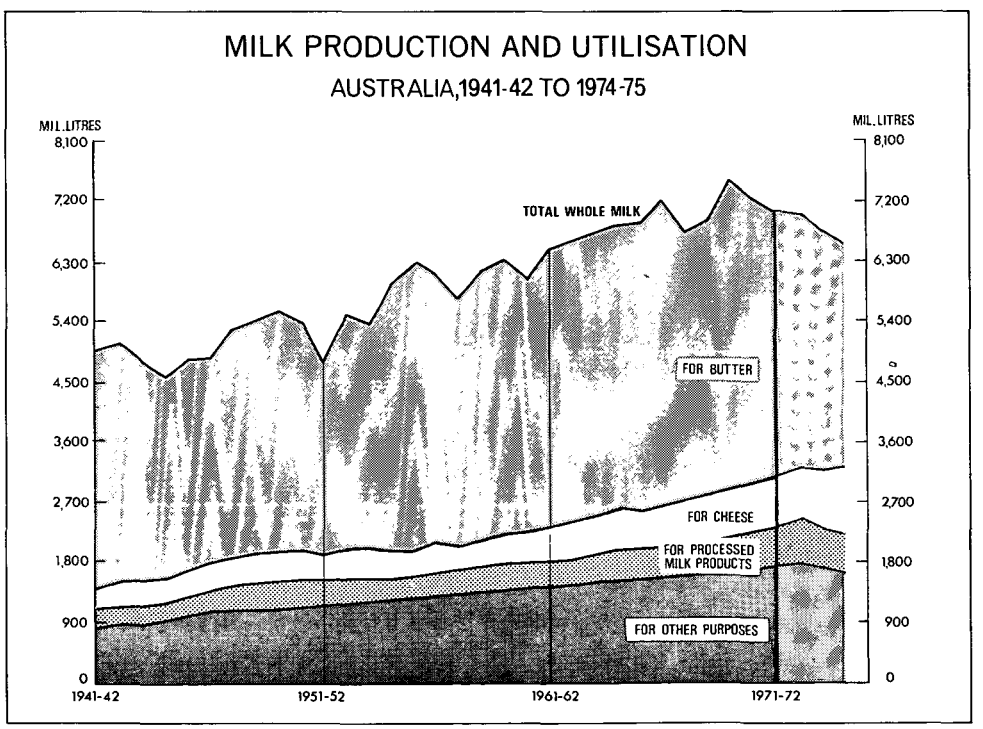


PLATE 55

Production of butter, cheese and processed milk products

Factory production of butter in 1974–75 was 161,274,000 kg. This was 61,684,000 kg (27.7 per cent) below the record of 222,958,000 kg attained in 1969–70.

BUTTER PRODUCTION IN FACTORIES
('000 kg)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.*
1970–71 . .	21,288	135,844	18,773	6,617	5,425	15,273	203,220
1971–72 . .	19,325	129,897	18,022	6,196	5,937	16,029	195,406
1972–73 . .	17,541	128,029	15,857	5,161	5,349	12,921	184,857
1973–74 . .	13,287	127,730	11,699	5,160	5,223	12,398	175,497
1974–75 . .	9,831	119,291	10,360	4,546	5,050	12,196	161,274

Factory production of cheese in 1974–75 reached a record level of 98,789,000 kg, which was 2,996,000 kg (3.1 per cent) more than the previous record of 1973–74.

NON-PROCESSED CHEESE PRODUCTION IN FACTORIES
('000 kg)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.*
1970–71 . .	7,700	35,804	7,687	18,906	1,917	5,551	77,566
1971–72 . .	7,486	38,788	8,251	18,444	1,979	5,923	80,871
1972–73 . .	9,262	49,001	8,753	17,315	1,870	7,240	93,441
1973–74 . .	9,365	47,903	9,225	18,904	1,922	8,475	95,793
1974–75 . .	9,925	44,833	10,066	19,288	2,291	12,386	98,789

FACTORY PRODUCTION OF NON-PROCESSED CHEESE BY VARIETIES: AUSTRALIA
('000 kg)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Fetta	n.a.	567	496	544	538
Cheddar		58,415	69,977	69,374	68,692
Cottage		1,554	2,065	2,706	2,907
Soft					
Gouda		2,989	3,469	4,180	4,876
Other		17,346	17,438	18,989	21,776
Total cheese	**77,566**	**80,871**	**93,445**	**95,793**	**98,789**

Processed milk products are manufactured mainly in Victoria, which produced 73 per cent of the total (in terms of whole milk equivalent) in 1974–75. New South Wales accounted for 12 per cent and the remaining States for 15 per cent.

PRODUCTION OF PROCESSED MILK PRODUCTS: AUSTRALIA
('000 kg)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Condensed, concentrated and evaporated milk—					
Full cream—					
Sweetened(*a*)	16,696	16,705	14,301	12,724	14,428
Unsweetened	61,797	47,832	36,108	33,396	34,627
Skim	14,997	11,489	11,943	12,020	11,033
Infants', invalid and health beverages—					
Infants' milk powder	7,931	11,734	11,679	13,239	17,058
Other(*b*)	16,046	15,265	15,028	14,482	16,431
Casein	28,480	30,517	22,851	19,183	13,530
Powdered milk—					
Full cream—					
Spray	25,100	27,978	35,601	36,677	44,447
Roller	534	786	728	699	
Skim—					
Without added ingredients—					
Spray	74,768	75,065	98,734	121,739	138,857
Roller	5,884	7,253	6,503	5,540	8,303
With added ingredients—					
Baker's powder	3,024	2,478	2,300	2,501	1,893
Other	7,831	7,884	10,099	9,873	8,598
Buttermilk or mixed skim and buttermilk—					
Spray	9,216	6,138	9,559	11,604	7,587
Roller	7,959	8,390	6,452	5,669	3,957
Total powdered milk	*134,316*	*135,972*	*169,976*	*194,302*	*213,642*

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

Wholesale prices of butter and cheddar cheese in Australia

Details of wholesale prices operating in each of the States since March 1969 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 up to May 1973. Since July 1974 the Council has accepted the recommendation of the Prices Justification Tribunal for increases in the domestic bulk wholesale prices of butter and cheese effective from the dates shown in the table below.

WHOLESALE PRICES OF BUTTER AND CHEDDAR CHEESE: AUSTRALIA
(cents per kg)

Date from which prices became effective	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*
Butter—						
31 March 1969	107.48	107.48	107.48	107.48	107.48	107.48
3 August 1971	111.88	111.88	111.88	111.88	111.88	111.88
7 August 1974	118.50	118.50	118.50	118.50	118.50	118.50
25 November 1974	125.11	125.11	125.11	125.11	125.11	125.11
27 May 1975	131.73	131.73	131.73	131.73	131.73	131.73
20 November 1975	142.75	142.75	142.75	142.75	142.75	142.75
Cheddar cheese—						
7 November 1966	65.04	65.04	65.04	65.04	65.04	65.04
10 November 1970	67.24	67.24	67.24	67.24	67.24	67.24
3 August 1971	69.45	69.45	69.45	69.45	69.45	69.45
8 November 1971	76.06	76.06	76.06	76.06	76.06	76.06
15 May 1972	82.67	82.67	82.67	82.67	82.67	82.67
7 May 1973	88.18	88.18	88.18	88.18	88.18	88.18
7 August 1974	92.59	92.59	92.59	92.59	92.59	92.59
25 November 1974	101.41	101.41	101.41	101.41	101.41	101.41
27 May 1975	104.06	104.06	104.06	104.06	104.06	104.06
20 November 1975	108.47	108.47	108.47	108.47	108.47	108.47

Local consumption of butter and cheese

Following the cessation of butter rationing after the 1939–45 War, consumption per head rose to 14.2 kg in 1951–52. However, in later years it gradually declined, and in 1974–75, at 7.3 kg per head, it reached its lowest level since the war. Consumption of cheese per head has risen steadily in recent years and by 1974–75 it attained a record figure of 5.2 kg per head.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE: AUSTRALIA

Year	Change in stocks(a) ('000 kg)	Factory production ('000 kg)	Exports(b) ('000 kg)	Apparent consumption in Australia as human food: Total ('000 kg)	Apparent consumption in Australia as human food: Per head per year (kg)
BUTTER					
1970–71	− 6,879	203,220	93,071	117,028	9.3
1971–72	+22,064	195,761	61,656	112,041	8.7
1972–73	− 3,100	184,857	78,957	109,000	8.3
1973–74	+11,226	175,497	60,083	104,189	7.9
1974–75	+27,547	161,274	35,247	98,480	7.3
CHEESE					
1970–71	−12,516	77,566	38,382	51,700	4.1
1971–72	− 6,302	80,871	33,378	53,795	4.2
1972–73	+ 3,207	93,441	29,600	60,634	4.6
1973–74	− 5,506	95,793	38,055	63,244	4.8
1974–75	− 5,023	98,789	34,260	69,552	5.2

(a) Balance figure (includes imports). (b) Includes ships' stores; figures for butter include dry butter fat, ghee and tropical spread 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 1971 to 1976.

BUTTER AND CHEDDAR CHEESE: RATES REALISED ON SALES, AVERAGE EQUALISATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRYING INDUSTRY ACTS

(*Source:* Commonwealth Dairy Produce Equalisation Committee Ltd)

(Cents per kg—product basis)

Year	Rates realised on sales: Intrastate	Interstate	Manufacturing	Overseas	Average equalisation rate	Rate of bounty	Rate of overall return to manufacturer
Butter—							
1970–71	101.25	96.86	63.25	51.59	76.57	18.50	95.07
1971–72	104.72	100.63	65.41	60.57	83.83	17.61	101.44
1972–73	105.09	99.94	65.69	54.17	79.32	12.24	91.56
1973–74	(a)	(a)	(a)	(a)	(b)80.02	(b)8.47	(b)88.49
1974–75(c)	(a)	(a)	(a)	(a)	(b)88.80	(b)4.50	(b)93.30
1975–76(c)	(a)	(a)	(a)	(a)	(b)78.99	(d)	(b)78.99
Cheddar cheese—							
1970–71		63.80		36.44	52.40	8.35	60.75
1971–72		71.76		48.33	61.95	8.41	70.36
1972–73		79.83		46.30	67.18	5.83	73.01
1973–74		(a)		(a)	(b)71.85	4.06	(b)75.91
1974–75		(a)		(a)	(b)81.49	(b)2.15	(b)83.64
1975–76		(a)		(a)	(b)78.99	(d)	(b)78.99

(a) Not yet available. (b) Interim Rates. (c) Modified equalisation arrangements are operative from the 1974–75 season (in respect of disposals ex production); differing equalisation rates apply as between the States. (d) Bounty ceased 1974–75.

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

(*Source:* Commonwealth Dairy Produce Equalisation Committee Ltd)

(Cents per kg)

Year	*Rate of overall return to manufacturer*	*Estimated manufacturing cost*	*Return to dairy farmer*
1971–72	101.44	11.38	(*a*)90.07
1972–73	91.56	11.81	(*a*)79.75
1973–74	(*a*)88.49	(*a*)13.18	(*a*)75.31
1974–75	(*a*)93.30	(*a*)14.21	(*a*)79.09
1975–76	(*a*)88.50	(*a*)16.34	(*a*)72.16

(*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 1974–75 amounted to 32.6 million kg, compared with 62.5 million kg in 1973–74. Exports of cheese in these years were 34.2 million kg and 43.7 million kg respectively. The principal importing country for Australian butter in 1974–75 was Canada, accounting for 34.9 per cent of total exports. In 1974–75 Japan was the principal importing country for Australian cheese with 53.7 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.

BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA

Grade	*Quantity ('000 kg)*			*Per cent*		
	1972–73	*1973–74*	*1974–75*	*1972–73*	*1973–74*	*1974–75*
BUTTER(*a*)						
Choicest quality	48,986	37,144	27,574	93.1	94.7	86.4
First quality	2,897	1,769	3,561	5.5	4.5	11.2
Second and pastry quality(*b*)	723	309	771	1.4	0.8	2.4
Total	**52,606**	**39,222**	**31,905**	**100.0**	**100.0**	**100.0**
CHEESE						
Bulk cheddar—						
Choicest quality	10,682	17,057	14,940	30.9	59.7	64.7
First quality	7,439	7,513	3,737	21.5	26.4	16.2
Second quality(*b*)	683	660	152	2.0	2.3	0.7
Other bulk cheese	15,750	3,323	4,265	45.6	11.6	18.4
Total	**34,554**	**28,553**	**23,094**	**100.0**	**100.0**	**100.0**

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

NOTE—Bulk butter and cheese graded for export during one year is not necessarily exported during that year.

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

EXPORTS OF DAIRY PRODUCTS: AUSTRALIA

	Quantity ('000 kg)			*Value ($'000 f.o.b.)*		
	1972–73	*1973–74*	*1974–75*	*1972–73*	*1973–74*	*1974–75*
Butter(*a*)	57,828	37,867	18,941	47,966	27,199	19,508
Cheese(*b*)—						
Processed(*c*)	8,092	9,267	10,946	8,359	9,300	15,258
Other—						
Cheddar and epicure cheddar	17,627	22,846	17,386	10,597	15,554	14,298
Parmesan (incl. parmigiano and reggiono)	91	82	438	132	127	414
Other	3,759	5,835	5,460	2,601	3,956	4,666
Total cheese	*29,568*	*38,031*	*34,230*	*21,689*	*28,936*	*34,634*
Other milk products(*b*)—						
Preserved, condensed, concentrated, etc.—						
Sweetened	2,042	1,534	2,451	900	730	1,397
Unsweetened	2,588	2,166	3,471	978	838	1,448
Milk and cream baby foods, dried	8,435	8,235	8,879	5,996	6,139	7,455
Casein	15,013	20,480	6,119	10,882	16,118	6,439
Dried or powdered—						
Full cream	19,487	22,335	27,238	14,352	17,111	27,440
Skim	48,030	94,114	67,031	18,700	39,196	43,530

(*a*) Excludes butter concentrate, ghee and ships' stores. (*b*) Excludes ships' stores. (*c*) Includes pastes and spreads.

