

DAIRY SITUATION AND OUTLOOK

OCTOBER 2019



SEVEN KEY DRIVERS

OF THE AUSTRALIAN DAIRY INDUSTRY



Global supply

+ Situation **●** Outlook

Milk production from key global dairy exporting regions has remained subdued. Seasonal and political headwinds in the European Union have seen milk production growth slow and US production remains sluggish.



Australian market

● Situation **●** Outlook

In Australian supermarkets, higher prices of dairy products have delivered value growth for all major dairy products. While volume growth is subdued, consumers have proved happy to pay a premium for speciality products, which is driving additional value creation.



Global demand

+ Situation **●** Outlook

Markets are well placed to absorb supply as global demand for dairy remains robust. In 2018–2019 world exports of dairy grew 4.5% to 12 million tonnes, a new global trade record. This was underpinned by increased imports into China and Southeast Asia.

Inputs

- Situation **-** Outlook

Another warm and dry winter has deteriorated the national inputs outlook for the season. Water costs remain elevated and feed production is mixed, with southern areas faring better than northern counterparts. While some failed northern grain crops have been cut for hay, temporarily increasing fodder availability, feed supply is forecast to remain tight.



Global economy

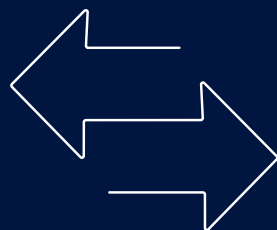
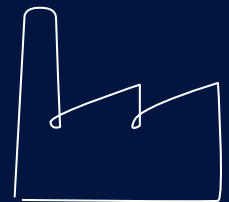
- Situation **-** Outlook

Concern about the global economy is mounting, as economic growth is expected to reach the weakest rate since the 2008 financial crisis. Geopolitical forces, such as Brexit and the ongoing trade wars, have curbed international trade and stressed economies. This has resulted in a downward revision of growth rates in nearly all G20 countries including Australia, with some edging closer to recession.

Australian industry

- Situation **●** Outlook

Australian farmers have entered a season of record farmgate milk prices however milk production has continued to contract. High input costs and an ominous weather forecast for the balance of the year is weighing on sentiment and has seen an increase in culling.



Exchange rates

+ Situation **●** Outlook

The Australian dollar has continued to depreciate, reaching its lowest level in over ten years. In October further falls were reported as the Reserve Bank of Australia (RBA) cut interest rates to the lowest level on record. This ultimately increases cost competitiveness internationally and supports Australian exports.

EXECUTIVE SUMMARY

Australian dairy farmers have entered a season of record farmgate milk prices, that is weighed down by high input costs and a dry weather outlook for the remainder of the year. For many farmers in southern Australia, good early-season rainfall has provided a head start on pasture growth and fodder conservation, but those in drought affected areas further north are facing a second season with few palatable options.

As milk processors grapple with how to secure required milk flows, dairy commodity prices have remained more buoyant than many previously anticipated. Well balanced supply and demand fundamentals have kept prices on an even footing, and in some cases (particularly skim milk powder) delivered increases. The disruption associated with the United States (US)-China trade dispute and the potential for a surge in New Zealand's (NZ) supply remain the key price risks for the coming months.

In Australia, another warm and dry winter continued to play havoc on milk production, especially in northern regions. While Tasmania and southern Victoria bucked the trend, most regions are dry and water availability remains constrained. The Dairy Farm Monitor Project (DFMP) revealed how dry conditions in 2018-19 severely impacted farm profitability due to increased cost of production. In Victoria, costs on farm grew 20% in 2018-19 as a result of the higher price of irrigation water and feed. The cost of irrigated water has continued to increase in northern Victoria and southern New South Wales (NSW), and weather outlooks offer little reassurance for the balance of the year.

Grain and hay production is mixed, with southern areas faring better than northern counterparts. Prolonged drought conditions across northern Australia has seen grain crops fail and milk production contract further in Queensland and NSW. While some failed northern grain crops have been cut for hay, temporarily increasing fodder availability, feed supply is forecast to remain tight. Farmers in northern Victoria are facing another season of limited water availability and high input prices, which is weighing heavily on sentiment. Frosts have impacted crop yield expectations in South Australia (SA) and ongoing high purchase feed costs have driven milk production lower. Western Australia (WA) is beginning to overcome

a slow start to the season and a late break has provided some optimism for the year ahead. Milk production in Tasmania is lagging, as a shortage of lucerne and cereal hay is making it difficult to source feed. Crop prospects are favourable in southern Australia; rain across parts of Victoria has boosted pasture production and provided a decent start to the milking season in Gippsland. Good pasture production prospects are also likely to improve the milk production outlook in south-western Victoria.

