



Dairy Situation and Outlook

October 2018

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Contents

Dairy Situation and Outlook – October 2018

Six key drivers of the Australian Dairy Industry	2
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Executive summary	3
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Export region weighted costs and income indices	5
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Inputs	6
Weather	7
Water	7
Fertiliser	8
Cull cows	8
Hay	8
Grain and hay prices	9
Grain	10

Australian market	11
Milk	11
Cheese	11
Yoghurts and dairy snacks	12
Dairy spreads	12
Sales on non-dairy milks	13
Australian Economic settings	14

Global economy and exchange rates	15
-----------------------------------	----

Global supply and demand overview	16
Overview	17
Greater China	17
Japan	17
Southeast Asia	18
Mexico	19
Middle East and North Africa	19
Russia	19
Global affordability and substitutes	19
Dairy price premiums and substitutes	20

South America: A growing exporter or fleeting recovery?	21
--	-----------

Global supply	22
Overview	22
European Union	23
United States	23
New Zealand	24
Australia	24

2017/18 Dairy Farm Monitor results, and 2018/19 Dairy Australia forecast	25
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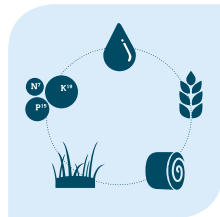
Gippsland	26
Northern Victoria	27
Southwest Victoria	28
South Australia	29
Tasmania	30
New South Wales	31
Queensland	32
Western Australia	33

Corporate sector updates	34
---------------------------------	-----------

Policy updates	35
Added sugar labelling	35
Reformulation targets for dairy foods	35
Trade policy update: Trade agreements	35

Six key drivers of the Australian Dairy Industry

Inputs



Situation: ●
Outlook: ●

Below average rainfall persisted through winter and early spring for the majority of the mainland, further intensifying drought affected areas. Demand for feed and fodder surged with the majority of the inquiry coming from the north. Challenging conditions have led to record high water trading prices. These production costs are driving the sale volume of cull cows.

Global supply



Situation: ●
Outlook: ●

Favourable prospects in New Zealand have far outweighed Australia's deteriorating season, pushing commodity prices down. Europe and the US have seen milk volumes recover as the northern hemisphere season begins to wind down, meaning the global market is increasingly well supplied.

Global economy



Situation: ●
Outlook: ●

Global economic output is expected to be in line with previous predictions of 3.9%. This expansion is expected to be less even between developed and developing economies. Current global trade tensions are presenting a threat to growth as the trade war continues between the US and China.

Australian market



Situation: ●
Outlook: ●

Supermarket sales of major dairy categories remain relatively steady as long term trends continue to shape the domestic market. Sales of milk, yoghurt and cheese grew over the past twelve months while butter sales eased, due to higher average retail prices.

Global demand



Situation: ●
Outlook: ●

Demand for dairy exports continues to grow, supported by healthy demand from major markets. Dairy exports from the six major exporters increased 3.7% over the past 12 months. Demand from Greater China and Japan helped drive this growth, while demand from the MENA region increased for the first time in over three years.

Exchange rates



Situation: ●
Outlook: ●

After peaking in January this year the AUD has steadily depreciated against the USD. Most forecasts are suggesting that this rate will steady out for the rest of the year. The NZD and Euro are both expected to appreciate, in turn improving cost competitiveness for Australia.

Key

● Positive ● Neutral ● Negative

Executive summary

- › **Continued increases in feed prices, together with tough seasonal conditions, have created extremely challenging circumstances for Australian farmers in 2018/19, and will likely see milk production fall.**
- › **Global dairy markets have been relatively benign and a depreciating Australian dollar has helped local farmgate prices, however some signs of weakening are present.**
- › **The Australian domestic market is delivering growth in both volume and value across most key categories, with flavoured milk and traditional yoghurts showing particular strength.**

For many Australian dairy farm businesses, the 2018/19 season has been challenging. Recent months have seen the benefits of better farmgate prices counterbalanced with an increase in feed costs and adverse seasonal conditions. Although Dairy Farm Monitor Project (DFMP) data shows some regions had a better chance to consolidate in 2017/18, virtually all regions have been affected via rising feed prices and access to feed. The ongoing feed shortage and a decline in cow numbers in some regions will have an impact on the 2018/19 production volume.

The wider dairy market has been much more settled, with the Australian domestic market maintaining similar trends for much of 2018. Milk, cheese and yoghurt sales continue to grow in both volume and value terms, whilst the volume drop associated with higher butter prices has been more than offset by strong growth in sales value. All of which demonstrates continued consumer confidence and support for dairy. Globally, commodity prices have shown recent signs of weakness as northern hemisphere production recovers and New Zealand's season takes shape. However, steady demand from most major importing markets and lower than expected global milk production for 2018 to date, have moderated price falls so far.

