



6 ***Agriculture***



INTRODUCTION

This chapter presents an overview of Victoria's agricultural performance as compared with that of Australia. Data are provided on the gross value of commodities produced, the major agricultural activities within statistical divisions, the area and production of agricultural commodities, and information concerning livestock and livestock products.

The 1992 Season

The 1991-92 Agricultural Census covered over 31,000 establishments with agricultural activity, which was a slight decrease from the previous season. Census results also showed a small decrease in both livestock numbers and the output of livestock products compared with the previous year.

Wool production fell by 12.5 per cent to 117,000 tonnes, while the gross value was \$548 million. The number of sheep shorn decreased by 11 per cent, while the average yield for sheep and lambs decreased to 4.1 kg per head.

The 1992 season saw a general increase in the production of fruit, fodder crops and vegetable production. The gross value of all crops increased by 14 per cent to \$1.83 billion.

The area sown for cereal grains decreased 10 per cent and production decreased by 3 per cent. Gross value of cereals for grain increased to \$413 million, a rise of 20 per cent.

The total gross value of agricultural commodities produced increased to \$4.8 billion, a 3 per cent increase compared with the previous season.

Victoria compared with Australia

In terms of farm income, Victoria's share for the latest 6 year period (1986-87 to 1991-92) fluctuated markedly. Farm income decreased from \$1,328m in 1988-89 to \$663m in 1990-91. The 1991-92 Victorian figure represented 65 per cent of the total Australian farm income of \$1,549m, a considerable increase on previous years.

The Gross Value of Agricultural Commodities Produced (GVACP) provides a measure of the output from farming. In 1991-92, the GVACP for Victoria was \$4,822m, or 23 per cent of the Australian total of \$20,861m. In terms of value, Victoria produced 19 per cent of Australia's crops, 22 per cent of livestock slaughtered, and 33 per cent of livestock products (wool, milk, eggs, and honey).

TABLE 6.1 AUSTRALIAN NATIONAL ACCOUNTS : FARM INCOME

Year	Gross Farm Product at factor cost		
	Victoria	Australia	Victoria as a percentage of Australia
	\$m	\$m	per cent
1986-87r	775	2,076	37.3
1987-88r	1,076	3,611	29.8
1988-89r	1,328	4,830	27.5
1989-90r	1,111	3,972	28.0
1990-91r	663	1,245	53.3
1991-92	1,001	1,549	64.6

TABLE 6.2 GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED, VICTORIA

Particulars	Year ended 30 June						Victoria as a percent- age of Australia
	1987	1988	1989	1990	1991	1992	1992
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	
Crops -							
Cereals for grain	525,136	421,509	502,434	578,167	343,967	413,010	12.0
Hay	181,003	148,406	211,254	234,627	287,937	285,127	24.6
Industrial crops	34,329	48,562	44,675	44,228	42,031	42,28	4.0
Vegetables	227,351	255,994	291,792	345,303	320,528	314,933	25.3
Grapes	117,776	149,323	156,215	141,160	158,598	178,620	41.3
Fruit	203,604	202,101	220,127	233,050	244,160	334,263	25.6
Other	186,862	269,598	232,317	234,334	211,270	265,893	15.7
Total	1,476,061	1,495,493	1,658,814	1,810,869	1,608,591	1,834,131	18.6
Livestock slaughterings and other disposals -							
Cattle and calves	561,154	570,499	625,307	706,928	794,469	743,455	19.6
Sheep and lambs	259,275	270,033	233,308	180,182	112,914	146,071	31.7
Other	249,424	294,405	318,831	332,799	363,327	392,961	27.2
Total	1,069,853	1,134,937	1,177,446	1,219,909	1,270,711	1,282,487	22.4
Livestock products -							
Wool	726,259	1,144,831	1,159,326	1,099,775	707,796	552,141	18.5
Dairy products	643,778	747,811	904,065	956,927	1,000,565	1,080,903	55.1
Other	86,327	84,633	91,815	92,649	95,507	72,468	23.8
Total	1,456,364	1,977,275	2,155,206	2,149,351	1,803,870	1,705,510	32.5
Grand total	4,002,278	4,607,705	4,991,466	5,178,442	4,683,172	4,822,131	23.1

TABLE 6.3 NUMBER OF ESTABLISHMENTS, WITH AGRICULTURAL ACTIVITY, AREA, AND LAND UTILISATION, BY STATISTICAL DIVISION 1991-92

Statistical division	Number of establishments (a)	Area used	Sown pasture	Native	Balance of	Total area of establishments
		for crops(b)(c)	and lucerne	pasture	establishments	
		'000 ha	'000 ha	'000 ha	'000 ha	'000 ha
Melbourne	1,889	20	100	43	40	203
Barwon	1,544	29	263	85	52	429
Western District	4,707	49	1,222	281	164	1,716
Central Highlands	1,779	63	463	149	90	765
Wimmera	2,897	665	809	214	408	2,096
Mallee	3,910	881	609	455	650	2,595
Loddon-Campaspe	3,000	192	607	266	220	1,285
Goulburn	4,865	95	668	271	194	1,229
Ovens-Murray	1,870	27	269	128	210	635
East Gippsland	1,239	8	245	212	375	840
Gippsland	3,658	10	405	103	62	581
Total Victoria	31,358	2,039	5,662	2,208	2,466	12,374

(a) Includes non land-based beekeeping establishments (i.e. beekeeping activity not permanently located at one site).
 (b) Excludes area of pasture cut for hay or seed.
 (c) Duplicated area included if double-cropping occurred.

TABLE 6.4 NUMBER OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, CLASSIFIED BY EVAO AND MAIN ACTIVITY OF ESTABLISHMENT, BY STATISTICAL DIVISION, VICTORIA, 1991-92 (a)

Main activity of establishment	Estimated value of agricultural operations (EVAO) (\$'000)						Total establishments
	<20	20-39	40-59	60-99	100-199	200+	
MELBOURNE STATISTICAL DIVISION							
Meat cattle	44	135	77	67	30	17	370
Milk cattle	2	17	33	60	97	27	236
Vegetables	6	15	25	50	97	155	348
Orchard and other fruit	4	28	29	43	59	63	226
Nurseries	18	40	16	42	34	34	184
Poultry	1	9	4	17	29	71	131
Potatoes	1	2	4	13	27	42	89
Other	59	66	52	52	45	31	305
- Total	135	312	240	344	418	440	1,889
BARWON STATISTICAL DIVISION							
Sheep	47	93	73	91	68	30	402
Sheep and meat cattle	10	29	25	38	27	14	143
Milk cattle	5	11	35	118	255	113	537
Meat cattle	17	71	44	37	19	6	194
Other	27	36	28	54	55	68	268
Total	106	240	205	338	424	231	1,544
WESTERN DISTRICT STATISTICAL DIVISION							
Sheep	69	208	285	428	449	171	1,610
Milk cattle	5	27	69	275	819	317	1,512
Meat cattle	42	193	112	106	72	31	556
Sheep and meat cattle	13	97	100	181	216	192	799
Other	37	17	28	36	61	51	230
Total	166	542	594	1,026	1,617	762	4,707