Buffaloes

Buffaloes were introduced into northern Australia, at Melville Island in 1825 and the Coburg Peninsula (Fort Wellington) in 1827 during attempts to establish settlements. In 1838 and later years shipments of buffaloes, mainly from Timor and the other Indonesian islands, were landed at Victoria Settlement. As buffaloes were ideally suited to the tropical region of the Northern Territory, they survived when the early settlements were abandoned, and multiplied rapidly in the coastal plains regions. It is estimated that there are now more than 200,000 buffaloes in the Northern Territory, predominantly along the coastal plains east of Darwin, although small groups have been known to wander further southwards.

Initially buffaloes were hunted for their hides. The demand for hides reached a peak in 1937 when about 17,000 buffaloes were slaughtered. Over the next 20 years the demand for hides declined considerably and there is no longer any demand for buffalo hide.

Commercial production of buffalo meat began in 1960 when a buffalo abattoir was established at Marrakai Creek, Northern Territory. The meat was used for pet food at first and in the following year slaughtering for human consumption commenced. During 1974–75 15,392 buffaloes were slaughtered for meat production valued at $593,216.

Although a domesticated animal in south-east Asia, the buffalo has reverted to its wild state in the Northern Territory. Attempts to domesticate the beast have largely been abandoned, with the annual agricultural census showing the number of domesticated buffaloes at: 7,843 in 1972; 5,189 in 1973; 4,418 in 1974 and 3,171 in 1975.

During 1974, for the first time, live buffaloes were exported overseas for breeding purposes. In 1974–75 120 were exported to Papua New Guinea, 406 to Venezuela, 128 to Brunei and 200 to Nigeria, a total of 854 beasts valued at $51,240. The 1975–76 year has seen the addition of Guyana to countries receiving live buffalo stock. Australia is currently the only supplier of buffalo breeding stock.

In 1975 Mudginberri Station commenced exporting buffalo meat to West Germany where it is sold as game meat. In 1976 Point Stuart was also granted an export licence and it too is providing meat for the German market.

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 slaughterings and this is matched, on a dollar for dollar basis from Commonwealth Government sources. Funds available for research are $514,839 for 1974–75.

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.

Distribution throughout Australia

At 31 March 1973 the number of pigs in Australia reached a record level of 3,259,397 which represented an increase of 60,714 (1.9 per cent) on the previous record at 31 March 1972 (3,198,683). The number of pigs has since declined to 2,172,762 at 31 March 1976.

NUMBER OF PIGS

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1972	1,059,331	589,992	534,502	478,874	427,061	103,934	4,862	127	3,198,683
1973	1,064,678	585,227	541,827	499,461	476,316	85,114	6,662	112	3,259,397
1974	834,678	424,248	441,463	385,158	343,623	68,379	7,826	43	2,505,418
1975	729,209	383,144	400,435	348,955	264,157	63,973	7,310	36	2,197,219
1976p	708,785	392,834	408,548	325,924	259,851	69,773	7,047	n.a.	2,172,762

A long-term comparison of pig numbers is given earlier in this chapter (*see* page 791). 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 52 of this Year Book (*see* page 793).

Pigs slaughtered

PIGS SLAUGHTERED
('000)

Year	Slaughterings 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.	
1971–72	1,094	1,051	794	436	367	165	4	17	3,928	3,942
1972–73	1,324	1,210	964	527	538	152	5	24	4,743	4,763
1973–74	1,166	1,081	829	448	497	116	9	24	4,170	4,187
1974–75	979	969	634	344	389	101	8	23	3,447	3,460
1975–76p	945	883	690	348	350	95	10	19	3,339	n.a.

Production of pigmeat, bacon and ham

PRODUCTION OF PIGMEAT (CARCASS WEIGHT)
(tonnes)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1971–72	49,722	51,506	41,151	23,095	19,963	8,267	130	644	194,478
1972–73	59,644	60,486	49,760	27,482	30,360	7,389	168	884	236,173
1973–74	54,161	54,336	43,333	24,195	28,269	5,477	345	920	211,036
1974–75	46,077	48,641	33,487	18,697	22,078	4,872	350	870	175,072
1975–76p	45,037	47,260	38,233	19,571	19,912	4,539	407	740	175,699

PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT)
(tonnes)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust
1970–71—							
(bone in)	10,877	4,479	5,616	1,115	1,678	915	24,681
(bone out)	4,973	8,788	5,620	3,506	3,124	545	26,556
1971–72—							
(bone in)	10,488	3,449	5,062	1,051	1,406	755	22,210
(bone out)	5,849	10,049	7,088	3,934	3,562	767	31,249
1972–73—							
(bone in)	11,611	3,176	6,548	1,252	1,446	746	24,779
(bone out)	6,622	11,598	7,950	3,828	3,765	729	34,492
1973–74—							
(bone in)	10,098	3,190	6,289	1,355	1,472	738	23,143
(bone out)	9,788	14,602	10,833	3,659	3,921	735	43,540
1974–75—							
(bone in)	6,135	2,880	5,189	1,075	1,535	824	17,638
(bone out)	10,388	15,805	6,864	3,280	3,882	842	41,060

Value of pigs slaughtered

GROSS VALUE OF PIGS SLAUGHTERED, 1974-75
($'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
58,022	42,511	30,941	23,435	16,936	5,625	268	3	177,741

GROSS VALUE OF PIGS SLAUGHTERED: AUSTRALIA
($'000)

1970–71	1971–72	1972–73	1973–74	1974–75
104,992	111,199	123,730	172,958	177,741

Consumption of pigmeat, bacon and ham

The apparent consumption of pigmeat decreased from 7.8 kg per head in 1973–74 to 5.2 kg in 1974–75. A table showing the consumption of all types of meat is shown on page 802.

PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT)

					Apparent consumption (as pork or smallgoods) in Australia	
Year	Change in stocks(a)	Production	Exports	Curing and canning	Total	Per head per year
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	kg
1970–71	−0.9	181.7	1.7	93.3	87.6	6.9
1971–72	+1.7	194.5	3.8	100.1	88.8	6.9
1972–73	+1.8	236.2	20.1	111.0	103.2	7.9
1973–74	−2.4	211.0	8.6	100.8	103.9	7.8
1974–75	−0.2	175.1	1.1	104.0	70.1	5.2

(a) Includes allowance for imports.

PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS WEIGHT) AUSTRALIA

Year	Change in stocks	Production	Exports	Canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	'000 tonnes	kg
1970–71	..	67.2	0.3	8.2	58.7	4.6
1971–72	+0.1	72.3	0.3	8.0	63.9	5.0
1972–73	..	80.3	0.3	8.2	71.8	5.5
1973–74	+0.1	82.5	0.4	9.2	72.9	5.5
1974–75	+0.5	75.1	0.4	6.9	67.3	5.0

A table showing the consumption of all types of meat appears on page 802.

Exports of pigs and pig products

EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA

		Quantity			Value ($'000 f.o.b.)		
		1972–73	1973–74	1974–75	1972–73	1973–74	1974–75
Bacon and ham (including canned)	'000 kg	401	549	583	575	813	1,047
Lard	'000 kg	14	485	92	6	150	32
Frozen pork	'000 kg	20,104	8,844	1,072	17,117	8,054	1,613
Pigs, live	number	1,219	1,068	497	59	78	39

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, total poultry numbers for Australia are not available. 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.

Poultry numbers

POULTRY NUMBERS(*a*): AT 31 MARCH 1976
('000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Hens and pullets for egg production	6,754	3,723	2,240	1,410	1,344	300	10	133	15,915
Meat strain chickens (broilers)	19,924	4,680	3,225	2,849	2,209	239	..	..	33,126
Other fowls and other chickens	640	344	357	126	64	34	..	..	1,566
Total	**27,319**	**8,747**	**5,823**	**4,385**	**3,617**	**574**	**10**	**133**	**50,608**
Ducks	185	28	5	18	15	2	..	..	254
Turkeys	294	19	2	12	5	1	..	..	333

(*a*) The table represents numbers of poultry on agricultural holdings as reported in the agricultural census.

Chicken hatchings and poultry slaughterings

Statistics shown in the following section have been compiled 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. New South Wales slaughtering statistics include poultry slaughterings by producers in the Australian Capital Territory.

NUMBERS OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION

('000)

Year	*Chickens(a)*	*Other fowls(b)*	*Ducks and drakes*	*Turkeys*
1974-75—				
New South Wales	59,176	3,639	(c)	(c)
Victoria	26,324	2,044	104	9
Queensland	17,764	1,554	(c)	(c)
South Australia	15,249	524	24	7
Western Australia	13,767	(c)	(c)	(c)
Tasmania	1,895	(c)	(c)	(c)
Australia	**134,175**	**8,600**	**1,283**	**1,891**
1973–74	139,765	7,894	1,195	2,216
1972–73	113,220	7,930	1,274	2,134
1971–72	113,296	8,803	1,375	1,353
1970–71	103,907	7,581	1,214	1,440

(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)

('000 kg)

Year	*Chickens(b)*	*Other fowls(c)*	*Ducks and drakes*	*Turkeys*	*Total*
1974–75—					
New South Wales	74,518	5,816	(e)	(e)	89,380
Victoria	33,140	3,196	166	(e)	36,544
Queensland(d)	23,096	2,477	(e)	(e)	25,611
South Australia	16,773	834	51	31	17,689
Western Australia	16,121	(e)	(e)	(e)	17,714
Tasmania	2,340	(e)	(e)	(e)	2,503
Australia	**165,989**	**13,706**	**2,136**	**7,609**	**189,440**
1973–74	171,268	12,405	1,990	7,776	193,439
1972–73	138,320	12,510	2,174	7,769	160,773
1971–72	141,700	14,367	2,246	4,968	163,281
1970–71	131,046	12,383	2,068	6,020	151,518

(a) Dressed weight of whole birds, pieces and giblets. (b) Comprises dressed weight of broilers, fryers and roasters. (c) Comprises dressed weight of hens, roosters, etc. (d) Estimated. (e) Not available for publication.

Value of poultry slaughtered

GROSS VALUE OF POULTRY SLAUGHTERED(*a*): 1974-75
($'000)

N.S.W.(b)	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*Aust.*
65,405	28,296	17,575	13,723	12,830	1,970	9	139,808

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock. (*b*) Includes A.C.T.

GROSS VALUE OF POULTRY SLAUGHTERED(*a*): AUSTRALIA
($'000)

1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
84,167	89,840	90,621	132,476	139,808

(*a*) Includes adjustment for net exports (overseas and interstate) of livestock.

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
('000)

Year	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*Aust.*
			MEAT STRAINS				
1971–72	73,707	35,097	21,647	13,253	(*b*)	(*b*)	161,645
1972–73	77,409	36,487	23,095	12,944	(*b*)	(*b*)	168,607
1973–74	95,578	41,902	26,275	17,529	(*b*)	(*b*)	202,790
1974–75	81,751	34,773	23,773	20,448	(*b*)	(*b*)	181,300
1975–76p	89,167	40,738	26,698	21,884	(*b*)	(*b*)	201,547
			EGG STRAINS				
1971–72	18,238	14,251	10,755	4,933	3,606	977	52,759
1972–73	16,840	14,354	9,769	3,739	3,321	926	48,950
1973–74	14,406	17,657	9,155	4,842	3,858	1,173	51,091
1974–75	12,988	14,925	7,708	4,260	3,587	843	44,310
1975–76p	13,719	11,480	6,802	4,585	3,346	874	40,804

(*a*) Includes eggs which failed to hatch. (*b*) Not available for publication.

CHICKENS HATCHED(a) IN COMMERCIAL HATCHERIES
('000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
INTENDED FOR CHICKEN MEAT—MEAT STRAINS (Unsexed)							
1971–72	54,209	26,951	16,360	10,431	(b)	(b)	121,563
1972–73	56,246	27,746	17,418	10,131	(b)	(b)	125,822
1973–74	70,019	32,089	20,268	13,385	(b)	(b)	151,654
1974–75	62,026	27,306	18,928	16,089	(b)	(b)	140,139
1975–76p	68,222	33,219	20,925	17,789	(b)	(b)	158,084
INTENDED FOR CHICKEN MEAT—EGG STRAINS (Crossbred and other cockerels)(c)							
1971–72	517	431	507	117	49	50	1,670
1972–73	523	489	675	103	43	18	1,853
1973–74	472	351	633	95	38	12	1,602
1974–75	237	316	(b)	65	(b)	13	856
1975–76p	182	192	(b)	25	(b)	32	573
INTENDED FOR EGG PRODUCTION—EGG STRAINS (Pullets)(c)							
1971–72	5,889	4,861	3,484	1,876	1,268	302	17,680
1972–73	5,129	4,875	3,126	1,409	1,223	317	16,078
1973–74	4,757	6,028	3,154	1,769	1,359	426	17,492
1974–75	4,483	5,004	2,763	1,723	1,321	340	15,634
1975–76p	4,648	4,012	2,601	1,807	1,200	354	14,621

(a) Excludes chicks destroyed. (b) Not available for publication. (c) Includes 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
('000 dozen)

State	1970–71	1971–72	1972–73	1973–74	1974–75
New South Wales(b)	89,663	91,100	87,782	83,315	81,221
Victoria	53,339	55,518	50,940	48,287	51,339
Queensland	25,305	25,031	26,985	28,365	30,699
South Australia	19,440	20,515	18,769	18,034	18,940
Western Australia	14,501	16,897	14,346	14,285	17,325
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total(c)	**202,249**	**209,061**	**198,822**	**192,286**	**199,525**

(a) Receipts from consignors and sales by producer agents. (b) Includes Australian Capital Territory. (c) Excludes Tasmania.