Seasonal conditions have been the key driver of Australia's tightening milk production outlook. Winter and the start of spring remained unseasonably warm and dry for most of the country. With slower pasture growth, on farm demand for hay has increased, diminishing inventories nationally as fodder has been shifted and transported around the country. Demand came predominantly from the drought affected areas in New South Wales and southern Queensland, and in turn reduced what had been large carryover stocks in Victoria and South Australia. Tasmania and Western Australia have also seen the impact of product being pulled north and east. Supply is beginning to improve as new season crops start to enter the market and many failed grain crops are being cut for hay.

Dry conditions and frost damage have dented harvest prospects for grains and oilseeds, with thousands of hectares already mown for hay. For many grain growers, the risk associated with taking crops through to harvest has not been worth the modest premium over hay prices. For others, frost damage has removed the luxury of choice. Current consensus is that grain prices are likely to remain supported by the lower yield prospects and reduced area taken to harvest. East coast grain users (including the dairy industry) are actively searching for sources to augment local supplies, including Western Australia, and international alternatives.

The shortage of feed, high costs of irrigation water, and challenging seasonal conditions have led to an increase in culling, which could potentially continue. Farm exits may be associated with this increase.

Dairy Australia's forecast for 2018/19 milk production has been revised to reflect the expected downside associated with these severe challenges. The revised forecast is for a decrease of between 5% and 7% relative to 2017/18, implying a total of between 8.6 and 8.8 billion litres.

At a regional level, Queensland and New South Wales are expected to be hardest hit by the ongoing feed shortage and drought conditions on farm. In northern Victoria high water prices are constraining the ability to respond to higher fodder prices by producing more feed on-farm, and a dry winter-spring period has impacted crop growth on dryland blocks. Further south, conditions range from drought in east Gippsland to wet underfoot in the far southwest of the state.

South Australia is likely to stabilise, but faces high feed costs and reduced stocks in addition to ongoing labour issues. Production in Western Australia is also expected to remain stable being somewhat (albeit not entirely) insulated from the feed shortage facing the east coast.

Long term fundamentals are quickly lost in the scale of the current feed shortage challenge, and milk flows will inevitably be impacted.

In Tasmania, input costs have increased and winter conditions have proven wet in some parts; the current outlook suggests drier conditions may take hold through spring. The state is coming off a period of structural growth however, and unless local conditions deteriorate substantially the current milk price outlook is likely to allow a stable production outcome.

As Australia's milk production outlook decreases, major northern hemisphere exporters have been recovering from a damaging summer. Europe's cold weather and late spring gave way to a hotter and drier than average summer, slowing milk production at its peak. Nonetheless, European commodity prices have begun to weaken as product supply strengthens. Across the Atlantic, United States milk production increased for the eighteenth consecutive month in August. The national herd is growing, suggesting that the hotter-than-average northern hemisphere summer has not affected production intentions.

The major supply influence at present however, is New Zealand, whose farmers experienced highly favourable winter weather, with above average temperatures through July and August boosting pasture growth. In contrast to last year, rainfall has been close to average for the season so far, minimising pasture damage as the spring flush approaches.

The current conditions together with profitable (albeit lower than earlier forecast) farmgate prices, are setting NZ farmers up for a strong season.

Global dairy demand has remained robust, with total exports from the six largest exporters growing 3.7% for the 12 months to July. This has been driven by demand from China and Japan (both up around 10% in volume terms) and to a lesser extent the Middle East/North Africa (MENA) region (up 8.1%), the latter seeing its first volume increase in three years.

According to the International Monetary Fund (IMF), the global economic outlook remains supportive; with growth projected to increase by 3.9% in both 2018 and 2019. However, this growth is anticipated to become more uneven, with the expansionary phase in several key advanced markets set to peak, whilst emerging markets continue to strengthen.

Back home, the domestic market for dairy products has remained largely stable, with all key product categories showing value growth, and all but dairy spreads seeing increased volumes sold.

Within categories, drinking milk consumption has continued to shift in favour of full cream milk, and the recovery in private label sales has persisted. Fresh milk has made gains over UHT, while flavoured milk grew 5%, outpacing the broader category's 1% increase.

Private label cheese is closing in on half the market share of the chilled cheese market, whilst higher-value deli cheese has also grown in popularity.

The yoghurt category has continued its return to growth, driven by strong growth in the 'traditional yoghurt' category. Probiotic yoghurts have also seen resurgent growth, albeit off a low base. Higher prices reflective of global demand for dairy fats continued to weigh on butter sales volumes, however inelastic demand overall saw sales value in the dairy spreads category grow over 18% in the last 12 months.

Despite the challenging conditions on farm, corporate activity continued apace, with Bega Cheese securing the former Murray Goulburn Koroit plant, Australian Consolidated Milk moving towards completion of their Girgarre facility, and consolidation continuing in the organic and boutique sectors.