**TABLE 6.4 NUMBER OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY,
CLASSIFIED BY EVAO AND MAIN ACTIVITY OF ESTABLISHMENT, BY STATISTICAL
DIVISION, VICTORIA, 1991-92 (a) - continued**

Main activity of establishment	Estimated value of agricultural operations EVAO (\$'000)						Total establish- ments
	<20	20-39	40-59	60-99	100-199	200+	
CENTRAL HIGHLANDS STATISTICAL DIVISION							
Sheep	79	182	170	240	215	85	971
Potatoes	4	5	10	24	47	61	151
Sheep and meat cattle	12	60	35	42	39	28	216
Meat cattle	11	34	15	18	15	2	95
Sheep and cereals	3	13	16	34	64	31	161
Other	18	21	20	38	49	39	185
Total	127	315	266	396	429	246	1,779
WIMMERA STATISTICAL DIVISION							
Sheep and cereals	29	94	118	265	327	166	999
Sheep	91	144	138	186	136	33	728
Cereal grains	10	66	85	173	325	259	918
Other	38	31	36	44	57	46	252
Total	168	335	377	668	845	504	2,897
MALLEE STATISTICAL DIVISION							
Grapes	9	141	249	488	429	119	1,435
Sheep and cereals	6	45	56	147	292	230	776
Cereal grains	8	53	64	123	248	259	755
Orchard and other fruit	12	22	24	46	42	72	218
Milk cattle	-	1	7	48	99	37	192
Other	74	118	81	90	80	91	534
Total	109	380	481	942	1,190	808	3,910
LODDON-CAMPASPE STATISTICAL DIVISION							
Sheep	118	233	142	156	113	37	799
Milk cattle	4	11	26	154	407	134	736
Sheep and cereals	10	59	85	122	146	60	482
Meat cattle	29	99	52	41	31	6	258
Sheep and meat cattle	20	55	46	70	56	18	265
Pigs	1	6	3	5	13	37	65
Other	38	54	46	58	101	98	395
Total	220	517	400	606	867	390	3,000
GOULBURN STATISTICAL DIVISION							
Milk cattle	6	36	88	406	960	265	1,761
Meat cattle	86	237	138	116	80	13	670
Sheep and meat cattle	31	129	130	138	123	37	588
Orchard and other fruit	4	17	19	59	92	188	379
Sheep and cereals	7	45	51	70	66	8	247
Sheep	99	239	160	165	86	18	767
Other	57	60	46	77	95	118	453
Total	290	763	632	1,031	1,502	647	4,865

TABLE 6.4 NUMBER OF ESTABLISHMENTS WITH AGRICULTURAL ACTIVITY, CLASSIFIED BY EVAO AND MAIN ACTIVITY OF ESTABLISHMENT, BY STATISTICAL DIVISION, VICTORIA, 1991-92 (a) - continued

Main activity of establishment	Estimated value of agricultural operations EVAO (\$'000)						Total establishments
	<20	20-39	40-59	60-99	100-199	200+	
OVENS-MURRAY STATISTICAL DIVISION							
Meat cattle	45	214	185	164	110	25	743
Milk cattle	1	10	20	70	181	54	336
Sheep and meat cattle	16	60	60	54	50	9	249
Tobacco	-	5	13	34	74	43	169
Sheep	23	31	29	28	12	4	127
Other	28	37	27	52	56	46	246
Total	113	357	334	402	483	181	1,870
EAST GIPPSLAND STATISTICAL DIVISION							
Meat cattle	18	115	89	78	68	8	376
Milk cattle	1	6	10	50	167	87	321
Sheep and meat cattle	3	49	42	70	71	22	257
Sheep	14	33	29	42	36	5	159
Other	14	10	11	11	23	57	126
Total	50	213	181	251	365	179	1,239
GIPPSLAND STATISTICAL DIVISION							
Milk cattle	6	46	105	426	1,012	352	1,947
Meat cattle	93	363	218	197	117	49	1,037
Potatoes	-	6	4	14	36	68	128
Sheep and meat cattle	12	58	46	63	55	24	258
Sheep	19	33	20	27	26	15	140
Other	35	26	10	11	20	46	148
Total	165	532	403	738	1,266	554	3,658

(a) The period covered in this and most subsequent tables in this Chapter is the 1991-92 season, which in general refers to the year ended 31 March 1992 but also includes activities which may have been finalised after 31 March (e.g. grape picking). In most of these activities the growing period occurred before 31 March.

AGRICULTURAL COMMODITIES

Field crops

The cereal crops of wheat, oats, and barley are the principal field crops grown in Victoria. These, together with hay production, green feed, and silage, represent about 75 per cent of the total area sown, although there is some variation from year to year.

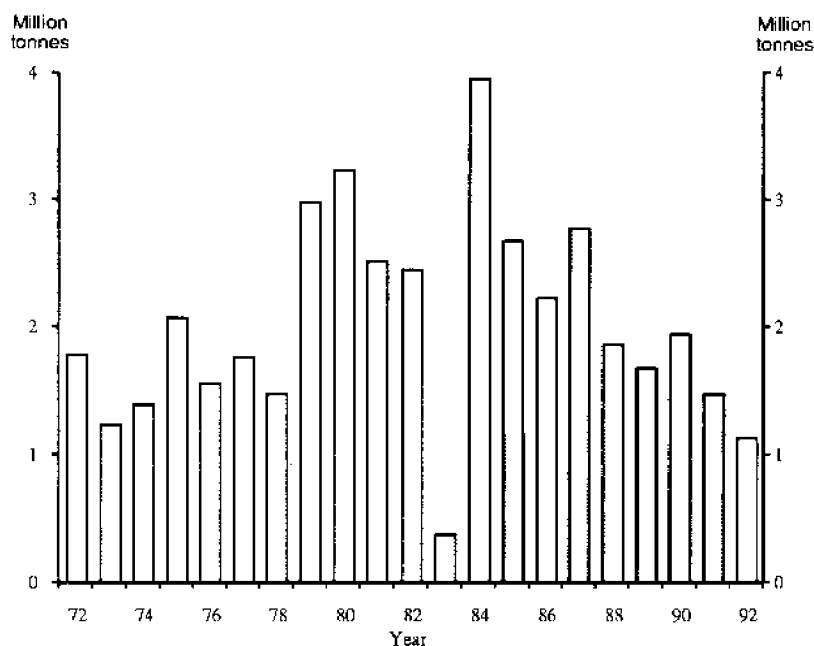
Wheat

Wheat is Victoria's largest crop in terms of area and production. The area sown has decreased by over 50 per cent in the six-year period 1986-87 to 1991-92. Over the same period production has declined by almost 60 per cent. The significance of wheat has declined from 65 per cent in 1989-90 to 48 per cent of the total production of cereals for grain in 1991-92. The value of wheat produced in Victoria amounted to \$219m in 1991-92.