Value of egg production

GROSS VALUE OF EGG PRODUCTION: 1974–75
($'000)

N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
68,644	44,331	24,535	14,043	12,032	4,903	853	2,400	171,741

GROSS VALUE OF EGG PRODUCTION: AUSTRALIA
($'000)

1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
111,155	110,874	117,359	147,788	171,741

Egg pulp production

Particulars of the production of egg pulp and powder 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.

EGG PULP AND POWDER: PRODUCTION RECORDED BY EGG BOARDS
('000 kg)

State	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
New South Wales	12,922	10,331	5,517	4,731	6,600
Victoria	8,334	9,122	2,475	3,379	4,670
Queensland	3,439	2,754	3,041	3,249	5,093
South Australia	3,691	4,176	2,021	2,406	3,317
Western Australia	1,353	2,442	1,085	711	1,732
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total(*a*)	**29,738**	**28,825**	**14,139**	**14,476**	**21,412**

(*a*) Excludes Tasmania.

In addition to egg pulp and powder, production was also recorded for liquid egg whites and liquid egg yolks. Output in 1974–75 amounted to 5,849,000 kg and 4,522,000 kg respectively, compared with 5,922,000 kg and 4,492,000 kg 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

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
1969–70	..	271.4	5.1	53.6	212.6	17.1
1970–71	+0.2	287.0	5.1	64.8	216.9	17.1
1971–72	+0.4	296.1	6.9	67.9	220.9	17.1
1972–73	−0.1	283.9	6.5	52.8	224.6	17.2
1973–74	+0.7	277.8	3.1	46.2	227.8	17.2

(a) Includes ships' stores. (b) Includes wastage.

Details of the annual consumption of shell eggs, egg pulp and powder 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

(Per head per year)

Year	Eggs in shell	Egg pulp and powder(a)	Total	
			Number	Weight(b)
	number	number		kg
1969–70	206	14	220	12.5
1970–71	206	14	220	12.4
1971–72	206	12	218	12.3
1972–73	206	12	218	12.4
1973–74	206	13	219	12.4

(a) In terms of number of eggs in shell. (b) The average weight of an egg in Australia is taken as 56.7g.

Overseas trade in poultry products

Australian exports of shell eggs in 1974–75 amounted to 2,345,000 dozen compared with 2,203,000 dozen in 1973–74. The main outlets for Australian eggs in 1974–75 were Hong Kong (579,000 dozen), Kuwait (443,000 dozen), United Arab Emirates (543,000 dozen), and Papua New Guinea (294,000 dozen).

EXPORTS OF POULTRY PRODUCTS: AUSTRALIA

		Quantity			Value ($'000 f.o.b.)		
		1972–73	1973–74	1974–75	1972–73	1973–74	1974–75
Eggs in shell	'000 doz	5,552	2,203	2,345	1,470	872	951
Eggs not in shell—							
In liquid form	'000 kg	23,728	14,075	12,674	9,578	5,521	7,229
Dry	'000 kg	282	436	107	458	654	121
Frozen poultry	'000 kg	3,963	4,861	5,106	2,483	3,309	4,279
Poultry, live(a)	number	379,952	436,496	251,123	214	250	165

(a) Includes day-old chicks.

Imports of canned poultry in 1974–75 amounted to 254,000 kg, valued at $261,000, compared with 148,000 kg, valued at $129,000, in 1973–74.

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 will be 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 52, page 793.

Horse numbers

NUMBER OF HORSES: 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 1974–75 numbered 682, valued at $2,755,000, made up of horses for breeding (174 valued at $1,062,000), horses for racing (394 valued at $1,608,000, shipped principally to Singapore, Hong Kong, the United States of America and New Zealand) and horses for other purposes (114 valued at $85,000). Horses imported into Australia in 1974–75 (2,199 valued at $13,833,000) were mainly from New Zealand and the United Kingdom.

Miscellaneous livestock products

Tallow

Details of tallow consumption are collected from the principal factories using tallow. Recorded usage of inedible tallow in factories for the years 1971–72, 1972–73 and 1973–74 was as follows; for soap making: 1971–72, 35,770,000 kg; 1972–73, 42,185,000 kg; 1973–74, 35,371,000 kg; for products other than soap: 1971–72, 12,333,000 kg; 1972–73, 11,117,000 kg; 1973–74, 14,197,000 kg. 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 1970–71 to 1974–75.

TALLOW: EXPORTS, AUSTRALIA, 1970–71 TO 1974–75
(tonnes)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Edible . . .	17,727	17,011	17,329	10,729	19,783
Inedible . . .	139,151	199,675	179,942	136,783	137,114
Total . . .	**156,878**	**216,686**	**197,271**	**147,512**	**156,897**

Overseas trade in hides and skins

The value of cattle and horse hides, sheep and other skins, and skin pieces sent overseas during 1974–75 amounted to $104,182,000, compared with a total of $150,574,000 in 1973–74 and $192,098,000 in 1972–73.

Beekeeping

Production of honey and beeswax

Although practised as a separate industry, beekeeping is also carried on in conjunction with other branches of farming. A feature of the industry is that it consists mainly of 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 1974–75 amounted to 20,618,000 kg (58.7 kg per productive hive) compared with 21,189,000 kg (51.8 kg per productive hive) in 1973–74. Beeswax produced in 1974–75 was 325,000 kg compared with 322,000 kg in the previous year.

Statistics in the following tables relate to the operations for 1974–75 of apiarists with forty or more hives. Information for earlier years covers the operations of apiarists with five or more hives except in New South Wales with six or more hives. It is estimated that for 1974–75 apiarists with less than forty hives accounted for less than 1% of honey produced, but comprised more than 50% of the total number of apiarists throughout Australia.

BEEKEEPING: AUSTRALIA

Season	Number of apiarists(a)	Beehives			Honey produced		Beeswax produced
		Productive	Unproductive	Total	Quantity	Average production per productive beehive	Quantity
		'000	'000	'000	'000 kg	kg	'000 kg
1974–75—							
New South Wales	812	142	52	194	7,790	55.0	126
Victoria	468	72	16	88	2,784	38.6	35
Queensland	275	37	21	58	1,480	40.0	24
South Australia	498	86	15	101	5,428	63.2	96
Western Australia	142	34	5	39	2,527	74.8	36
Tasmania	62	9	1	11	574	62.1	8
Australian Capital Territory	9	1	..	1	53	51.4	1
Australia	**2,266**	**381**	**110**	**491**	**20,636**	**54.2**	**326**
1970–71	5,759	376	118	493	19,126	50.9	266
1971–72	5,803	384	139	524	20,240	52.7	264
1972–73	5,926	395	133	528	18,083	45.7	261
1973–74	5,779	409	134	544	21,189	51.8	322

(a) *See* comments on coverage (in terms of bee-keepers included) above.

Value of honey and beeswax

GROSS VALUE OF HONEY AND BEESWAX 1974–75
($'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Total
Honey	3,587	1,493	735	2,094	935	423	37	9,304
Beeswax	220	45	41	129	65	14	1	515

GROSS VALUE OF HONEY AND BEESWAX: AUSTRALIA
($'000)

	1970–71	1971–72	1972–73	1973–74	1974–75
Honey	4,362	6,136	8,130	11,768	9,304
Beeswax	337	320	294	525	515

Overseas trade in honey and beeswax

EXPORTS OF HONEY: AUSTRALIA
(Australian produce only)

Country of consignment	Quantity ('000 kg)			Value ($'000 f.o.b.)		
	1972–73	1973–74	1974–75	1972–73	1973–74	1974–75
Belgium-Luxembourg	3	116	17	1	77	8
Denmark	187	55	134	97	36	69
Germany, Federal Republic of	317	140	732	197	93	398
Hong Kong	24	38	13	18	39	16
Indonesia	48	51	54	9	50	72
Japan	1,221	562	587	733	482	395
Kuwait	61	77	38	43	87	47
Malaysia	255	307	216	173	295	201
Netherlands	55	27	35	34	18	19
Saudi Arabia	67	91	146	46	106	195
Singapore	140	250	192	109	249	204
United Arab Emirates	14	31	41	15	34	46
United Kingdom	5,089	2,583	5,101	2,898	1,673	2,721
United States of America	190	76	1,952	88	37	1,051
Other countries	294	288	358	261	229	341
Total	**7,965**	**4,692**	**9,616**	**4,722**	**3,505**	**5,783**

Imports of honey amounted to 52,511 kg, valued at $46,014 in 1972–73, 40,421 kg, valued at $49,564 in 1973–74 and 38,486 kg, valued at $48,000 in 1974–75.

EXPORTS OF BEESWAX: AUSTRALIA
(Australian produce only)

Country of consignment	Quantity ('000 kg)			Value ($'000 f.o.b.)		
	1972–73	1973–74	1974–75	1972–73	1973–74	1974–75
France	..	14	7	..	24	13
Germany, Federal Republic of	..	29	31	..	33	61
Japan	11	34	14	15	44	26
United Kingdom	25	131	144	30	212	262
United States of America	..	15	24	..	21	48
Other countries	5	11	23	11	22	49
Total	**41**	**234**	**243**	**56**	**356**	**459**

Imports of beeswax amounted to 6,621 kg, valued at $11,049 in 1972–73; 13,744 kg, valued at $24,777 in 1973–74 and 10,724 kg, valued at $28,000 in 1974–75.

Honey levy

A levy is imposed under the *Honey Levy Act* 1962 on domestic sales of honey, for the purpose of financing the operations of the Australian Honey Board. The current rate of levy which became effective on 1 October 1975 is 1.3 cents per kg; it can be increased by regulation to a maximum of 2.2 cents per kilogram.

In April 1974 an export charge of 0.3 cents per kg was introduced under the *Honey Export Charge Act* 1973 to provide necessary additional finance for the Honey Board to regulate Australian honey exports and undertake associated promotional and research activities. This levy may be increased by regulation to a maximum of 1 cent per kg.

Collections of the domestic sales levy have amounted to $128,000 and $162,000 in 1973–74 and 1974–75 respectively. Collections of the export levy amounted to $28,400 in 1974–75. The sum made available for research ($5,000 per annum in recent years) is matched by the Commonwealth Government with funds from the Special Research Grant.

RURAL IMPROVEMENTS, CONSERVATION AND CONSUMPTION OF FODDER

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. Production of nitrogenous fertilisers is based on both Australian natural and refinery gas and imported naphtha feedstocks. Production of phosphatic fertilisers is dependent upon imported phosphate rock but with the development of domestic rock deposits, rock from these sources will be phased out of local manufacture.

As a result of widespread phosphate deficiency in Australian soils, phosphatic fertilisers account for a large proportion of usage both on crops and pastures. During 1973–74 usage of nitrogen, phosphorus and potassium in elemental terms was in the ratio of approximately 2:6:1.

Principal crops and pastures fertilised, etc.

Information regarding the principal crop and pasture areas treated with artificial fertilisers, and the quantity of artificial fertilisers (superphosphate, nitrates, etc.) used is given in the following tables.