In the face of ongoing challenges, farmers have continued to cull stock. With a substantially reduced milking herd, the outlook for Australian milk production suggests a further decrease throughout 2019-20. High production costs are weighing further on this, particularly in regions where a lack of timely rainfall, high irrigation water prices, or both, have made even homegrown fodder expensive. For the season to August, national milk production is down 6.9% compared to last year, with significant differences between regions.

Dairy Australia's current forecast is for a decrease in national milk production of between 3% and 5% relative to 2018-19, implying a total of 8.3 to 8.5 billion litres for the 2019-20 season. An updated forecast will be published in a new December Situation and Outlook report.

Milk production from other key global dairy exporting regions has remained subdued. Seasonal and political headwinds in the European Union (EU) have seen milk production growth slow. Warm weather and low cow numbers have driven production lower in France and Germany, whilst the Netherlands deals with a reduced herd size due to phosphate regulations. Milk production has also remained sluggish in the US. Trade disputes, African Swine Fever, and declining liquid milk consumption are all weighing on US milk prices, whilst months of wet weather in the Midwest of the US impacted crop plantings and pushed up feed prices.

NZ's milk intakes are up 2.8% for the country's production season to August, as favourable weather, a stable herd, and a strong milk price forecast deliver short term optimism. Bigger picture issues around government environmental policy and processing sector developments are however impacting sentiment. Nonetheless, growth is anticipated over the balance of the season, with NZX forecasting an increase of 0.7% for the season to May 2020.

Markets are well placed to absorb additional supply as global demand for dairy remains robust. In 2018–2019 world exports of dairy grew 4.5% to 12 million tonnes, a new global trade record. This was underpinned by increased imports into China and Southeast Asia, up 7.2% and 10.2% in volume terms respectively. Despite strong demand, disturbances caused by protectionist trade policies have increased market volatility. In a year of low milk production in Australia, fierce competition has impacted Australia's competitiveness in key markets. Ongoing trade disputes and the looming Brexit deadline are likely to cause additional uncertainty going forward.

Back home higher prices of dairy products in supermarkets have delivered value growth for all major dairy products. While milk sales contracted in volume terms over the year, total sales value grew. This was mainly supported by the higher unit price of private label and branded milk. Similarly, dairy spreads sold at a higher average price which drove an increase in value. Yoghurt and cheese volumes were steady while values grew, as consumers proved happy to pay a premium for speciality products, including health-style yoghurts and deli-cheeses.

The impact of Australia's shrinking milk pool is also impacting the corporate sector, with further consolidation plans announced. The ACCC has approved Saputo Dairy Australia's takeover of Lion Dairy & Drink's speciality cheese brand. Bellamy's board is encouraging shareholders to approve Mengniu Dairy Company's offer to buy the company, however both bids remain subject to the Foreign Investment Review Board's approval. Furthermore, incremental consolidation in processing facilities have been flagged, with Nestle announcing the closure of their Tongala factory and the Brancourts dairy company entering voluntary administration with two factories up for sale.

Whilst conditions on farm and for processors remain challenging, a well-balanced global dairy market supports a positive outlook for commodity pricing, and opportunities in the domestic market are also welcome signs. This season's farmgate milk price will provide many farmers with the chance to make up some ground financially, however, high costs of feed and water (not to mention ongoing drought) will continue to hold back profitability. Whilst these challenges persist, milk production is likely to remain subdued.



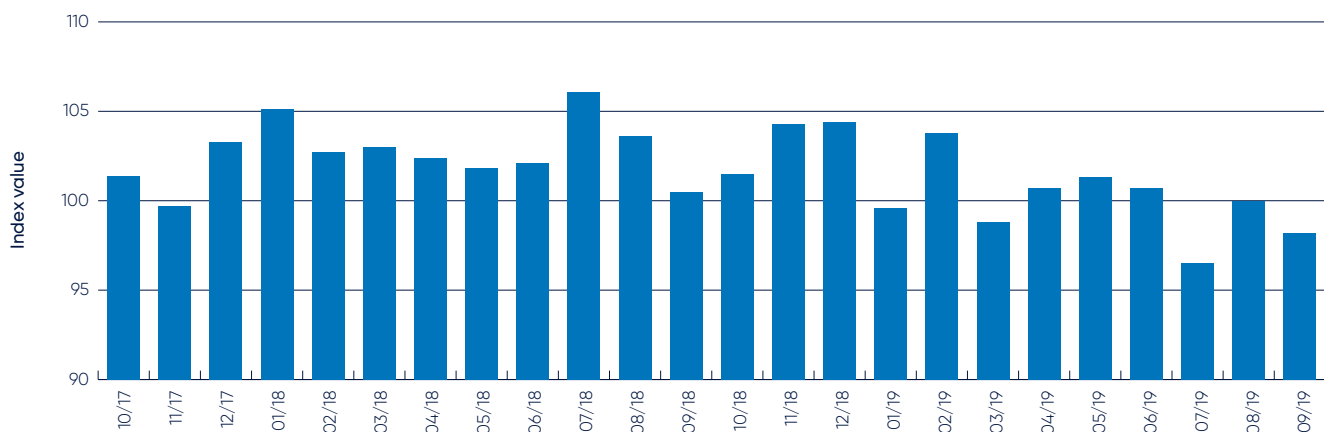
AUSTRALIAN CONSUMERS AND THE VALUE OF PREMIUM PRODUCTS

Over winter, Australian consumers have grown increasingly concerned about the wider economy and the potential for a downturn.