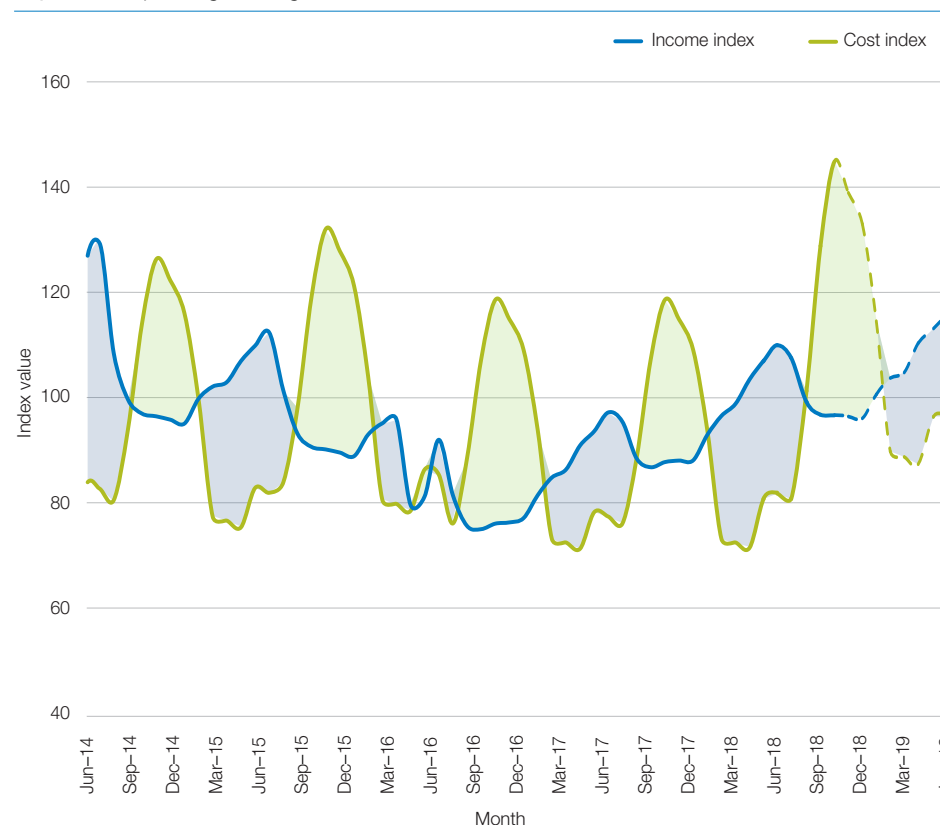
Positive developments in post farmgate investment, and a growing domestic market are timely reminders of the medium and longer term opportunities that remain a feature of the dairy market.

Export region weighted cost and income indices

The weighted cost and income indices consider the near term outlook and highlight the net impact of market changes. The latest update suggests:

- › Opening prices for 2018/19 were higher than had been expected only a few months prior, however softening global indicators suggest limited further upside in the short term.
- › Hay, grain and irrigation water have all seen further, significant price increases since the previous report. The balance of opinion suggests prices for these key inputs will remain elevated for the balance of the 2018/19 season, placing severe upward pressure on farm costs.
- › The combination of sharply higher costs and constrained farmgate pricing is likely to persist through 2018/19, and in the absence of more favourable seasonal conditions, margins are expected to remain particularly challenging.

Figure 1 Export region weighted cost and income indices



Source: Dairy Industry Farm Monitor Project, Dairy Australia analysis

Inputs

Key

● Positive

■ Neutral

● Negative



Fertiliser

Urea (granular Black sea)

268 US\$/t

● + 22% LY

● -15% 5Y

DAP (US Gulf)

422 US\$/t

● + 29% LY

● -9% 5Y

MOP (granular Vancouver)

216 US\$/t

■ + 0% LY

● -33% 5Y

Price is September 2018 average, compared to the 2017 September average (LY) and 5-year (5Y) September average.

Source: World Bank

Water and weather

Northern Victoria

321 \$/ML

● +202% LY

● +84% 5Y

2,110,815 ML

■ - 13% LY

■ +8% 5Y

Murray irrigation System

351 \$/ML

● + 89% LY

● +196% 5Y

158,269 ML

■ -32% LY

■ -11% 5Y

Price of water traded is the September average. Volume of water is 12 months to September, both compared to year earlier (LY) and last 5 years (5Y).

Source: Victorian Water Register, Murray Irrigation Ltd

Cows

Cull cows

370 c/kg

● -13% LY

● -3% 5Y

72,834 head

■ -3% LY

■ -8% 5Y

Dairy cattle exports

47,976 head

■ - 22% LY

■ - 33% 5Y

Price is August 2018 average, compared to August last year (LY) and 5-year (5Y) averages. Number of head is 12 months to August 2018 compared to year earlier (LY) and 5-year (5Y) averages.

Source: NLRS, ABS

Overall, winter was warmer and drier than average, with record high temperatures and record low rainfall reported across many regions.

Weather

Following what has been an unseasonably warm and dry year for most of Australia, conditions are expected to remain dry. Overall, winter was warmer and drier than average, with record high temperatures and record low rainfall reported across many regions. Australia recorded the second hottest July in 2018, while August's national rainfall was the lowest since 2013. Following this, September was another challenging month for the mainland, being the driest on record.

