

Chapter Fifteen

Agriculture

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The major source of the statistics in this chapter is the Agricultural Census conducted by the ABS at 31 March each year.

The ABS excludes from the Census those establishments which make only a small contribution to overall agricultural activity. From 1986–87 to 1990–91, the Census included establishments with agricultural activity which had an estimated value of agricultural operations of \$20,000 or more. Prior to this (1982–83 to 1985–86) the cut-off value was \$2,500. The cut-off was raised to \$22,500 for the 1991–92 Census.

While this alteration has resulted in some changes in the counts of numbers of establishments engaged in agricultural activities, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small-scale operations may be affected to a greater extent.

Unless indicated otherwise, Australian totals include data for all States and both Territories.

Details of the method used in the calculation of the estimated value of agricultural operations (EVAO) are contained in the publication *Characteristics of Australian Farms* (7102.0).

Financial statistics are collected in the Agricultural Finance Survey, conducted annually since 1986–87. The size inclusions referred to above for the Agricultural Census apply also to the Agricultural Finance Survey.

CHARACTERISTICS OF AUSTRALIAN FARMS

The gross product of agriculture, forestry, fishing and hunting in 1992–93 was \$12,869 million, 3.2 per cent of GDP. Agriculture constituted the major proportion of this total, as indicated by the fact that 386,400 of the 405,900 people employed in the above group of industries were employed in agriculture and services to agriculture. As at August 1993, five per cent of employed persons were employed in Agriculture and Services to Agriculture.

Table 15.1 provides information on the number, and type of agricultural establishments at 31 March 1993.

It should be noted that prior to 1991–92, establishments within the agricultural sector were classified in accordance with the 1983 edition of the *Australian Standard Industrial Classification (ASIC)* (1201.0). Since ASIC has now been replaced by the new *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (1292.0), 1992–93 census units have been classified on an ANZSIC basis. Care should be taken when making comparisons between years where different classifications have been used.

15.1 ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, 31 MARCH 1993

ANZSIC code	Industry of establishment	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
0111	Plant nurseries	613	296	456	81	162	34	11	4	1,657
0112	Cut flower & flower seed growing	213	146	138	88	116	46	4	—	751
0113	Vegetable growing	644	1,043	1,258	553	546	580	11	3	4,638
0114	Grape growing	541	1,594	50	1,155	186	23	3	—	3,552
0115	Apple & pear growing	222	470	123	144	197	160	—	1	1,317
0116	Stone fruit growing	352	201	90	348	150	12	—	—	1,153
0117	Kiwi fruit growing	18	11	1	—	5	—	—	—	35
0119	Fruit growing n.e.c.	1,646	362	1,638	656	343	20	38	—	4,703
0121	Grain growing	2,060	2,502	1,397	2,911	2,311	19	5	—	11,205
0122	Grain-sheep/beef cattle farming	6,843	2,738	1,682	3,314	4,008	82	2	—	18,669
0123	Sheep-beef cattle farming	3,584	2,872	1,117	987	633	418	—	28	9,639
0124	Sheep farming	7,216	4,399	872	1,523	2,025	516	—	25	16,576
0125	Beef cattle farming	5,615	5,066	7,673	538	1,175	578	203	15	20,863
0130	Dairy cattle farming	1,965	7,672	1,840	849	514	767	—	1	13,608
0141	Poultry farming (meat)	331	137	88	70	51	13	—	—	690
0142	Poultry farming (eggs)	170	131	138	54	90	16	6	2	607
0151	Pig farming	442	239	463	224	132	51	1	—	1,552
0152	Horse farming	494	294	282	87	101	32	1	1	1,292
0153	Deer farming	125	116	45	42	39	11	—	—	378
0159	Livestock farming n.e.c.	237	181	131	156	70	21	2	—	798
0161	Sugar cane growing	461	—	4,455	—	—	—	—	—	4,916
0162	Cotton growing	445	—	371	—	—	—	—	—	816
0169	Crop & plant growing n.e.c.	219	370	465	85	57	42	3	—	1,241
Total (ANZSIC code 01)		34,456	30,840	24,773	13,865	12,911	3,441	290	80	120,656
02	Services to agriculture; hunting & trapping	25	25	21	14	6	3	—	—	94
03	Forestry & logging	4	1	7	—	1	9	—	—	22
04	Commercial fishing	1	—	1	1	2	3	—	—	8
Total (ANZSIC Division A)		34,486	30,866	24,802	13,880	12,920	3,456	290	80	120,780
B	Mining	3	1	1	—	1	1	—	—	7
C	Manufacturing	39	34	10	31	24	4	2	1	145
D	Electricity, gas & water supply	—	1	—	—	—	—	—	—	1
E	Construction	20	35	13	13	1	6	—	—	88
F	Wholesale trade	33	20	3	6	5	7	—	—	74
G	Retail trade	13	10	10	5	1	8	—	—	47
H	Accommodation, cafes & restaurants	6	4	3	2	1	—	—	—	16
I	Transport & storage	27	42	13	23	6	14	—	—	125
J	Communication services	1	—	—	—	—	—	—	—	1
K	Finance & insurance	1	—	—	—	—	—	—	—	1
L	Property & business services	30	4	31	15	18	5	—	1	104
M	Government administration & defence	9	1	—	—	—	—	—	—	10
N	Education	19	1	8	1	14	2	—	—	45
O	Health & community services	1	—	8	1	—	—	—	—	10
P	Cultural & recreational services	6	10	1	1	—	2	—	—	20
Q	Personal & other services	5	1	9	—	6	1	—	—	22
	Unclassified	586	221	219	99	131	12	6	—	1,274
Total all industries		35,285	31,251	25,131	14,077	13,128	3,518	298	82	122,770

Source: Characteristics of Australian Farms (7102.0).

EMPLOYMENT IN AGRICULTURE

15.2 EMPLOYED PERSONS(a) IN AGRICULTURE AND SERVICES TO AGRICULTURE (*000)

<i>August</i>	<i>Married males</i>	<i>All males</i>	<i>Married females</i>	<i>All females</i>	<i>Persons</i>
1988	193.2	284.0	97.5	118.7	402.7
1989	187.5	269.4	94.2	112.2	381.6
1990	195.5	282.5	100.3	118.0	400.5
1991	181.8	265.4	97.0	115.9	381.2
1992	173.3	257.6	91.8	113.3	370.9
1993	187.4	267.2	97.7	115.5	382.7

(a) The estimates of employed persons include persons who worked without pay for at least one hour per week in a family business or on a farm (that is, unpaid family helpers).

Source: *The Labour Force, Australia* (6203.0).

GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED

The gross value of agricultural commodities produced is the value placed on recorded production at the wholesale prices realised in the market place.

15.3 GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED (\$ million)

<i>Commodity</i>	<i>1987-88</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
Crops						
Barley for grain	454.9	558.1	708.8	568.3	680.9	792.7
Oats for grain	191.0	232.6	178.0	147.3	178.3	205.5
Wheat for grain	2,002.8	2,950.3	2,775.1	1,988.1	2,097.2	2,669.6
Other cereal grains	392.5	411.0	360.7	304.9	473.3	340.1
Sugar cane cut for crushing	608.9	744.2	874.0	748.0	602.7	797.7
Fruit and nuts	832.1	951.6	1,022.1	1,059.6	1,304.1	1,380.3
Grapes	345.6	427.3	392.2	362.0	433.0	377.6
Vegetables	928.4	1,165.3	1,328.2	1,284.9	1,242.4	1,226.6
All other crops(a)	1,882.4	2,202.9	2,237.2	2,611.5	2,853.8	2,804.4
<i>Total crops</i>	<i>7,638.6</i>	<i>9,643.3</i>	<i>9,876.3</i>	<i>9,074.6</i>	<i>9,865.7</i>	<i>10,594.5</i>
Livestock slaughtering and other disposals(b)						
Cattle and calves(c)	3,047.9	3,189.6	3,860.5	3,869.4	3,801.9	3,839.2
Sheep and lambs	803.9	738.3	585.4	364.2	460.6	663.0
Pigs	(d)536.1	(e)629.3	(e)656.0	(e)691.0	(e)658.6	(e)649.5
Poultry	(d)671.2	(e)730.3	(e)777.9	(e)788.3	(e)778.0	(e)833.5
<i>Total livestock slaughtering and other disposals</i>	<i>(d)(f)5,074.3</i>	<i>(g)5,300.8</i>	<i>(g)5,893.3</i>	<i>(g)5,721.0</i>	<i>(g)5,738.1</i>	<i>(g)6,023.5</i>

For footnotes see end of table.

15.3 GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED — continued
(\$ million)

Commodity	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Livestock products						
Wool	5,517.3	5,906.0	5,718.1	4,180.9	2,979.5	2,568.5
Milk	1,390.9	1,635.1	1,749.0	1,824.8	1,960.0	2,314.4
Eggs	304.4	321.4	311.8	321.1	278.1	289.4
<i>Total livestock products(h)</i>	<i>(i)7,247.0</i>	<i>(j)7,910.8</i>	<i>(j)7,806.7</i>	<i>(j)6,354.3</i>	<i>(j)5,244.0</i>	<i>(j)5,205.3</i>
Total value of agricultural commodities produced	(k)19,962.5	(l)22,862.5	(l)23,585.1	(l)21,158.5	(l)20,861.3	(l)21,836.4

(a) Includes pastures and grasses. Excludes crops for green feed or silage. (b) Includes net exports of livestock. (c) Includes dairy cattle slaughtered. (d) Excludes Northern Territory pigs and poultry. (e) Excludes Tasmania and Northern Territory pigs and poultry. (f) Includes goat slaughterings, exports and buffalo slaughterings. (g) Includes goat slaughterings, exports, buffalo slaughterings and Tasmanian pigs and poultry. (h) Includes honey and beeswax. (i) Includes cashmere, cashgora, mohair, liquid goat milk, honey and beeswax. Excludes Northern Territory and Australian Capital Territory milk and eggs. (j) Excludes Northern Territory milk and eggs. (k) Includes Northern Territory pigs, poultry, milk and eggs and Australian Capital Territory milk and eggs. (l) Includes Northern Territory pigs, poultry, milk and eggs.

Source: Value of Agricultural Commodities Produced, Australia (7503.0).

The following table shows the index of the gross value of commodities produced at constant prices, that is, it is a measure of

change in value after the direct effects of price changes have been eliminated.

15.4 INDEX OF VALUES AT CONSTANT PRICES OF AGRICULTURAL COMMODITIES PRODUCED(a)
(Reference base year 1989-90 = 1,000)

Commodity	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Crops						
Barley for grain	859	818	1,000	1,016	1,120	1,335
Oats for grain	1,096	1,138	1,000	933	1,030	1,181
Wheat for grain	859	989	1,000	1,056	729	1,019
Other cereal grains	1,274	1,082	1,000	859	1,379	857
Sugar cane(b)	932	987	1,000	940	831	1,089
Fruit and nuts	1,026	1,001	1,000	959	1,003	1,171
Grapes	999	1,100	1,000	1,027	1,185	983
Vegetables	974	995	1,000	1,042	1,050	1,042
All other crops(c)	1,009	1,013	1,000	1,050	1,245	1,244
<i>Total crops</i>	<i>956</i>	<i>994</i>	<i>1,000</i>	<i>1,019</i>	<i>1,000</i>	<i>1,114</i>
Livestock slaughterings and other disposals						
Cattle and calves(d)	939	890	1,000	1,049	1,068	1,089
Sheep and lambs	1,016	965	1,000	908	932	945
Pigs	936	972	1,000	984	1,059	1,035
Poultry	943	957	1,000	1,011	1,076	1,099
<i>Total livestock slaughterings(e)</i>	<i>947</i>	<i>915</i>	<i>1,000</i>	<i>1,028</i>	<i>1,055</i>	<i>1,070</i>
Livestock products						
Wool	835	869	1,000	969	804	782
Milk	982	1,005	1,000	1,022	1,075	1,171
Eggs	1,052	1,011	1,000	1,018	913	956
<i>Total livestock products(f)</i>	<i>878</i>	<i>906</i>	<i>1,000</i>	<i>982</i>	<i>869</i>	<i>876</i>
Total agricultural commodities produced	928	945	1,000	1,008	970	1,024

(a) Indexes of values at constant prices (weighted by average unit values of the year 1989-90). (b) Sugar cane cut for crushing and planting. (c) Includes pasture and grasses. Excludes crops for green feed or silage. (d) Includes dairy cattle slaughtered. (e) Component series based on carcass weight. Includes goat slaughterings. (f) Includes honey, beeswax and goat products.