Despite recent interest rate and tax cuts consumer sentiment deteriorated according to the Westpac-Melbourne Institute of Consumer Sentiment. The index reveals that consumer confidence in the future of finance and the economy is close to a four-year low. As a result,

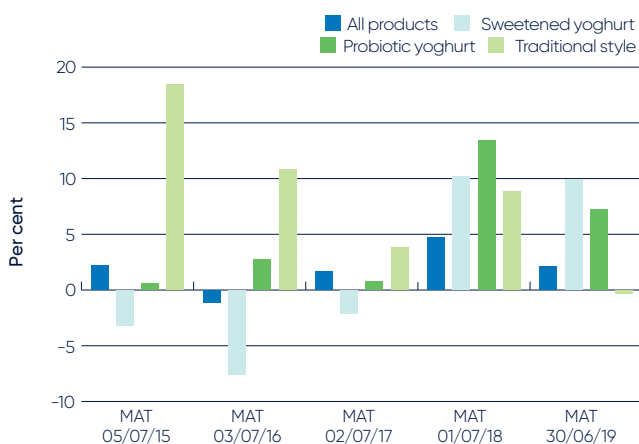
consumers have become more hesitant to spend money on discretionary items and 'non-essential' goods, which includes eating-out. In contrast, spending in supermarkets traditionally increases during times of low consumer sentiment. As supermarkets are a major sales channel for Australian dairy products, any change in consumer shopping behaviour tends to impact demand for dairy.

Figure 1 Consumer confidence



Source: Westpac-MI Consumer Sentiment Index

Figure 2 Value growth by yoghurt category

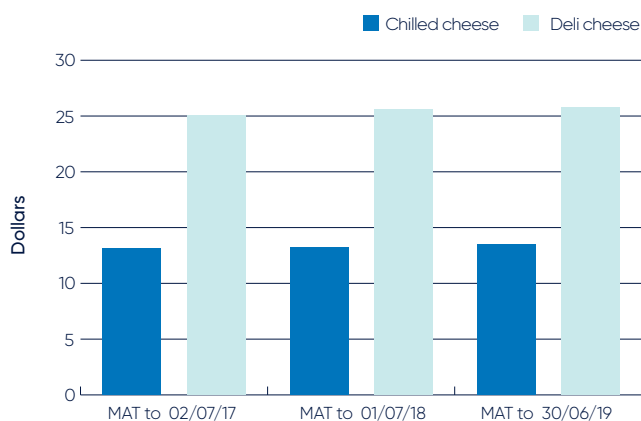


Source: IRIWorldwide

While consumers have become less willing to spend money on 'non-essential' items, sales of premium priced dairy products have continued to drive value growth in the domestic market. Supermarket sales of yoghurt only grew 0.1% to 233,000 tonnes over the 12 months to June 2019, however, value increased 2.1%. This was mainly driven by sales of premium-priced yoghurt products, such as sweetened yoghurts (up 9.9% in value) and probiotic yoghurts (up 7.2% in value).

The same can also be observed in sales of cheese, which grew 0.9% in volume to 160,000 tonnes but 3.4% in value to \$2.5 billion over the same period. The average price of cheddar cheese increased 2.3% to \$13.53/kg over the year, which positively impacted the value of the 'chilled cheese', category as it accounts for 82% of the total market. Despite this increase, many brands of cheddar cheese are retailed at a significant discounted price in supermarkets, which previously has seen sales value contract. With Australia importing significant volumes of cheese, a third being cheddar, a portion of the sales value is also not captured by the domestic supply chain. The overall value growth in the cheese market was largely driven by deli-style cheeses, which are retailed at a significant premium (\$25.73/kg). Sales of deli-style cheeses increased 5.7% in volume to 28,000 tonnes over the year, while sales value grew 6.3% to \$722 million.

Figure 3 Average retail price of cheese



Source: IRIWorldwide

Chilled cheese refers to cheddar cheese varieties sold in supermarkets. Deli cheese is speciality types of cheese, such as feta and brie sold in supermarkets.