The eastern states had the largest rainfall deficiencies, particularly New South Wales which reported its eighth-driest winter on record, with some areas reporting their lowest on record. Drought conditions intensified throughout the start of spring as warm weather persisted and the state received minimal September rainfall. High daytime and low overnight temperatures in Queensland, Victoria and South Australia resulted in above average temperatures for the country. These high daytime temperatures combined with reduced cloud cover at night led to a higher presence of frost. Conversely, Tasmania and Western Australia both experienced above average rain and mild winters.

This was a welcome change compared to the rest of the country and proved favourable for feed production.

Looking to the remainder of the year, the Bureau of Meteorology has raised its ENSO outlook from El Niño Watch to Alert. This, combined with a positive Indian Ocean Dipole (IOD), is expected to result in a 70% chance of an El Niño event occurring this year. These two events combined will typically bring drier and warmer conditions and an increased presence of heat waves to Australia.

Water

The lack of winter and spring rain has resulted in reduced inflows to most major water storages, while above average daytime temperatures increased evaporation. The rain deficiencies and increased frost presence have contributed to below average soil moisture and therefore little runoff into reservoirs when rain was received. Currently water levels in the Hume Dam, Lake Eppalock and the Waranga Basin are considerably lower, compared to this time last year, while levels in Dartmouth and Eildon are relatively similar.

After prolonged dry conditions in the eastern states, demand for water has recently increased as growers commenced irrigating earlier than usual. In turn, traded water prices have surged to record highs for both the northern Victorian and Murray irrigation systems. Over the last seven months, prices firmed in northern Victoria with the September's average hitting \$321/ML. This has surged 202% from the same time last year and resulted in 13% less volume traded, compared with September 2017. It must be noted that prices were below average last year, although water is currently trading at 84% above the five-year average. Zone 7 (Barmah to Nyah) had the largest month-on-month price increase, jumping \$110/ML from July to August, while both zone 6 (Hume to Barmah) and zone 1A (Greater Goulburn) also had substantial increases of \$83/ML and \$70/ML respectively.

The Murray irrigation system also saw reductions in water trading volumes this year, currently tracking 11% below the five-year average and 32% less than the same time last year. Primarily due to the premium buyers are paying which is currently 196% above the five-year average, \$351/ML. This is the highest price reported in several years.

Fertiliser

Strong demand for fertiliser (due to high global grain prices) has pushed prices higher in recent months. A weaker AUD has further inflated local pricing.

For the last three months DAP prices have been increasing steadily and in September reached their highest level in nearly two years. The World Bank reported September's average to be US\$422/tonne, a 29% increase from the same time last year. Despite the recent growth, the price is still tracking 9% below the five year average.

Similarly, the September price for urea is up 22% since 2017 although 15% below the five-year average. Reported at US\$267/tonne, September's average price has increased 19% over the last three months. It must be noted that the majority of nitrogen has already been imported this season due to the peak application period commencing. This means that local price fluctuations will be largely driven by local demand and supply factors.

As DAP and urea prices have fluctuated over the past year MOP prices have remained relatively stable.

Since September 2017, MOP prices remain unchanged and are down 33%, compared to the five-year average. However, multiple reports suggest that the potash market is expecting to firm with Indian buyers securing long-term contracts and putting upward pressure on the market.

Cull cows

In the twelve months leading up to August, 72,834 cows were culled compared to 74,999 the year prior (a decrease of 3%). Culling rates are down 8% on the five-year average. Challenging conditions, with high feed costs and unfavourable weather ended the national herd rebuilding phase, and led farmers to reduce cow numbers in recent months. Cull volumes are up 14% in the last three months and 12% in the last six, compared to the same time last year. A continuation or worsening of this trend (as looks likely) would see a smaller national overall herd by the end of the season.

After a brief increase in July, cull cow prices continued to decline throughout winter and early spring. Current prices are down 13% from last year and 3% less than the five-year average. After persistent drought conditions and the recent spike in cull cow numbers, producers received 370c/kg on average in August. The Meat and Livestock Industry Projection 2018 suggests due to the current climate outlook, culling rates will remain high and prices relatively stable.

Despite rising trade concerns, Australia's beef exports are up 13% for the year. Australia and the US continue to compete head-to-head when exporting beef. The US is projected to expand beef production by 4% by the end of 2018, however, Japan and Korea's imported beef markets are forecast to continue to grow, facilitating the extra supply on Australian ships. A weaker Australian dollar is improving cost competitiveness and therefore also assisting the extra supply in the domestic market.

Hay

Following a dry start to the year hay demand surged, diminishing inventories as fodder was transported all over the country. Carryover stock began to deplete in autumn and demand exceeded supply throughout winter. This resulted in prices spiking across the country. Demand came predominantly from the drought affected areas in New South Wales and southern Queensland and in turn reduced stocks in Victoria and South Australia. It has been reported that there will be little carryover in Tasmania as it is being transported to New South Wales. Supply is beginning to pick up as new season crops start to enter the market and failed crops are cut for hay. Demand for fodder remains strong throughout Australia as farmers are trying to secure this season's supply.