Source: Value of Agricultural Commodities Produced, Australia (7503.0).

GATT: Implications of the Uruguay round for agriculture

After seven years of international trade negotiations, the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) was finalised in Geneva on the 15 December 1993. The outcome is a complex set of new understandings and agreements which will govern global trade in the future.

This article provides a summary of the expected impacts on Australian agriculture.

The GATT, a set of rules and disciplines in international trade, aims to provide collective protection for all countries, and in particular small and medium sized countries. The establishment of the World Trade Organisation (WTO) will provide a dispute settlement process and ensure that these countries are sufficiently protected against unilateral action by the major economic powers.

New international agreements have been agreed upon to cover a wide range of areas. This incorporates the rapidly expanding trade areas of services, such as banking and telecommunications, and intellectual property like patents and copyrights. Also, agreement was reached on a large tariff cutting package (33% on average), particularly in the industrial sector. Furthermore, for the first time, agriculture and textiles are to be fully integrated under GATT.

The treaty is scheduled to come into effect during 1995, with many of its key provisions to be phased in over six years. The effects of GATT will not be felt right away. Nevertheless, the OECD estimates that the outcomes on agricultural and industrial products alone will provide a boost to the global economy of \$A418 billion by 2002. Also, the GATT secretariat estimated that world merchandise trade would be about \$A1,120 billion higher by 2005 than if trade continued at pre-Uruguay round levels. This will all depend on the exact way in which individual countries implement the agreement.

The Australian economy

For the Australian economy, the Uruguay Round of agreements provides major trading opportunities. Being a middle-ranking trading

country and wanting an effective multilateral trading system, Australia placed much importance on participation in and successful conclusion of the Uruguay Round. The Industry Commission has estimated that the long-term effects of the round will eventually be an annual increase in Australia's exports of over \$A5 billion and an increase in Australia's GDP of around \$A3.7 billion per year. Overall, all sectors of the Australian economy stand to benefit, especially agriculture.

GATT's impact on agriculture

In the agricultural package, tariff equivalents of border measures, domestic subsidies and export subsidies are to be reduced. Minimum access levels have also been set where imports have previously been small. This should result in better access for agricultural exports. The market outlook should improve as a result of significant reductions in the export industry subsidy and domestic support policies which have distorted international markets for agricultural exports in recent decades. Finally, the trading environment will be significantly freer and fairer but still remain extremely competitive.

Competitive support

Domestic support measures which distort trade will be cut by 20 per cent for agriculture as a whole. This aims to decrease policy induced over-production which distorts world agricultural markets. However, a range of assistance measures that will have a minimal effect on trade will not be subject to reduction. Such measures include disaster relief, research, disease control and infrastructure.

Export subsidies

Countries are required to reduce the value of direct export subsidies to 36 per cent below the 1986-90 base period with a reduction in the quantity of subsidised exports by 21 per cent. These cuts in export subsidies, which are to occur over six years, will relieve a major source of downward pressure on international prices.

Border protection

The market access provisions include an average cut in all agricultural tariffs of 36 per cent from their 1986-88 base level, over the six year implementation period, with the minimum cut being 15 per cent. Importantly, all existing non-tariff barriers, such as quantitative restrictions, will be converted to tariff equivalents. All tariffs are to be bound which means they cannot be raised without appealing to GATT or without compensation being paid to exporting countries. In a developing country's situation the corresponding cuts are 24 per cent and 10 per cent respectively, with an implementation period of 10 years. For the least developed countries no tariff cut is required. Under the Agricultural Agreement, Australia must meet the three commitments. Australia has already met the required reductions of domestic support with relatively low levels already existing. The main area where export subsidy commitments are required is for dairy products, with reductions occurring over the implementation period. Regarding market access, the 1988 and 1991 tariff cuts meet the necessary reductions on agricultural tariffs for nearly all products. Quotas on imports of cheese and unmanufactured tobacco are to be replaced by tariff-based arrangements. For all but a few products, no further tariff cuts are required beyond those previously announced.

The new Agricultural Agreement resulting from the Uruguay Round has significant implications for Australian and world agricultural commodities. The estimated impacts of the Round on world prices are shown in table 1. Most of these figures are relatively modest, except for dairy products. With the implementation of the agreement taking place over six years, the full effects will not be realised until well into the next decade.

As indicated in table 2, Australian agriculture should benefit from the Uruguay Round with the gains estimated to be modest over the long term. The benefits to Australian agriculture from the world price increases will be improved further by greater domestic production in response to the higher prices.

TABLE 1. INCREASES IN WORLD PRICES RESULTING FROM THE IMPLEMENTATION OF THE URUGUAY ROUND AGREEMENT (per cent)

Beef (foot and mouth disease free)	6
Beef (foot and mouth disease affected)	1
Pork	7
Sheep meat	3
Poultry meat	2
Butter	4
Cheese	20
Milk powders	16
Wheat	8
Corn	6
Other coarse grains	5
Rice	8
Soybeans	1
Other oilseeds	6
Cotton	2
Sugar	1

Source: Andrews, N., Roberts, I. and Hester, S.

TABLE 2. INCREASES IN ANNUAL VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS(a)

	Increase in volume (%)	Increase in value (\$m)
Production		
Beef	3	340
Sheep meat	(b)	10
Dairy products	1	320
Wheat	5	340
Coarse grains	1	70
Rice	3	15
Sugar	(b)	5
Total		1,110
Exports		
Beef	7	330
Sheep meat	(b)	(b)
Dairy products	10	210
Wheat	7	320
Coarse grains	3	50
Rice	5	30
Sugar	(b)	10
Total		950

(a) The changes in the value of the Australian production and exports were estimated by applying the percentage change in world prices as a result of the Uruguay Round and the percentage change in the volume of production and exports as estimated from the model to the actual average value of Australian production and exports over the period 1988-89 to 1992-93. (b) Less than 0.5 per cent in absolute value.

Source: Andrews, N., Roberts, I. and Hester, S.

Meat

Access was the critical issue for beef within the Uruguay Round. For the Australian economy there are two principal outcomes. The first is an undertaking given by the European Union (EU) to continue to observe the Andriessen Assurance. This means the EU has maintained its agreement to refrain from exporting subsidised beef to key Asian and Pacific markets, which are of major importance to Australian beef exporters. The second main outcome is that there will no longer be a meat Import Law in the United States (US) for beef. This will be replaced by a tariff quota which is set significantly above recent access levels. Furthermore, increased access to beef markets in Korea and Japan will benefit the beef trade. The overall outlook for beef is positive and provides greater opportunity for Australia in accessing export markets.

Grain

Grain growers will benefit from the agreement, with improvements in world economic growth and expanded trade. Considerable reductions will occur in EU export subsidy programs for wheat. Also, the market distorting effects of the US Export Enhancement Program (EEP) will be reduced, so the US will export less subsidised wheat in terms of volume and value. The key outcome in the grain area is the permanent opening up of the Korean and Japanese rice markets. Also, there will be improved access for wheat and barley to Japan and Korea. However, the extent to which Australia will benefit will depend on how the US and EU might change their support arrangements within the framework of the agreement.

Dairy

The key result for the dairy industry will be the reduction in export subsidies. Both the US and EU will be cutting sales of subsidised skim milk powder while the EU will also cut subsidised cheese. There will be access into the US, EU and Asian markets with quotas being increased and tariffs being reduced. This

will allow for a more predictable environment for Australia to trade in. However, while this appears good for Australia, there needs to be restructuring of the industry's market support system. Under present arrangements, Australian exports are classified as subsidies under the terms of the agreement and the volume of subsidised exports will have to be reduced for Australia to comply with the limits on volumes of subsidised exports.

Sugar

The main benefit for Australian sugar will be increased demand arising from greater access opportunities for processed products. There will also be some benefit from tariff reduction in Japan and Korea and reductions in EU export subsidies.

Wool

The Uruguay Round of GATT will significantly benefit Australian wool growers. There will be greater access to wool importing countries such as the US, India and China due to reductions in barriers and the phase-out of the Multi-Fibre Agreement. The Australian wool industry will also benefit from the liberalisation of trade in textiles and clothing, although this is not part of the Agricultural Agreement. Indirectly, improved grain and beef prices could cause farmers to produce more of these products and less wool, and decreased wool production should lead to increased wool prices.

Review

The Uruguay Round has delivered a fundamental change to world trade, particularly to agriculture. There is considerable opportunity for Australia and the rest of the world for the benefits to be realised. However, these benefits will not occur overnight as the implementation will be staged over six years. The outcome will not be fully realised until well into the next decade. The actual impact of the Round will depend on the exact way in which individual countries implement the agreement. It will be important for Australian rural industries to think forward as trade will be fairer and freer, but very competitive.

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FINANCIAL STATISTICS OF FARM BUSINESSES

tables. The estimates have been derived from the Agricultural Finance Survey (AFS).

Estimates of selected financial aggregates of farm businesses are shown in the following

15.5 ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF FARM BUSINESSES(a) (\$ million)

	1988-89	1989-90	1990-91	1991-92	1992-93
Sales from crops	6,991.2	7,795.2	7,196.7	7,718.3	8,572.8
Sales from livestock	5,399.3	5,519.1	4,864.5	4,905.3	5,430.9
Sales from livestock products	6,715.7	7,157.9	5,853.6	4,753.6	4,768.2
Turnover	20,272.3	21,823.5	19,190.6	18,576.0	20,043.2
Purchases and selected expenses	10,672.6	11,447.8	10,892.5	10,726.3	11,381.5
Value added(b)	11,690.3	10,237.4	7,347.7	8,039.5	9,085.0
Adjusted value added(b)	10,500.3	8,924.4	6,023.1	6,729.1	7,740.9
Gross operating surplus(b)	8,643.3	6,897.0	4,133.6	4,876.5	5,828.0
Interest paid	1,681.1	2,227.5	2,066.0	1,820.4	1,497.7
Cash operating surplus(c)	5,227.3	5,330.6	3,412.8	3,095.0	4,080.7
Total net capital expenditure	1,849.1	1,906.3	1,216.6	1,420.8	1,659.6
Gross indebtedness	12,948.0	14,518.0	14,140.6	14,819.2	15,377.8

(a) Statistics for 1991-92 are not strictly comparable with previous periods. For 1988-89, 1989-90 and 1990-91, the population for the Agricultural Finance Survey consisted of all farm businesses classified to an industry class within subdivision 01 Agriculture of the Australian Standard Industrial Classification and with an estimated value of agricultural operations of \$20,000 or more. This was increased to \$22,500 in 1991-92. (b) Includes an estimate for the value of the increase in livestock. (c) Excludes an estimate for the value of the increase in livestock.

Source: *Agricultural Industries, Financial Statistics, Australia* (7507.0).

15.6 ESTIMATES OF SELECTED FINANCIAL AGGREGATES OF FARM BUSINESSES, 1992-93 (\$ million)

	NSW	Vic.	Qld	SA	WA	Tas.	Aust.(a)
Sales from crops	2,199.5	1,412.8	2,090.5	971.4	1,557.7	193.8	8,572.8
Sales from livestock	1,379.4	918.5	1,678.3	395.9	462.8	125.1	5,430.9
Sales from livestock products	1,246.7	1,721.9	471.4	403.6	690.8	172.8	4,768.2
Turnover	5,156.6	4,296.7	4,595.3	1,910.7	2,875.8	525.8	20,043.2
Purchases and selected expenses	3,033.8	2,294.3	2,598.2	1,054.5	1,710.5	304.7	11,381.5
Value added(b)	2,248.8	2,247.9	1,942.1	962.7	1,188.9	201.8	9,085.0
Adjusted value added(b)	1,862.0	1,966.8	1,661.6	822.6	1,006.4	168.6	7,740.9
Gross operating surplus(b)	1,305.3	1,593.1	1,237.5	643.8	801.2	103.0	5,828.0
Interest paid	422.8	316.1	340.8	147.3	190.8	45.5	1,497.7
Cash operating surplus(c)	811.3	1,045.4	987.1	425.8	618.5	77.1	4,080.7
Total net capital expenditure	383.8	364.3	358.2	177.2	279.3	41.6	1,659.6
Gross indebtedness	4,355.1	2,769.5	3,606.9	1,486.0	2,192.5	472.2	15,377.8

(a) Includes Northern Territory and estimates for multi-State enterprises. (b) Includes an estimate for the value of the increase in livestock. (c) Excludes an estimate for the value of the increase in livestock.

Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

Using turnover as a guide to the size of farm business activity, in 1992-93 farm businesses with an annual turnover of \$300,000 and over

(13.3% of total farm businesses) accounted for almost half of farm business turnover.

15.7 FARM BUSINESSES BY SIZE OF TURNOVER

Size of turnover	Number of farm businesses ('000)			Total turnover (\$m)		
	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93
Less than \$50,000	26.6	26.3	23.7	818.4	758.7	761.9
\$50,000 to \$99,999	26.5	29.7	25.5	2,111.8	2,095.9	1,915.6
\$100,000 to \$149,999	19.6	18.5	18.3	2,520.6	2,267.3	2,281.1
\$150,000 to \$199,999	11.1	11.2	10.5	1,975.1	1,965.6	1,823.7
\$200,000 to \$249,999	7.3	6.8	8.0	1,679.2	1,536.0	1,787.6
\$250,000 to \$299,999	3.8	5.1	4.8	1,095.1	1,417.8	1,297.6
\$300,000 and over	13.3	12.0	15.2	8,990.3	8,534.8	10,175.8
Total	108.3	109.6	106.1	19,190.6	18,576.0	20,043.2

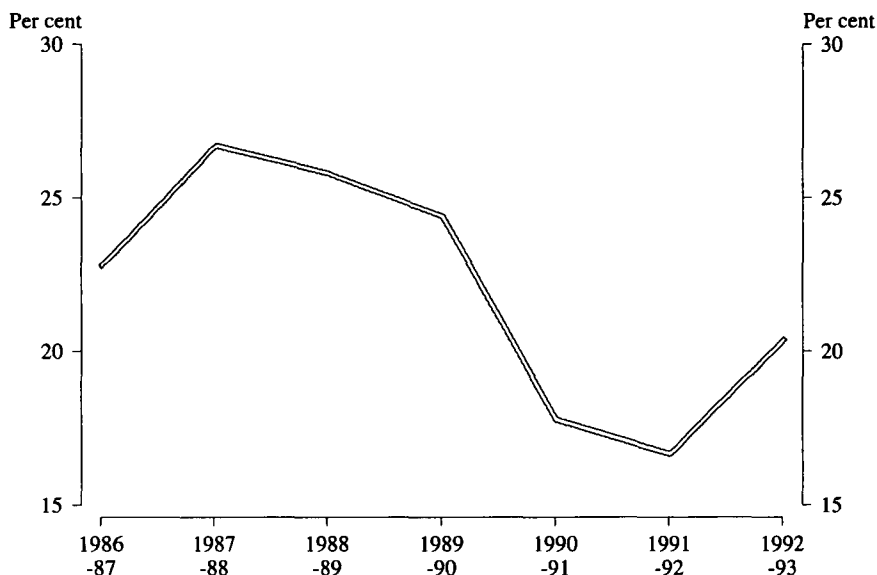
Source: *Agricultural Industries, Financial Statistics, Australia (7507.0)*.

In 1992-93, farm businesses making less than \$50,000 in turnover were, in aggregate, in a cash operating loss situation. Average cash operating loss per farm business for these farm businesses in 1992-93 was under \$1,000. The previous year farm businesses with turnover less than \$50,000 had experienced an average cash operating loss of \$3,100. Farm businesses making \$300,000 or more in turnover had an average cash operating surplus

of \$149,500 in 1992-93 compared with an average of \$123,000 in 1991-92.

In 1992-93, farm business profit margin, the ratio of cash operating surplus to turnover, was 21.3 per cent. This represented an improvement from 1991-92 when the farm business profit margin fell to only 16.7 per cent. Profit margins over recent years are illustrated in the following graph.

15.8 PROFIT MARGINS: AUSTRALIAN FARM BUSINESSES



Source: Australian Industries, Financial Statistics, Australia (7507.0).

The low points in farm profitability in 1990-91 and 1991-92 are principally a reflection of the impact of the cessation of the wool floor price support scheme.

Gross indebtedness

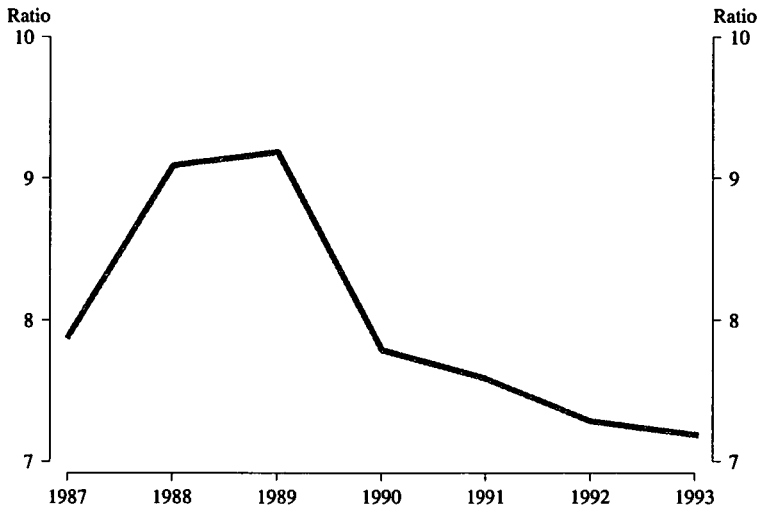
Aggregate farm gross indebtedness has increased from an estimated \$11,482.9 million at the end of 1986-87 to an estimated \$15,377.8 million at the end of 1992-93. Average gross indebtedness per farm business at the end of 1992-93 was \$145,000. At the end of 1986-87, 89,965 farm businesses were actually in debt with average indebtedness of \$127,637. At the end of 1992-93, the number of farm businesses in debt had decreased to 79,638 whereas the average indebtedness of these businesses had increased to \$193,096.

15.9 FARM BUSINESS: AGGREGATE GROSS INDEBTEDNESS AND AVERAGE GROSS INDEBTEDNESS

	Aggregate gross indebtedness (\$m)	Average gross indebtedness per farm business (\$)
30 June		
1987	11,482.9	96,700
1988	11,425.6	99,900
1989	12,948.0	114,400
1990	14,518.0	126,400
1991	14,140.6	130,600
1992	14,819.2	135,200
1993	15,377.8	145,000

Source: Australian Industries, Financial Statistics, Australia (7507.0).

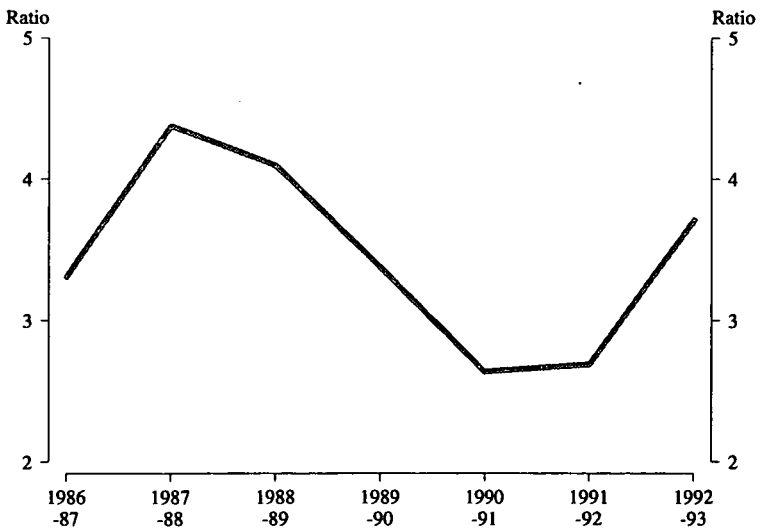
At the end of 1992-93, the estimated debt to asset ratio was 7.3, that is, for every dollar of debt there was 7.30 dollars of asset value.

15.10 DEBT TO ASSET RATIO: AUSTRALIAN FARM BUSINESSES, 30 JUNE

Source: Australian Industries, Financial Statistics, Australia (7507.0).

The interest coverage ratio (the number of times farm businesses can pay the interest bill out of cash operating surplus before deducting interest paid) is an indicator of farm business

economic health. In 1992-93, the interest coverage ratio was 3.8. This represented a considerable improvement from 1991-92, when the ratio had been 2.7.

15.11 AUSTRALIAN FARM BUSINESSES: INTEREST COVERAGE RATIO

Source: Australian Industries, Financial Statistics, Australia (7507.0).

Profile of the rural population

Demographic characteristics

Growth in the rural population in Australia from the mid-1970s to the early 1990s resulted in a reversal of the long-term trend of a declining rural population (that is, all persons living in small towns or settlements with a population of less than 1,000). Although the growth was only modest (average of 1.9% per year), it saw the rural population grow to just over 2.5 million in 1991. This represented 15 per cent of the total population, a proportion which is low compared to most other countries. Since World War II, this number has been influenced by a number of factors, beginning with the implementation of soldier resettlement schemes following the War, natural population growth rate and a mid-1970s trend, which included commuters settling on the outer fringes of major cities and city people, particularly retirees, moving to coastal localities.

Three in four rural Australians live in New South Wales, Victoria or Queensland, due to these States' large regions amenable to agricultural development. In comparison to the urban population, rural people are highly represented in the Northern Territory (32%), Tasmania (27%), and Queensland (21%). The Northern Territory has experienced the greatest growth in rural population, increasing by 29 per cent between 1986 and 1991, while Queensland's rural community increased 14 per cent.

Historically, men have outnumbered women by substantial proportions in rural areas. However, since a ratio of 121 men for every 100 women recorded at the 1954 Census, the proportion has steadily declined to a ratio in 1991 of 109 men per 100 women. During this same period there were improvements in the standard of living in rural areas, changes in the role of women in the labour force and decreasing reliance on labour as a result of increased mechanisation.

On average, the male population in rural areas was slightly older than the male population in urban areas with a median age of 32 years compared to 31 for urban areas. The median age of rural women was 32 years, slightly younger than women in urban areas whose median age was 33 years. There were high

proportions of children (aged 0 to 16) and 'middle aged' adults (aged 30 to 55), indicators of a relatively high proportion of 'traditional' families in rural areas. There were also marked differences in the number of younger adults in rural and urban areas. People in their late teens and early twenties (the ages typically associated with leaving school and entering the work force or tertiary education) were under represented in rural areas. This was more evident in the number of rural women, with the ratio of males being substantially higher in the age group 15 to 24 than for any other age group.

Married people represented 63 per cent of the rural adult population compared to 55 per cent of the urban adult population, while the percentage of divorced, separated and widowed people, especially women, was lower in rural areas.

There were 265,000 Aboriginal and Torres Strait Islander people counted in the 1991 Census, with 86,000 (32%) living in rural areas.

Education, employment and income

In 1991, 42 per cent of persons in rural areas, aged 15 and over, had left school before they were 16 (including those who did not go to school). This compares to only 36 per cent of persons, living in urban areas, in the same category. In rural areas, women (aged 15 and over) were more likely than men to have stayed at school until they were at least 17 years of age, while the reverse was true in urban areas. Overall, 4.7 per cent of persons in rural areas, 15 and over, were still at school compared to 4.9 per cent of people, 15 and over, in urban areas.

Tertiary students who lived in rural areas accounted for only 11 per cent of students at TAFE colleges and seven per cent of students undertaking courses at colleges of advanced education or universities. This is a reflection of the small number of tertiary institutions, particularly universities in or readily accessible from rural areas. The proportion of men in rural areas with post-school qualifications (27%) was less than that of men in urban areas (32%). In comparison, there was little difference between women in rural and urban

areas with similar proportions having post-school qualifications.

In 1991, there were 1.2 million people in the labour force in rural areas, representing 15 per cent of Australia's total labour force. The Agriculture, forestry, fishing and hunting industry employed 24 per cent of employed persons in the rural area, while Community Services (predominantly health and education) employed 15 per cent and the Wholesale/Retail sector, 14 per cent. The labour force participation rate of men in rural areas was 75 per cent compared to 53 per cent for women. Between 1981 and 1991, the rural labour force participation rate fell by five percentage points for men and increased three percentage points for women. While urban men's labour force participation rate fell by five percentage points, urban women's participation rate increased by nearly six percentage points.

The median annual income range of persons aged 15 years or more in rural and urban areas was the same at \$12,001-\$16,000. However, the median annual income of rural families (\$25,001-\$30,000) was lower than that of urban families (\$35,001-\$40,000). Overall, employed people in rural areas were more likely to have been working in the private sector, to have been self-employed, to have worked longer hours and to have worked at home, than employed urban people.