The value growth in the yoghurt and cheese market highlights the opportunities available in the domestic market for products that capitalise on consumer preferences. As Australia is a mature market for dairy any significant volume growth in products, such as cheese, milk, yoghurt and butter, is unlikely. What will generate further revenue to the supply chain going forward is value growth. Evidently, consumers are willing to pay a premium for products they believe derive further benefit to them as consumers.

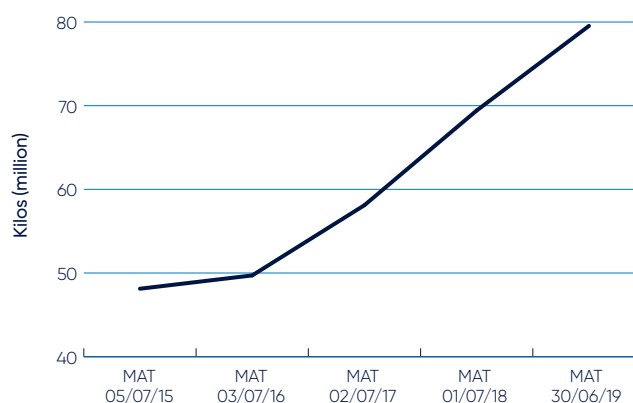
The perception of what is additional value differs significantly between consumers. Some are willing to pay extra for products perceived as healthy while others will pay extra if they think the product enables them to support a cause. The 'drought milk' launched by retailers is an example of this. By retailing specific milk products as a good way to support struggling dairy farmers, retailers saw private label milk sales grow.

Sales of private label milk grew 3.5% in the first month 'drought milk' was introduced on the market, even though it was retailing at a higher price-point than usual.

Organic products are seen as providing additional benefit to some consumers. Products with an organic label can therefore be sold at a significant premium to other types of products, which also reflects the significantly higher cost of production for organic dairy products. This is the case with sales of organic white milk, which are retailed at an average of \$2.61/litre, 77% higher than other white milk products (average retail price of \$1.47/litre). Due to this higher price, organic milk made up 1.2% of total milk sale value over the year, while only accounting for 0.8% of products sold.

It is important to consider that consumer perceptions of product benefits are key to purchase decisions. This can include the idea of a product being healthy to consume or accommodate various diet preferences. The health and fitness trend spans across all shopper goods, as consumers are increasingly concerned about purchasing products marketed as being beneficial to their health. In the dairy space, this trend has been especially evident in the yoghurt market. Over the past year, sales of yoghurts that position themselves as healthy have grown exponentially, both in volume and in the number of companies manufacturing this product. This includes yoghurts with increased protein content, yoghurt sweetened with artificial sweeteners or products with added probiotic bacteria. These products are perceived as healthier and thus consumers are willing to pay a significant premium for a small pack-size. Over the 12 months to June 2019, sales of single-size yoghurt containers grew 14.6% to make up 34.1% of the entire yoghurt market. This surge in growth was predominantly underpinned by fast growing 'health-style' yoghurt varieties.

Figure 4 Sales of single-size yoghurt packs



Source: IRIWorldwide

Another trend influencing the market is consumer desire for individualisation and the willingness to purchase products that allow them to express specific views. Shoppers are walking away from one-size-fits all products and are looking for products that suit individual needs and preferences. A successful example of a company able to utilise this trend was Coca Cola in 2014 with their 'Share a Coke' campaign. By replacing the label with common names consumers were encouraged to find a coke with their name on it and to share it on social media. This increased sales and grew the company's social media following with more than 25 million new consumers.

This trend is currently being pursued by a nut beverage company as a tactic to attract more consumers. A company selling oat drinks, in Australia and overseas, has launched a social media campaign called 'post-milk generation', which encourages consumers to switch to oat beverage and share photos on social media of them consuming the product. This has been successful in captivating consumer attention. This desire for consumers to be recognised as unique individuals has partly driven the 23.9% increase in oat drink sales in the six months to September, at the same time as dairy alternatives sales increased 6.7% (oat drink sales still only account for 0.3% of total supermarket milk sales in Australia). This surge in growth occurred even though oat products are more expensive than other dairy alternatives. Oat drinks retail at an average of \$2.51/litre compared to soy beverages at \$2.25/litre. This represents an example of the kind of product innovation and consumer campaigns the dairy industry will have to compete with in the future.

So what?

For a long time, the dairy industry has focused on price competition to capture additional sales, and campaigns against low prices for staple products to seize additional value. At the same time however, consumers are increasingly willing to actively pay a premium for products they believe offer additional value to them, even when the economy is slowing. Such premium priced products act as a major value creator for the industry and have grown in significance, even while prices for basic products remained suppressed. This means that the right combination of innovation and marketing can deliver tangible benefits over a significant portion of the industry's products. This can help drive additional value growth for the dairy industry, even where milk supply is constrained, and the broader consumer focus is on 'value'.