TABLE 6.5 WHEAT FOR GRAIN, VICTORIA

Season	Area	Production	Average yield per hectare	A.S.W.(a) wheat standard
	'000 ha	'000 tonnes	tonnes	kg/hl
1986-87	1,364	2,795	2.05	80.2
1987-88	1,026	1,882	1.84	82.7
1988-89	931	1,691	1.82	82.5
1989-90	952	1,961	2.06	83.5
1990-91	911	1,493	1.64	82.5
1991-92	664	1,150	1.73	83.0

(a) Australian Standard White, quoted in kilograms per hectolitre.

WHEAT PRODUCTION, VICTORIA, YEAR ENDED 31 MARCH

Oats

Oats are sown for grain production, winter grazing, and hay production. Of the area sown for grain, grazing, and hay, about 82 per cent was harvested for grain, some of it after having been grazed during the winter. Approximately 80 per cent of oats produced is held on farms within Victoria. The balance is used for compound/urban feed markets, for milling, and for export. Within the feed market, the horse racing industry takes around 25,000 tonnes each year of the higher quality oats available for feed.

TABLE 6.6 OATS FOR GRAIN, VICTORIA

Season	Area	Production	Average yield per hectare
	'000 ha	'000 tonnes	tonnes
1986-87	215	356	1.66
1987-88	216	325	1.51
1988-89	189	276	1.46
1989-90	189	330	1.75
1990-91	177	301	1.70
1991-92	183	300	1.64

Barley

The area sown to barley for all purposes has been increasing over the six-year period. While barley is grown in all statistical divisions, production has been traditionally centred in two distinct areas where high quality grain is produced. The highest production is in the south-west of the Mallee and the adjacent north-western Wimmera. The second source of high quality barley grain is in an area between Melbourne, Geelong, and Bacchus Marsh in southern Victoria.

TABLE 6.7 BARLEY FOR GRAIN, VICTORIA

Season	Area		Production	Average yield per hectare
	'000 ha		'000 tonnes	tonnes
1986-87	265		444	1.68
1987-88	366		529	1.45
1988-89	350		544	1.55
1989-90	389		696	1.79
1990-91	463		651	1.41
1991-92	534		898	1.68

TABLE 6.8 OTHER CEREAL CROPS FOR GRAIN

Season	Rye		Maize		Millet		Triticale	
	Area	Production	Area	Production	Area	Production	Area	Production
	'000 ha	'000 tonnes	'000 ha	'000 tonnes	'000 ha	'000 tonnes	'000 ha	'000 tonnes
1986-87	22.8	19.0	0.6	3.2	2.8	4.5	17.6	28.5
1987-88	11.6	6.8	1.3	5.5	1.4	2.1	18.3	27.4
1988-89	8.1	4.8	0.3	1.4	1.0	1.6	16.0	25.8
1989-90	8.3	4.7	0.3	1.0	1.8	3.0	14.8	25.9
1990-91	11.0	7.1	0.3	2.0	1.3	2.1	18.3	32.7
1991-92	19.0	17.1	0.3	3.0	0.9	1.7	18.9	34.6

TABLE 6.9 SILAGE MADE, AND FARM STOCKS OF SILAGE AND HAY, BY STATISTICAL DIVISION (tonnes)

Statistical division	Silage made,	Stocks at 31 March 1992	
	season 1991-92	Silage	Hay
Melbourne	10,372	13,647	65,615
Barwon	17,611	20,497	141,268
Western District	49,173	45,044	459,655
Central Highlands	4,213	12,148	160,285
Wimmera	2,699	14,907	193,008
Mallee	1,485	4,211	101,197
Loddon-Campaspe	8,914	13,067	263,451
Goulburn	17,257	16,295	400,153
Ovens-Murray	14,270	22,725	100,169
East Gippsland	7,863	11,243	74,850
Gippsland	72,825	59,152	287,557
Total Victoria	206,681	232,935	2,247,207

TABLE 6.10 HAY PRODUCTION, VICTORIA, SEASON 1991-92

Variety	Area	Production	Average yield
	hectares	tonnes	per hectare tonnes
Meadow grass and clover	436,126	1,550,360	3.55
Oaten	70,297	276,100	3.93
Lucerne	33,663	173,674	5.16
Cereals (excluding oats)	10,531	29,774	2.83
Total	550,617	2,029,908	3.69

Oil seeds

After a decline from 1987-88 in the production of rapeseed, of which 'canola' is a cultivar, to a low of 9,500 tonnes in 1990-91, in 1991-92 there was a large increase to 26,500 tonnes. There was considerable variability in the production of oil seeds over the 6 year period.

TABLE 6.11 SELECTED OILSEEDS PRODUCTION, VICTORIA

Season	Area	Production	Average yield
	(hectares)	(tonnes)	per hectare (tonnes)
LINSEED			
1986-87	2,618	2,926	1.12
1987-88	4,040	4,336	1.07
1988-89	1,981	2,539	1.28
1989-90	709	681	1.00
1990-91	2,187	2,129	0.97
1991-92	1,287	1,251	0.97
RAPSEED (a)			
1986-87	18,117	21,699	1.20
1987-88	21,080	22,730	1.08
1988-89	13,345	16,327	1.22
1989-90	12,392	16,609	1.30
1990-91	10,235	9,544	0.93
1991-92	22,957	26,481	1.15
SAFFLOWER			
1986-87	10,448	7,425	0.71
1987-88	20,878	14,467	0.69
1988-89	25,824	20,126	0.78
1989-90	21,842	13,580	0.60
1990-91	7,891	4,398	0.56
1991-92	19,707	12,116	0.61
SUNFLOWER			
1986-87	7,359	8,019	1.09
1987-88	4,161	7,234	1.74
1988-89	3,943	6,117	1.55
1989-90	3,187	5,331	1.70
1990-91	1,742	3,041	1.75
1991-92	1,396	2,222	1.59

(a) Includes canola.

Grain legumes

The area of lupins sown has risen from about 100 hectares in 1973 to 36,700 hectares in 1991-92. The 1991-92 production of lupins increased 37 per cent from the previous year. The production of field peas increased by over 60 per cent in 1991-92.

TABLE 6.12 LEGUMES FOR GRAIN, VICTORIA

Season	Lupins		Field peas		Total (a)	
	Area	Production	Area	Production	Area	Production
	'000 ha	'000 tonnes	'000 ha	'000 tonnes	'000 ha	'000 tonnes
1986-87	27.6	37.2	197.8	334.8	232.5	384.7
1987-88	37.2	35.2	236.8	258.5	289.8	311.2
1988-89	34.9	37.0	221.1	263.7	280.7	335.6
1989-90	35.9	41.2	154.4	198.2	237.7	314.9
1990-91	33.2	29.6	165.2	131.7	291.4	224.4
1991-92	36.7	40.5	193.6	211.7	382.3	437.8

(a) Includes chick peas, dried edible beans, etc.