PRINCIPAL CROPS AND PASTURES ARTIFICIALLY FERTILISED, AREA FERTILISED TYPE AND QUANTITY(a) USED, 1974-75

Crops and pastures		*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Australia*
Sown and native pastures—										
Area fertilised	hectares	3,358,384	3,439,255	198,017	1,662,167	5,293,984	506,850	14,229	11,436	14,484,322
Type of fertiliser used—										
Superphosphate	tonnes	439,649	542,297	43,158	233,303	712,130	85,457	1,556	1,308	2,058,858
Nitrogenous	,,	8,705	7,740	5,806	752	6,742	1,396	26	..	31,167
Other(b)	,,	7,032	85,527	4,383	5,679	29,541	14,210	4	..	146,376
Lucerne—										
Area fertilised	hectares	93,105	48,182	8,701	(c)475,336	10,286	3,744	140	390	639,884
Type of fertiliser used—										
Superphosphate	tonnes	14,891	10,671	2,396	(c)80,954	1,796	823	29	54	111,614
Nitrogenous	,,	20	187	401	(c)147	54	4	..	4	817
Other(b)	,,	515	..	183	(c)1,919	526	500	..	..	3,643
Wheat—										
Area fertilised	hectares	1,460,800	970,081	56,316	1,120,334	2,748,569	1,493	..	204	6,357,797
Type of fertiliser used—										
Superphosphate	tonnes	96,867	114,595	2,117	144,627	308,121	357	..	24	666,708
Nitrogenous	,,	6,051	1,947	2,537	1,901	75,722	1	..	..	88,159
Other(b)	,,	6,747	1,291	159	5,264	3 262	10	..	..	16,733
Oats, barley and rye—										
Area fertilised	hectares	499,793	(d)344,680	83,937	(e)648,463	701,517	23,394	..	239	2,302,023
Type of fertiliser used—										
Superphosphate	tonnes	43,071	(d)43,412	5,636	(e)86,302	91,048	5,039	..	28	274,536
Nitrogenous	,,	3,967	(d)653	4,855	(e)1,286	9,690	53	..	..	20,504
Other(b)	,,	3,367	(d)727	903	(e)4,406	1,242	573	..	8	11,226
Other cereals—										
Area fertilised	hectares	91 921	3,260	100,163	167,274	4,290	23	8,615	..	375,546
Type of fertiliser used—										
Superphosphate	tonnes	3,898	536	4,360	22,290	353	6	3,105	..	34,548
Nitrogenous	,,	11,873	50	8,645	172	667	..	988	..	22,395
Other(b)	,,	2,141	87	1,359	841	108	4	5	..	4,545
Sugar cane—										
Area fertilised	hectares	11,767	..	236,602	..	..	..	..	..	248,369
Type of fertiliser used—										
Superphosphate	tonnes	639	..	20,514	..	..	..	..	..	21,153
Nitrogenous	,,	5,345	..	118,517	..	..	..	..	..	123,862
Other(b)	,,	1,147	..	83,564	..	..	..	..	..	84,711
Vegetables for human consumption—										
Area fertilised	hectares	17,094	21,094	16,001	7,583	5,597	10,054	104	48	77,575
Type of fertiliser used—										
Superphosphate	tonnes	6,071	7,707	1,942	4,089	2,890	3,016	30	3	25,748
Nitrogenous	,,	2,445	1,952	3,845	1,702	5,105	177	11	11	15,248
Other(b)	,,	9,085	13,337	7,589	4,342	3,804	6,526	47	47	44,777
Fruit—										
Area fertilised	hectares	20,730	14,450	13,601	11,509	5,603	3,346	31	7	69,277
Type of fertiliser used—										
Superphosphate	tonnes	4,464	3,541	1,687	4,629	2,206	631	8	1	17,167
Nitrogenous	,,	4,065	4,202	5,988	3,021	2,617	363	8	..	20,264
Other(b)	,,	12,063	3,712	9,077	2,804	1,447	2,079	3	2	31,187
Grapevines—										
Area fertilised	hectares	6,833	13,174	974	15,797	1,660	..	..	..	38,438
Type of fertiliser used—										
Superphosphate	tonnes	2,160	1,683	85	5,503	466	..	..	..	9,897
Nitrogenous	,,	713	829	54	1,095	289	..	..	..	2,980
Other (b)	,,	923	656	382	2,349	309	..	..	..	4,619
All other crops—										
Area fertilised	hectares	67,475	21,349	38,971	14,949	117,656	10,611	2	..	271,013
Type of fertiliser used—										
Superphosphate	tonnes	4,097	4,662	3,651	2,560	27,408	2,399	..	..	44,777
Nitrogenous	,,	4,345	541	2,942	64	1,369	332	..	..	9,593
Other(b)	,,	2,046	2,782	4,959	191	622	905	1	..	11,506
Total—										
Area fertilised	hectares	5,627,902	4,875,525	753,283	4,123,412	8,889,162	559,515	23,121	12,324	24,864,244
Type of fertiliser used—										
Superphosphate	tonnes	615,807	729,104	85,546	584,257	1,146,418	97,728	4.728	1,418	3,265,006
Nitrogenous	,,	47,529	18,101	153,590	10.140	102,255	2,326	1,033	15	334,989
Other(b)	,,	45,066	108,119	112,558	27,795	40,861	24,807	60	57	359,323

(a) Includes quantities of "double" and "triple" strength superphosphate converted to single strength equivalent. (b) Includes mixed and compounded fertilisers. (c) Includes Lucerne-based pastures. (d) Excludes rye which is included in "Other Cereals". (e) Excludes oats and rye which are included in "Other Cereals."

PRINCIPAL CROPS AND PASTURES ARTIFICIALLY FERTILISED, AREA FERTILISED TYPE AND QUANTITY USED, AUSTRALIA

Crops and pastures	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
AREA FERTILISED (Hectares)					
Sown and native pastures	14,938,139	13,296,223	15,256,254	17,994,410	14,484,322
Lucerne		482,475	496,955	494,949	639,884
Wheat	5,374,724	5,619,253	6,071,142	7,146,716	6,357,797
Oats, barley and rye	3,993,892	3,818,567	3,335,886	3,060,760	2,302,023
Other cereals		190,291	199,548	197,573	375,546
Sugar cane	228,404	234,301	239,672	235,843	248,369
Vegetables for human consumption	84,535	87,609	77,576	73,024	77,575
Fruit	125,170	82,493	79,750	74,828	69,277
Grapevines		35,966	35,551	35,726	38,438
All other crops	541,385	301,525	283,397	214,938	271,013
Total	**25,286,247**	**24,148,703**	**26,075,731**	**29,528,767**	**24,864,244**
SUPERPHOSPHATE USED (Tonnes)					
Sown and native pastures	2,158,413	1,895,616	2,233,071	2,708,648	2,058,858
Lucerne		77,079	79,887	89,142	111,614
Wheat	598,951	623,297	688,052	803,568	666,708
Oats, barley and rye	460,323	443,241	394,748	383,292	274,536
Other cereals		12,752	16,591	18,886	34,548
Sugar cane	22,477	18,544	19,830	20,642	21,153
Vegetables for human consumption	26,923	26,681	25,090	25,055	25,748
Fruit	27,200	17,781	18,012	18,904	17,167
Grapevines		8,950	9,061	10,242	9,897
All other crops	86,286	36,301	37,439	31,466	44,777
Total	**3,380,569**	**3,160,244**	**3,521,784**	**4,109,845**	**3,265,006**
NITROGENOUS FERTILISERS USED (Tonnes)					
Sown and native pastures	31,801	44,251	45,019	49,177	31,167
Lucerne		1,288	1,170	1,169	817
Wheat	31,153	30,021	32,382	72,754	88,159
Oats, barley and rye	33,435	19,018	16,943	23,426	20,504
Other cereals		19,126	19,561	47,694	22,395
Sugar cane	80,072	96,197	108,852	109,565	123,862
Vegetables for human consumption	11,335	13,624	11,879	21,907	15,248
Fruit	24,204	19,184	19,781	23,886	20,264
Grapevines		3,627	3,742	4,519	2,980
All other crops	9,622	12,493	10,573	12,851	9,593
Total	**221,622**	**258,829**	**269,902**	**366,946**	**334,989**
OTHER ARTIFICIAL FERTILISERS USED(*a*) (Tonnes)					
Sown and native pastures	131,719	151,039	176,467	168,258	146,375
Lucerne		4,418	4,215	5,562	3,643
Wheat	36,864	18,085	19,590	14,729	16,733
Oats, barley and rye	34,506	14,394	12,447	11,513	11,226
Other cereals		4,186	4,450	5,574	4,545
Sugar cane	68,898	69,985	75,127	75,589	84,711
Vegetables for human consumption	56,131	51,979	47,017	35,842	44,777
Fruit	48,782	34,985	35,488	28,655	31,187
Grapevines		4,515	5,074	4,442	4,619
All other crops	21,193	13,773	12,541	10,020	11,506
Total	**398,093**	**367,359**	**392,415**	**360,185**	**359,323**

(*a*) Includes mixed and compounded fertilisers.

Imports and exports of fertilisers

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

	1970–71		*1971–72*		*1972–73*		*1973–74*		*1974–75*	
Description	*'000 kg*	*$'000*	*'000 kg*	*$'000*	*'000 kg*	*$'000*	*'000 kg*	*$'000*	*'000 kg*	*$'000*
Fertilisers, crude—										
Natural sodium nitrate	3,242	185	3,159	212	3,572	225	3,921	286	3,135	494
Natural phosphates, whether or not ground	2,107,482	22,174	1,654,352	18,157	2,281,922	22,647	3,109,470	35,236	2,647,410	74,059
Natural potassic salts, crude	5,203	152	..	..	..	..	..	..	..	..
Fertilisers, manufactured—										
Mineral or chemical fertilisers, nitrogenous—										
Ammonium nitrate	14,648	954	2,695	164	9,185	458	3,987	255	6,480	967
Ammonium sulphate	453	20	375	13	144	7	111	11	43	8
Calcium ammonium nitrate	1,042	40	1,097	41	1,032	48	1,044	64	538	120
Sodium nitrate	2,101	110	1,035	66	805	116	198	17	35	3
Urea containing in the dry state more than 45% by weight of nitrogen	12,669	626	6,984	435	1,302	76	122	21	4,347	1,245
Other	948	58	564	32	757	47	1,073	87	844	111
Mineral or chemical fertilisers, phosphatic—										
Basic slag	..	..	..	..	..	..	..	..	..	..
Other (including superphosphates)	3,141	132	2,433	218	2,044	123	1,816	151	332	49
Mineral or chemical fertilisers, potassic—										
Potassium chloride	136,138	4,045	130,431	3,350	156,184	4,254	182,881	5,221	211,108	9,523
Potassium sulphate	17,131	748	15,482	768	9,101	438				
Other	2,468	66	891	54	128	8				
Fertilisers, n.e.s. In the form of tablets, lozenges and similar prepared forms or in packs of gross weight not exceeding 10 kg	39	54	49	53	29	30	214	109	170	137
Other—										
Sodium nitrate mixed or combined with potassium nitrate	234	15	118	9	100	9	31	7	18	3
N.P.K. complete fertilisers	7,439	443	14,850	985	5,491	439	4,258	430	3,801	647
Mixed or composite fertiliser	375	22	44	10	74	17	197	45	79	28
Blood and bone	..	..	..	..	..	..	..	..	..	..
Other	952	117	320	68	577	104	500	122	699	264

Exports of fertilisers (manufactured locally) amounted to 28,562 tonnes valued at $2,789,000 in 1974–75 compared with 39,407 tonnes valued at $1,929,000 in 1973–74.

Pasture improvement

An article on pasture improvement, which includes notes on indigenous and introduced species of grasses and 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 Federal and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

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 593,000 hectares; in 1974–75 the total was 5,080,000 hectares. The following table shows details of area treated and materials used for each State for years ended 31 March.

AERIAL AGRICULTURE

Year ended 31 March	*Area topdressed and seeded*	*Area sprayed*	*Total area treated(a)*	*Materials used*		*Total flying time*
				Super-phosphate	*Seed*	
	'000 hectares	'000 hectares	'000 hectares	tonnes	tonnes	hours
1975—						
New South Wales(b)	2,172	512	2,754	261,658	4,595	41,167
Victoria(c)	649	132	814	112,824	5	18,327
Queensland	154	314	522	8,489	146	12,505
South Australia(d)	119	145	264	16,051	38	4,675
Western Australia	284	441	726	74,827	21	12,525
Australia	**3,378**	**1,544**	**5,080**	**473,849**	**4,805**	**89,199**
1971	3,304	1,124	4,581	417,366	1,111	83,692
1972	2,795	1,357	4,291	335,374	1,991	75,620
1973	3,359	1,355	4,788	446,190	1,646	89,432
1974	4,870	1,870	6,776	546,009	2,510	93,288

(a) Includes other types of treatment (rabbit baiting, etc.). (b) Includes the Australian Capital Territory. (c) Includes Tasmania. (d) includes the Northern Territory.

Irrigation on rural holdings

Details of the principal crops and the area under irrigation are given in Chapter 23, Water Resources.

Farm stocks of major cereal grains, silage and hay

FARM STOCKS OF CEREAL GRAINS

(Tonnes)

State	At 31 March— 1971	1972	1973	1974	1975
BARLEY					
New South Wales	(a)	150,938	98,970	147,008	90,928
Victoria	62,994	91,669	86,999	91,788	62,534
Queensland	21,060	48,922	27,041	49,700	36,667
South Australia	133,017	189,501	156,444	147,737	135,244
Western Australia	102,056	144,528	189,226	163,617	108,247
Tasmania	10,004	10,447	10,758	9,315	8,590
Northern Territory	(b)	(a)	(a)	(a)	(a)
Australian Capital Territory	(b)	(a)	(a)	(a)	(a)
Australia	n.a.	(c)636,005	(c)569,438	(c)609,165	(c)442,210
OATS					
New South Wales	611,889	415,855	260,918	360,598	392,123
Victoria	289,358	263,315	259,058	289,328	148,733
Queensland	13,516	14,653	9,592	11,020	21,646
South Australia	115,533	138,857	85,836	114,255	97,672
Western Australia	209,830	285,427	169,075	260,560	194,794
Tasmania	8,176	7,138	12,778	6,931	6,213
Northern Territory	(b)	(a)	(a)	(a)	(a)
Australian Capital Territory	565	411	262	586	285
Australia	(c)1,248,867	(c)1,125,656	(c)797,519	(c)1,043,278	(c)861,466
WHEAT					
New South Wales	301,285	296,328	325,987	326,891	257,884
Victoria	137,537	169,455	157,904	148,748	122,664
Queensland	20,535	26,641	27,773	27,452	28,831
South Australia	105,288	105,489	122,119	120,799	109,373
Western Australia	279,158	214,055	199,481	221,541	209,086
Tasmania	2,563	2,534	4,413	3,214	2,344
Northern Territory	(b)	(a)	(a)	(a)	(a)
Australian Capital Territory	649	348	540	485	483
Australia	(c)847,015	(c)814,850	(c)838,217	(c)849,130	(c)730,665

(a) Not available for publication. (b) Not collected. (c) Incomplete; *see* footnotes to individual states.