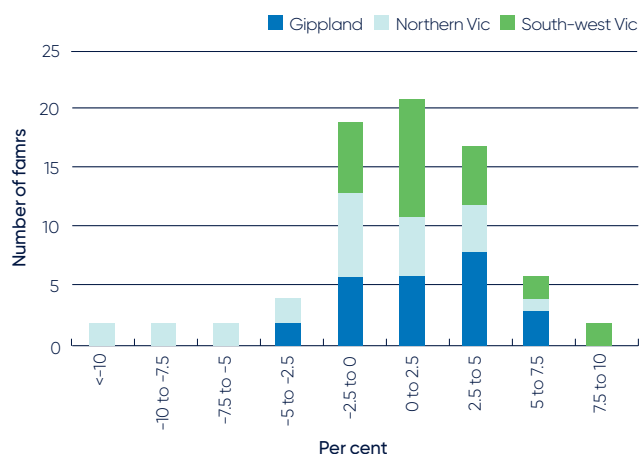


DAIRY FARM MONITOR PROJECT 2018–19

VICTORIA – A YEAR OF EXTREMES

The recently released Dairy Farm Monitor Project (DFMP) report in Victoria showed mixed results for the state. Reports for other dairy regions will be available by December.

Figure 5 Return on total assets for VIC DFMP farms in 2018–19



Source: Dairy Farm Monitor Project

The top performing farms in the project showed timely decision making combined with a business analysis approach were key strategies to managing the dry conditions throughout 2018–19.

	South-west Victoria	Gippsland	Northern Victoria
Milk Income (net) \$/kgMS	6.15	5.97	6.28
Feed Costs (\$ kgMS)	3.20	3.27	4.40
Cost of Production (includes inventory changes) (\$/kgMS)	6.25	6.07	7.38
Net Farm Income \$	27,355	- 14,811	- 85,268
Return on Total Assets (ROTA) %	2.3	1.7	-1.7

Source: Dairy Farm Monitor Project

South West Victoria

Southern parts of south-west Victoria reported favourable conditions through the year, however, the north-west experienced a late break. Several farmers with failed pastures in 2017–18 over-sowed for autumn, which paid off with a faster pasture recovery from the long summer.

With high grain prices, the ability to produce milk off concentrates fed at a margin was key for success for many farms businesses. Twelve of the 25 farms reduced milk on a per cow basis, reflecting individual farmer decision to manage risk. This was consistent with Gippsland where a late autumn break was also experienced.

Gippsland

Spring provided farmers in Gippsland with ideal conditions, and farmers' ability to capitalise and conserve feed, impacted their overall performance. With a dry, hot summer and no break until late autumn, farmers without feed inventory on-hand, were exposed to fodder market. Some farmers recorded very large silage/hay harvests, which proved essential in the following months.

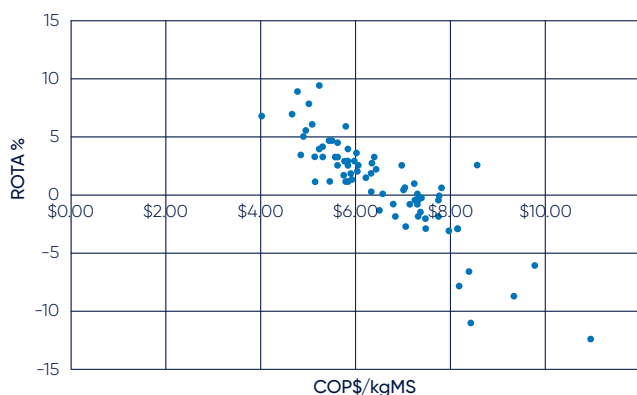
The Macalister Irrigation District received 100% allocation without a spill event, thus farmers were hard pressed to cover all of summer.

Northern Victoria

Low rainfall combined with high input prices, notably water, provided a challenging year for northern Victoria. While high reliability water shares received 100% allocation, the median price for temporary water was \$470/ML.

Farmers with access to feed inventory, carried over water and minimal exposure to the fodder and temporary water market, were able to reduce the impact of high input prices. However, many were not able to avoid purchasing supplementary fodder and late season water.

Figure 6 Cost of Production VS Profitability



Source: Dairy Farm Monitor Project

In 2018–19 there was a clear relationship between Cost of Production (COP) \$/kgMS and Return on Total Assets (ROTA). This comes as no surprise as some systems and areas were highly exposed to record high fodder and water prices.

As always, there was a significant difference between farm businesses in the project. This was caused by the unique nature of farm businesses and the variables such as production curve, bought in feed, input costs and milk price paid. Farmers who had farming systems and risk management strategies to absorb these cost shocks were able to minimise losses, and in some regions maximise profit.