FRUIT

In 1991-92 in Victoria the area planted with fruit, nuts, and berries was 22,156 hectares and the area of vineyards was 19,471 hectares. Although the total is only about two per cent of the total area under crops in Victoria, in 1991-92 fruit and grapes contributed 30 per cent to the gross value of crops produced.

Tree fruit

In Victoria, the main fruit growing areas are in the Goulburn, Mallee, and Melbourne Statistical Divisions. There are important, but smaller areas throughout the State, including areas in the Ovens-Murray, Wimmera and Loddon-Campaspe Statistical Divisions.

TABLE 6.13 NUMBER OF SELECTED BEARING AND NON BEARING POME, STONE FRUIT AND CITRUS TREES BY STATISTICAL DIVISION, AT 31 MARCH 1992 ('000)

Statistical division	Apples	Pears	Peaches	Apricots	Nectarines	Oranges	Lemons and limes	Mandarins
Melbourne	685	71	104	-	39	-	12	-
Barwon	2	-	-	1	-	-	-	-
Western District	12	-	1	1	-	-	-	-
Central Highlands	98	14	5	4	4	-	-	-
Wimmera	2	-	2	-	2	-	-	-
Mallee	2	-	84	59	139	1,179	48	103
Loddon-Campaspe	328	17	-	-	-	-	-	-
Goulburn	519	1,557	658	203	58	99	29	-
Ovens-Murray	160	1	7	1	1	14	5	-
East Gippsland	3	-	2	-	-	-	-	-
Gippsland	56	4	5	-	3	-	-	-
Total Victoria	1,865	1,668	868	270	245	1,293	94	103

TABLE 6.14 ORCHARD FRUIT PRODUCTION, VICTORIA
(tonnes)

Type of fruit	Year ended 31 March -					
	1987	1988	1989	1990	1991	1992
Pears	123,859	138,814	119,012	142,419	140,184	158,394
Apples	99,801	83,451	99,554	94,098	91,269	105,725
Peaches	31,491	38,061	28,351	32,456	32,271	35,758
Apricots	6,365	8,567	8,384	9,279	8,227	10,421
Cherries	1,193	1,092	971	1,291	1,495	1,736
Plums and prunes	2,865	3,150	3,311	3,411	3,553	4,414
Olives	43	111	121	183	157	352
Nectarines	2,074	2,536	2,425	3,393	3,935	4,537
Quinces	33	23	26	14	14	19
Figs	2	5	6	6	3	3
Oranges -						
Valencias	47,132	40,680	35,461	47,733	41,888	46,038
Navels	20,572	22,094	21,620	22,319	20,323	22,147
Other	324	380	331	305	291	322
Lemons and limes	7,454	6,363	7,265	7,468	6,425	5,846
Grapefruit	6,033	6,801	6,079	7,123	5,872	6,647
Mandarins	3,080	2,783	3,259	4,078	3,411	3,781

Small fruit

Climatic requirements have restricted the commercial production of strawberries, and cane and bramble fruits in particular, to the cooler southern regions of Victoria, so that most of this fruit is grown in the Dandenong Ranges and the Mornington Peninsula areas which are relatively close to the Melbourne market. During the last few years fruit growers in other parts of the State interested in diversification have taken up the production of strawberries, raspberries and kiwi fruit, particularly for the fresh fruit market.

TABLE 6.15 SMALL FRUIT PRODUCTION, VICTORIA
(tonnes)

Type of fruit	Year ended 31 March -					
	1987	1988	1989	1990	1991	1992
Strawberries	1,619	1,748	1,621	1,665	1,725	1,976
Raspberries	312	320	330	376	275	279
Kiwi Fruit	568	861	1,657	2,239	2,271	2,380
Blueberries	21	31	32	50	73	107
Loganberries	4	9	4	3	2	1
Other berries	136	100	95	102	75	67