FARM STOCKS OF SILAGE

(Tonnes)

State	At 31 March— 1971	1972	1973	1974	1975
New South Wales	860,565	745,997	590,043	769,127	775,097
Victoria	226,126	237,561	157,607	284,343	164,265
Queensland	129,622	187,159	173,979	168,017	142,146
South Australia	58,129	77,299	44,708	49,245	51,260
Western Australia	37,537	57,328	28,330	59,607	42,438
Tasmania	69,317	73,342	44,477	66,190	67,654
Northern Territory	(a)	589	469	842	275
Australian Capital Territory	50	737	203	1,350	6,630
Australia	(b)1,381,346	1,380,012	1,039,816	1,398,721	1,249,765

(a) Not collected. (b) Incomplete; excludes the Northern Territory.

FARM STOCKS OF HAY
(Tonnes)

State	At 31 March— 1971	1972	1973	1974	1975
New South Wales	2,561,303	1,782,023	1,192,843	1,662,779	1,556,490
Victoria	2,695,585	3,861,139	2,547,423	3,290,408	2,958,869
Queensland	287,762	338,670	294,848	280,609	263,869
South Australia	624,278	961,820	555,213	879,545	891,575
Western Australia	407,022	479,465	398,025	561,383	442,702
Tasmania	471,596	516,321	317,193	471,290	461,997
Northern Territory	(a)	945	521	2,488	909
Australian Capital Territory	9,805	14,350	2,885	8,727	5,280
Australia	(b)7,057,351	7,954,733	5,308,951	7,157,229	6,581,691

(a) Not collected. (b) Incomplete; excludes the Northern Territory.

On-farm consumption of major cereal grains and hay

CEREAL GRAINS CONSUMED BY LIVESTOCK ON FARMS
(Tonnes)

State	1970–71	1971–72	1972–73	1973–74	1974–75
BARLEY					
New South Wales	46,186	83,275	92,180	72,447	56,956
Victoria	40,837	57,230	84,196	68,999	43,069
Queensland	62,302	68,183	73,527	74,474	64,497
South Australia	78,002	126,956	148,578	125,311	109,227
Western Australia	62,484	66,473	126,656	126,272	71,251
Tasmania	9,678	12,267	13,594	6,457	6,237
Northern Territory	(a)	(a)	(b)	(b)	(b)
Australian Capital Territory	(a)	(a)	62	64	(b)
Australia	(c)299,489	(c)414,384	(c)538,793	(c)474,024	351,297
OATS					
New South Wales	131,025	192,623	253,697	107,834	84,924
Victoria	112,797	131,081	253,968	279,966	79,924
Queensland	9,587	6,730	9,591	8,732	8,484
South Australia	75,508	63,039	80,871	52,995	44,911
Western Australia	144,469	139,516	186,820	137,426	108,145
Tasmania	4,117	3,762	5,654	3,334	2,764
Northern Territory	(a)	7	(b)	32	(b)
Australian Capital Territory	152	504	232	319	292
Australia	(c)477,655	537,262	(c)790,833	590,638	(c)329,444
WHEAT					
New South Wales	194,532	319,713	230,930	237,270	196,017
Victoria	64,661	70,969	209,135	61,485	50,385
Queensland	32,282	52,940	32,155	39,268	46,546
South Australia	99,409	55,345	73,915	43,011	40,222
Western Australia	73,642	78,803	72,980	58,496	35,660
Tasmania	10,466	11,919	13,987	16,694	14,276
Northern Territory	(a)	108	(b)	(b)	(b)
Australian Capital Territory	672	155	384	1,336	5,160
Australia	(c)415,664	589,952	(c)633,486	(c)457,560	(c)388,266

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

HAY CONSUMED BY LIVESTOCK ON FARMS

(Tonnes)

State	*1970–71*	*1971–72*	*1972–73*	*1973–74*	*1974–75*
CEREAL HAY					
New South Wales	176,193	251,585	242,414	115,958	83,026
Victoria	284,661	378,997	396,186	244,116	174,362
Queensland	18,972	26,597	25,830	18,141	21,403
South Australia	217,929	222,076	234,755	155,892	129,469
Western Australia	251,627	229,665	241,573	213,602	169,374
Tasmania	21,422	19,662	25,427	13,710	23,292
Northern Territory	(*a*)	365	542	(*a*)	(*a*)
Australian Capital Territory	293	1,027	356	332	231
Australia	(*b*)971,097	1,129,974	1,167,083	(*b*)761,751	601,157
LUCERNE HAY					
New South Wales	408,512	561,260	558,448	316,230	264,843
Victoria	128,074	172,118	173,836	111,554	95,459
Queensland	164,919	172,208	184,626	136,059	130,781
South Australia	95,769	95,413	99,019	77,428	65,853
Western Australia	(*a*)	5,461	8,070	6,473	6,041
Tasmania	(*a*)	12,444	14,572	9,595	11,720
Northern Territory	1,212	4,015	562	5,376	1,928
Australian Capital Territory	3,130	3,433	3,256	1,296	1,124
Australia	(*b*)801,616	1,026,352	1,042,389	664,011	577,749
OTHER HAY					
New South Wales	306,764	445,767	307,709	225,194	246,596
Victoria	1,477,258	1,916,440	1,800,674	1,507,121	1,522,629
Queensland	146,631	59,733	58,261	48,995	46,277
South Australia	263,388	293,527	307,146	258,611	276,239
Western Australia	220,878	216,087	234,874	227,873	243,456
Tasmania	246,320	326,094	317,999	263,356	290,833
Northern Territory	3,596	2,225	2,323	7,788	1,494
Australian Capital Territory	843	1,373	497	388	882
Australia	2,665,678	3,261,246	3,029,483	2,539,326	2,628,406

(*a*) Included in 'other hay'. (*b*) Incomplete; *see* footnotes to individual States.

Agricultural machinery on rural holdings

The tables following show the principal types of agricultural machinery on rural holdings in the States and Territories at 31 March 1975. Additional information was published in the statistical bulletin *Rural Land Use, Improvements, Agricultural Machinery and Labour*, 1974–75 (10.59).

Farm machinery on rural holdings

AGRICULTURAL MACHINERY ON RURAL HOLDINGS: 31 MARCH 1975

(Number)

Machinery	*N.S.W.*	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Tractors—									
Wheeled	82,232	78,322	66,223	35,524	32,681	11,560	451	131	307,124
Crawler	6,326	3,005	8,570	2,831	3,439	1,101	159	5	25,436
Fertiliser distributors and broadcasters(*a*)	23,887	26,681	18,036	10,021	10,099	5,518	105	56	94,403
Grain and seed harvesters (including headers and strippers)—									
Tractor drawn	12,637	9,761	3,635	8,350	7,520	510	26	10	42,449
Self-propelled	5,966	2,003	3,773	2,649	2,494	135	14	(*b*)	(*c*)17,034
Grain drills—									
Combine type	28,251	19,076	14,625	15,218	13,912	1,499	82	44	92,707
Other type	5,104	6,332	1,791	4,010	2,813	1,776	13	15	21,854
Pick-up balers	12,407	15,110	3,780	5,878	4,738	2,155	60	36	44,164
Forage harvesters	3,227	2,228	1,599	872	674	348	28	4	8,980
Rotary hoes and rotary tillers—									
Self-contained power unit	7,444	6,285	3,266	3,292	1,589	1,144	55	16	23,091
Tractor mounted and trailing types	9,571	6,066	8,088	3,154	2,236	1,159	55	16	30,345
Shearing plant (number of stands)	59,858	34,144	15,052	24,580	25,244	3,916	..	145	162,939

(*a*) Rotary and direct drop. (*b*) Not available for publication. (*c*) Excludes A.C.T.

AGRICULTURAL MACHINERY ON RURAL HOLDINGS: AUSTRALIA

(Number)

	31 March				
Machinery	*1971*	*1972*	*1973*	*1974*	*1975*
Tractors—					
Wheeled	300,844	305,628	307,271	308,714	307,124
Crawler	25,904	25,698	25,775	25,734	25,436
Fertiliser distributors and broadcasters(*a*)	98,117	96,832	96,140	96,388	94,403
Grain and seed harvesters (including headers and strippers)—					
Tractor drawn	49,904	48,477	46,107	44,440	42,449
Self-propelled	13,871	15,040	15,109	16,276	17,034
Grain drills—					
Combine type	93,567	95,779	95,743	94,881	92,707
Other type	26,078	24,959	24,066	23,161	21,854
Pick-up balers	42,187	42,942	43,399	44,565	44,164
Forage harvesters	8,479	8,960	9,044	9,237	8,980
Rotary hoes and rotary tillers—					
Self-contained power unit	23,059	24,884	25,553	25,073	23,091
Tractor mounted and trailing types	23,264	26,733	26,750	29,876	30,345
Milking plant (number of units)	n.a.	209,805	211,888	n.a.	n.a.
Shearing plant (number of stands)	n.a.	188,482	n.a.	n.a.	162,939

(*a*) Rotary and direct drop.

Sales of new tractors for agricultural purposes

Details of the sales of new tractors for agricultural purposes are given in the quarterly publication *Receipts, Sales and Stocks of New Tractors* (12.18).

RURAL EMPLOYMENT

Employment on rural holdings

The following tables contain details of persons working on rural holdings at the end of March as recorded in the annual Agricultural Census.

Males working permanently full-time include all other than casual or seasonal workers, boys and youths attending schools and other persons working only part-time. Casual or seasonal workers, including contractors for shearing, etc., but not those engaged on construction and development work, are shown as temporary employees.

Attention should be drawn to the difficulty encountered in obtaining data on persons working on holdings on a comparable basis from year to year. This is mainly due to the changing number of lessees and sharefarmers, and the tendency of many farmers to include part-time family helpers as full-time workers in their returns.

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 WORKING ON RURAL HOLDINGS: 31 MARCH 1975

	N.S.W.	*Vic.*	*Qld*	*S.A.*	*W.A.*	*Tas.*	*N.T.*	*A.C.T.*	*Aust.*
Permanent—									
Owners, lessees or sharefarmers	50,492	51,336	33,239	21,067	19,143	5,975	215	93	181,560
Relatives of owner, lessee or sharefarmer—									
Over 15 years of age, not receiving wages or salary	301	3,256	2,276	86	1,058	..	20	5	7,002
Employees, incl. managers and relatives working for wages or salary	17,784	10,236	12,156	5,479	5,885	2,310	1,124	62	55,036
Total permanent males	*68,577*	*64,828*	*47,671*	*26,632*	*26,086*	*8,285*	*1,359*	*160*	*243,598*
Temporary	18,429	20,628	11,941	6,919	(*a*)	3,674	372	98	(*a*)
Total males	**87,006**	**85,456**	**59,612**	**33,551**	(*a*)	**11,959**	**1,731**	**258**	(*a*)

(*a*) Not available for publication.

MALES WORKING ON RURAL HOLDINGS: AUSTRALIA

	31 March—				
	1971	*1972*	*1973*	*1974*	*1975*
Permanent—					
Owners, lessees or sharefarmers	191,180	194,905	189,260	185,886	181,560
Relatives of owner, lessee or sharefarmer over 15 years of age, not receiving wages or salary	(*a*)8,062	8,797	7,782	7,316	7,002
Employees, incl. managers and relatives working for wages or salary	69,667	65,333	62,580	62,150	55,036
Total permanent males	*268,909*	*269,035*	*259,622*	*255,352*	*243,598*
Temporary	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Total males	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)

(*a*) Over 14 years of age. (*b*) Not available for publication.

Employment in the agricultural sector

In addition to the statistics of employment on rural holdings compiled from agricultural census data, agricultural industry employment statistics are also available from the quarterly labour force surveys conducted by the Bureau, and from the Australian population censuses which have been conducted on six occasions since 1947. Population census information is published in *Rural Land Use, Improvements, Agricultural Machinery and Labour*, 1974–75, (10.59).

In the labour force surveys, the agricultural labour force estimates form part of the civilian labour force estimates, which are based on the results of the quarterly population survey conducted by the Bureau throughout Australia in February, May, August and November each year. The survey is a multi-stage area sample of private and non-private dwellings and covers about two-thirds of one per cent of the population of Australia. The information is obtained by means of personal interviews undertaken by specially trained interviewers. Interviews are carried out during a period of four weeks, so that there are four survey weeks in each of the months to which the survey relates. These four survey weeks are chosen so as to fall within the limits of the calendar month or with minimum encroachment into the adjacent month.

A table showing an estimate of employment in agriculture from the labour force survey is shown on page 692–3. The table is based on the Australian Standard Industrial Classification (ASIC).

Under the *ASIC classification*, the term *agriculture* is used in the broad sense to include the breeding, keeping or cultivation of animal or vegetable life, the sun-drying of fruit and the agricultural service industries, such as those operating on a contract, consultant, etc., basis. However, the following activities which could be construed as falling within the ambit of agriculture, as specified in the previous sentence, are specifically excluded:

Forestry, pisciculture and the cultivation and production of aquatic vegetation, flora and fauna sanctuaries, botanical and zoological gardens, and institutional farms with research or penal functions.

Further information relating to the labour force surveys can be obtained from the quarterly Bureau publication *The Labour Force* (6.20).

ASSISTANCE TO, AND REGULATION OF, AGRICULTURE

This section is intended to provide a summary of the means by which the Australian agricultural industries are assisted and regulated. It is not intended to provide a comprehensive statement of all the consultative and legislative assistance and control measures that exist, but rather to describe the way in which these processes affect the crops, livestock and livestock products referred to earlier in this chapter.