The cost of housing was lower in rural areas with the median weekly rent being in the range of \$48-\$77 compared to the urban median range of \$108-\$137. The median monthly housing loan repayment for rural households was in the range \$476-\$550 compared to the urban median repayment range of \$551-\$625.

LAND USED FOR AGRICULTURE

The total area of agricultural establishments in 1992-93 constituted 59.7 per cent of the Australian land area, the remainder being urban areas, State forests, mining leases and national parks etc., with an overwhelming proportion of unoccupied land (mainly desert)

(table 15.12). The balance data in that table include large areas of arid or rugged land held under grazing licences but not always used for grazing, and also variable amounts of fallow land.

The area cropped represents 3.8 per cent of the area of agricultural establishments.

15.12 LAND UTILISATION IN AUSTRALIA
(million hectares)

Year	Area of		Balance(b)	Area of establishments	Total
	Crops(a)	Sown pastures and grasses			Percentage of Australian land area (768,284,000 hectares)
1987-88	18.4	28.6	425.0	472.0	61.4
1988-89	17.5	30.2	419.2	466.9	60.8
1989-90	17.0	30.9	416.4	464.3	60.4
1990-91	17.4	28.3	417.1	462.8	60.2
1991-92	16.4	30.8	418.8	466.0	60.7
1992-93	17.3	29.0	413.8	460.1	59.9

(a) Excludes pastures and grasses harvested for hay and seed which have been included in 'sown pastures and grasses'. (b) Used for grazing, lying idle, fallow, etc.

Source: *Summary of Crops, Australia* (7330.0).

15.13 AREA OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY (million hectares)

<i>At 31 March</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>Aust. (incl. ACT)</i>
1988	61.5	13.1	152.5	60.0	113.5	1.9	69.6	472.0
1989	61.6	13.1	151.3	58.0	112.6	1.9	68.3	466.9
1990	62.0	13.1	152.3	57.5	110.9	1.9	66.6	464.3
1991	60.7	12.7	150.8	57.0	110.9	1.9	68.8	462.8
1992	60.4	12.4	150.0	56.9	115.7	1.8	68.7	466.0
1993	59.4	12.3	149.5	56.6	110.6	1.8	69.9	460.1

Source: Summary of Crops, Australia (7330.0).

CROPS

The following tables show the area of crops in the States and Territories of Australia since

1870-71, and a summary of the area, production and gross value of the principal crops in Australia in recent years.

15.14 AREA OF CROPS(a) ('000 hectares)

<i>Year</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>NT</i>	<i>ACT</i>	<i>Aust.</i>
1870-71	156	280	21	235	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
1949-50	2,295	1,881	832	1,518	1,780	114	—	4	8,424
1954-55	2,183	1,904	1,049	1,711	2,069	122	—	2	9,040
1959-60	2,888	1,949	1,184	1,780	2,628	130	1	3	10,564
1964-65	4,182	2,621	1,605	2,414	3,037	163	2	4	14,028
1969-70	4,999	2,212	2,208	2,290	3,912	98	6	2	15,728
1971-72	4,186	1,925	2,017	2,278	3,751	67	7	1	14,231
1972-73	4,329	1,943	1,963	2,122	3,814	80	12	1	14,265
1973-74	4,628	1,981	1,786	2,451	4,133	74	6	1	15,060
1974-75	4,089	1,772	1,898	2,257	3,754	67	7	1	13,845
1975-76	4,285	1,851	2,010	2,116	4,208	60	8	1	14,539
1976-77	4,520	1,943	2,026	2,036	4,417	65	2	1	15,010
1977-78	4,984	2,163	2,107	2,564	4,910	70	1	1	16,800
1978-79	5,020	2,209	2,307	2,827	4,993	80	2	1	17,438
1979-80	5,243	2,243	2,334	2,771	5,281	79	2	1	17,954
1980-81	5,208	2,180	2,481	2,772	5,547	84	1	1	18,273
1981-82	5,744	2,184	2,765	2,865	5,963	90	2	1	19,613
1982-83	5,200	2,234	2,648	2,856	6,380	98	3	1	19,420
1983-84	6,566	2,655	2,998	3,108	6,526	101	5	1	21,961
1984-85	5,789	2,569	3,047	2,902	6,723	99	6	1	21,136
1985-86	5,990	2,528	3,231	3,039	5,970	88	7	1	20,853
1986-87	5,325	2,317	3,036	3,066	5,930	78	12	—	19,764
1987-88	4,908	2,159	2,870	2,990	5,334	84	13	1	18,359
1988-89	4,560	1,990	2,842	2,961	5,082	82	11	1	17,527
1989-90	4,077	1,989	2,580	3,042	5,174	83	9	—	16,953

For footnotes see end of table.

15.14 AREA OF CROPS(a) — continued
(^{'000} hectares)

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
1990-91	4,073	2,063	2,872	2,933	5,359	75	6	—	17,382
1991-92	3,846	2,039	2,302	2,920	5,216	76	5	—	16,404
1992-93	3,906	2,258	2,316	3,073	5,668	73	4	1	17,297

(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 and harvested for seed or green feed are excluded.

NOTE: From 1970-71 to 1980-81 figures related to area 'used for' crops, that is, an area used for more than one purpose during the year was counted only once. From 1981-82, an area double cropped has been counted separately each time used.

Source: *Summary of Crops, Australia* (7330.0).

15.15 SELECTED CROPS: AREA, PRODUCTION AND GROSS VALUE

	1990-91			1991-92			1992-93		
	Area (^{'000} ha)	Prod- uction (^{'000} tonnes)	Gross value (\$m)	Area (^{'000} ha)	Prod- uction (^{'000} tonnes)	Gross value (\$m)	Area (^{'000} ha)	Prod- uction (^{'000} tonnes)	Gross value (\$m)
Cereals for grain									
Barley	2,556	4,108	568	2,744	4,530	681	2,947	5,397	792.7
Grain sorghum	378	751	99	569	1,447	201	427	548	85.6
Maize	49	194	32	52	269	46	45	199	40.5
Oats	1,044	1,530	147	1,160	1,690	178	1,149	1,937	205.5
Rice	89	740	138	114	957	183	106	858	163.7
Wheat	9,218	15,066	1,988	7,183	10,557	2,097	8,275	14,739	2,669.6
Legumes for grain	1,388	1,363	286	1,762	1,899	395	1,797	2,041	441.6
Crops for hay									
Oats	252	(a)829	89	327	(a)1,155	n.a.	247	981	96.4
Wheat	19	52	4	30	64	n.a.	21	60	5.9
Crops for green feed, silage									
Barley	n.a.	}	n.a.	r759	n.a.	n.a.	712	n.a.	n.a.
Forage sorghum	154								
Oats	329								
Wheat	n.a.								
Sugar cane cut for crushing	325	24,370	748	329	20,640	603	328	27,958	797.7
Tobacco	5	13	78	5	11	71	4	11	70.0
Cotton	279	1,129	898	312	1,278	879	287	1,000	706.0
Peanuts (in shell)	18	27	30	21	39	41	23	32	32.8
Soybean	40	62	22	30	63	22	30	49	18.1
Canola	73	98	n.a.	151	170	n.a.	107	178	56.6
Sunflower	166	152	42	79	84	28	60	50	16.1
Fruit (excl. grapes)	113	n.a.	1,060	117	n.a.	1,259	123	n.a.	1,380.3
Fruit									
Orchard	95	n.a.	733	99	n.a.	n.a.			
Oranges	n.a.	(b)453	165	n.a.	(b)470	203	n.a.	616	212.1
Apples	n.a.	289	183	n.a.	316	269	n.a.	328	263.4
Pears	n.a.	160	84	n.a.	180	122	n.a.	168	98.5
Peaches	n.a.	58	44	n.a.	62	49	n.a.	63	49.7
Bananas	10	165	235	10	177	270	11	289	299.8
Pineapples	6	126	37	6	133	39	6	142	41.8
Grapes	60	851	362	61	986	433	63	792	377.6
Vegetables	121	n.a.	1,284	117	n.a.	1,242	118	2,189	1,226.6
Potatoes	(c)40	(c)1,372	(c)377	(c)40	(c)1,150	(c)339	39	1,129	314.4
Total all crops (excl. pastures and grasses)	17,382	n.a.	8,492	16,404	n.a.	9,267	17,297	n.a.	9,998.6

(a) Includes all cereals not collected separately. (b) Excludes Queensland. (c) Includes potatoes for seed.

Source: *Summary of Crops, Australia* (7330.0); *Value of Agricultural Commodities Produced, Australia* (7503.0); *Value of Selected Agricultural Commodities Produced, Australia* (7502.0); and *Viticulture, Australia* (7310.0).

The characteristics of the main crops are outlined below.

Cereal grains

In Australia, cereals are conveniently divided into autumn–winter–spring growing ('winter' cereals) and spring–summer–autumn growing ('summer' cereals). Winter cereals such as wheat, oats, barley and rye are usually grown in rotation with some form of pasture such as grass, subterranean clover, medics or lucerne. In recent years, alternative winter crops such as canola, field peas and lupins have been introduced to cereal rotation in areas where they had not previously been grown. Rice, maize and sorghum are summer cereals with the latter being grown in association with winter cereals in some areas. In northern

Queensland and Western Australia there are two rice growing seasons.

Wheat is Australia's most important crop. It is produced in all States but primarily on the mainland in a narrow crescent known as the wheat-belt. Inland of the Great Dividing Range, the wheat-belt stretches in a curve from central Queensland through New South Wales, Victoria and southern South Australia. In Western Australia, the wheat-belt continues around the south-west of the State and some way north up the western side of the continent.

Following a very low level of production in 1991–92, wheat production in 1992–93 increased by almost 40 per cent to 14.7 million tonnes. Excellent seasonal conditions in most wheat growing regions resulted in very high yields compared with 1991–92.

15.16 WHEAT: AREA, PRODUCTION AND RECEIVALS

Season	Area(a)		Production(a)		Australian Wheat Board receivals (^{'000 tonnes})
	For grain (^{'000 ha})	All purposes (^{'000 ha})	Grain (^{'000 tonnes})	Gross value (\$m)	
1987–88	9,005	9,141	12,287	2,015.7	10,740
1988–89	8,827	8,932	13,935	2,975.9	12,954
1989–90	9,004	9,093	14,214	2,792.0	13,057
1990–91	9,218	(b)9,237	15,066	1,988.1	13,047
1991–92	7,183	(b)7,213	10,557	2,097.2	6,769
1992–93	8,275	(b)8,296	14,739	2,669.6	12,173

(a) Area and production data relate to the year ending 31 March. (b) Excludes wheat for hay for all States, except New South Wales. Source: *Summary of Crops, Australia* (7330.0); *Value of Agricultural Commodities Produced, Australia* (7503.0); and *Value of Selected Agricultural Commodities Produced, Australia* (7502.0).

15.17 WHEAT FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA (^{'000 hectares})							
1987–88	2,464	1,026	646	1,556	3,312	1	9,005
1988–89	2,309	931	768	1,520	3,297	1	8,827
1989–90	2,123	952	894	1,557	3,476	1	9,004
1990–91	2,166	911	1,060	1,448	3,632	1	9,218
1991–92	1,499	664	492	1,297	3,230	1	7,183
1992–93	1,694	821	669	1,419	3,669	1	8,275
PRODUCTION (^{'000 tonnes})							
1987–88	3,997	1,882	718	1,803	3,882	4	12,287
1988–89	4,105	1,691	1,550	1,361	5,225	2	13,935
1989–90	3,423	1,961	1,420	2,607	4,800	3	14,214
1990–91	4,128	1,493	1,973	2,021	5,449	2	15,066
1991–92	2,183	1,150	344	2,141	4,736	3	10,557
1992–93	3,583	2,015	735	2,421	5,979	5	14,739

Source: *Summary of Crops, Australia* (7330.0).

Oats are 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. They have a high feed value and produce a greater bulk of growth than other winter cereals; they need less cultivation and respond well to superphosphate and nitrogen. Oats have two main uses: as a grain crop, or as a fodder crop, (following sowing or fallow

or rough sowing into stubble or clover pastures). Fodder crops can either be grazed and then harvested for grain after removal of livestock or else mown and baled or cut for chaff.

Oats production in 1992-93 increased by 14.6 per cent despite a 0.9 per cent fall in plantings, reflecting the excellent seasonal conditions which prevailed during the season.