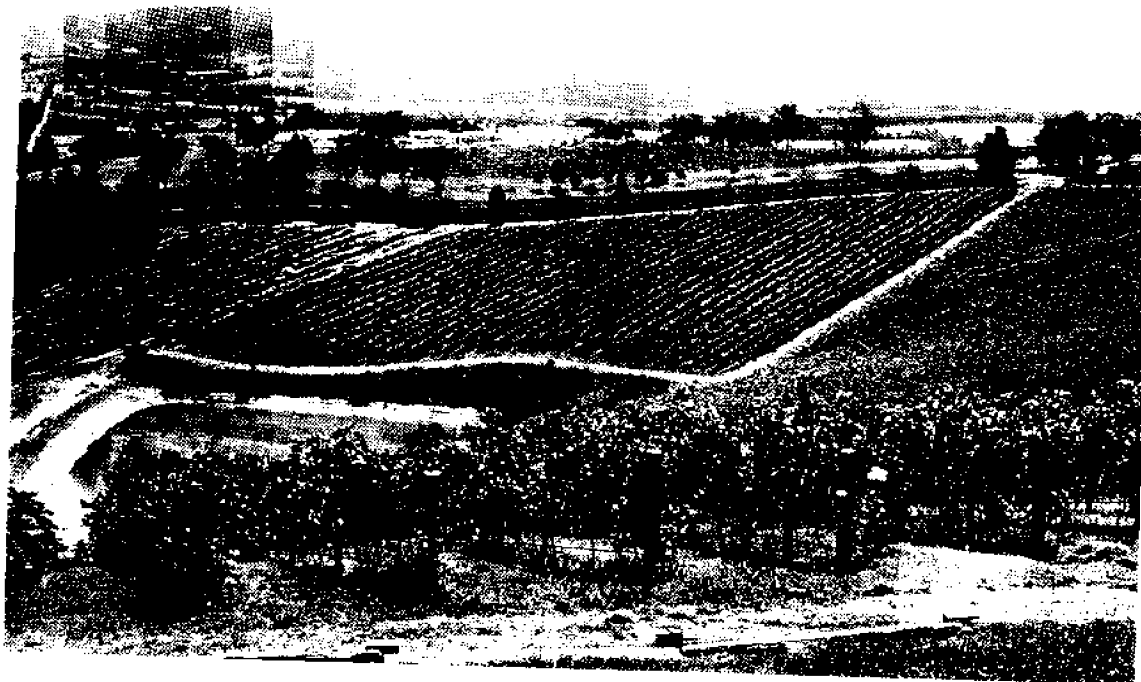
Nuts

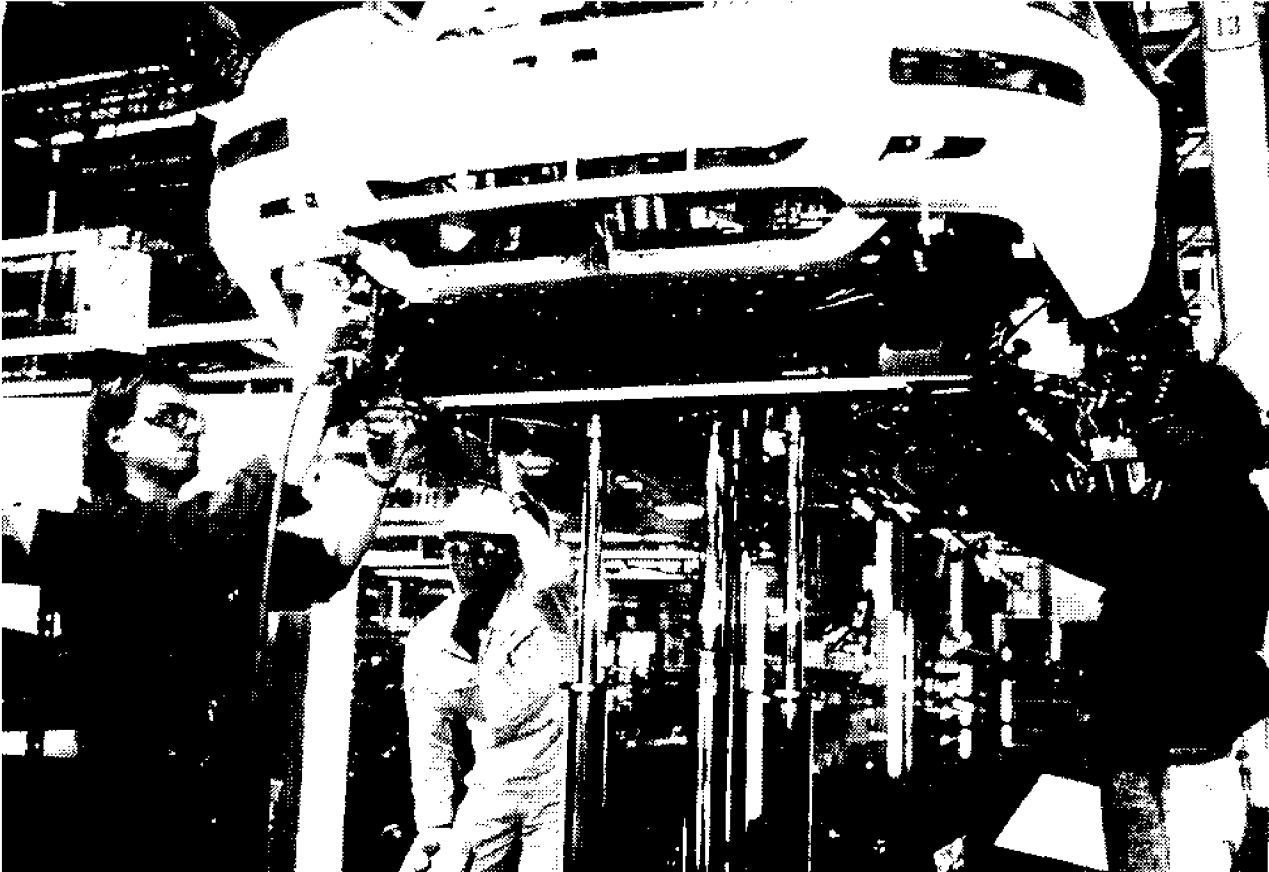
A wide range of nuts can be grown in Victoria. Examples are almonds, walnuts, chestnuts, hazelnuts, and pistachios. In the past, only a few of these trees have been grown in commercial plantings. Almonds were mainly planted in the northern area; walnuts and chestnuts in situations with deep soil in the north-east, the Dandenongs and Gippsland; and hazelnuts on shallower soils in the north-east and the Dandenongs.



▲ Research at the Australian Bionic Ear and Hearing Research Institute and The University of Melbourne's Department of Otolaryngology indicates that children receiving their cochlear implants at an early age can develop normal speech and language and be fully integrated in education. *Inset:* Minisystem 22 Cochlear Implant including the receiver/stimulator and electrode array which are surgically implanted and the speech processor and ear-level microphone and transmitter coil which is worn externally. - Photos: University of Melbourne. (Chapter reference "Social".)

A view of Yarra Valley Vineyards. The valley's first vineyard was planted in 1837 at Yering (near today's Yarra Glen). - Photo: Department of Business and Employment. (Chapter reference "Agriculture".) ▼





▲ Car assembly plant at Broadmeadows. - Photo: Department of Business and Employment.
(Chapter reference "Manufacturing".)

▼ Food processing operation at Shepparton. - Photo: Department of Business and Employment.
(Chapter reference "Manufacturing".)