General

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 Federal and State Ministers on agricultural and marketing matters held at Canberra in December 1934. The Council consists of the Commonwealth Government Ministers for Primary Industry and the Northern Territory and the State Ministers of Agriculture/Primary Industries, with power to co-opt the services of other Commonwealth Government 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 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 Commonwealth Department of Primary Industry and State Departments of Agriculture/Primary Industries and a representative each from the Commonwealth Departments of the Treasury, Health, Overseas Trade, the Northern Territory, and from the Commonwealth Scientific and Industrial Research Organization.

The Rural Reconstruction Scheme

The Rural Reconstruction Scheme commenced in 1971 when the Commonwealth Government agreed to make finance available to the States to help restore to economic viability those farms and farmers with the capacity to maintain viability once achieved.

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 1972 the Commonwealth Government undertook to provide the whole $100 million by 30 June 1973 and to provide an additional $18 million in 1973–74 to fund approvals given in the later months of 1972–73.

At the 1973 Review it was agreed to extend the Scheme for 3 years to 30 June 1976 with the Commonwealth Government authorising each State to approve a maximum amount of assistance in each year. A total of $36 million was allocated for 1973–74, $28 million for 1974–75 and $30 million for 1975–76. A Review in 1976 extended the Scheme to December 1976.

The Commonwealth Government provides the funds to the States on the basis of 75 per cent loan (repayable over 20 years) and 25 per cent grant. The States lend money to eligible farmers who repay their loans, with interest, over a period of years to the State. Each State Government has appointed an Authority responsible to a Minister, to undertake the detailed administration of the Scheme within its State.

Three forms of assistance are available.

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.

Farm build-up to assist the normal processes under which properties which are too small to be economic are amalgamated with an adjoining holding or are subdivided and the subdivided portions are added to adjoining holdings, 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.

Rehabilitation to provide limited assistance to those obliged to leave the industry where, in the opinion of the Authority administering the Scheme, this is necessary to alleviate conditions of personal hardship. The maximum rehabilitation loan at present is $3,000.

To 30 June 1975 over $189 million had been approved under the Scheme to provide assistance to 4,306 farmers for debt reconstruction, 2,576 for farm build-up and 182 farmers in need of rehabilitation assistance.

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 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. 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.

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 Government-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 Government funds (*see* Chapter 18, Public Finance pages 597–8).

For research work in industries where legislation-backed arrangements do not exist, voluntary contributions from the rural industry are matched by the Commonwealth Government from a special research grant to finance a range of research projects, e.g. fruit fly disinfestation, locust control, honey, potato research and mohair production.

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.Commonwealth extension services operate in the Northern Territory and the Australian Capital Territory.

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 States have strengthened the economic and farm management content of extension work.

Support for the field extension staff is provided by information service groups, by applied research teams and industry and subject matter specialist groups including economists, and by diagnostic and analytical services. Some States have advisory staff specialising in agricultural mechanisation. In recent years emphasis has been placed on the regional development of extension services.

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 Government 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 through the Extension Services Grant. Provision for the five year period which began in 1971 amounted to $37 million. The Grant was renewed for the 1975–76 financial year amounting to $9.9 million. The Grant is disbursed mainly to State Departments of Agriculture, and its scope includes extension, regional research, information, economic services, agricultural education 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 service 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.

Crops and crop products

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 Stabilisation 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 stablisation of the wheat industry, including controls exercised during the 1914–18 and 1939–45 Wars and legislation establishing the Wheat Industry Stabilisation Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295–9.

The Wheat Industry Stabilisation 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 stablisation 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 1968–73 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), No. 54, pages 868 and 869 (1963–64 to 1967–68), and No. 55, pages 834 and 835 (1968–69 to 1972–73).

The Fifth Wheat Industry Stabilisation 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, for one year, to cover the 1973–74 crop. More detailed information is available in the publication: *The Wheat Industry*, 1973–74 *and* 1974–75 *(Preliminary)*, (10.35).

Sixth Wheat Industry Stabilisation Plan, 1974–75 to 1979–80. The sixth post-war Wheat Industry Stabilisation Plan was agreed to by the industry and the Commonwealth and State Governments following negotiations during 1973 and 1974. The *Wheat Industry Stabilization Act* 1974 and the complementary *Wheat Export Charge Act* 1974 and the *Wheat Products Export Adjustment Act* 1974 were enacted in September 1974. Complementary legislation was enacted by the State Governments by the beginning of the marketing year on 1 December 1974 as some aspects of the plan rely on State law for their operation. The new plan abandoned the concept of guaranteed price, replacing it with a stabilised price related to movements in the International Wheat Market. Details of the guaranteed price operating under the former plan are given in earlier issues of the Year Book. The main features of the new stabilisation plan are set out below:

(i) *Period of the plan.* The plan is to operate for five years commencing 1 October, 1974. The Australian Wheat Board's marketing powers will be extended for two seasons beyond the duration of the stabilisation plan to enable continuity of the Board's operations to be maintained.

(ii) *Stabilisation price.* For the 1974–75 season the price was set at $73.49 per tonne f.o.b. The price will be adjusted for each of the next four succeeding seasons by application of the formula

$$SP_2 = SP_1 + \frac{EP_2 - A_1}{4}$$

where SP_2 = stabilisation price for the current season;

SP_1 = stabilisation price for the season immediately preceding the current season;

EP_2 = the average export price for the current season, and

A_1 = one-half the sum of the average export price for the season immediately preceding the current season and the stabilisation price for the immediately preceding season.

(iii) *Average export price.* The average price, f.o.b. equivalent, contracted to be paid for all exported wheat.

(iv) *Operation of the Stabilisation Fund.* The Stabilisation Fund will commence with a credit balance (estimated at $48 million) equal to the amount to be contributed as charge on wheat exports for the 1973–74 season.

Industry contributions to the Fund. When the average price for all exports of a season is above the stabilisation price set for that season, and above $55.12 per tonne f.o.b., growers will contribute to the fund up to $30 million or $5.51 per tonne, whichever is the lower, subject to the growers' contribution not exceeding an amount which would bring the final price, that is, the average export price less the contribution to the fund, down to $55.12 per tonne. If the aggregate of the growers' contributions plus the interest earning should at any time take the fund to a credit in excess of $80 million, the excess will be refunded to the Wheat Board for distribution to the earliest contributing pool.

Payment from the Fund. When the average price for all exports of a season is below the stabilisation price set for that season, growers will receive from the fund payments necessary to lift the average price for all exports of the season to the stabilisation price, subject to,

(a) maximum payment per season of $30 million or $5.51 per tonne, whichever is the lower, and

(b) the payment not exceeding an amount which will bring the final price, that is the average export price plus the payment from the fund, to $73.49 per tonne. A qualification is that should the credit of the fund reach $80 million this restriction on payments from the fund will not apply for the ensuring period of the plan.

Government support for the Fund. If, in any season, the fund contains an insufficient level of industry contributions to meet payments required to be made from the fund in that season, the Government will contribute to the fund for monies necessary to meet the deficiency, subject to

(a) Any Government contribution to the fund being repaid to the Government from industry contributions and subsequent seasons of the plan period before those industry contributions are accumulated in the fund, and
(b) the net Government contribution to the fund over the 5 seasons not exceeding $80 million.

The Government has agreed that any outstanding Government contributions not recouped by the end of the fifth season will be written off. Details of the former stabilisation fund arrangements are given in previous issues of the Year Book.

(v) *Home consumption price.* The home consumption price arrangements will continue on the existing basis except that the Act in authorising the Minister to determine, in consultation with the State Ministers, the price at which the basic wheat is to be sold by the Board on the domestic market, does so on the basis that it will be a single price for wheat for all purposes.

The home consumption price in each year commencing on 1 December will be adjusted on the base level of $70.41 per tonne, being the 1973–74 price (less the Tasmanian freight loading), according to movements in cash costs and in rail freight and handling charges. Amending legislation passed in April 1976 provided for the inclusion of an owner/operator's labour allowance in the index adjustment of the home consumption price.

(vi) *Tasmanian freight loading.* Continuing provision will be made for the Board to recoup in the the home consumption price the cost of shipping wheat from the mainland to Tasmania but on the basis that the Board will be empowered to take such steps as are practicable to recoup from Tasmanian interests the freight costs of the wheat equivalent of any products made from wheat of mainland origin and exported from Tasmania to the mainland.

(vii) *Nomenclature.* The term 'fair average quality' (f.a.q.) has been replaced by the term 'Australian standard white' (A.S.W.) which means wheat other than wheat classified by or on behalf of the Australian Wheat Board as prime hard, hard, durum or soft biscuit wheat or as having a defect quality.

(viii) *Quota arrangements.* The Act contains provisions for the retention of the wheat delivery quota mechanism on the basis that it will be optional whether State governments make allocations of any State quotas, which may be applied in a season, to individual growers. However, the Act continues the existing requirement that in a quota season advances will only be payable by the Board on wheat delivered within a State up to the level of the quota determined for that State.

(ix) *Borrowings by the Board.* The Board retains the authority to borrow from the Reserve Bank, through its Rural Credits Department, the funds required for first advance payments to growers and for its marketing operations. In addition it is being given a supplementary borrowing power which could be used to make progress payments to growers at an accelerated rate, to expedite repayment of seasonal borrowings from the Reserve Bank or to finance stock holdings for lengthy periods. It is envisaged that the Board will only be authorised to borrow commercially against fully secured outstanding debts. All borrowings will be with the approval of the Minister and a Government guarantee of repayment may be given.

(x) *First Advanced Financial Arrangements.* As has applied since 1948, the *Wheat Industry Stabilization Act* 1974 empowers the minister for Primary Industry to provide a Commonwealth Government guarantee against the borrowings the Wheat Board makes from the Rural Credits Department of the Reserve Bank to enable the Board to pay a first advance on the delivery of wheat to it. The level of the first advance is determined on each occasion by the Minister.

Wheat prices: Home consumption prices. 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. However, as indicated in (v) above, at the beginning of the 1973–74 season the Board reverted to selling all wheat on the home market at a single domestic price i.e. the home consumption price.

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

WHEAT PRICES: HOME CONSUMPTION PRICES(*a*)(*b*)
($ per tonne)

Utilisation	*1971–72*	*1972–73*	*1973–74*	*1974–75*	*1975–76*
Human consumption	65.40	67.63	71.10	83.40	(*c*)98.70
Manufacture of flour for industrial use	54.75	56.97			
Stockfeed (basic)	58.79	67.63			
Stockfeed (where purchaser undertakes to buy entire season's requirements from Wheat Board)	54.75	56.97			

(*a*) Australian Wheat Board basic selling price for A.S.W. bulk wheat, f.o.r. (ports) basis. (*b*) Includes a loading of $0.44 in 1971–72, $0.83 in 1972–73, $0.69 in 1973–74, $0.67 in 1974–75 and $1.15 in 1975–76, to meet freight charges on wheat shipped to Tasmania. (*c*) Increased to $99.32 from May 1976 following the inclusion of an owner/operator's allowance in the index adjustment of the home consumption price.

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 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 receival and subsequent sale by the Australian Wheat Board is concerned.

State quotas effective for the 1971–72 to 1973–74 seasons and those proposed by the Federation and agreed to by all parties for 1974–75 are given in the table below. Delivery quotas were suspended for the 1975–76 season and again for the 1976–77 season.

WHEAT DELIVERY QUOTAS
('000 tonnes)

Quota	*State*	*Seasons* *1971–72*	*1972–73*	*1973–74*	*1974–75*
Basic	New South Wales	3,102	4,028	5,030	5,030
	Victoria	1,551	1,823	2,490	2,490
	Queensland	735	871	1,012	1,012
	South Australia	1,089	1,252	1,886	1,886
	Western Australia	2,068	2,585	3,065	3,065
	Total	*8,545*	*10,559*	*13,483*	*13,483*
Additional	New South Wales—				
	Prime hard	327	191	191	191
	Durum	54	54	54	54
	Queensland—				
	Prime hard	299	163	163	163
	South Australia—				
	Southern hard	..	109	109	109
	Total	*680*	*517*	*517*	*517*
	Grand total	**9,225**	**11,076**	(*a*)**14,000**	(*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 1974–75 (as in 1973–74) provision has been made for a special pool quantity of 2,000,000 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 was $1.10 per bushel ($40.42 per tonne) for A.S.W. bulk wheat, f.o.r. ports basis for a number of years. For 1973–74 in addition to $1.10 there was a special incentive first advance payment of 10 cents per bushel ($3.67 per tonne). For 1974–75 there was the same first advance payment of $1.20 per bushel ($44.09 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.

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 Wheat Agreement, 1971. This Agreement came into force on 1 July 1971. It originally had a life of three years but was extended twice by protocol to 30 June 1976. The form of the 1967 International Grains Arrangement (*see* Year Book No. 55, page 836) was 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, an Advisory Sub-Committee on Market Conditions keeps the wheat market under continuous review. This Sub-Committee is required to 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.

All major wheat trading nations except China (excluding Taiwan Province) participate in the Wheat Trade Convention. China may participate if it so wishes.

The 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 (or the cash equivalent thereof). Australia's contribution will remain unchanged at 225,000 tonnes annually (8,267,000 bushels of wheat). Minimum annual contributions under the Convention total 4,226,000 tonnes in 1975–76.

Several minor changes were 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 are 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.

The International Wheat Agreement was again (in 1976) extended by protocol to run two years to 30 June 1978. The Council has established a Preparatory Group to examine the possible basis for a new agreement.

Research into the wheat industry

To the end of June 1975, the Wheat Industry Research Council and the State Wheat Industry Research Committees had spent $23,726,000 mainly through grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, Australian Universities and Wheat Research Institutes.

