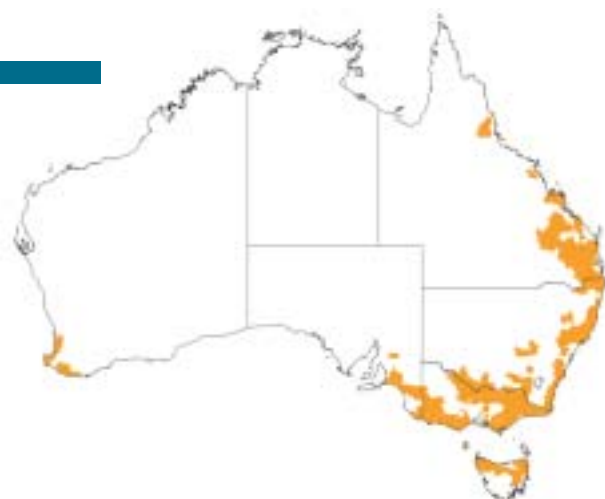


4 Dairy



Location

The Australian dairy industry is concentrated in the higher rainfall areas along coastal eastern, south-eastern and south-western Australia, and in the Murray–Darling Valley. Dairy production takes place in all states, but it is particularly significant in Victoria, where more than 60 per cent of all dairy farming enterprises are located. The dairy industry is a water-intensive industry, often requiring irrigated pasture. The number of dairy farms has declined steadily over recent decades, and the industry is trending towards fewer and larger farms.

Industry features

Table 7 shows the major features of the Australian dairy industry, including its size, output, market orientation and position in the global market.

Table 7 **Overview of dairy production and trade**

	Unit	1983–84	1993–94	2003–04
World				
Production	Mt	413	378	395
Trade ^a	%	na	na	na
Australia				
Dairy cow numbers	'000	1 809	1 786	2 036
Average milk yield	L/cow	3 269	4 523	4 948
Production	ML	5 913	8 077	10 075
Market milk sales	ML	1 572	1 810	1 961
Used in manufacturing	ML	4 341	6 267	8 114
Share of world output ^a	%	1.5	2.2	2.6
Gross value ^b	\$m	2 545	3 183	2 808
Domestic consumption ^a	ML	1 708	2 127	3 124
Exports				
Butter	kt	31	83	76
Cheese	kt	54	99	212
Whole milk powder	kt	28	57	117
Skim milk powder	kt	61	165	155
Total ^a	ML	1 092	2 340	3 827
Value ^b	\$m	368	1 315	2 179
Production exported ^c	%	36	52	63
Imports of cheese	kt	22	27	44
Employment ^d				
Dairy cattle farming ^e	'000			28.6
Dairy manufacturing	'000			14.9

a Milk equivalent.

b In 2003–04 dollars.

c Proportion of Australian manufactured product exported.

d ABS 2001a.

e Farmers/managers and others associated with dairy production.

na Not available.

Sources: ABARE 2004, 2005; ABS 1990, 2001a,b.

Markets

In farm-gate value terms, 56 per cent of the milk produced on Australian farms in 1999–2000 was exported, principally in the form of manufactured products such as butter, cheese, whole milk powder, skim milk powder and casein.

Although accounting for around 2 per cent of world milk production, Australia ranks third (behind New Zealand and the European Union) in world dairy trade with a 13 per cent share.

- Australia's top five export markets for processed dairy products in 2003–04 were Japan, Malaysia, the Philippines, the United States and Chinese Taipei.
- Japan is Australia's largest export destination for cheese, with shipments of 92 400 tonnes in 2003–04 — nearly 45 per cent of total cheese exports. Other important markets are the European Union, South Korea, Saudi Arabia and the United States.

In recent years, major export markets for milk powders have been in Asia, with the Philippines and Malaysia being the largest markets.

- Major factors driving Asian demand for dairy products are economic growth and changes in tastes.

Barriers to trade (in the form of import quotas and high tariffs), together with distortions to world trade and markets arising from production and export subsidies in major producing and consuming countries such as the European Union, the United States and Japan, are a significant issue for the Australian dairy industry and its future growth.

