

# THE DAIRY INDUSTRY IN SOUTH AUSTRALIA

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South Australia covers a total area of 984,377 square kilometres (one eighth of the area of the Australian continent). One-third of this area is desert with little agricultural use.

Approximately 99% of the population of 1,408,000 (estimated, June 1988) live south of the 32nd parallel.

South Australia is the driest of the Australian States and Territories with more than four fifths of the area receiving less than 250 millimetres of rain annually.

The wettest area is the Mount Lofty Ranges with 1200 millimetres annually. These ranges are immediately east of the capital city, Adelaide. (Population 1,003,802 at 1986 census).

The climate is characterised by hot dry summers with day temperatures from 25 to 35°C with cool but mild winters (no snow) with most rainfall falling between the months of April and September.

## INDUSTRY OVERVIEW

The S.A. dairy farming industry developed to supply a need for market milk in population centres throughout the State. Farmers also catered for consumers' needs for dairy products, particularly butter and cheese.

Increasing milk production led to the establishment of small cheese and butter factories serving farmers in their immediate vicinities. Surplus produce was exported to the United Kingdom. Later, farmer co-operatives developed alongside proprietary companies and larger companies were formed by amalgamation.

South Australian milk production reached a peak of 483 million litres in 1969-70. Production has since declined to 377 million litres in 1987-88. South Australian butter production has declined dramatically since the 1940's. Cheese production has increased from approximately 10,000 tonnes in the 1940's to 27,000 tonnes in 1987-88. Surplus cheese and other products are exported to Britain, the Middle East, Japan and South East Asia.

With these changes in the industry, larger and more efficient factories were built, as evidenced by the following changes in licences issued by the Department of Agriculture under the Dairy Industry Act.

Year	No. of Companies	Factories
1962/63	26	45
1988/89	13	24

The number of licensed dairy farmers in South Australia has declined from 3,289 in 1976/77 to 1,133 in 1988/89. Dairy cow numbers (in milk and dry) have declined from 138,000 in 1976 to an estimated 97,000 in 1988 (Australian Bureau of Statistics 1988). The rate of decline in cow numbers has lessened since 1980 (102,000), reflecting a stabilisation in the industry.

Average dairy cow milk production figures in South Australia are the highest in Australia at an estimated 3,793 litres of milk per cow per lactation in 1987/88.

South Australia is Australia's fourth largest producing state, accounting for 6.2% of milk produced.

1987/88 (Australian Dairy Corporation Figures)

State	Milk Prod. (m litres)	Prod. per cow (litres)* *Provisional	No. of Dairy farms
Victoria	3649	3765	9458
New South Wales	932	3590	2495
Queensland	614	2873	2139
South Australia	377	3793	1138 (1988/9)
Tasmania	306	3576	1037
Western Australia	249	3773	541
	<u>6127</u>		<u>16786</u>

S.A.'s major dairying regions are the Adelaide Hills (Central and Southern), Fleurieu Peninsula, River Murray Swamps and Lakes irrigation areas, the Mid North and the South East (centred at Mount Gambier). All of these regions, except the South East and Mid North, constitute the Metropolitan Milk Production Area.

Dairying is also carried out on a small number of farms in the Riverland.

The table below indicates regions, number of farms, and locations of dairy factories and milk processors:

Region	No. of Dairy Farms	Location of Factories/Processors
Metropolitan Milk Production Area	829	Adelaide Metropolitan Area (12), Murray Bridge, Mount Compass, Jervois
South East	212	Mount Gambier (2), Moorak, Suttontown, Mil Lel, Bordertown
Mid North	85	Laura, Port Pirie
Riverland	7	Renmark, Moorook
TOTAL	<u>1133</u>	

In addition to the 1,133 dairy farms, 24 factories/processing premises are licensed. These plants provide direct employment for approximately 1,000 people. Approximately 490 milk vendors are involved in retail and wholesale distribution of milk.

The gross retail value of South Australia's dairy produce is approximately \$300 million.

### THE SOUTH AUSTRALIAN MANUFACTURE MILK INDUSTRY

Approximately 30% of South Australia's milk production is used for market milk and 45% for cheese manufacture. Other products manufactured are flavoured milk, cream, ice cream, butter, custard, yoghurt, cultured buttermilk and cultured cream.

South Australia manufactures approximately 14% of Australia's cheese production. Cheddar cheese is the most important variety manufactured with other varieties including edam, gouda, romano, pepato, feta, mozzarella, cottage, quark and ricotta.

### THE SOUTH AUSTRALIAN MARKET MILK INDUSTRY

The sale of market milk is characterised by four regional marketing schemes designed to share the returns from market milk among all dairy farmers participating in each scheme. The schemes are unusual by Australian standards and the success of the schemes has contributed to the industry's stability.

The schemes operate with a high degree of industry self regulation and the administration of the industry by a statewide marketing authority and the use of farm milk quotas or contracts has not been necessary.

The largest scheme for market milk equalisation is that operated by the Metropolitan Milk Equalisation Committee for dairy farmers in the Metropolitan Milk Production Area. The scheme is designed to equalise market milk and manufacturing milk returns and to ensure adequate supplies of market milk for the Adelaide metropolitan area. It has legislative support under the Metropolitan Milk Supply Act.

The Metropolitan Milk Equalisation Scheme achieves equalisation of three variables for all producers participating in the scheme:

1. The price paid to producers for market milk is the same for all producers in a given month.
2. The scheme equalises each producer's share of market milk sales by the two companies in the area.
3. The scheme involves a negotiated basic price paid for manufacturing milk.