SUGAR CANE

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 price (in centres in which refineries are established and in Hobart, Launceston and Darwin) of refined sugar sold to wholesalers for consumption in Australia. The 1975 Sugar Agreement between the

Commonwealth and Queensland Governments (18th Agreement since the 1923 Sugar Agreement when the control of marketing was passed to Queensland) came into operation on 1 February 1975 for an agreed period ending 30 June 1979.

Control over production of sugar is the responsibility of the Queensland Government. At the mill level, production control is exercised by means of seasonal 'mill peaks' in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total of 'mill peaks' approximately equals the estimated requirements of the domestic and secure export markets. Individual farm production is regulated in accordance with the production limit on that mill which the farm supplies.

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 in 1974–75 was 2,847,910 tonnes basis 94 net titre and for 1975–76 is estimated at 2,854,382 tonnes 94 net titre, of which New South Wales production contributed 103,962 tonnes.

International Sugar Agreement

The 1973 International Sugar Agreement, which is now in operation, came into force on the expiry of the 1968 Agreement; and that Agreement was preceded by the 1937, 1953, and 1958 Agreements. Details of the 1937, 1953, 1958 and 1968 Agreements were given in Year Books No. 40, pages 881–2; No. 48, page 936; No. 54, page 892; and No. 59, pages 782–3, respectively.

A United Nations Sugar Conference was convened in 1973, the last year of the 1968 Agreement, to negotiate a new International Sugar Agreement to follow on the 1968 Agreement. It was not possible to negotiate at the Conference an Agreement with regulatory provisions, such as the 1968 International Sugar Agreement, which established basic export tonnages for all exporters, a quota/price mechanism, and stockholding, supply commitment, and import limitation obligations.

The 1973 International Sugar Agreement is only an administrative Agreement. It provides for the continuation of the International Sugar Organisation, and for work to progress towards the negotiation of a new Agreement. Initally of two years duration, the term of operation of the Agreement was extended to 31 December 1976 by resolution of the International Sugar Council at its September 1975 meeting.

Australia is an exporting member of the International Sugar Organisation under the 1973 International Sugar Agreement.

Commonwealth Sugar Agreement

Under the terms of the Commonwealth Sugar Agreement, Australia has supplied over 300,000 tonnes of sugar annually for over twenty years to the United Kindgom at a negotiated price. At the 1971 triennial review of the Agreement, the annual negotiated price quota was continued at 335,000 long tons, and the negotiated price for the three years 1972 to 1974 was agreed at £stg 50 per long ton f.o.b. and stowed, bulk sugar 96° polarisation. In early 1974, it was agreed that an additional £stg 11 per ton would be paid on shipments of negotiated price sugar in the 1974 calendar year.

The Commonwealth Sugar Agreement terminated at the end of 1974, as a consequence of the United Kingdom's accession to the European Economic Community.

Exports to the United States of America

Australian sugar exports to the United States of America were, in the past, subject to the quota provisions of the United States Sugar Act, which expired at the end of 1974, and thus varied from year to year following changes in quotas as U.S. requirements and domestic production, and export availabilities of other suppliers, changed. In 1973 and 1974 exports to the U.S. totalled 230,802 and 209,381 tonnes *tel quel* sugar respectively. Following expiration of the quota provisions, 470,551 tonnes *tel quel* sugar were exported to the U.S. in 1975.

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 $4.33 a tonne 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. This was increased to $9.84 a tonne from 16 May 1960, to $14.76 a tonne from 1 July 1969 and to $15 per tonne from 1 February 1975.

The Queensland Government is responsible for payment of an export sugar rebate to exporters of approved fruit products and other approved products to ensure that manufacturers do not pay higher prices for the Australian sugar content of those products than the Australian equivalent of the world sugar parity price. Payment is made upon satisfactory arrangements having been made for payment for the fresh fruit used for processing at not less than the minimum prices (if any) which the Committee has declared.

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 return 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.

TOBACCO

Tobacco 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 11.793 million kilograms (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 12.927 million kilograms, which was subsequently increased to 14.288 million kilograms 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 15.422 million kilograms which was set for the 1971 season was retained through to the 1976 season. 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 and representative of the Commonwealth Government, tobacco-producing States, growers and manufacturers.

The guaranteed average minimum Australian price for the 1971, 1972 and 1973 seasons, 252.4 cents per kg, is 12.1 cents per kg above the price set for the 1970 season. The price for the 1974 season was set at 288.4 cents per kg, for 1975 at 336.4 cents per kg, and for 1976 at 347 cents per kg.

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 a 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 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 1975 expenditure from the Account amounted to $12.5 million, and allocations for support of research projects in 1974–75 totalled $1,037,252.

Tobacco research and extension

The Commonwealth Scientific and Industrial Research Organisation closed down operations of the Tobacco Research Institute, Mareeba, on 30 June 1975. Some plant breeding work is being continued in Canberra, but this will cease in August 1976. The C.S.I.R.O. will then no longer be actively associated with tobacco research. The New South Wales Department of Agriculture ceased tobacco research activities from the end of the 1974–75 season. The Victorian Department of Agriculture and the Queensland Department of Primary Industries are expanding their research activities to take over the plant breeding program previously undertaken by the C.S.I.R.O., as well as maintaining investigations into a wide range of problems including fundamental and applied research, plant nutrition, disease and pest control and cultural practices. They are continuing to maintain 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.

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 1974–75 the quantity of cured leaf recorded as used in tobacco factories in Australia amounted to 24.2 million kg, of which 13.6 million kg was of local origin. The balance was imported, chiefly from the United States of America.

COTTON

Final payments under the *Raw Cotton Bounty Act* 1963 were made in 1971. For further details *see* Year Book No. 59 and earlier issues.

FRUIT

Apples and pears

The *Australian Apple and Pear Corporation Act* 1973, which was proclaimed on 1 September 1974, provided for the establishment of an Australian Apple and Pear Corporation which replaced the Australian Apple and Pear Board.

The Corporation consists of nine part-time members (an independent Chairman, four members to represent growers, three members with special qualifications and one member to represent the Commonwealth Government) who are appointed for a period of three years. The Australian Apple and Pear Board's overseas representative in London has been retained by the Corporation.

Export control and regulation functions of the previous Apple and Pear Board have been absorbed by the Corporation. It also has been provided with a much wider role, e.g. powers to trade under certain circumstances, to charter shipping for such trade and, subject to Government approval, to borrow funds for trading operations. In addition, it has important functions in promotion and research in both fresh and processed apple and pear products.

Early in October 1971 the Government approved a stabilisation plan for the export of apples and pears 'at risk', with an estimated Commonwealth Government liability of $10 million over five 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. The Government approved the recommendation of the Industries Assistance Commission Report on Fruit Growing extending the apple and pear stabilisation scheme for the 1976 season.

The Fruitgrowing Reconstruction Scheme

The Fruitgrowing Reconstruction Scheme, which commenced on 14 July 1972, provides $4.6 million to assist fruitgrowers who are in financial difficulties to remove some or all of their fruit trees and either leave the industry or put the land to other use. It is regarded as an extension of the Rural Reconstruction Scheme; fruitgrowers may receive assistance under both schemes.

A fruitgrowing industry may qualify for assistance under the Scheme if its trees take at least five years to mature, have a commercial bearing life of at least ten years, and produce fruit of which there is a chronic over-supply. The Scheme applied initially to the canning peach, canning pear, fresh apple and fresh pear industries. In March 1973 it was extended to include the canning apricot industry and provision exists for its extension to any fruitgrowing industry which meets the above criteria.

A grower is eligible to apply for assistance under the Scheme if the Authority is satisfied that the number of trees which he has, of the kind that qualifies for assistance, constitutes a commercial operation.

Two forms of assistance are offered:

Clear fell for the grower who is predominantly a fruitgrower and who is in severe financial difficulties and intends to clear fell his orchard and leave the fruitgrowing industry.

Partial fell for the grower who does not have adequate resources to withstand the short term effects on his economic viability of removing the trees without assistance; the surplus of the horticultural commodity concerned is threatening the long term viability of his property; and where the Authority considers the enterprise has sound prospects of long term commercial viability after removal of the surplus trees and using the land for other purposes.

Assistance is provided in the form of a loan which is converted to a grant after 5 years provided the grower honours his undertaking not to replant with specified trees within that period. Specified trees are those upon which assistance was paid. The maximum rate of assistance per acre is $350 for fresh fruit and $500 for canning fruit. Average rates in each State must not exceed $250 for fresh or $350 for canning fruit.

The closing date for applications for assistance was originally 30 June 1973 but it was extended to 31 December 1975. To 30 June 1975 $3.1 million had been approved to assist almost 1,000 fruitgrowers.

Canned Fruit

The overseas marketing of canned fruit is regulated by the *Canned Fruits Export Marketing Act* 1963. Under this Act the Australian Canned Fruits Board sets terms and conditions for overseas sales. All exporters must hold an export licence authorised 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 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 processers of canning fruit and a representative of the Commonwealth Government.

DRIED VINE FRUITS AND WINE

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 enacted in December 1971. The plan operates as from the 1971 season for a period of five years. The scheme has been extended to cover the 1976 crop following the Industries Assistance Commission Report on Fruit Growing which recommended that the existing Dried Vine Fruit Stabilization Scheme be extended to cover the 1976 crop but should not apply beyond the 1977 crop.

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

The *Wine Overseas Marketing Act* 1929 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 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.

Livestock and livestock products

SHEEP

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 1929. A complete prohibition on the export of merino sheep has been maintained since then, except during a three year period between February 1970 and February 1973. In that period the prohibition was partially relaxed and 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 pending a referendum of woolgrowers on the question of whether the export of merino rams and merino semen should be permitted and if so, whether exports should be restricted or unrestricted.

A voluntary poll of woolgrowers was held during October/November 1973 and a majority of voters favoured a continuing prohibition on the exports. Of the 123,000 persons eligible to vote 47.6 per cent returned ballot papers. Of the votes admitted to the count: 17 per cent voted for unrestricted exports, 23.3 per cent voted for restricted exports and 58.5 per cent voted for total prohibition on exports (1.2 per cent of votes were rejected as informal). The Government accepted the view of those who voted at the referendum and a complete prohibition continues on the export of all merino rams, ewes, semen and fertilised ova, to countries other than New Zealand.

Since June, 1958 there has been a prohibition on the imports of sheep (which is still operative except for sheep imported from New Zealand) to protect the Australian sheep industry from the introduction of exotic diseases, such as "blue-tongue".

WOOL

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* 1972 it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Corporation, and the Conference has to be consulted on the appointment of Corporation members with special qualifications. Under the Wool Tax Acts (*see* page 597) 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.

Committee on Wool (Randall Committee)

In October 1971 the Commonwealth 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.

In March 1972 the Australian Wool Industry Conference submitted to the Commonwealth 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.

The Government asked the Committee 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 ten 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 nine other members, four represent Australian woolgrowers, one represents the Commonwealth Government and four 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 from a panel of names submitted by the A.W.I.C. and the four members with special qualifications after consultation with the A.W.I.C.

The functions of the Corporation, which were inherited almost directly from the Wool Commission and Wool Board (*see* below) relate to wool marketing, wool use promotion, wool testing, wool research and the management of wool stores. In addition, the Corporation is required to enquire into methods of marketing wool and to report on matters relating to marketing. A comprehensive report on wool marketing was released on 17 January 1974 in which the Corporation recommended the adoption of procedures aimed at stabilising wool prices and regulating availability. The central recommendation of the report was that the Corporation acquire ownership of all wool for export. The proposal was submitted by the Corporation to the Commonwealth Government and is under study.

For the 1974–75, 1975–76 and 1976–77 seasons, the Corporation was authorised by the Government to operate a minimum reserve (floor) price at wool auctions. Credit facilities for $350 million were provided by the Government to the Corporation for this purpose. These are additional to credit available to the Corporation from commercial sources. Woolgrowers are required to pay a levy of 5 per cent on sales proceeds of shorn wool for a reserve against possible losses from the scheme.

Funds for other activities of the Corporation (notably wool promotion) are provided jointly by woolgrowers through a levy on shorn wool proceeds (*see* below), and the Commonwealth Government.

Australian Wool Board

The Australian Wool Board which was constituted under the *Wool Industry Act* 1962 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.

Australian Wool Commission

The functions of this body, which began operation in November 1970 under the *Wool Commission Act* 1970, were taken over by the Australian Wool Corporation on 1 January 1973.

For details of the Commission's activities *see* Year Book No. 58, pages 802–3.

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 1973–74 was raised to 2.4 per cent, for 1974–75 to 2.75 per cent and for 1975–76 to 3 per cent. The rates for these years include a loading (previously collected as a separate charge) for the administration costs of the Corporation's activities in the wool marketing field.

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.

From 2 September 1974, an additional component of 5 per cent was added to the wool levy. This component is collected to provide a reserve against any losses that may be incurred from the operation of the minimum reserve price scheme at wool auctions.

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 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 Government commitment of about $1.70 a bale. In aggregate this commitment entailed a Commonwealth Government 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 2 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.

For 1973–74, pending a Government review of the programming and funding of wool research and promotion, the overall expenditure of $43.8 million for wool research and promotion was financed by a Government grant of $22 million and by revenue from the Wool Tax—2.4 per cent of the gross proceeds from the sale of shorn wool. Following its review of the funding of wool research and promotion, the Government decided to provide one-half of the cost of the approved wool research and promotion programs. In 1974–75 and the subsequent two years it is supporting three-quarters of the cost of the research programs and one-quarter of the promotion programs. This has involved Government contributions of $22 million in 1974–75, $20 million in 1975–76, and $21 million in 1976–77.