Risk Management

In response to the extreme season, where not only high feed and water prices but availability proved challenging, several strategies were implemented to reduce the impact felt. Farmers with feed inventory and access to cheaper water or reliable rain fared best. Some regions experienced (and are still experiencing) seasonal conditions that tested even the most robust of systems.

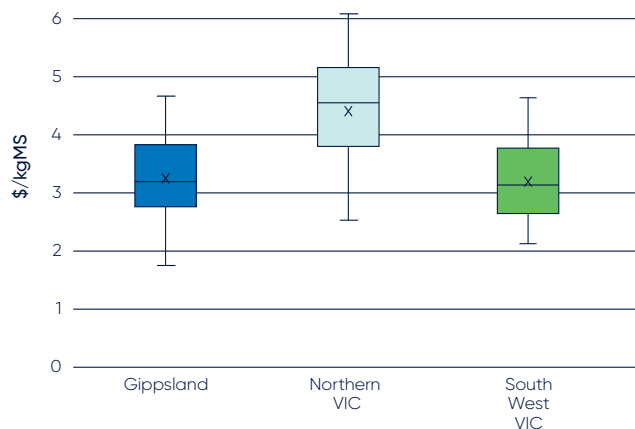
Out of the DFMP in Victoria, the following risk management strategies were key drivers in managing difficult seasonal conditions across northern Victorian participants.

1 Lowering exposure to fodder market

Since the cost of feed spiked throughout the year, (up 93% for cereal hay over the year in northern Victoria) the key risk to mitigate was exposure to the feed market. Timely investment was key to several farmers who navigated the year with minimal loss.

Shorter-term strategies included reducing stocking rate, consuming previous feed inventories and accessing cheaper feed by forming relationships with fodder growers. Meeting with fodder and grain growers proved important in the 2018 and 2019 spring. Some farmers found fodder considerably cheaper than market price by putting in the time to form relationships with growers.

Figure 7 Feed costs 2018–19



Source: Dairy Farm Monitor Project

Note: Figure 2 shows the range of feed costs in each Victorian region for 2018–19. It shows the importance of having strategies in place to minimise exposure to these feed markets.

2 Having a reliable source of water (if possible)

With water prices reaching record highs, access to lower cost, reliable water allowed farmers to grow relatively cheap home-grown feed.

Timing was crucial for those in the water market in northern Victoria in 2018/19. The price of temporary water increased throughout the season, affecting farmers that purchased water late in the year. By the end of the irrigation season, irrigators had received 100% allocation of their high reliability water shares. With high fodder prices, those without high reliability water struggled to find a cost-effective substitute for irrigation.

3 Growing feed inventory through more profitable years

A stockpile of carryover feed was highlighted as a key factor for success, as farmers were able to draw on reserves with less impact on their cash position. It was only businesses with several years' worth of feed in storage that could minimise the impact of the heightened feed price and long summer.

This does increase farmers cost of production, as conserving fodder increases the \$/tDM of home-grown feed compared with grazed pasture with the extra cost of harvesting. Therefore it, has the potential to reduce profit during the 'good years'. Farmers with this strategy have the higher cost of production offset when pasture is difficult to grow, and the fodder market becomes inflated.

This has been more difficult for farmers to achieve in regions with consecutive years of drought, with either drought conditions or restricted cash flow reducing the ability to build fodder inventory.

4 General efficiency across the business in both variable and overhead costs

Efficiencies ranged in terms of tonnes Dry Matter (tDM) pasture produced, kgMS produced as a percentage of cow liveweight and labour efficiencies. Labour costs are one of the largest contributing factors to a farm's cost of production (after feed), with 23% to 30% of an average farmer's costs going towards either employed or imputed labour. Labour efficiency is of importance to profit in a year when margins are tight. With increased efficiency, labour costs decrease per kgMS produced, leaving a greater margin between income and cost of production to deal with the volatile nature of milk price and feed/water costs.

This advantage is often seen in those who invest in their labour (both imputed and paid) to upskill staff which in turn brings efficiency into the system. Investment in infrastructure also typically increases labour efficiency and shifts risk from an operational risk to a financial risk if borrowings are required for the additional capital.

So what?