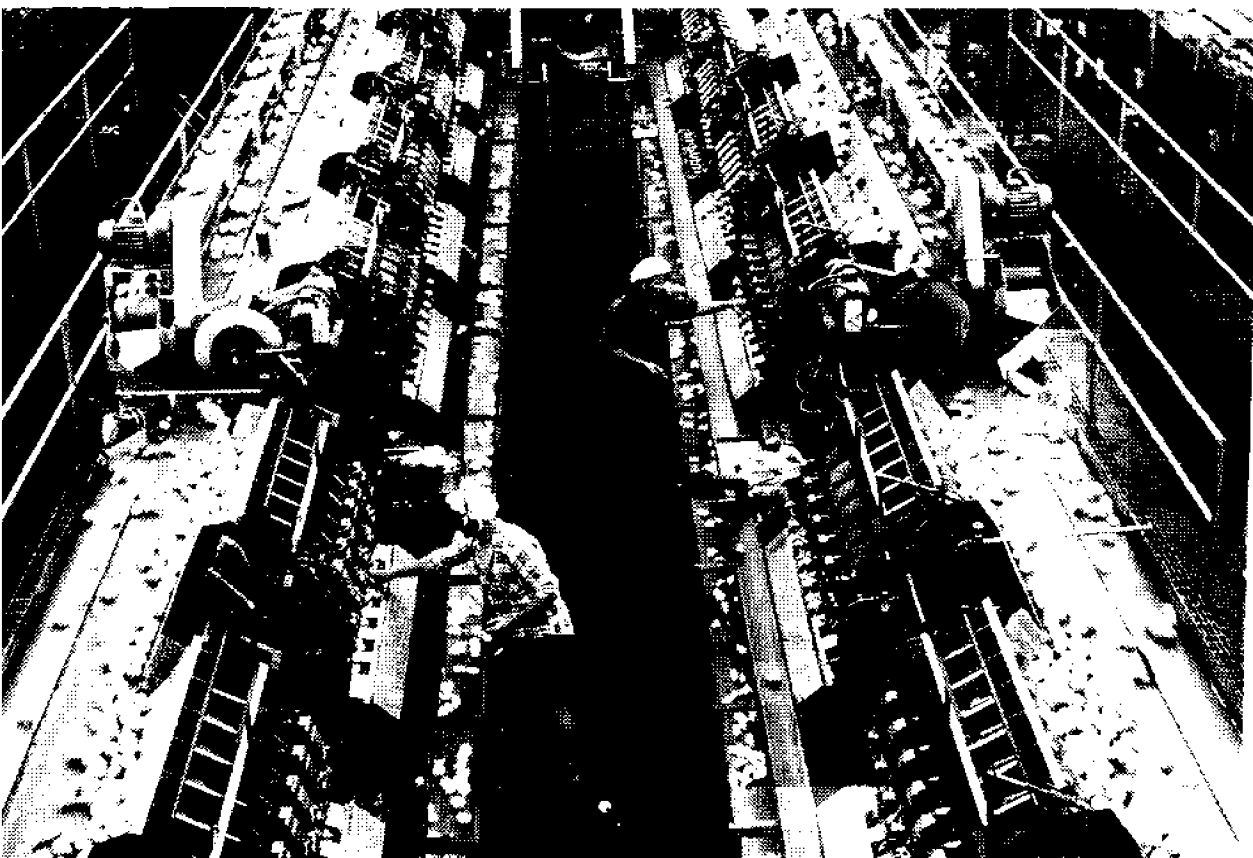


TABLE 6.16 NUT PRODUCTION, VICTORIA
(tonnes)

Type of nut	Year ended 31 March -					
	1987	1988	1989	1990	1991	1992
Walnuts	68	48	43	74	47	47
Chestnuts	29	53	53	103	148	231
Almonds	1,161	1,655	1,479	1,896	2,077	2,454

Grapes

In Victoria, most wine grapes are grown under irrigation in the Mallee, Ovens-Murray and Goulburn Statistical Divisions. Wine grape varieties are also being grown in the traditional non-irrigated areas in the north-east (Rutherglen and Milawa) and in the west (Avoca) of the State. With the increasing interest in wine grapes over recent years, many vineyards of varying sizes have been established in other suitable areas throughout the State.

TABLE 6.17 VITICULTURE, AREA AND PRODUCTION, VICTORIA

Season	Area (hectares)		Production (tonnes) for -	
	Bearing	Non-bearing	Wine making	Drying and table (a)
1986-87	17,827	1,127	67,133	221,482
1987-88	17,591	1,172	78,407	250,789
1988-89	17,590	1,267	104,275	221,921
1989-90	17,648	1,265	85,225	215,284
1990-91	18,112	1,138	78,674	276,747
1991-92	18,490	981	104,398	294,514

(a) Production for drying is estimated as fresh weight equivalent of dried weight.

OTHER INTENSIVE CROPS

Vegetables

Most of the fresh vegetable production in Victoria is located in the Melbourne, Central Highlands, Gippsland, East Gippsland and Goulburn Statistical Divisions.

Potatoes are the main vegetable produced. These are grown mainly in the Central Highlands Statistical Division around Ballarat, at Thorpdale and Koo-wee-rup in the Gippsland Statistical Division, with additional areas around Warnambool, the Bellarine Peninsula, Colac, the Otway Ranges, and Melbourne metropolitan market gardens. In 1991-92, the gross value of potato production was \$91m, 5 per cent of the total value of production of crops.

The tomato industry in Victoria is predominantly processing-oriented with most of the crop produced in the irrigated areas between Shepparton and Rochester in northern Victoria.

TABLE 6.18 VEGETABLES FOR HUMAN CONSUMPTION, VICTORIA

Type of vegetable	Area sown (hectares)			Production (tonnes)		
	1989-90	1990-91	1991-92	1989-90	1990-91	1991-92
Potatoes	13,319	14,058	13,602	368,409	376,739	368,777
Onions	399	467	414	9,221	11,357	10,386
Carrots	1,287	1,352	1,393	48,625	57,393	54,299
Parsnips	123	121	144	2,598	1,818	2,099
Beetroot	33	28	25	421	319	251
Tomatoes	3,225	3,595	2,922	136,901	164,559	139,048
French beans	855	738	819	5,341	3,824	5,115
Green peas -						
Market (a)	93	93	101	155	170	159
Factory (b)	1,849	1,610	852	4,928	4,493	3,688
Cabbages	727	817	785	26,233	32,455	32,118
Cauliflowers	1,206	1,277	1,182	28,668	31,508	26,155
Lettuce	1,372	1,375	1,286	28,613	35,188	34,640
Pumpkins	518	446	398	8,691	7,504	6,770

(a) Sold in pod. (b) Shelled weight.

Tobacco

The tobacco industry in Victoria is centred at Myrtleford in the Ovens-Murray Statistical Division with production areas in the adjacent valleys of the Buffalo, Ovens, King, and Kiewa Rivers, with 182 tobacco growers in Victoria.

TABLE 6.19 TOBACCO PRODUCTION, VICTORIA

Season	Area	Production	Average yield
	hectares	tonnes (dry)	per hectare tonnes (dry)
1986-87	1,819	3,975	2.19
1987-88	2,041	5,102	2.50
1988-89	1,737	4,089	2.35
1989-90	2,116	5,001	2.36
1990-91	1,937	5,233	2.70
1991-92	1,845	4,219	2.29

Hops

In Victoria, production of hops is confined to the alluvial soils in the valleys of the Ovens and King Rivers where good quality irrigation water is available to supplement the natural summer rainfall. In 1991-92 the 18 hop gardens in Victoria had the best yield in 6 years, producing 764 tonnes (dried weight) of hops for both domestic brewers and export markets.

TABLE 6.20 HOP PRODUCTION, VICTORIA

Season	Area	Production	Average yield
	hectares	(dried weight) tonnes	per hectare tonnes
1986-87	336	579	1.72
1987-88	382	695	1.82
1988-89	371	680	1.84
1989-90	348	577	1.66
1990-91	341	661	1.94
1991-92	352	764	2.17

Plant nurseries

In 1991-92, there were 377 nurseries in Victoria with a total production area of 3,164 hectares (including establishments growing cultivated turf).

**LIVESTOCK AND
LIVESTOCK
PRODUCTS**

Sheep continue to be by far the most common livestock. Although in 1991-92 their number continued to decline, there was an increase in the number that were slaughtered. Numbers of cattle and pigs have remained relatively steadier, though also with an increasing number being slaughtered.