15.18 OATS FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA ('000 hectares)							
1987-88	526	216	19	132	373	10	1,275
1988-89	548	189	18	156	389	10	1,309
1989-90	365	189	15	172	340	8	1,089
1990-91	374	177	24	135	324	9	1,044
1991-92	457	183	15	129	367	9	1,160
1992-93	448	223	15	123	332	9	1,149
PRODUCTION ('000 tonnes)							
1987-88	707	325	14	135	502	16	1,698
1988-89	780	276	15	131	618	18	1,838
1989-90	504	330	14	250	529	13	1,640
1990-91	538	301	27	148	497	19	1,530
1991-92	579	300	5	172	614	19	1,690
1992-93	761	404	10	165	578	19	1,937

Source: *Summary of Crops, Australia* (7330.0).

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 as a grain crop although in some areas it is used as a fodder crop for grazing, with grain being subsequently harvested if conditions are suitable. It is often grown as a rotation crop with wheat, oats and pasture. When sown for fodder, sowing may take place either early or late in the season,

as it has a short growing period. It may therefore provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock or sold for malting.

Barley continues to grow in importance as a cereal crop. Production in 1992-93 of 5.4 million tonnes is 58 per cent higher than the 1987-88 level and plantings have increased steadily in recent years.

15.19 BARLEY FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA ('000 hectares)							
1987-88	465	366	169	876	461	8	2,346
1988-89	413	350	200	837	383	8	2,190
1989-90	413	389	179	900	421	8	2,310
1990-91	463	463	177	945	498	10	2,556
1991-92	517	534	128	999	554	11	2,744
1992-93	560	551	189	1,023	611	12	2,947

... continued

15.19 BARLEY FOR GRAIN: AREA AND PRODUCTION — *continued*

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
PRODUCTION ('000 tonnes)							
1987-88	744	529	244	1,261	617	22	3,417
1988-89	712	545	374	1,036	552	22	3,242
1989-90	656	696	321	1,724	628	19	4,044
1990-91	822	651	361	1,506	742	26	4,108
1991-92	749	898	70	1,882	900	32	4,530
1992-93	1,044	1,116	285	1,855	1,061	35	5,397

Source: *Summary of Crops, Australia (7330.0)*.

Grain 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.

Grain sorghum has been grown extensively only in the last two decades. Rapid increases in production have resulted in a substantial

increase in exports over this period. The grain is used primarily as stockfeed and is an important source for supplementing other coarse grains for this purpose.

Grain sorghum production decreased significantly in 1992-93. Production in Queensland, the dominant State, decreased by almost 70 per cent as a result of drought conditions which prevailed during the year. Overall, production declined by 62 per cent.

15.20 GRAIN SORGHUM FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.(a)
AREA ('000 hectares)							
1987-88	175	—	565	—	—	—	745
1988-89	152	—	468	—	—	—	625
1989-90	138	—	238	—	—	—	380
1990-91	84	—	291	(b)	1	(b)	378
1991-92	147	—	420	(b)	—	(b)	569
1992-93	118	—	308	—	—	—	427
PRODUCTION ('000 tonnes)							
1987-88	412	1	1,213	—	—	—	1,633
1988-89	301	1	934	—	1	—	1,244
1989-90	359	1	578	—	1	—	946
1990-91	187	1	558	(b)	2	(b)	751
1991-92	398	—	1,045	(b)	—	(b)	1,447
1992-93	229	—	315	—	2	—	548

(a) Includes the Northern Territory. (b) Not collected.

Source: *Summary of Crops, Australia (7330.0)*.

Maize. Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. Maize for grain is almost entirely confined to the south-east regions and the Atherton Tablelands of Queensland; and the north coast, northern slopes and tablelands and the Murrumbidgee Irrigation Area in New South Wales. Small amounts are grown in all States, except South Australia, for green feed

and silage, particularly in association with the dairy industry.

Maize production in 1992-93 suffered as a result of drought conditions in Queensland. A 47 per cent fall in that State from 21 per cent less plantings saw production for Australia fall to 199 thousand tonnes, 26 per cent less than in 1991-92.

15.21 MAIZE FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA ('000 hectares)							
1987-88	15	1	37	—	1	—	56
1988-89	14	—	36	—	1	—	52
1989-90	17	—	34	—	1	—	52
1990-91	18	—	29	(a)	1	(a)	49
1991-92	17	—	34	(a)	1	(a)	52
1992-93	16	—	27	—	2	(a)	45
PRODUCTION ('000 tonnes)							
1987-88	72	6	124	—	5	—	208
1988-89	78	1	132	—	4	—	217
1989-90	98	1	115	—	5	—	219
1990-91	91	2	95	(a)	5	(a)	194
1991-92	119	3	141	(a)	5	(a)	269
1992-93	108	3	75	—	13	(a)	199

(a) Not collected.

Source: *Summary of Crops, Australia* (7330.0).

Rice. In Australia, rice was first grown commercially in 1924-25 in the Murrumbidgee Irrigation Area, one of three irrigation areas in southern New South Wales where rice is now produced. About 96 per cent of Australia's

rice is grown in New South Wales. The remainder is grown in the Burdekin River basin at Mareeba in northern Queensland and in the Adelaide River District in the Northern Territory.

15.22 RICE FOR GRAIN: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA ('000 hectares)							
1987-88	102	—	4	—	—	—	106
1988-89	94	—	3	—	—	—	97
1989-90	100	—	5	—	—	—	105
1990-91	85	(a)	4	(a)	(a)	(a)	89
1991-92	109	(a)	4	(a)	(a)	(a)	114
1992-93	105	(a)	2	(a)	(a)	(a)	106
PRODUCTION ('000 tonnes)							
1987-88	721	—	19	—	—	—	740
1988-89	730	—	18	—	—	—	748
1989-90	816	—	30	—	—	—	846
1990-91	719	(a)	21	(a)	(a)	(a)	740
1991-92	929	(a)	28	(a)	(a)	(a)	957
1992-93	846	(a)	12	(a)	(a)	(a)	858

(a) Not collected.

Source: *Summary of Crops, Australia* (7330.0).**Vegetables**

The area sown to vegetables reached a peak of over 200,000 hectares in 1945. It remained static at around 109,000 hectares from the mid-1970s to the mid-1980s, increased until the end of the decade but has levelled out in

recent years. Yields from most vegetable crops have continued to increase due to variety breeding for increased yields, greater use of irrigation and better control of disease and insect pests.

In 1992-93, the two largest vegetable crops, potatoes and tomatoes, decreased in terms of both area planted and quantity produced. Other

significant vegetable crops to fall in 1992-93 included onions which fell by 23.9 per cent and peas which fell by 4.7 per cent.

15.23 SELECTED VEGETABLES FOR HUMAN CONSUMPTION: AREA UNDER PRODUCTION

Year	<i>French and runner beans</i>	<i>Cabb-ages</i>	<i>Carrots</i>	<i>Cauli-flowers</i>	<i>Onions</i>	<i>Green peas</i>	<i>Potatoes</i>	<i>Tomatoes</i>	<i>Other</i>	<i>Total vegetables</i>
AREA ('000 hectares)										
1987-88	6.0	2.8	4.6	3.4	5.0	11.2	39.8	8.9	35.0	116.7
1988-89	6.9	2.2	4.8	3.5	5.3	11.9	37.6	9.1	37.7	119.0
1989-90	7.3	2.3	4.8	3.7	5.1	13.3	40.6	9.6	39.1	125.8
1990-91	6.4	2.3	4.3	3.8	5.7	10.8	39.8	10.1	37.5	120.7
1991-92	6.8	2.3	4.7	3.6	5.4	8.9	39.8	9.0	37.0	117.5
1992-93	6.7	2.1	4.9	4.0	4.4	9.2	(a)38.8	8.6	39.0	117.7

(a) Excludes potatoes for seed.

Source: *Summary of Crops, Australia (7330.0)*.

15.24 PRODUCTION OF SELECTED VEGETABLES FOR HUMAN CONSUMPTION

	French and runner beans	Cabb- ages	Carrots	Cauli- flowers	Onions	Green peas		Potatoes	Tomatoes
						Process- ing (shelled weight)	Sold in pod (pod weight)		
						PRODUCTION ('000 tonnes)			
1987-88	32.7	80.1	144.0	112.2	181.7	43.0	1.2	1,081.5	282.6
1988-89	35.5	87.8	148.7	79.6	196.3	46.0	1.1	1,048.0	318.6
1989-90	38.4	77.8	154.9	88.6	192.5	49.8	1.0	1,178.0	322.1
1990-91	29.9	76.8	152.1	90.3	222.3	40.9	1.0	1,136.2	364.1
1991-92	32.5	78.6	158.3	78.3	220.5	37.2	(a)0.9	1,150.1	330.5
1992-93	32.0	69.5	168.9	80.2	167.9	35.5	0.8	1,129.2	290.8

(a) Excludes potatoes for seed.

Source: *Summary of Crops, Australia (7330.0)*.

Fruit

A wide variety of fruit is grown in Australia ranging from pineapples, mangoes and papaws in the tropics to pome, stone and berry fruits in the temperate regions.

The most important fruit crops in Australia are apples, oranges, bananas and grapes. However,

some other fruit types have experienced considerable growth in recent years. These include mangoes, kiwi fruit and strawberries. The most significant crop in terms of gross value of production is bananas, marginally ahead of apples. The value of the banana crop has increased by 152.4 per cent since 1987-88.

15.25 SELECTED FRUIT STATISTICS

Year	Orchard fruit number of trees ('000)				Tropical and other fruits area (ha)			Total area of fruit (ha)
	Apples	Oranges	Pears(a)	Peaches	Bananas	Pineapples	Other fruit	
1987-88	6,555	6,873	1,779	1,867	9,195	6,269	2,024	166,100
1988-89	6,810	7,122	2,028	2,004	9,319	6,660	1,239	119,756
1989-90	7,023	7,187	2,201	2,035	9,092	6,461	1,427	121,785
1990-91	6,919	7,357	2,205	2,104	9,578	5,927	1,941	113,225
1991-92	7,206	7,536	2,183	2,123	9,913	5,745	2,531	116,702
1992-93	7,321	7,797	2,120	2,214	10,518	5,854	2,850	123,066

PRODUCTION ('000 tonnes)

	Apples	Apricots	Bananas	Cherries	Oranges	Peaches	Pears(a)	Pineapples	Plums and prunes
1987-88	300.0	28.0	160.1	5.0	479.0	66.0	162.0	146.5	18.0
1988-89	323.0	27.9	195.8	4.0	399.2	51.9	142.1	154.4	19.9
1989-90	319.4	29.7	180.3	4.7	487.2	58.0	164.2	141.6	19.9
1990-91	288.7	25.2	165.1	5.4	453.3	57.9	159.6	126.0	19.6
1991-92	316.1	31.8	176.9	4.8	469.9	61.7	180.1	133.3	21.6
1992-93	327.8	29.5	213.9	5.0	616.5	62.6	168.4	142.4	25.0

GROSS VALUE OF PRODUCTION (\$ million)

	Apples	Apricots	Bananas	Cherries	Oranges	Peaches	Pears(a)	Pineapples	Plums and prunes
1987-88	183.1	30.4	118.8	14.2	143.9	44.9	77.0	34.0	21.8
1988-89	235.6	27.8	134.8	14.0	177.0	42.4	63.9	43.2	26.7
1989-90	211.6	28.0	181.3	17.4	175.9	50.9	79.3	40.7	24.3
1990-91	182.6	23.6	235.2	19.7	164.6	44.0	83.6	37.3	26.3
1991-92	269.4	33.5	270.0	20.2	202.8	49.0	121.6	39.0	29.9
1992-93	263.4	30.6	299.8	19.2	212.1	49.7	98.5	41.8	37.5

(a) Includes Nashi.

Source: Summary of Crops, Australia (7330.0); Value of Agricultural Commodities Produced, Australia (7503.0); and Value of Selected Agricultural Commodities Produced, Australia (7502.0).

Grapes

Grapes are a temperate crop which require warm to hot summer conditions for ripening and predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a lesser extent, for table use. Some of the better

known wine producing areas are the Barossa, Clare, Riverland, Southern Districts and Coonawarra (South Australia); north-eastern Victoria and Great Western (Victoria); Hunter and Riverina (New South Wales); Sunraysia (New South Wales and Victoria); Swan Valley and Margaret River (Western Australia).