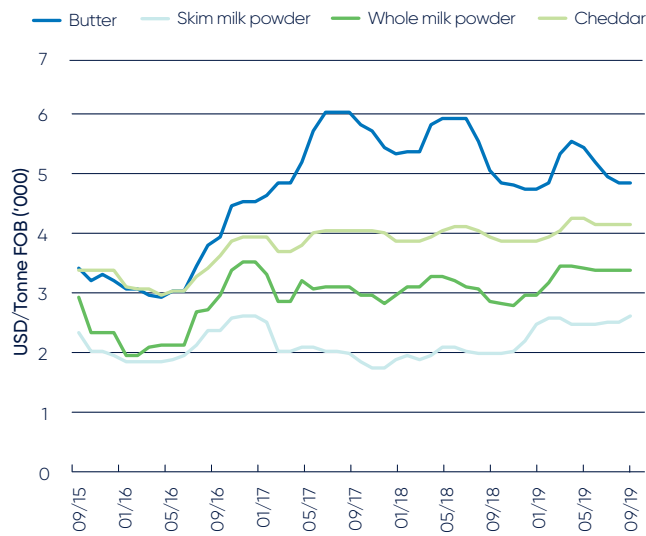
The key to success in 2018–19 was a resilient business that could withstand both input cost and output price fluctuations. The profitable farmers recognised the importance of risk management and had strategies in place to navigate the poor conditions. Given the volatile nature of milk price and the tough conditions of the past four years, having a business strategy for mitigating risk is one of the key principles of success for dairy farmers in Victoria. Recognising what strategy suits each system is important in the farmer's long term ability to cope with fluctuating prices and to remain profitable.



MARKET DASHBOARD

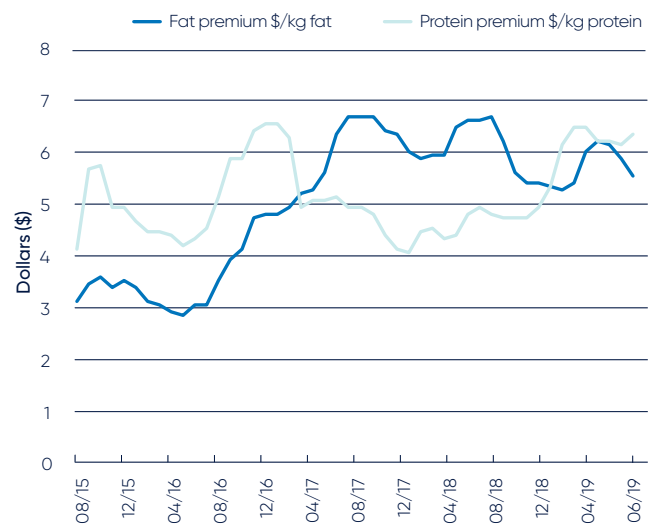
Commodity prices

Figure 8 Key dairy commodity price indicators



Source: Dairy Australia

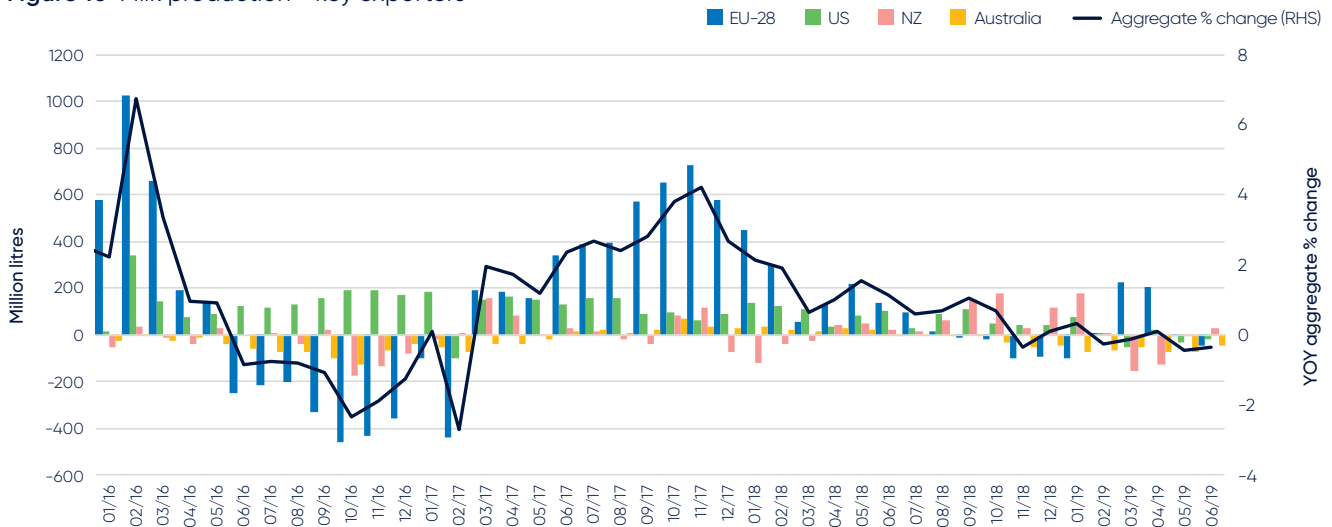
Figure 9 Dairy fat and protein – pricing relative to substitutes