The producer price for market milk is based on an annual Cost of Production Survey conducted by the Metropolitan Milk Board.

Individual dairy companies operate similar equalisation schemes in association with the producers in the Mid North and Riverland.

Most milk supplied in these two regions receives market milk prices. Some milk is purchased from the Metropolitan Milk Production Area as accommodation milk, to cover periods of shortage for market milk.

**The Mid North and Riverland regions have, by self regulation, eliminated large manufacturing milk surpluses and tailored production to market milk needs.** Surplus milk in spring is sold to the processing factories in the Adelaide Hills and Murray Swamps.

In contrast, only 6% of the milk produced in the South East region is used for market milk. The South East Market Milk Equalisation Committee (S.E.M.M.E.C.) equalises market milk returns for the dairy farmers supplying milk to the dairy companies in the region.

Because the South East Region was the only region in South Australia not receiving a significant market milk return, legislation, effective from 1/1/86, transferred funds from producers in the Metropolitan Milk Supply Area to those in the South East.

The Metropolitan Milk Supply Act was amended to ensure South East producers receive an equitable share of the market milk premium.

The ability of the regional schemes to encourage all year round production by specific monthly price signals is evidenced by a comparison of the peak : trough ratios of milk intake in the major regions, i.e. the ratio between milk intake in the highest production spring month and the lowest production autumn month.

#### **PEAK INTAKE : LOWEST INTAKE RATIOS FOR S.A. DAIRY REGIONS**

<b>Region</b>	<b>Peak : Trough Ratio</b>
Adelaide Hills—Murray Swamps	1.7 : 1
South East	4.4 : 1
Other Areas	1.4 : 1

Regions, and different parts of the Metropolitan Milk Production Area have different optimal calving times depending on pasture growth. Milk for market milk purposes is sourced from different areas at different times of the year, with accommodation milk being used as an alternative to increased autumn-winter production in some regions.

Milk prices are set by the Metropolitan Milk Board for the Metropolitan Milk Distribution Area. Prices outside this area are set by the Prices Commissioner, taking account of additional transport costs and other factors.

The South Australian market milk industry has succeeded in producing adequate milk all the year, to satisfy its market milk requirements as well as the traditional markets of Alice Springs and Broken Hill.

The producer and processing sectors of the industry have rationalised and co-operated to ensure industry control over marketing arrangements.

All the various schemes aim to encourage production all the year round where needed. Farmers are not bound to produce to quota levels or to produce milk all the year round. Milk is being distributed to consumers at retail prices competitive with prices elsewhere in Australia.

The 1987/88 annual per capita consumption for all fluid milk (plain, modified, flavoured and UHT) was 119.8 litres compared with 117.0 litres in 1986/87 and 109.5 litres 10 years ago in 1977/78.

## THE METROPOLITAN MILK BOARD

This board was established under the Metropolitan Milk Supply Act in 1946, is funded by the industry and is not a Government department; its functions are:

- To regulate the production, treatment, transport and storage of milk and cream.
- To regulate the supply and delivery of milk and cream to vendors and to retail purchasers.
- To conduct laboratory services.
- To control and zone retail delivery vendors.
- To fix prices to be paid to milk producers, wholesalers, retail delivery vendors and shops for milk and cream.
- To promote milk and cream.

The Board controls 72% of the dairy farmers and 75% of South Australia's total milk production.

The functions of supervision (farms, processors, vendors), zoning (retail milk vendors), costing (dairy farmers, processors, vendors and shops), laboratory (routine testing and the central laboratory for herd recording in the State), promotion and administration are conducted by a staff of 14 full-time employees.

The Board is independent of industry and consists of three persons. The Chairman is also the Principal Executive Officer.

The aim is to ensure that the consumer receives a reasonably priced wholesome product, 365 days of the year, which can be relied upon as a staple basic food.

## THE DEPARTMENT OF AGRICULTURE

The Department of Agriculture administers the Dairy Industry Act, which applies to factories making manufactured dairy products, and to farms, outside the Metropolitan Milk Production Area, which sell milk to factories. In addition to these regulatory functions the Department has the following responsibilities:

- Research, in liaison with industry and other Australian research organisations, into milk production and processing.
- Farm and factory advisory duties.
- Technical and advisory support for herd testing.
- Dairy product grading.
- Dairy technology education for factory operatives and tanker drivers.
- Advise the Minister and the general public on matters relating to the dairy industry.

## FARM MILK QUALITY STANDARD IN SOUTH AUSTRALIA

The standards for city milk are set by the Metropolitan Milk Board under the Metropolitan Milk Supply Act. Milk standards outside the Metropolitan Milk Production Area are set by the Department of Agriculture under the Dairy Industry Act. The standards are basically the same for all milk. The standards are summarised as follows:

Principal Quality Tests	Standard
Organoleptic grading	Free of taints, extraneous matter, etc. as examined by tanker driver.
Butterfat	For payment purposes only.
Protein	Advisory — likely to be introduced for payment purposes.
Freezing point (MMB only)	-0.517°C
Somatic Cells (MMB only)	750,000 cells/ml.
Standard/total plate count	50,000 colonies/ml.
Antibiotics and other residues	Must not be detected.
Iodine	500 µg/litre (advisory)

Retail standards for milk and dairy products are set by the Metropolitan Milk Board and the South Australian Health Commission.