Northern Australia

Demand for hay in northern Australia increased as rain deficiencies persisted throughout winter and into spring. The lack of rainfall impacted pasture growth and therefore amplified the need to buy fodder. Much of this was sourced out of state, generally from the south and therefore, freight played a key influence on price. Alternative feeds such as almond hulls and cottonseed entered the market as a cheaper alternative. New season hay is being made and beginning to pass through the market, however, securing long-term reliable sources may be an issue due to demand. The NSW Government has continued to offer transport grants for those eligible farmers affected by the drought.

Hay stocks began to deplete in autumn and demand exceeded supply throughout winter. This resulted in prices spiking across the country.

Strong demand for fertiliser (due to high global grain prices) has pushed prices higher in recent months.

Grain and hay prices

Australian dairy regions

Grain and hay



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



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

Prices are estimates in \$/tonne at September 2018, compared to equivalent date September 2017. GST exclusive but including delivery and (for grain) an allowance for storage and marketing costs.

Percentage price change compares to the equivalent date 2017.

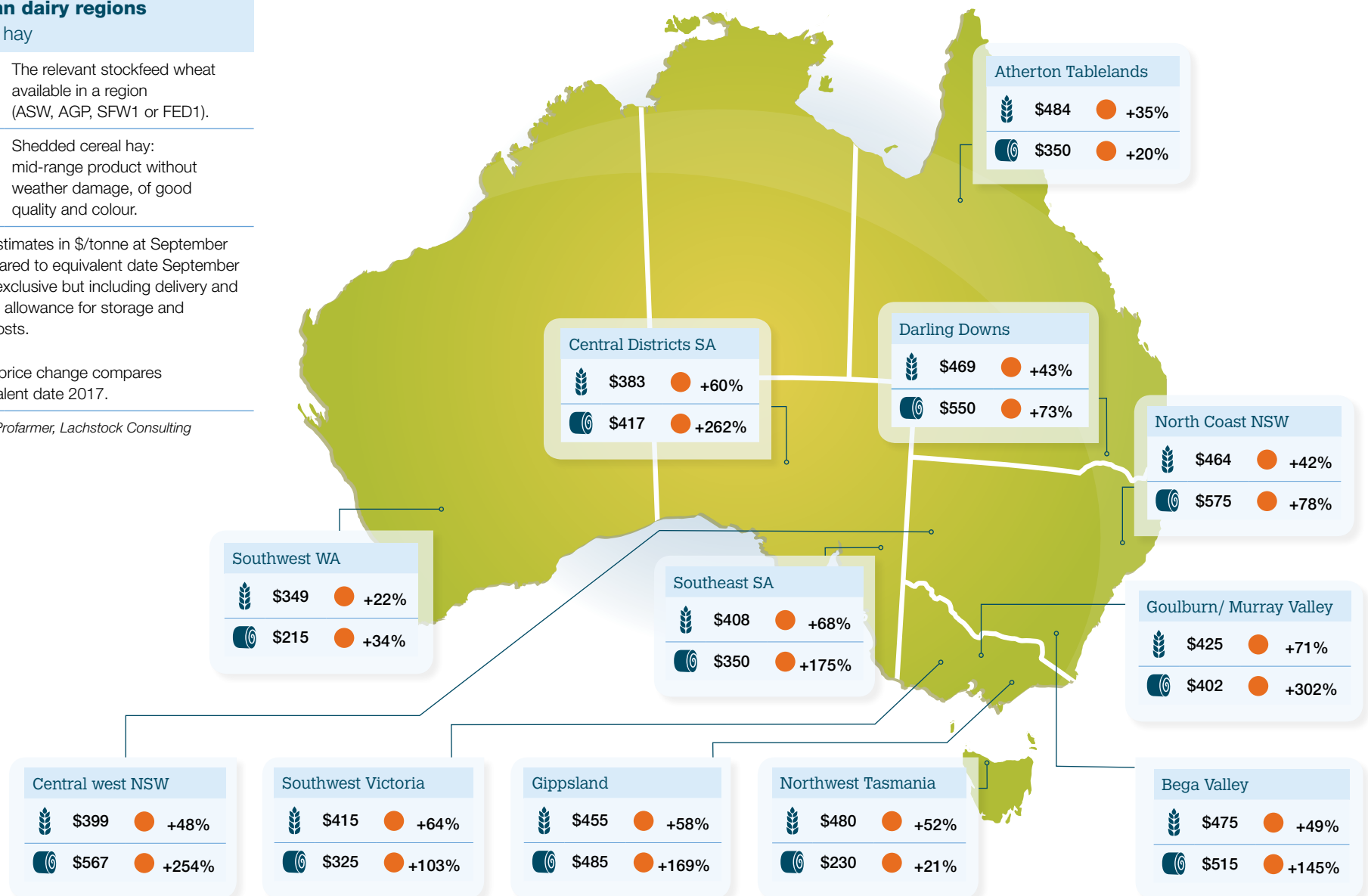
Source: AFIA, Profarmer, Lachstock Consulting

Key

● Positive

■ Neutral

● Negative



Southern Australia

In the previous Situation and Outlook (June) the urgency to purchase feed was reduced by the large carryover stocks. Since then demand has exceeded supply and protein has been difficult to source. Reports suggest many paddocks have been under contract before being cut. Challenging conditions have resulted in a large acreage of wheat and canola crops being cut for hay and silage this year. Despite this, demand is still expected to exceed supply in New South Wales, Victoria, and South Australia, with a lot of hay being transported further north. This is expected to last for some time as unfavourable conditions continue to stress the eastern states.