TABLE 6.21 SELECTED LIVESTOCK NUMBERS, VICTORIA
(’000)

Season	Cattle			Sheep	Pigs
	Dairy	Beef	Total		
1986-87	1,464	2,014	3,478	26,586	432
1987-88	1,436	2,038	3,474	26,997	437
1988-89	1,438	2,071	3,509	28,067	423
1989-90	1,445	2,200	3,646	29,268	428
1990-91	1,423	2,208	3,631	27,494	403
1991-92	1,422	2,152	3,574	24,782	431

TABLE 6.22 LIVESTOCK SLAUGHTERED, VICTORIA
(’000)

Types of livestock	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
Sheep	3,857	3,530	3,053	3,326	4,054	4,154
Lambs	6,634	7,111	6,264	6,200	6,246	6,321
Cattle and calves	2,081	2,054	1,875	1,995	2,229	2,226
Pigs	849	938	917	971	1,013	1,211

Sheep and Wool

At 31 March 1992, the Victorian sheep population was almost 25 million head, well below the 1971 peak of 34 million head. Nearly 60 per cent of the State’s sheep flock is located in the Western District, Central Highlands, and Wimmera Statistical Divisions. Clipped wool production decreased by 13 per cent to 116,600 tonnes, with a gross value of \$548 million. The number of sheep shorn decreased by 11 per cent while the average yield (for sheep and lambs) decreased to 4.1 kilograms per head.

TABLE 6.23 SHEEP AND LAMBS BY STATISTICAL DIVISION, AT 31 MARCH 1992
(’000)

Statistical division	Rams	Ewes	Wethers	Lambs	Total
Melbourne	2	83	78	28	190
Barwon	17	683	399	282	1,380
Western District	74	3,428	2,136	1,497	7,137
Central Highlands	32	1,572	1,407	666	3,678
Wimmera	35	1,642	1,334	660	3,670
Mallee	23	970	320	401	1,714
Loddon-Campaspe	25	1,222	942	481	2,670
Goulburn	26	1,151	727	376	2,280
Ovens-Murray	7	281	150	83	520
East Gippsland	8	386	288	166	848
Gippsland	10	380	176	128	695
Total Victoria	258	11,797	7,957	4,769	24,782

TABLE 6.24 SHEEP SHORN AND WOOL CLIPPED, VICTORIA

Season	Number shorn		Wool clipped (including crutchings)		Average	
	Sheep	Lambs	Sheep	Lambs	Per sheep	Per lamb
	'000	'000	tonnes	tonnes	kg	kg
1986-87	22,978	5,942	115,684	9,281	5.0	1.6
1987-88	23,545	6,365	118,620	9,597	5.0	1.5
1988-89	24,357	6,225	122,566	9,927	5.0	1.6
1989-90	25,773	6,308	132,710	10,028	5.1	1.6
1990-91	25,939	5,716	124,881	8,292	4.7	1.5
1991-92	23,467	4,662	109,835	6,739	4.5	1.4

TABLE 6.25 SHEEP SHORN AND WOOL CLIPPED BY STATISTICAL DIVISION, SEASON 1991-92

Statistical division	Number shorn		Wool clipped (including crutchings)		Average	
	Sheep	Lambs	Sheep	Lambs	Per sheep	Per lamb
	'000	'000	tonnes	tonnes	kg	kg
Melbourne	184	31	888	51	4.8	1.6
Barwon	1,311	278	5,857	377	4.5	1.4
Western District	6,876	1,451	30,909	2,046	4.5	1.4
Central Highlands	3,534	494	15,363	722	4.3	1.5
Wimmera	3,460	664	17,560	1,031	5.1	1.6
Mallee	1,453	405	7,935	656	5.5	1.6
Loddon-Campaspe	2,519	501	12,676	697	5.0	1.4
Goulburn	2,178	447	9,684	620	4.4	1.4
Ovens-Murray	509	103	2,104	132	4.1	1.3
East Gippsland	818	131	3,896	184	4.8	1.4
Gippsland	626	157	2,963	222	4.7	1.4
Total Victoria	23,467	4,662	109,835	6,739	4.7	1.4

TABLE 6.26 TOTAL WOOL PRODUCTION, VICTORIA

Season	Clip	Stripped from or exported on skins (greasy)		Total quantity (greasy)
		tonnes	tonnes	
1986-87	124,965		33,728	158,693
1987-88	128,217		32,034	160,251
1988-89	132,493		25,175	157,668
1989-90	142,737		27,974	170,711
1990-91	133,172		28,317	161,489
1991-92	116,574		28,791	145,365

Lambing

Victoria's largest lambing season occurred in 1970-71, when 12.7 million lambs were marked from 14.8 million ewes mated (86 per cent). The peak in more recent years was in 1984-85 when 10.4 million lambs were marked from 11.7 million ewes mated (89 per cent). Since then there has been a decline, with 7.4 million lambs marked from 9.5 million sheep mated (78 per cent) in 1991-92, the lowest number in some years.

TABLE 6.27 LAMBING, VICTORIA

Season	Ewes mated	Lambs marked	Percentage of lambs marked to ewes mated
	'000	'000	per cent
1986-87	10,479	9,001	86
1987-88	10,662	9,399	88
1988-89	10,447	9,029	86
1989-90	10,923	9,504	87
1990-91	10,632	8,843	83
1991-92	9,466	7,412	78

Mutton and lamb production

Mutton, the meat from adult sheep, is mainly produced from sheep which are surplus to the wool industry, so that production patterns correspond closely to expansions and contractions in that industry. In 1991-92 mutton production was 87,000 tonnes, well down on the 1971-72 peak of 247,000 tonnes.

Prime lamb producers are found throughout the state. However, early to mid-season producers are distributed in a broad band across northern Victoria, including some irrigated areas. In addition, a considerable number of early lambs are brought from southern New South Wales for slaughter in Victoria. Mid to late-season producers are located mainly in the Western District, Central Highlands, Gippsland, and parts of the Ovens-Murray Statistical Divisions of the State. In 1991-92, 111,000 tonnes of lamb were produced.

Meat cattle

The Victorian environment is very favourable for beef production with cattle able to graze on pasture throughout the year.

Most of the Victorian breeding herds are located in the Western District, Goulburn, Ovens-Murray, East Gippsland, and Gippsland Statistical Divisions. A significant proportion of Victorian beef and veal production was exported during 1991-92, major markets being the USA, Japan, and the Republic of Korea.

TABLE 6.28 DISTRIBUTION OF MEAT CATTLE BY STATISTICAL DIVISION AT 31 MARCH 1992 ('000)

Statistical division	Bulls and buff calves for service	Cows and heifers	Calves under 1 year	Other (a)	Total
Melbourne	4	61	30	20	114
Barwon	3	51	26	15	95
Western District	15	244	116	79	454
Central Highlands	2	45	25	16	88
Wimmera	1	20	13	8	42
Mallee	1	29	23	12	66
Loddon-Campaspe	4	67	46	41	158
Goulburn	9	141	86	47	282
Ovens-Murray	7	132	84	54	277
East Gippsland	5	97	54	24	180
Gippsland	10	166	105	116	397
Total Victoria	60	1,053	609	431	2,152

(a) Steers and bullocks, 1 year and over.