- The OECD estimates that, in 2003, the monetary value of transfers from consumers and taxpayers to support EU dairy producers as a result of policy measures was equivalent to 51 per cent of their gross incomes. For US producers the figure was 45 per cent, and for Japanese producers it was 77 per cent (OECD 2004).
- Australian producers received assistance equivalent to an estimated 15 per cent of their gross incomes in 2003. This support was in the form of, for example, payments associated with industry deregulation in 2000 and matching grants for industry research and development programs.

Farm businesses

Over the past two decades, the Australian dairy industry has undergone substantial restructuring as a consequence of the phasing-out of government support and regulation in an environment of change in world dairy product markets. During this period, the number of dairy farms in Australia has more than halved, and the processing and distribution sectors have been significantly rationalised. This restructuring has promoted a more efficient industry and has enabled significant growth in the value of Australian dairy production.

Principal features of Australian dairy farming businesses are shown in Table 8.

Over the past decade, there has been a steady increase in the size and scale of Australian dairy farms. The average area per farm, area of fodder crops, herd size, volume of milk production, milk yield per cow and purchased inputs per cow have all increased.

Many of the changes in dairy farming reflect industry responses in an environment in which the cost of inputs used in dairying have been rising faster than the prices received by dairy farmers for their outputs. In such an environment, the only way that real farm incomes can be maintained or improved is for producers to improve productivity.

Table 8 **Features of Australian dairy farming businesses** Average per farm

	Unit	1983–84	1993–94	2003–04
Number of businesses	no.	19 020	14 059	11 069
Average performance				
Area operated	ha	169	189	248
Dairy cattle numbers	no.	141	195	287
Milk sales ^a	\$	130 574	201 421	244 187
Dairy cattle sales	\$	16 868	17 325	29 398
Net farm cash income ^a	\$	54 520	71 348	59 440
Farm business profit ^a	\$	2 988	17 706	–14 210
Capital investment ^a	\$'000	957	1 296	2 005
Return on capital ^b	%	2.0	2.9	0.7
Farm debt ^a	\$'000	104	168	308
Off-farm income ^a	\$'000	na	10 559	19 350
Largest 30% of farms ^c				
Share of industry output	%	54	54	59
Milk produced	ML	0.50	0.96	1.78
Net farm cash income ^a	\$	92 997	127 642	89 678
Farm business profit ^a	\$	24 766	71 204	–1 765
Return on capital ^b	%	3.6	5.2	2.0
Other 70% of farms ^c				
Share of industry output	%	46	46	41
Milk produced	ML	0.23	0.36	0.52
Net farm cash income ^a	\$	38 440	47 379	45 025
Farm business profit ^a	\$	–6 113	–5 073	–21 160
Return on capital ^b	%	0.5	0.8	–0.5

a In 2003–04 dollars.

b Adjusted to full equity by adding interest paid to farm business profit and excluding capital appreciation.

c Ranked by value of output.

na Not available.

Source: ABARE Farm Surveys.

Australian dairy producers have been able to lift productivity by increasing average herd sizes and the scale of operations without greatly increasing the labour component of farm inputs. However, after strong growth in the decade to 1991–92 (average 3.5 per cent a year), total productivity growth slowed in the decade to 2001–02 (average 1.6 per cent a year) as increases in grain feeding were not matched by increased milk output per cow.

The merging of the market and manufacturing milk sectors in mid-2000 through the removal of state regulations was a major industry initiative intended to increase economic efficiency in the industry. It was expected that industry productivity would improve as dairying operations shifted to areas of greatest comparative advantage in production, so increasing industry competitiveness and profitability.

Relocation of dairying activity has been mainly to the inland irrigated regions. In New South Wales, dairying has tended to move from the north coast to the Lachlan and Murray Valleys. In Victoria, dairying has moved from Gippsland to the Goulburn and Murray Valleys, as well as to inland areas of western Victoria.