Australian Wool Marketing Corporation Pty Ltd

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

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 initially introduced for the 1971–72 season, to give woolgrowers a guaranteed minimum return for their wool clip. It was subsequently extended for a further period of twelve months. The operative provisions of the legislation lapsed at 30 June 1973. For details of the Wool Deficiency Payments Scheme *see* Year Book No. 58, page 803.

Objective measurement of wool

In 1969 the former 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 pointed 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 of wool. The Committee noted that further refinements and developments in techniques would occur.

The Department of Primary Industry has established a monitoring unit, as recommended by the Committee, to ensure the maintenance of standards and accuracy in sampling and measurement of wool for sale by sample and objective measurement. The unit, the *Australian Wool Measurement Standards Authority*, operates a voluntary registration scheme for wool testing laboratories and sampling sites. Prior to registration, laboratories and sampling sites are closely inspected by the Authority's officers to ensure they meet the high standards required. After registration, continuing surveillance is employed to ensure the required standards are maintained.

MEAT

Australian Meat Board

The Australian Meat Board is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. It consists of six members representing meat producers, two representing meat exporters, one representing the Commonwealth Government, and an independent Chairman. 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 Australian 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 Government 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 $3,004,304, and a mutton and lamb research program of $1,337,851 for 1974–75.

The Livestock Slaughter Levy

The *Livestock Slaughter Levy Act* 1964 imposed a levy on all cattle (over 90 kg 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* Year Book No. 51,) page 909. 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 present legislation (the *Livestock Slaughter Levy Act* 1964) 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, 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 56.0c (25.0c for research; 30.0c to the Australian Meat Board; 1.0c for service and investigation) and for sheep and lambs, 4.85c (1.75c for research; 3.00c to the Australian Meat Board; 0.10c for service and investigation).

The Meat Export Charge

The *Meat Export Charge Act* 1973 imposes a charge on the exports of meat. A charge of 1.0 cents per lb is imposed on exports of meat and edible offals of cattle, sheep, lambs, goats and pigs and the revenue is to recoup to the Government the cost of export meat inspection. A further 0.6 cents per lb is imposed on beef and veal exports in order to recover to the Government the cost of the National Brucellosis and Tuberculosis Eradication Campaign.

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 (1952–1967) 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 approximately 16 kg 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 of America-Australia Meat Agreement

In February 1964 the Governments of Australia and the United States of America 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 halfway 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. Restraints have been suspended since that time, but the situation is still subject to quarterly review.

Pig Industry research

A general description of research commenced in 1971 into the Australian pig industry appears in the section, The Pig Industry page 816.

POULTRY INDUSTRY

Stabilisation scheme for the egg industry

An Australia-wide stabilisation type of scheme for the egg industry has been in operation since 1 July 1965. The principal features of the scheme are embodied in three Acts—*Poultry Industry Levy Act* 1965, *Poultry Industry Levy Collection Act* 1965, and *Poultry Industry Assistance Act* 1965.

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 mainly 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 from 1972–73. The fortnightly rate of levy in accordance with the recommendations of the Council of Egg Marketing Authorities of Australia was 4 cents from 1972–73. As the maximum of $1 per hen was reached each year after twenty-five fortnights, no levy was imposed for the last prescribed days from 1972–73.

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 Government (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 $12,872,493 in 1974–75 ($11,612,025 in 1973–74). Payments from the Fund made to the State Government 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 $12,734,437 in 1974–75 ($11,532,302 in 1973–74).

Research

The *Poultry Industry Assistance Act* 1965 makes provision for expenditure for research purposes to be allocated from the Poultry Industry Trust Fund.

The Act also provides for a contribution limited to $100,000 each year from the Commonwealth Government to support poultry research on dollar for dollar matching basis with industry funds, up to a total of $200,000.

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 Government. On this basis, it is estimated that funds currently available for research will be $374,022 for 1974–75.

Marketing of eggs

Details of the *Egg Export Control Act* 1947 were given in earlier issues of the Year Book (*see* No. 47, page 997).

DAIRY PRODUCTS

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 Australian Dairy Produce Board (since 1 July 1975 the Australian Dairy Corporation) 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 Stabilization Fund at 30 June 1975 totalled approximately $6,019,000. The major portion of the fund represents capital and other investments in milk recombining plants now established by the Corporation in the Democratic Republic of Cambodia, Indonesia, the Philippines and Thailand. Approved expenditure in excess of $200,000 in any year may be met from unmatched contributions and income from sales.

Processed milk products. As part of the sixth five-year Stabilisation Plan the Government provided, under the *Processed Milk Products Bounty Act* 1962, 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. In July 1973 it was decided to phase out the bounty on the exports of processed milk products over the two-year period ending 30 June 1975. Expenditure on the bounty in respect of exports in 1973–74 amounted to approximately $535,000 and in 1974–75 to approximately $520,000.

Whole milk. In addition to the bounties referred to below, 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.

Commonwealth Government 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 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 subsequently paid on a flat rate basis. Bounties were 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.

The sixth five-year stabilisation plan, which came into operation on 1 July 1972, provided for the continuation of financial assistance on butter and cheese production and an export bounty on processed milk products. In July 1973 the Commonwealth Government decided to phase out financial assistance provided under the stabilisation plan over the two-year period ending 30 June 1975, and instead to place greater emphasis on adjustment assistance for the dairy industry. For details of the sixth and earlier stabilisation plans *see* Year Book No. 59, and earlier issues.

The bounty on butter and cheese for the 1974–75 season was $9 million and that was the final payment of financial assistance geared directly to output.

Marginal Dairy Farms Reconstruction Scheme

The Marginal Dairy Farms Reconstruction Scheme was introduced in July 1970 to operate for a period of four years. It provided funds up to a maximum of $25 million to State Governments to purchase marginal dairy farms from producers wishing to leave the industry. The land acquired was sold on favourable terms to neighbouring farmers so as to build up their holdings to an economic size. When the scheme expired in July 1974, 1,136 dairy farms had been offered to the States for acquisition; purchase and subsequent sale of 576 had been arranged; 348 applications had been rejected; and 205 applications had been withdrawn or had lapsed. The cost of purchase amounted to $14.9 million. The scheme has now been replaced by the Dairy Adjustment Program.

Australian Dairy Adjustment Program

The Marginal Dairy Farm Reconstruction Scheme was broadened into an Australian Dairy Adjustment Program. Assistance available under the Program includes a comprehensive range of measures to enable non-viable dairy farmers to build-up their properties into sound economic units; and interest-free loans to help suppliers change over to refrigerated bulk milk delivery with concurrent assistance as necessary to dairy factories.

To 31 December 1975 assistance of $28.8 million to the dairy industry had been approved under the Program. This comprised 2,491 loans amounting to $14.6 million for farm conversion to refrigerated bulk milk; 263 cases involving property amalgamation amounting to $8.5 million; 552 farm development loans amounting to $3.4 million; 6 loans for diversification out of dairying; and 12 loans to dairy factories amounting to $2.0 million for receival and processing facilities in connection with the receipt of whole milk.

Marketing of dairy products

The export trade is regulated by the terms of the Commonwealth *Customs Act* 1901 and the Australian *Commerce (Trade Descriptions) Act* 1905 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.

In 1975 the Commonwealth Parliament passed the *Dairy Produce Act* 1975 which substantially amended the *Dairy Produce Export Control Act* 1924. The provisions of the amended Act provided for replacement of the Australian Dairy Produce Board with the Australian Dairy Corporation from 1 July 1975.

The Corporation comprises eleven members consisting of an independent chairman, three members representing dairy farmers, three members representing manufacturers, two members with special qualifications, one representative of employees in the dairy industry and one government representative. Its composition was designed to achieve a balanced membership to enhance the Corporation's ability to perform its functions in a modern marketing environment.

The Corporation assumed the existing functions and powers of the Australian Dairy Produce Board. Full details of these functions and powers were given in earlier issues of the Year Book (*see* No. 48, pages 999–1000).

The Corporation was given additional powers to those exercised by the former Board in three main areas. Firstly it has the power, after consultation with appropriate industry bodies to determine the quantity of dairy produce which may be exported to the particular country or countries in the course of a season. Secondly, the Corporation may acquire a monopoly trading power for specific export markets by regulation after consultation with the industry. Thirdly the borrowing powers of the Corporation were broadened to allow it to provide advances, not only to cover dairy produce intended for export, but also to cover winter stocks of dairy produce subsequently withdrawn for the local market.

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 1971 to 1976 are given on page 813 of this issue. Details are also given on page 812 of the wholesale prices of butter and cheese for home consumption.

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 tonne under the scheme were $570.60 in 1971–72, $678.57 in 1972–73, and $678.89 in 1973–74. The interim rates for 1974–75 and 1975–76 are $970.00 per tonne and $650.00 per tonne respectively. (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. Rates for 1971–72, 1972–73 and 1973–74, were $281.57 $333.04 and $394.20 per tonne respectively. Interim rates for 1974–75 and 1975–76 are $500 per tonne and $250 per tonne respectively.

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.

Research and promotion of the dairying industry

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 (funds for research being matched by Government contributions, *see* below). The legislation provided for levies on the manufacture of butter and cheese (the Dairy Produce Levy) which were initially set at operative rates of 0.104 cents per lb (0.229 cents per kilogram) for butter and 0.052 cents per lb (0.115 cents per kilogram) for cheese, the proceeds being divided equally between research and sales promotion. The operative rates of levy were increased from November 1959 to 0.156 cents per lb (0.344 cents per kilogram) for butter and 0.078 cents per lb (0.172 cents per kilogram) for cheese (the maximum amounts permitted under the legislation) with two-thirds of the funds raised being allocated to sales promotion and one-third to research. In August 1964, the legislation was amended to include butter powder at the same rate as for butter, i.e. 0.156 cents per lb (0.344 cents per kilogram).

In 1965, the Dairy Produce Levy Act was repealed and replaced by the Butter Fat Levy Act which provided for one levy on butterfat used in the manufacture of butter, cheese and related products. The maximum rate of levy was set at 60 cents per cwt (1.18 cents per kilogram) of butterfat, comprising 12 cents (0.24 cents per kilogram) for research, 24 cents (0.47 cents per kilogram) for sales and domestic promotion, and 24 cents (0.47 cents per kilogram) for administration and overseas promotion. The operative rates of levy for those three categories were initially 8 cents per cwt (0.16 cents per kilogram), 22 cents (0.43 cents per kilogram) and 20 cents (0.39 cents per kilogram) respectively, i.e. a total of 50 cents (0.98 cents per kilogram).

Following several minor increases, the operative levy rate reached 58 cents per cwt (1.14 cents per kilogram) of butterfat from 1 October 1971. Of this amount, 10 cents (0.20 cents per kilogram) was used for research, 24 cents (0.47 cents per kilogram) for promotion and 24 cents (0.47 cents per kilogram) for administration and overseas market development. Research levies have been collected under Dairying Research Acts (*see* below) since 1 July 1972 and the butterfat levy (maximum and operative) was reduced to 48 cents per cwt (0.94 per kilogram) of butterfat from that date. The sales promotion program has throughout been financed solely from the industry levy.

The table following shows the levies collected for research and sales promotion during the past five years.

BUTTERFAT LEVY: AMOUNTS COLLECTED FOR RESEARCH AND SALES PROMOTION

($)

	1970–71	*1971–72*	*1972–73*	*1973–74*	*1974–75*
Research(*a*)	387,088	370,824	(*b*)	(*b*)	(*b*)
Sales promotion	923,494	886,911	858,530	836,412	802,035
Total collected(*a*)	**1,310,582**	**1,257,735**	**858,530**	**836,412**	**802,035**

(*a*) Excludes amounts contributed by the Commonwealth Government. (*b*) Since 1 July 1972, research levies have been collected under Dairying Research Acts 1972 (*see* below).

From 1958 onwards, the Commonwealth Government has contributed 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 Dairy Produce Research Committee administered the research scheme and made recommendations through the Australian Dairy Produce Board to the Minister for Primary Industry.

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 dairy farmers, irrespective of the end-use of the milk or cream produced. Later that year, to implement the new scheme, five Acts were passed: Dairying Research Act; Dairying Research Levy Act; Dairying Research Levy Collection Act; Dairy Produce Sales Promotion Act; Butter Fat Levy Act.

The research levies are payable either on a butterfat or volume basis, according to the normal method of payment to the producer by the dairy factory or authority. The maximum rates of these levies are 12 cents per cwt (0.24 cents per kilogram) of butterfat or 0.04 cents per gallon (8.8 cents per thousand litres) of milk. The operative rates are prescribed by regulation and since 1 July 1972 have been 10 cents per cwt (0.20 cents per kilogram) of butterfat and 0.033 cents per gallon (7.3 cents per thousand litres) of milk. The research scheme came into operation on 1 July 1972 and levies collected amounted to $486,190 in 1972–73, $534,769 in 1973–74 and $481,798 in 1974–75.

The 1972 legislation established a separate statutory body, the Dairying Research Committee, to control and administer the research funds. (The sales promotion program continues to be administered by the Australian Dairy Corporation.) The Chairman of the Corporation is also Chairman of the Dairying Research Committee.

Allocations from the Dairying Research Trust Account totalled $844,794 in 1972–73, $958,392 in 1973–74 and $962,571 in 1974–75. The Commonwealth Government has continued to match research expenditure on a dollar for dollar basis.

THE BEE-FARMING INDUSTRY

Honey Levy

For details of the Honey Levies *see* under Bee-Farming, page 826.