Western Australia

After a favourable start to the season and winter break, there has been good growth in some areas. Some parts of the state reported strong supplies as domestic demand eased. Hay is being transported across the country into Victoria and New South Wales. Failed wheat crops, ryegrasses, oaten hay and frosted peas are being readily cut and baled. The export industry continues to dominate the market and largely determines price, as exporters continue to seek quality hay.

Grain

World crop production (wheat and coarse grains) is set for its second annual consecutive decline in 2018/19. Following last year's production total

of 2,095 million tonnes this year is expected to decline by 1.1%, to 2,072 million tonnes. Maize is the largest upward adjustment, increasing output by 27 million tonnes while sorghum is up 1 million tonnes. However, this is being outweighed by reductions in other grains. After a difficult growing season in many regions, wheat is down 41 million tonnes and barley is facing its smallest harvest in six years. Wheat yields are expected to be higher in Russia and India although this has been offset by smaller crops in Australia and Canada.

Total grain consumption is expected to reach a new high of 2,136 million tonnes due to an increase in feed, food and industrial use. This has increased 29 million tonnes from last year, with maize and sorghum accounting for a large proportion of this growth. Increased consumption and reduced carryover stocks from major exporters has resulted in world stocks forecast declining for the second consecutive season. The reduction by 64 million tonnes will place stocks at a four-year low at 544 million tonnes. The tightening of global wheat supplies is even more apparent when factoring in China's impact. China's stocks have increased heavily in the last several years and are expected to account for more than half the global stocks by the end of the year, although reliable indications are scarce. According to the International Grain Council, the world stocks-to-use ratio could finish the year down 25%, and the lowest in five seasons. Despite political disruptions, global grain trade

is expected to increase slightly this year, up 0.5%. This would set a new record, although it must be noted the increase itself is significantly less than previous years. A total of 369 million tonnes is predicated to be traded in 2018/19, including new highs for maize and barley but declines for wheat and sorghum. As wheat stocks tighten and prices rise, many exporters are expecting to ship much more of their available stock and in turn will have limited supplies left over at the end of their season.

In Australia, seasonal conditions over winter and the start of spring varied considerably for different cropping regions and resulted in mixed prospects. As a whole the country's total winter crop production is forecast to decrease by 12% in 2018/19, the second fall from the record year in 2016/17. Production is set at 33.2 million tonnes, 9% below the 20 year average.

Following hot and dry conditions in the eastern states, yields in New South Wales and Queensland are forecast to be 46% and 38% less than 2017/18.

Conversely, favourable conditions have Western Australia's production predicted to increase by 12%. In South Australia and Victoria, below average rainfall and low soil moisture resulted in a lower production forecast. As the challenging conditions continue many crops are expected to be cut for hay and silage. Nationally, prices have been at near record highs. In local feed markets, the combination of record prices and supply concerns has seen some shift in demand away from wheat and barley into other options.

The 'Grain and Hay Report' provides a comprehensive overview of the market and indicative pricing by dairying region, and is published most weeks.

The Production Inputs Monitor provides statistics and commentary for grain, hay, fertiliser, weather, water and cull cows on a monthly basis.



For ongoing information and updates on farm inputs, subscribe to Dairy Australia's monthly Production Inputs Monitor, or the weekly Hay and Grain Report, found on the Dairy Australia website at: dairyaustralia.com.au/industry/farm-input-and-costs

Australian market

Milk

Over the twelve months to September 2018, Australians bought 1.4 billion litres of milk in supermarkets, up 0.9% from last year. The value of supermarket drinking milk sales increased 1.5% to over \$2.3 billion. Fresh white milk is considered Australia's largest and most mature dairy segment and represented 77.8% of total liquid milk sales. Fresh white milk sales grew 1.3% in the twelve months to September 2018, in line with a conservative long-term growth rate.

Six years ago close to half of all fresh white milk sold in supermarkets was modified skim or low-fat varieties. Today over 75.3% of all fresh white milk sold is full cream milk. This remains an ongoing trend within the milk market as consumers prefer 'natural products' and have a greater appreciation of the benefits of dairy fats. Over the past year full cream milk sales increased 3.7% in volume and 3.9% in value, largely at the expense of modified skim and low-fat varieties. Modified milk varieties dropped 4.4% in volume and 5.7% in value, indicating a drop in average price in addition to total volume. Private label fresh white milk continued to grow at the expense of branded competitors. In the past twelve months private label sales increased 5.9% to 667 million litres, while branded fresh white milk sales eased 5.0% to 436 million litres.