15.26 VITICULTURAL STATISTICS: AREA, PRODUCTION AND VALUE

Year	Area		Production: grapes used for(a)			Total(b)
	Bearing ('000 ha)	Total ('000 ha)	Winemaking ('000 tonnes fresh weight)	Drying ('000 tonnes fresh weight)	Quantity ('000 tonnes fresh weight)	Gross value (\$m)
1987-88	54	57	460	293	799	345.6
1988-89	54	57	563	248	859	427.3
1989-90	54	59	530	249	824	392.2
1990-91	54	60	487	317	851	362.0
1991-92	56	61	565	373	987	r433.0
1992-93	59	63	546	197	794	377.6

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes grapes used for table and other purposes.

Source: Summary of Crops, Australia (7330.0); Value of Agricultural Commodities Produced, Australia (7503.0); and Value of Selected Agricultural Commodities Produced, Australia, Preliminary (7502.0).

15.27 VITICULTURE: AREA AND PRODUCTION, BY VARIETY, 1993 SEASON(a)

Variety	Area of vines at harvest			Production of grapes used for			
	Bearing	Not yet bearing	All vines	Wine-making	Drying	Other	Total
	— hectares —	— hectares —	— hectares —	— tonnes (fresh weight) —	— tonnes (fresh weight) —	— tonnes (fresh weight) —	— tonnes (fresh weight) —
Red grapes							
Cabernet Sauvignon	5,163	726	5,890	37,990	—	—	37,990
Currant (incl. Carina)	1,203	108	1,310	167	12,355	—	12,522
Grenache	1,911	21	1,932	19,222	—	—	19,222
Mataro	617	15	632	8,516	—	—	8,516
Pinot Noir	1,185	137	1,321	10,011	—	—	10,011
Shiraz	5,500	640	6,140	56,430	—	—	56,430
Other red grapes	786	158	944	5,330	141	4,341	9,813
Total red grapes	19,818	2,155	21,974	157,213	12,674	15,582	185,469
White grapes							
Chardonnay	4,984	1,123	6,107	55,311	—	—	55,311
Doradillo	644	1	645	13,125	—	—	13,125
Muscat Gordo Blanco	3,360	45	3,404	67,909	4,415	261	72,585
Palomino & Pedro Ximenes	780	1	782	10,830	—	—	10,830
Rhine Riesling	3,546	73	3,620	34,847	—	—	34,847
Semillon	2,904	162	3,066	39,759	—	—	39,759
Sultana	15,505	421	15,926	76,010	177,860	25,824	279,695
Waltham Cross	686	7	692	2,437	2,102	2,045	6,583
Other white grapes	561	121	682	5,249	15	1,904	7,169
Total white grapes	38,652	2,185	40,837	388,610	184,417	34,244	607,271
Total grapes	58,470	4,341	62,811	545,823	197,091	49,825	792,740

(a) Excludes Northern Territory and the Australian Capital Territory where varietal data is not collected.

Source: *Viticulture, Australia* (7310.0).**Selected other crops**

Oilseeds. The oilseeds industry is a relatively young industry by Australian agricultural standards. The specialist oilseed crops grown in Australia are sunflower, soybeans, canola, safflower and linseed. Sunflower and soybeans are summer grown

while the others are winter crops. In Australia, oilseeds are crushed for their oil, which is used for both edible and industrial purposes and protein meals for livestock feeds.

Oilseed crops are grown in all States but the largest producing regions are the grain growing areas of the eastern States.

15.28 OILSEEDS: AREA AND PRODUCTION

Season	NSW	Vic.	Qld	SA	WA	Tas.	Aust.
AREA ('000 hectares)							
1987-88	109	50	175	10	4	—	348
1988-89	103	46	189	8	3	—	349
1989-90	84	39	69	7	1	—	200
1990-91	134	23	135	7	2	—	302
1991-92	155	47	71	15	17	—	305
1992-93	119	37	50	14	12	—	232
PRODUCTION ('000 tonnes)							
1987-88	116	48	201	12	4	—	381
1988-89	138	46	195	11	3	—	394
1989-90	119	38	84	7	2	—	251
1990-91	169	21	124	9	2	—	325
1991-92	191	44	78	19	16	—	348
1992-93	198	41	36	16	12	—	304

Source: *Summary of Crops, Australia (7330.0)*.

Cotton is grown primarily for its fibre (lint). When the cotton is matured, seed cotton is taken to a gin where it is separated (ginned) into lint, seed and thrash. Lint is used for yarn while seed is further processed at an oil mill. There the short fibres (linters) remaining on the seed after ginning are removed. They are too short to make into cloth but are used for wadding, upholstery and paper. The seeds are then separated into kernels and hulls. Hulls

are used for stock feed and as fertiliser, while kernels are crushed to extract oil. The remaining cake is ground into meal which is protein roughage used as stock feed.

Seed cotton production declined by 21.8 per cent in 1992-93, the first fall in production since 1982-83. Despite an accompanying fall in the gross value, cotton remains a significant crop, representing about seven per cent of the total value of all crops.

15.29 COTTON: AREA, PRODUCTION AND EXPORTS

Year	Seed cotton(a)			Raw cotton export			
	Area (<i>'000</i> ha)	Quantity (<i>'000</i> tonnes)	Gross value (\$m)	Cotton- seed(b) (<i>'000</i> tonnes)	Lint(b) (<i>'000</i> tonnes)	Quantity (<i>'000</i> tonnes)	Value f.o.b. (\$m)
1987-88	245	762	421.6	435	281	176	353.0
1988-89	194	769	536.9	449	286	286	461.0
1989-90	240	792	639.5	493	305	291	539.0
1990-91	279	1,129	898.0	686	433	319	689.4
1991-92	312	1,278	878.6	724	502	458	944.2
1992-93	287	1,000	706.0	p528	p373	395	752.3

(a) Before ginning. (b) Estimated by the Australian Bureau of Agricultural and Resource Economics.

Source: *Summary of Crops, Australia (7330.0)* and *Value of Agricultural Commodities Produced, Australia (7503.0)*.

Sugar cane is grown commercially in Australia along the east coast over a distance of some 2,100 kilometres in a number of discontinuous areas from Maclean in northern New South Wales to Mossman in Queensland. The geographical spread contributes to the

overall reliability of the sugar cane crop and to Australia's record as a reliable sugar supplier.

Approximately 94 per cent of production occurs in Queensland, with some 75 per cent of the crop grown north of the Tropic of Capricorn in areas where rainfall is reliable and the warm,

moist and sunny conditions are ideal for the growing of sugar cane. Farm sizes generally range between 20 and 70 hectares.

Following falls in each of the previous three years, sugar cane production rose in 1992-93

by 35.5 per cent to 28 million tonnes. Improved seasonal conditions saw the Queensland crop increase by 36.8 per cent despite a slight fall in the area planted.

15.30 SUGAR CANE: AREA, PRODUCTION AND YIELD

Year	New South Wales					Queensland				
	Sugar cane cut for crushing			Raw sugar(a)		Sugar cane cut for crushing			Raw sugar(a)	
	Area har- vested (^{'000} ha)	Produc- tion (tonnes)	Yield (^{'000} t/ha)	Quantity (tonnes)	Yield (^{'000} t/ha)	Area har- vested (^{'000} ha)	Produc- tion (tonnes)	Yield (^{'000} t/ha)	Quantity (tonnes)	Yield (^{'000} t/ha)
1987-88	16	1,632	60.4	195	7.2	291	23,200	64.4	3,483	9.7
1988-89	15	1,560	104.0	196	13.1	302	25,586	85.9	3,483	11.5
1989-90	15	1,388	92.5	179	11.9	307	25,552	83.2	3,618	11.8
1990-91	14	1,137	81.2	r161	r11.5	311	23,232	74.7	r3,354	r10.8
1991-92	15	1,416	94.4	r180	r12.0	314	19,225	61.2	r2,931	r9.3
1992-93	16	1,667	104.2	240	15.0	312	26,292	84.3	4,016	12.9

(a) In terms of 94 net titre.

Source: *Summary of Crops, Australia* (7330.0).

Fodder crops. Considerable areas of Australia are devoted to fodder crops which are utilised either for grazing (as green feed), or harvested and 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 seasonal and comparatively unreliable nature of rainfall in Australian agricultural areas.

15.31 FODDER CROPS: AREA AND PRODUCTION

Year	Hay(a)			Green feed or silage(b)	
	Area (^{'000} ha)	Production		Area (^{'000} ha)	Silage made (^{'000} tonnes)
		Quantity (^{'000} tonnes)	Gross value (\$m)		
1987-88	344	1,003	85.8	1,313	878
1988-89	323	1,080	106.8	1,152	825
1989-90	297	964	104.0	r1,053	723
1990-91	(c)336	(c)1,068	(c)112.3	(d)787	(d)574
1991-92	(c)450	(c)r1,480	(c)r159.0	(d)759	(d)687
1992-93	(c)324	(c)1,220	(c)116.9	(d)712	(d)883

(a) Principally oaten and wheaten hay. (b) Principally from oats, barley, wheat and forage sorghum. (c) Excludes wheat for hay for all States, except New South Wales. (d) Excludes oats for New South Wales, Victoria, Tasmania and the Northern Territory.

Source: *Summary of Crops, Australia* (7330.0).

15.32 FARM STOCKS OF CEREAL GRAINS, HAY AND SILAGE (^{'000 tonnes})

At 31 March	Cereal grains				
	Barley	Oats	Wheat	Hay	Silage
1988	693	1,366	962	4,972	757
1989	702	1,550	1,028	5,550	975
1990	655	1,610	954	5,687	991
1991	697	1,420	1,213	5,332	1,018
1992	868	1,378	1,035	5,394	1,014
1993	825	1,582	1,110	5,714	1,292

Source: *Summary of Crops, Australia* (7330.0).

LIVESTOCK

from 1861 to 1971, and yearly from 1981, are given in the following table.

The numbers of each of the principal kinds of livestock in Australia at ten-yearly intervals

15.33 LIVESTOCK (^{'000})

Year	Cattle	Sheep	Pigs	Year	Cattle	Sheep	Pigs
1861	3,958	20,135	351	1981	25,168	134,407	2,430
1871	4,276	41,594	543	1982	24,553	137,976	2,373
1881	7,527	62,184	816	1983	22,478	133,237	2,490
1891	10,300	97,881	891	1984	22,161	139,242	2,527
1901	8,640	70,603	950	1985	22,784	149,747	2,512
1911	11,745	98,066	1,026	1986	21,820	146,776	2,512
1921	13,500	81,796	674	1987	21,915	149,157	2,611
1931	11,721	110,568	1,072	1988	21,851	152,443	2,706
1941	13,256	122,694	1,797	1989	22,434	161,603	2,671
1951	15,229	115,596	1,134	1990	23,191	170,297	2,648
1961	17,332	152,579	1,615	1991	(a)23,662	163,238	2,531
1971	24,373	177,792	2,590	1992	(a)23,880	148,203	2,570
				1993	(a)24,062	138,102	2,646

(a) Excluding house cows and heifers.

Source: *Livestock and Livestock Products, Australia* (7221.0).

Cattle

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 dairy herds. While dairy cattle are restricted mainly to southern and to coastal districts, beef cattle are more concentrated in Queensland and New South Wales. Cattle numbers in Australia increased slowly during the 1960s and 1970s, despite seasonal changes and heavy slaughterings, to a peak of 33.4 million in 1976. Beef cattle production is often combined with cropping, dairying and sheep. In the

northern half of Australia, cattle properties and herd sizes are very large, pastures are generally unimproved, fodder crops are rare and beef is usually the only product. The industry is more intensive in the south because of the more favourable environment including more improved pasture.

Drought conditions in the early 1980s led to a decline in the beef herd until 1984. For the next five years, the size of the herd remained relatively static. Since 1989, cattle numbers have increased each year, despite drought conditions which have prevailed in many parts

of Queensland and in north-western New South Wales.

15.34 CATTLE BY AGE, SEX AND PURPOSE (^{'000})

Classification	31 March					
	1988	1989	1990	1991	1992	1993
Milk cattle						
Bulls used or intended for service	36	36	33	31	31	31
Cows, heifers and heifer calves	2,506	2,476	2,461	2,399	2,401	2,472
House cows and heifers	38	34	28	(a)	(a)	(a)
<i>Total</i>	<i>2,581</i>	<i>2,546</i>	<i>2,523</i>	<i>2,430</i>	<i>2,432</i>	<i>2,504</i>
Meat cattle						
Bulls used or intended for service	528	551	582	538	521	526
Cows and heifers (1 year and over)	9,818	10,120	10,577	10,687	10,748	11,171
Calves under 1 year	4,716	4,816	5,107	5,208	5,128	5,064
Other cattle (1 year and over)	4,207	4,402	4,401	4,799	5,050	4,795
<i>Total</i>	<i>19,270</i>	<i>19,888</i>	<i>20,668</i>	<i>21,232</i>	<i>21,447</i>	<i>21,555</i>
Total all cattle	21,851	22,434	23,191	23,662	23,880	24,062

(a) Not collected.