Milk cattle

Dairy farming in Victoria is largely confined to the higher rainfall areas of Gippsland, Western District, Barwon Statistical Divisions and the northern irrigation areas of Loddon-Campaspe and Goulburn Statistical Divisions. With minor fluctuations, milk cattle numbers have been gradually declining from the 1973 peak of almost 2 million. There were 1.4 million milk cattle at 31 March 1992.

**TABLE 6.29 DISTRIBUTION OF MILK CATTLE BY STATISTICAL DIVISION
AT 31 MARCH 1992
(^{'000})**

<i>Statistical division</i>	<i>Bulls and bull calves</i>	<i>Cows in milk and dry</i>	<i>Heifer and heifer calves</i>	<i>Total milk cattle (a)</i>
Melbourne	1	26	11	37
Barwon	1	72	29	103
Western District	5	214	84	302
Central Highlands	1	5	2	8
Wimmera	-	1	-	1
Mallee	-	25	11	37
Loddon-Campaspe	2	94	40	136
Goulburn	4	217	91	312
Ovens-Murray	1	38	15	54
East Gippsland	1	52	21	73
Gippsland	5	248	105	357
Total Victoria	19	991	411	1,422

(a) Excludes house cows.

TABLE 6.30 MILK PRODUCTION, VICTORIA

<i>Year ended 30 June</i>	<i>Million litres</i>	<i>Year ended 30 June</i>	<i>Million litres</i>
1987	3,692	1990	3,787
1988	3,649	1991	3,908
1989	3,792	1992	4,118

Pigs

The number of commercial establishments with pigs has been declining since 1984-85. However, during the same period the average herd size increased from 278 to 508 pigs. This trend toward fewer but larger units is expected to continue, with the bulk of the industry becoming increasingly capital intensive and established in grain growing areas. There were 431,000 pigs in Victoria at 31 March 1992, a slight increase from the previous few years.

TABLE 6.31 PIGS AND PIG KEEPERS BY STATISTICAL DIVISION AT 31 MARCH 1992

<i>Statistical division</i>	<i>Boars</i>	<i>Breeding sows</i>	<i>All other</i>	<i>Total pigs</i>	<i>Pig keepers</i>
Melbourne	239	3,018	19,709	22,966	20
Barwon	41	610	4,111	4,762	19
Western District	126	1,734	11,596	13,456	59
Central Highlands	118	2,273	16,878	19,269	29
Wimmera	383	5,854	43,326	49,563	136
Mallee	453	6,732	46,771	53,956	173
Loddon-Campaspe	1,173	19,088	146,756	167,017	171
Goulburn	604	9,060	55,135	64,799	121
Ovens-Murray	132	1,816	12,472	14,420	53
East Gippsland	12	202	1,742	1,956	14
Gippsland	136	2,593	15,772	18,501	53
Total Victoria	3,417	52,980	374,268	430,665	848

Poultry

In 1991-92 egg production for human consumption was 45.3 million dozen. The main areas of commercial egg production in Victoria are centred on the outskirts of the Melbourne and Goulburn (Shire of Yea) Statistical Division. Other important egg producing areas include the Geelong and Bendigo districts.

Farms consisting of one person or one family usually manage 5,000 to 15,000 layers. There are, however, many larger farms employing labour with up to 40,000 layers, and a few with much bigger establishments.

TABLE 6.32 POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION, VICTORIA ('000)

<i>Year ended 30 June</i>	<i>Chickens (i.e. broilers, fryers, or roasters)</i>	<i>Hens and stags</i>	<i>Ducks and drakes</i>
1987	62,466	2,441	637
1988	68,325	2,829	r703
1989	68,943	2,719	633
1990	68,335	2,154	657
1991	72,165	2,321	727
1992	73,832	1,938	735

In 1991-92, there were 75.2 million chickens, hens, stags, and ducks and drakes slaughtered for human consumption. The total dressed weight was 112,036 tonnes.

Most broiler farms range in capacity from 30,000 to 100,000 broilers, and with the present average of 5.5 batches of broiler chickens a year, these farms may produce from 165,000 to 550,000 broilers a year.

The main broiler production centres are located on the Mornington Peninsula, in areas east and south-east of Melbourne, and in the Geelong area - near the processing works and the main centres of consumption. Most of Victoria's production is consumed locally, with very little being exported.

TABLE 6.33 DRESSED WEIGHT OF POULTRY SLAUGHTERED, FRESH AND FROZEN (a)(b), VICTORIA
(⁰⁰⁰ kg)

<i>Year ended 30 June</i>	<i>Chickens (i.e. broilers, fryers, or roasters)</i>	<i>Hens and stags</i>	<i>Ducks and drakes</i>
1987	84,646	3,959	1,202
1988	96,279	4,655	1,326
1989	97,409	4,547	1,206
1990	92,608	3,708	1,222
1991	100,529	4,130	1,377
1992	107,049	3,565	1,399

(a) Dressed weight of whole birds, pieces, and giblets intended for sale as reported by producers.

(b) Fresh: sold immediately after slaughter or chilled for sale soon after. Frozen: frozen hard for storage of indefinite duration.

Apiculture

Honey production in Victoria was 3,579 tonnes in 1991-92. The bulk of the honey produced is sold to large processors who clarify and pack it. Nearly 50 per cent of the annual production of honey is exported, chiefly to the United Kingdom.

TABLE 6.34 BEEHIVES, HONEY, AND BEESWAX, VICTORIA

<i>Year ended 30 June</i>	<i>Beekeepers</i>	<i>Production</i>		
		<i>Hives</i>	<i>Honey</i>	<i>Beeswax</i>
	number	number	tonnes	tonnes
1987	111	58,948	3,107	52
1988	145	59,377	3,824	64
1989	130	50,561	2,886	66
1990	131	56,657	3,127	58
1991	149	60,747	4,129	71
1992	118	56,540	3,579	56

REFERENCES

Data sources

Statistics in this chapter are, in general, derived from the Agricultural Census conducted at 31 March each year throughout Australia, which collects data from establishments with agricultural activity.

The ABS excludes from the Census establishments with an Estimated Value of Agricultural Operations (EVAO) less than a certain cut-off level. This cut-off level is reviewed from time to time. From the 1986-87 Census, the cut-off value was raised to \$20,000, and in 1991-92, to \$22,500.

EVAO is an aggregation of derived values for all crop and livestock activity for each unit. It should be noted that EVAO is applicable only for Industry Coding and Size Valuation purposes. It is NOT an indicator of receipts obtained by units, nor of the actual value of agricultural commodities produced by these units.

ABS publications

Agricultural Industries, Australia, Structure of Operating Units (7102.0)
Australian National Accounts, National Income and Expenditure (5206.0)
Environmental Issues and Usage of National Parks, Australia (4115.0)
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Value of Selected Agricultural Commodities Produced, Australia, Preliminary (7502.0)
Value of Agricultural Commodities Produced, Australia (7503.0)

Non-ABS source

Australian Wheat Board