Over the past twelve months consumers continued to opt for fresh milk over UHT,

and UHT sales contracted 3.9%, to 181 million litres. Private label UHT milk bucked this trend and sales volumes increased 12.6% to almost 80 million litres. Private label UHT milk is sold at a significant discount compared to company branded UHT (averaging \$0.98/litre vs \$1.70/litre) and has therefore steadily gained market share. Lactose-free UHT milk continued to show substantial growth and accounted for 14.7% of all UHT milk sold (sales of all lactose free milk represent 4.1% of total liquid milk sales). Lactose-free UHT is sold at a higher average retail price compared to traditional UHT milk and thus represented 21.0% of total UHT milk value. Private label lactose-free UHT milk grew 41.2% in volume over the past twelve months, and represented 19.5% of total lactose-free UHT sales.

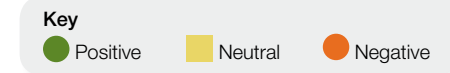
Flavoured milk remains an important category for dairy companies. The average retail price of flavoured milk was \$3.60/litre in the twelve months to September, well above the average retail price of fresh white milk (\$1.38/litre). Sales of flavoured milk grew 4.7% to 143 million litres and company branded flavoured milk made up the majority of these sales.

Cheese

Total supermarket sales volume of cheese grew 1.9% to 150,000 tonnes, whilst the value of cheese sales increased 3.9% to \$2.2 billion. Over the past twelve months, chilled cheese sales have remained fairly steady while

deli-style cheese continued to grow in popularity. Deli cheese sales accounted for much of the growth in the cheese category in 2017/18, increasing 7.3% in volume to 25,000 tonnes. The average retail price of deli cheese is higher than the retail price of chilled cheese (\$25.43/kg compared to \$13.05/kg) and grew 2.0% over the period. This resulted in an increase in deli cheese sales value of 9.4% to \$639 million.

In 2017/18 the volume of chilled cheese sold increased 0.9% to 125,000 tonnes. Over the same period the overall value of chilled cheese returned to growth, up 1.9% to \$1.6 billion.



The average retail price of cheese grew 1.0% to \$13.05/kg, a deviation from the downwards trend of recent years. Chilled cheese in the 300-999 gram pack-sizes rose in price and contributed to this recovery. While the average retail value of medium pack-sizes recovered, the bigger pack sizes (larger than 1kg pack) continued to be offered at a discount. Private label volume sales of chilled cheese increased 2.9% in 2017/18, whilst value sales grew 6.6%. Private label sales represented 47.4% of the total chilled cheese market in volume and 34.9% in value.

Figure 2 Australian supermarket sales

Milk* (As of 19/08/18)	Cheese (As of 01/07/18)	Dairy spreads (As of 19/08/18)	Yoghurts and snacks (As of 01/07/18)
Volume (m. litres)	Volume (kt)	Volume (kt)	Volume (kt)
1,419	151	48	216
Year-on-year growth	Year-on-year growth	Year-on-year growth	Year-on-year growth
+0.9%	+1.9%	-1.3%	+1.5%
Retail value (\$ m)	Retail value (\$ m)	Retail value (\$ m)	Retail value (\$ m)
2,255	2,275	563	1,530
Year-on-year growth	Year-on-year growth	Year-on-year growth	Year-on-year growth
+1.5%	+3.9%	+18.3%	+4.8%

Source: Aztec-IRI

Note: Available data is taken from differing periods; milk and dairy spreads from MAT 19/8/2018; cheese and yoghurt and snacks from MAT 01/07/2018. *Milk sales represent supermarket sales and exclude other sales channels

The average retail price of private label chilled cheese also grew over the past year, up to \$9.61/kg. Compared to branded cheese sales, private label cheese is sold at a significant discount.

Yoghurts and dairy snacks

During 2017/18 yoghurt and dairy snacks sales grew 1.5% in volume to 216,000 tonnes and 1.9% in value to \$1.5 billion. The volume increase was driven by strong growth in the traditional yoghurt category. Unsweetened, traditional style yoghurts (such as Greek yoghurt) grew 6.2% to 88,000 tonnes, worth \$638 million. Five years ago traditional style yoghurt represented 26.9% of total yoghurt and dairy snacks sales. These yoghurts have since grown in popularity and in 2017/18 represented 40.6% of total sales. Consumers continue to opt for traditional style yoghurts as they are perceived as more healthy and natural compared to sweetened yoghurts and dairy snacks. In 2013/14 sweetened yoghurts made up 34.9% of all yoghurt and dairy snack sales. Sweetened yoghurts' market share has since decreased, down to 28.4% in 2017/18. The average retail price of sweetened yoghurt increased over the past twelve months, resulting in the category value growing 10.7% to \$374 million.

Over the past twelve months, the segment within the yoghurt and dairy snacks category which experienced the fastest growth was sales of probiotic yoghurts. In 2017/18 sale volumes grew considerably, up 19.2% while sale value increased 12.6%.