Source: *Livestock and Livestock Products, Australia (7221.0)*.

15.35 CATTLE (^{'000})

31 March	NSW	Vic.	Qld	SA	WA	Tas.	NT	Aust.(a)
1988	4,962	3,474	8,825	947	1,705	542	1,385	21,851
1989	5,329	3,509	8,994	943	1,702	560	1,388	22,434
1990	5,506	3,646	9,489	969	1,673	569	1,327	23,191
1991	5,653	3,631	9,856	990	1,584	584	1,353	(b)23,662
1992	5,697	3,574	10,005	1,016	1,649	593	1,334	(b)23,880
1993	5,783	3,689	9,873	1,104	1,648	605	1,347	(b)24,062

(a) Includes the Australian Capital Territory. (b) Excluding house cows and heifers.

Source: *Livestock and Livestock Products, Australia (7221.0)*.

Sheep

With the exception of a short period in the early 1860s, 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 presently the second largest sheep raising State, with Victoria ranking third in numbers of sheep.

Sheep numbers reached a peak of 180 million in Australia in 1970. Following subsequent falls, by March 1990, flock numbers had risen to 170 million. However, poor market prospects for wool since 1990 have had a marked impact on the flock size and numbers declined to 138 million in 1993.

15.36 SHEEP AND LAMBS
(millions)

<i>31 March</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>Aust.</i>
1988	54.9	27.0	14.4	17.4	34.0	4.7	152.4
1989	59.1	28.1	14.9	17.4	37.1	4.9	161.6
1990	62.1	29.3	16.7	18.4	38.4	5.3	170.3
1991	59.8	27.5	17.4	17.2	36.5	4.8	163.2
1992	53.6	24.8	15.3	16.1	34.1	4.3	148.2
1993	48.1	23.6	13.4	15.7	33.0	4.3	138.1

Source: Livestock and Livestock Products, Australia (7221.0) and Selected Agricultural Commodities, Australia, Preliminary (7112.0).

15.37 SHEEP AND LAMBS
(millions)

	<i>31 March</i>					
	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Sheep (1 year and over)						
Rams	1.7	1.8	1.8	1.7	1.6	1.4
Breeding ewes	71.6	74.8	74.8	67.0	65.5	61.4
Other ewes	4.3	4.7	6.0	9.7	7.9	6.6
Wethers	39.1	43.7	47.7	48.7	45.5	40.3
Lambs and hoggets (under 1 year)	35.7	36.6	40.1	36.1	27.8	28.4
Total sheep & lambs	152.4	161.6	170.3	163.2	148.2	138.1

Source: Livestock and Livestock Products, Australia (7221.0).

Pigs

15.38 PIGS
(’000)

<i>31 March</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas.</i>	<i>Aust.(a)</i>
1988	853	437	617	441	307	48	2,706
1989	855	423	611	450	285	45	2,671
1990	865	428	600	437	272	42	2,648
1991	821	403	596	400	271	38	2,531
1992	r799	431	560	420	318	40	r2,570
1993	818	425	617	435	305	44	2,646

(a) Includes the Northern Territory and the Australian Capital Territory.

Source: Livestock and Livestock Products, Australia (7221.0).

Poultry**15.39 POULTRY**
(*000)

31 March	Chickens						
	Hens and pullets for egg production	Meat strain chickens (broilers)	Total chickens(a)	Other poultry			Total all poultry
				Ducks	Turkeys	Other poultry	
1988	13,463	47,988	64,201	663	1,585	365	66,813
1989	13,193	39,709	56,149	263	1,125	420	57,957
1990	13,084	43,906	59,956	276	1,240	449	61,920
1991	12,590	39,883	55,116	364	1,446	455	57,382
1992(b)	10,994	44,750	60,071	n.p.	n.p.	(c)2,293	62,364
1993(b)	12,844	51,664	68,936	n.p.	n.p.	(c)1,896	70,832

(a) Includes breeding stock. (b) Excludes Tasmania. (c) Includes ducks and turkeys.

Source: *Livestock and Livestock Products, Australia* (7221.0).**MEAT PRODUCTION AND SLAUGHTERINGS**

Tables 15.40 and 15.41 contain details of slaughterings and meat production from abattoirs, commercial poultry and other

slaughtering establishments and include estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughterings for human consumption and do not include animals condemned or those killed for boiling down.

15.40 PRODUCTION OF MEAT(a)
(*000 tonnes)

Year	Carcass weight					Dressed weight(b)(c)	
	Beef	Veal	Mutton	Lamb	Pig meat	Total meat	Total all chickens Poultry(d)
1987-88	1,549	39	293	293	297	2,471	(e)362 401
1988-89	1,459	32	254	290	308	2,343	(e)368 407
1989-90	1,642	35	333	295	317	2,622	(e)380 425
1990-91	1,723	36	381	287	312	2,741	(e)388 430
1991-92	1,753	38	392	275	336	2,794	416 457
1992-93	1,787	39	370	273	328	2,798	435 474

(a) Excludes offal. (b) Excludes the Northern Territory and the Australian Capital Territory. (c) Dressed weight of whole birds, pieces and giblets. (d) Includes other fowls, turkeys, ducks and drakes. (e) Excludes Tasmania.

Source: *Livestock Products, Australia* (7215.0).

**15.41 NUMBERS OF LIVESTOCK AND POULTRY SLAUGHTERED
FOR HUMAN CONSUMPTION
(million head)**

<i>Year</i>	<i>Cattle</i>	<i>Calves</i>	<i>Sheep</i>	<i>Lambs</i>	<i>Pigs</i>	<i>Chickens (b)</i>	<i>Other fowls(a) and turkeys</i>	<i>Ducks and drakes</i>
1987-88	6.9	1.2	14.9	17.2	4.9	(c)273.6	11.1	2.3
1988-89	6.3	1.0	12.4	16.5	5.0	(c)274.1	10.6	2.2
1989-90	6.9	1.0	16.1	16.8	4.9	(c)285.5	10.8	2.2
1990-91	7.3	1.0	18.2	16.4	4.9	(c)283.7	9.9	2.3
1991-92	7.6	1.1	18.8	15.8	5.1	(c)293.5	8.7	2.2
1992-93	7.4	1.0	17.5	15.4	5.0	304.1	8.4	2.3

(a) Comprises hens, roosters, etc. (b) Comprises broilers, fryers and roasters. (c) Excludes Tasmania.

Source: *Livestock Products, Australia (7215.0)* and *Agricultural Statistics, Australian Bureau of Statistics*.

**15.42 GROSS VALUE OF LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS(a)
(\$ million)**

<i>Year</i>	<i>Cattle and calves</i>	<i>Sheep and lambs</i>	<i>Pigs</i>	<i>Poultry</i>	<i>Total</i>
1987-88	3,047.9	803.9	536.1	671.2	(b)5,074.3
1988-89	3,189.6	738.3	629.3	730.3	(b)5,300.8
1989-90	3,860.5	585.4	656.0	777.9	(b)5,893.3
1990-91	3,869.4	364.2	691.0	788.3	(b)5,721.0
1991-92	3,801.9	460.6	658.6	778.0	(b)5,738.1
1992-93	3,839.2	663.0	649.5	833.5	(b)6,023.5

(a) Includes adjustment for net exports of live animals. (b) Includes goats and buffalo.

Source: *Value of Agricultural Commodities Produced, Australia (7503.0)* and *Value of Selected Agricultural Commodities Produced, Australia, Preliminary (7502.0)*.

**15.43 EXPORTS OF FRESH, CHILLED OR FROZEN MEAT(a)
('000 tonnes)**

<i>Year</i>	<i>Beef(b)(c)</i>		<i>Veal(b)</i>		<i>Mutton(b)</i>		<i>Lamb</i>		<i>Pork</i>
	<i>Bone-in</i>	<i>Bone-out</i>	<i>Bone-in</i>	<i>Bone-out</i>	<i>Bone-in</i>	<i>Bone-out</i>	<i>Bone-in</i>	<i>Bone-out</i>	
1987-88	7.6	310.2	0.4	2.7	31.5	34.0	26.3	1.3	3.0
1988-89	47.4	493.7	1.0	5.3	32.6	53.7	34.9	2.7	6.6
1989-90	83.1	579.8	1.1	4.6	63.3	55.0	36.4	3.6	6.2
1990-91	83.8	662.0	1.0	5.1	91.0	64.9	41.4	3.4	5.4
1991-92	100.0	691.5	1.5	5.7	103.7	75.0	39.4	4.6	5.0
1992-93	80.9	739.5	2.1	5.3	80.2	77.4	46.7	5.5	7.0

(a) Excludes offal. (b) Factors can be applied to beef, veal, mutton and lamb bone-out figures to derive bone-in carcass weight which, when added to bone-in figures, shows total exports in carcass weight. The factor for beef and veal is 1.5 and that for mutton and lamb 2.0 (Source: Australian Meat and Livestock Corporation). (c) Includes buffalo meat.

Source: *Agricultural Statistics, Australian Bureau of Statistics*.

Production of sheep meats in Australia is closely associated with the wool industry. Sheep grazing often occurs on mixed farms in conjunction with beef and/or grain enterprises and in some areas producers specialise in lamb production. The supply of sheep meat depends greatly on seasonal conditions, decisions to build up or reduce flock numbers, expectations of wool prices, live sheep exports

and the pattern of domestic consumption of meat. Production in 1992-93 decreased by 3.5 per cent to 643,377 tonnes.

In 1992-93, exports of beef to Japan increased to 258,924 tonnes from the 196,059 tonnes of the previous year. Liberalisation of the Japanese market occurred in 1991. This involved removal of import quotas in exchange

for a percentage of customs value. Exports of beef to Canada increased to 91,661 tonnes whereas exports to both the USA and the Republic of Korea decreased to 305,911 tonnes and 74,293 tonnes, respectively.

Significant changes have taken place in the pig producing industry in recent years. Capital investment and corporate takeovers have seen the emergence of a few large companies producing 30 per cent of all pigs sold in Australia. These moves, on top of the trend to more intensive and efficient production techniques, have seen pigmeat production rise steadily since 1982 to reach 325,894 tonnes in 1992-93. In addition, there has been an increase in the slaughter weights of pigs reflecting the demands of the fresh pork trade.

WOOL

Wool production

Wool as shorn from the sheep ('greasy wool') contains an appreciable amount of grease, dirt, vegetable matter and other extraneous material. The exact quantities of these impurities in the fleece vary between differing climatic and pastoral conditions, with seasonal fluctuations and with the breed and condition of the sheep. It is, however, the clean wool fibre that is ultimately consumed by the textile industry and the term 'clean yield' is used to express the net wool fibre content present in greasy wool. Clean yields for Australia have gradually trended upwards; in 1990-91 and 1991-92 the clean yield of the Australian clip was 65.6 per cent and in 1992-93, 66.0 per cent.

The gross value of wool produced in 1992-93 was 54.7 per cent lower than in 1988-89, the peak year in the wool boom of the 1980s.

15.44 SHEARING, WOOL PRODUCTION AND VALUE

Year	Wool production					Gross value (b) (\$m)
	Sheep and lambs shorn (million)	Average fleece weight (kg)	Shorn wool ('000 tonnes)	Total wool		
				Other wool(a) ('000 tonnes)	Quantity ('000 tonnes)	
1987-88	186.3	4.53	843.0	73.4	916.4	5,517
1988-89	196.4	4.58	898.9	60.1	959.0	5,906
1989-90	215.1	4.79	1,030.9	71.1	1,102.0	5,718
1990-91	212.9	4.65	989.2	76.9	1,066.1	4,181
1991-92	181.2	4.42	801.2	73.7	875.0	2,979
1992-93	179.0	4.55	815.1	54.3	869.4	2,568.5

(a) Comprises dead and fellmongered wool, and wool exported on skins. (b) 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.

Source: *Shearing and Wool Production Forecast, Australia (7211.0)*; *Value of Agricultural Commodities Produced, Australia (7503.0)*; and *Value of Selected Agricultural Commodities Produced, Australia, Preliminary (7502.0)*.

Wool receivals

The total amounts of taxable wool received by selling brokers and dealers in recent years are shown in the following table. It excludes wool

received by brokers on which tax had already been paid by other dealers (private buyers) or brokers.