- The movement of dairying towards the inland has been a key factor in allowing producers to increase average farm size to try to achieve economies of scale.
- However, it may have come at the cost of increasing production risk, because dairying in the inland areas generally depends more on the use of purchased feed and irrigation than coastal dairying.

Herd management

The health and welfare of the national herd is an important determinant of productivity.

- The Australian Breeding Values Program has been used to counter a long-term genetic decline in herd fertility and to increase milk production.
- The Cow Time program is designed to improve milk harvesting and animal health and welfare.

Natural resource management

Dairying is an intensive industry that is dependent on water and pasture production.

- Over half of dairy farmers irrigate paddocks. The drought of 2002–03 severely reduced the availability of irrigation water in regulated irrigation areas of the Murray–Darling Basin, resulting in large sell-offs of cows and increased costs from extra water and fodder purchases.
- Some 80 per cent of flood irrigators have adopted water reuse systems.
- In 2000, 80 per cent of dairy farmers used soil testing to match fertiliser applications to soil and plant needs.
- Changed irrigation practices and groundwater pumping are some of the measures being taken to manage emerging problems of acid sulfate soils and salinity.

The industry recognises the importance of biodiversity and native vegetation conservation:

- 56 per cent of dairy farmers have been involved in property revegetation
- 64 per cent of dairy farms have some remnant vegetation
- 57 per cent of dairy farmers with waterways have all or most of them fenced off from livestock.

Measures are being taken to reduce the impacts of the industry on water and air quality:

- 80 per cent of farmers have formal effluent management systems
- There is potential for a reduction in greenhouse gas emissions through reducing or using methane gas emitted by cows and through improved management of organic matter, fertilisers and irrigated pastures.

In 2000, 31 per cent of managers were involved in Landcare and 30 per cent had a written farm plan. Managers who are in Landcare are more likely to undertake soil testing, revegetation and farm planning.

Employment and infrastructure

Dairy farming accounted for around 10 per cent of all employment in the agriculture sector in 2001. However, at a regional level, dairy farming occupies a much greater proportion of the agricultural workforce (between 30 and 45 per cent in Victorian dairying regions in 2001).

- Victoria has the largest proportion of agricultural employees engaged in the dairy cattle industry (57 per cent of total industry employment in 2001), followed by New South Wales (15 per cent) and Queensland (12 per cent). Farmers/managers constitute the bulk of those employed in the sector.
- Between 1996 and 2001, the proportion of people employed in dairying declined by around 2 per cent across all dairying regions. However, declines were substantially lower in Victorian dairying regions.

In the dairy processing sector, employment is also heavily concentrated in Victoria (50 per cent in 2001). Other regional employment in the transport sector and in associated supply and service industries is directly associated with the dairy industry, as well as employment in activities related to export and marketing.

The median age of dairy cattle farmers was 46 years in 2001, while the median age in the processing sector was lower, at 39 years.

Institutional arrangements

Peak bodies

The six state dairy farmer organisations are members of Australian Dairy Farmers Ltd, which provides national representation for dairy farmers. The Australian Dairy Products Federation is the peak national policy organisation representing the interests of dairy product manufacturers.

Marketing and research and development arrangements

The industry-owned company Dairy Australia (DA) provides research and development and marketing services for the benefit of the dairy industry. DA receives farmer levies for marketing and research and development, and matching government funding (up to a maximum of 0.5 per cent of industry gross value of production) for eligible research and development expenditure. In 2003–04, DA spent \$9.1 million on marketing. It also spent \$31.4 million on research and development, which equals 1.2 per cent of the industry's GVP. These activities focused on improving farm productivity growth and business success; social and environmental pressures on demand, production and supply; and building industry capacity to develop and utilise advances in research.



Industry outlook

Some key factors for the future are:

- remaining internationally competitive and attractive relative to other farm enterprises through growth in on-farm and off-farm productivity
- responding to changing customer and consumer demands and building supply-chain competitiveness and integrity
- increasing global market access, which will be critical to future growth in the industry
- increasing water-use efficiency, managing climate variability and change, and minimising emissions to air and water.