Source: Dairy Australia, Oil World

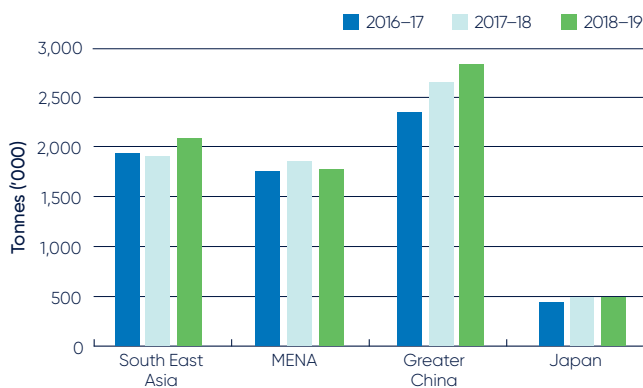
Global supply and demand

Figure 10 Milk production - key exporters



Source: USDA, DCANZ, Eurostat, Dairy Australia.

Figure 11 Exports to key markets



Source: Dairy Australia, GTIS. Data represents 12 months to June 2019.

Figure 12 Australian supermarket sales

	Volume	YoY growth	Retail value \$m	YoY growth
Milk* (As of 15/09/19)	1,463 m. litres	↓ -1.3%	2,466	↑ 3.0%
Cheese (As of 30/06/19)	160kt	↑ 0.9%	2,503	↑ 3.4%
Dairy spreads (As of 15/09/19)	52.1kt	↑ 0.9%	624.7	↑ 2.8%
Yoghurt and snacks (As of 30/06/19)	233kt	↑ 0.1%	1,685	↑ 2.1%

Source: Iri Worldwide. Please note - available data is taken from different periods; milk and dairy spreads from MAT 15/09/2019; cheese and yoghurt and snacks from 30/06/2019.

*Milk sales represent supermarket sales and exclude other sales channels

Inputs



Hay and grain prices

Australian dairy regions	\$/t	%	\$/t	%
1 South-west WA	\$268 ↓	-23	\$340 ↑	+58
2 Central districts SA	\$290 ↓	-24	\$440 ↑	+6
3 South-east SA	\$315 ↓	-23	\$425 ↑	+21
4 South-west Victoria	\$382 ↓	-8	\$337 ↑	+4
5 Goulburn/Murray Valley	\$352 ↓	-17	\$350 ↓	-13
6 Gippsland*	\$427 ↓	-6	\$500 ↑	+24
7 North-west Tasmania	\$442 ↓	-8	\$240 ↑	+4
8 Bega Valley	\$397 ↓	-16	\$452 ↓	-12
9 Central west NSW	\$358 ↓	-10	\$447 ↓	-21
10 North coast NSW	\$423 ↓	-9	\$458 ↓	-20
11 Darling Downs	\$405 ↓	-14	\$475 ↓	-14
12 Atherton Tablelands*	\$425 ↓	-12	\$383 ↑	+10



Sedded cereal hay: mid-range product without weather damage, of good quality and colour



The relevant stockfeed wheat available in a region (ASW, AGP, SFW1 or FED1)

Prices are estimates at September average 2019. Compared to September average 2018.

*Note that all regions other than Atherton Tablelands and Gippsland is cereal hay. Atherton Tablelands and Gippsland is pasture hay.

Source: AFIA, Profarmer



Fertiliser

Urea (granular Black Sea)	DAP (US Gulf)	MOP (granular Vancouver)
263 US\$/t	293 US\$/t	266 US\$/t
↑ +1% LY	↓ -28% LY	↑ +23% LY
↑ +1% 5Y	↓ -23% 5Y	↑ +5% 5Y

Price is August 2019 average, compared to the 2018 August average (LY) and 5-year (5Y) August average.

Source: World Bank



Cows

Cull cows

473 c/kg	84,639 head
↑ +26% LY	↑ +16% LY
↑ +10% 5Y	- 0% 5Y

Dairy cattle exports

102,042 head	↑ +113% LY
	↑ +40% 5Y

Price is August 2019 average, compared to August last year (LY) and 5-year (5Y) August averages. Number of head is last 12 months, cull cows and dairy cattle exports to August 2019, compared to year earlier (LY) and 5-year (5Y) averages.

Source: NLRs, ABS



Water

Northern Victoria

468 \$/ML
↑ +220% LY
↑ +128% 5Y

2,034,835 ML
↓ -6% LY
↑ +2% 5Y

Murray Irrigation System

447 \$/ML
↑ +197% LY
↑ +178% 5Y

84,213 ML
↓ -54% LY
↓ -45% 5Y

Price of water traded is 12 month average and volume of water is 12 month total, both to August, 2019, and compare to year earlier (LY) and last 5 years (5Y).

Source: Victorian Water Register, Murray Irrigation Ltd