15.45 TAXABLE WOOL RECEIVALS

Year	Receivals			Dealers as per cent of total receivals %
	Brokers (NCWSB)	Dealers(a)	Brokers and dealers	
	— '000 tonnes —			
1987-88	707.3	135.1	842.4	16.0
1988-89	755.1	136.5	891.5	15.3
1989-90	911.8	138.0	1,049.8	13.1
1990-91	916.3	96.4	1,012.7	9.5
1991-92	734.2	102.3	836.6	12.2
1992-93p	703.2	140.8	844.1	16.8

(a) Includes brokers who are not members of the National Council of Wool Selling Brokers of Australia (NCWSB).

Source: *Livestock Products, Australia* (7215.0).

Wool marketing arrangements

The auction system reverted to a 'free marketing' system during the 1990-91 season. The Reserve Price Scheme that had operated since 1974 was suspended in February 1991. It had become unworkable due to the massive accumulation of wool in the stockpile and the substantial debt which had been incurred. The stockpile of bales at 22 April 1994 was 3,733,408.

On 1 December 1993, the Australian Wool Corporation and the Australian Wool Research and Development Corporation were replaced by the Australian Wool Research and Promotion Organisation (AWRAP). The role of AWRAP is to improve the performance of the Australian wool industry by funding research and development and generic promotion of wool internationally. It does not participate in the trading of wool or have any involvement in the stock holding or disposal arrangements. It is funded by Australian wool growers who contribute four per cent of their wool sale proceeds to fund promotion and research activities. The growers' contribution is matched by the Australian Government.

From 1 February 1994, the Australian Wool Exchange (AWEX) took over the responsibility for the wool auction system. AWEX is not a statutory body and cannot compulsorily collect levies and is run on a commercial basis.

Sales of wool from the stockpile are controlled by Wool International, the statutory authority in charge of the stockpile. Wool is sold from the stockpile by either private treaty on either a current or deferred delivery basis or by auction. From 1 July 1994, Wool

International must dispose of 28,000 bales per month and from 1 January 1995, 180,000 bales per quarter.

DAIRYING

Dairying is a major Australian rural industry, ranking fourth behind the wheat, wool and beef industries in terms of value of production. The gross value of dairy production at farm gate prices in 1992-93 was \$2,314 million or approximately 11 per cent of the gross value of rural production. The gross value of this industry at an ex-factory level is approximately \$4,200 million per annum. The industry is also one of Australia's leading rural industries in terms of the proportion of down stream employment and processing it generates. Employment at manufacturing, processing and farm establishments is estimated to be in the vicinity of 50,000 people.

Production

Australian milk production in 1992-93 was 7,327 million litres, an increase of 8.9 per cent compared with the previous year. This largely reflected productivity gains through a combination of farm and herd management techniques. Average production per dairy cow of 4,318 litres in 1992-93 was around a third higher than the levels of the early 1980s.

Domestic market

Average annual per capita milk consumption has stabilised at around 100 litres since the mid-1980s. However, there have been substantial changes in the types of fresh milk consumed, with fat reduced and modified milks taking an increasing share of overall market milk sales.

After growing strongly throughout the late 1980s, domestic sales of cheese have stabilised in recent years at slightly above 150,000 tonnes. This is approximately nine kilograms per capita on an annual basis. This reflects the fact that recent increases in sales of cheddar varieties (particularly lower fat varieties) have been offset by a decline in sales of round eye cheese (such as Swiss, Gouda and Edam).

15.46 MILK CATTLE ('000)

31 March	Bulls used or intended for service	Cows and heifers used or intended for production of milk or cream for sale		
		Cows (in milk and dry)	Heifers	House cows and heifers(a)
1989	36	1,663	813	34
1990	33	1,653	808	28
1991	31	1,637	762	(b)
1992	31	1,652	749	(b)
1993	31	1,697	776	(b)

(a) One year and over, kept for the establishment's own milk supply. (b) Not collected.

Source: *Livestock and Livestock Products, Australia (7221.0)* and *Selected Agricultural Commodities, Australia, Preliminary (7112.0)*.

15.47 PRODUCTION, UTILISATION AND GROSS VALUE OF WHOLE MILK

Year	Market milk sales by factories	Milk used in the manufacture of dairy products	Whole milk intake by factories	
			Total intake	Gross value
		— million litres —		\$m
1987-88	1,667	4,462	6,129	1,390.9
1988-89	1,695	4,594	6,289	1,635.1
1989-90	1,705	4,558	6,263	1,749.0
1990-91	1,736	4,667	6,403	1,824.8
1991-92	1,765	4,965	6,731	1,960.0
1992-93	1,777	5,550	7,327	2,314.4

Source: *Australian Dairy Corporation*.

BEEKEEPING

The beekeeping industry consists of approximately 300-400 full-time apiarists, who produce approximately 70 per cent of the Australian honey production, and a large number of part-time apiarists who produce the

rest. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to obtain a continuous supply of nectar for honey from suitable flora. While honey production remains the predominant sector of the industry, production of breeding stock and provision of pollination services is significant.

15.48 BEEKEEPING

Year	Number of apiarists	Honey produced			Average pro- duction per pro- ductive hive (kg)	Gross value (\$'000)	Beeswax produced	
		Number of beehives		Quantity ('000 tonnes)			Quantity (tonnes)	Gross value (\$'000)(b)
		Pro- ductive(a) ('000)	Total ('000)					
1987-88	770	285	366	23.0	80.8	32,523	428	1,940
1988-89	836	307	405	22.6	73.8	29,586	530	1,967
1989-90	819	298	405	21.2	71.2	26,113	412	1,546
1990-91	726	290	384	20.6	71.0	26,078	381	1,389
1991-92	651	264	366	18.9	71.8	25,008	390	1,455
1992-93	686	278	362	22.6	81.1	31,499	422	1,560

(a) Beehives from which honey was taken. (b) Includes pollen.

Source: Agricultural Census, Australian Bureau of Statistics.

APPARENT CONSUMPTION OF FOODSTUFFS

Estimates of the consumption of foodstuffs in Australia are compiled by deducting exports from the sum of production and imports and allowing for recorded movement in stocks of the respective commodities. The term 'consumption' is used in a specialised sense. The estimates derived are broadly the quantities available for consumption at a particular level of distribution, that is, ex-market, ex-store or ex-factory depending on the method of marketing and/or

processing. Because consumption of foodstuffs is measured, in general, at 'producer' level no allowance is made for wastage before they are consumed. The effect of ignoring wastage is ultimately to overstate consumption to some extent.

The estimates of consumption per capita have been obtained by using the mean resident population for the period.

Table 15.49 shows the changes in trends in the consumption of various foodstuffs over the past fifty years.

15.49 APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS
(kg — unless otherwise indicated)

Commodity	Average 3 years ended						Latest year
	1938-39	1948-49	1958-59	1968-69	1978-79	1988-89	
Meat and meat products							
Meat (carcass equivalent weight)							
Beef	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35.4
Veal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.7
Beef and veal	63.6	49.5	56.2	40.0	64.8	40.1	37.1
Lamb	6.8	11.4	13.3	20.5	14.4	14.9	12.5
Mutton	27.2	20.5	23.1	18.8	3.6	7.3	8.5
Pigmeat(a)	3.9	3.2	4.6	6.7	13.3	17.5	18.9
Total	101.5	84.6	97.2	85.9	96.1	79.8	77.1
Offal and meat, n.e.i.	3.8	4.0	5.2	5.1	5.9	3.1	2.5
Total meat and meat products (carcass equivalent weight)	118.5	103.0	112.4	98.8	102.0	83.0	79.6

For footnotes see end of table.

15.49 APPARENT PER CAPITA CONSUMPTION OF FOODSTUFFS — continued
(kg — unless otherwise indicated)

Commodity	Average 3 years ended						Latest year 1992-93p
	1938-39	1948-49	1958-59	1968-69	1978-79	1988-89	
Canned meat (canned weight)	1.0	1.2	1.9	2.2	1.6	n.a.	n.a.
Bacon and ham (cured carcass weight)	4.6	5.3	3.2	3.6	6.0	6.9	7.1
Poultry							
Poultry (dressed weight)	n.a.	n.a.	n.a.	8.3	17.1	24.3	26.5
Milk and milk products							
Market milk (fluid whole litres)	106.4	138.7	128.7	128.2	100.5	101.8	101.2
Cheese (natural equivalent weight)	2.0	2.5	2.6	3.5	5.3	8.3	9.0
Oils and fats							
Butter	14.9	11.2	12.3	9.8	5.1	3.2	2.6
Margarine							
Table margarine	0.4	0.4	n.a.	1.5	5.4	6.8	6.2
Other margarine	1.8	2.4	2.2	3.4	3.1	2.2	1.8
Total margarine	2.2	2.8	n.a.	4.9	8.5	9.0	8.0
Beverages							
Tea	3.1	2.9	2.7	2.3	1.7	1.2	1.0
Coffee(b)	0.3	0.5	0.6	1.2	1.6	2.0	2.2
Aerated & carbonated waters (litres)	n.a.	n.a.	n.a.	47.3	67.4	79.9	97.2
Beer (litres)	53.2	76.8	99.7	113.5	133.2	111.7	95.6
Wine (litres)	2.7	5.9	5.0	8.2	14.7	20.2	18.2
Spirits (litres alcohol)	0.5	0.8	0.7	0.9	1.2	1.2	1.2

(a) Includes pigmeat for bacon and ham. (b) Coffee and coffee products in terms of roasted coffee.

Source: *Apparent Consumption of Foodstuffs and Nutrients, Australia (4306.0)*.

AGRICULTURAL IMPROVEMENTS

Irrigation

Irrigation is one of the factors by which agriculture is developed. The variability in stream flow and annual rainfall means that

successful irrigation of crops and pastures is dependent on storage. Ground water supplies are used in areas where the quantity is adequate and the quality is suitable. The area of land irrigated (approximately 2.1 million hectares in 1992-93) forms 11.4 per cent of the total area under crops.

15.50 AREA OF CROPS AND PASTURES IRRIGATED
('000 hectares)

	Australia								1993		
	1991	1992	1993	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT
Pastures	1,133	1,081	1,184	517	502	54	62	16	31	—	—
Cereals	260	275	311	229	24	47	7	1	3	—	—
Vegetables for human consumption	93	93	89	14	18	28	9	7	13	—	—
All fruits	123	120	125	26	30	23	36	6	3	1	—
All other crops	266	356	245	143	8	81	3	3	6	—	—
Sugar cane	138	146	154	(a)	(a)	154	(a)	(a)	(a)	(a)	(a)
Total	2,012	2,069	2,107	930	581	387	117	33	55	3	—

(a) Not classified.

Source: *Summary of Crops, Australia (7330.0)*.

Fertilisers

Most Australian soils are deficient in phosphorous. Because of this and the significant but less widespread deficiency of sulphur in many soils, phosphatic fertilisers, particularly single superphosphate, account for the bulk of fertiliser usage. Over half of superphosphate is used on pastures in areas

with moderate to good rainfall. Large quantities are also used on cereal crops. Nitrogen deficiency is also general in Australian soils and the use of nitrogenous fertilisers is increasing. Potassium deficiency, however, is confined mainly to soils in the higher rainfall areas which are intensively cropped or used for irrigated pastures.

15.51 ARTIFICIAL FERTILISERS: AREA AND USAGE

<i>Year</i>	<i>Area fertilised ('000 ha)</i>	<i>Super- phosphate used ('000 tonnes)</i>	<i>Nitrogenous fertilisers used ('000 tonnes)</i>	<i>Other fertilisers used ('000 tonnes)</i>
1987-88	26,651	2,454	431	953
1988-89	27,871	2,523	438	971
1989-90	27,360	2,378	483	1,010
1990-91	23,627	(a)	(a)	(b)3,239
1991-92	19,517	(a)	(a)	(b)2,678
1992-93	19,702	(a)	(a)	(b)2,761

(a) Not collected. (b) Includes all fertiliser categories.

Source: *Summary of Crops, Australia (7330.0)*.

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- INTERNATIONAL WHEAT COUNCIL. Grain Marketing Report, December 1992*
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FOR MORE INFORMATION

The ABS has a far wider range of information on Australia than that contained in the *Year Book*. Information is available in the form of regular publications, electronic data services, special tables and from investigations of published and unpublished data.

For further information contact ABS Information Services at one of the addresses listed on the page facing the Introduction to the *Year Book*.