This was a result of increased interest and awareness of the health benefits of probiotic yoghurts, as well as new market entrants in the segment. Despite strong growth, probiotic yoghurt sales traditionally represent a small proportion of the total yoghurt and dairy snack market. In 2017/18 probiotic yoghurts accounted for 3.0% of total sales.

Dairy spreads

As butter commodity prices remained strong, sales of dairy spreads continued to ease over the twelve months to September 2018, down 1.3% to 48,300 tonnes. This is a smaller decrease than previously reported, as dairy spreads sales have started to recover from the market shock caused by the global butter price rally. While sales volumes remained under pressure, values continued to show remarkable growth, increasing 18.3% to more than \$563 million. This value growth has been underpinned by the high average retail prices of butter. Over the past twelve months average retail butter prices increased 35.6%, up to \$12.47/kg. Private label butter increased more in price than company branded butter, up 60.5% compared to 20.4%. However, within the butter category, company branded butter is still sold at a premium to private label butter (\$14.02/kg compared to \$10.64/kg). Supermarket sales of company branded butter contracted 1.1% while private label sales dropped 12.1% following the price spike. The high price of butter prompted some consumers to opt for substitutes,

however, demand for butter has proven fairly inelastic overall. Consumers have instead reduced their consumption of butter by buying smaller pack-sizes. Sales of 150-250 gram butter tubs increased over the year, while sales of larger tubs decreased. As global butter prices remain strong consumers are likely to continue to substitute large size butter packs for smaller ones.

Despite traditionally being more expensive than butter, blends are now retailed at a lower average price. This has led consumers to increase their consumption of blend products. Over the past twelve months, blend sales increased 4.6% in volume and 9.5% in value. The average retail price of blends increased 4.6% to \$10.82/kg. Private label blends are the cheapest dairy spread product, with an average retail price of \$8.86/kg, compared to company branded blends, \$10.88/kg. When consumers purchase blends they usually buy the 500 gram pack-size. Sales of 500 gram tubs of blends represented 76.5% of total blend sales in 2017/18. Consumers have more recently increased purchases of 375 gram tub sizes of blends, which are up 46.8% to make up 9.6% of total blend sales.



Sales of non-dairy 'milks'

Over the past twelve months supermarket sales of non-dairy 'milks' have increased. In 2015, sales of these beverages represented 5.8% of total milk sales, with soy beverages accounting for more than 50% of sales. Traditionally, consumers who drink non-dairy alternatives have seemed open to substituting between varieties and since 2015 sales of soy beverages have lost market share to almond and coconut drinks. Today, soy drinks make up roughly 43% of the non-dairy beverage market, while almond beverages have grown to account for more than 35% of the market.

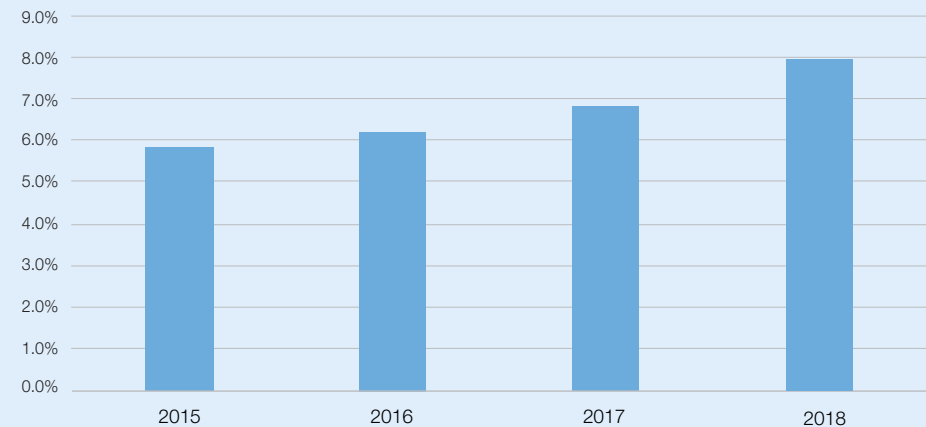
In the twelve months to September 2018, non-dairy alternatives accounted for 7.9% of total supermarket milk sales by volumes and 12.4% by value. These substitutes are substantially more expensive than fresh white milk, with an average retail price ranging between \$2.19/litre to \$3.60/litre. Of the non-dairy beverages, soy drinks are generally the most affordable option while macadamia milk is the most expensive. Due to the high purchase price, retail data suggests customers are more likely to purchase non-dairy beverages when they are part of a promotional offer. Sales generally spike as soon as the price goes down, indicating that customers demand for non-dairy alternatives is fairly elastic.

The expansion of the 'coffee culture' in Australia has made the foodservice industry a large market for both dairy milk and non-dairy 'milks'.

Dairy Australia's Domestic Sales Database reveals that sales of regular milk through non-grocery channels, like the food service industry, increased 1.2% over the past year. Sales of non-dairy 'milks' to the foodservice sector and other non-grocery channels, grew more rapidly, up 32% compared to last year. Soy, clearly the most popular dairy alternative, accounted for 43% of these sales.

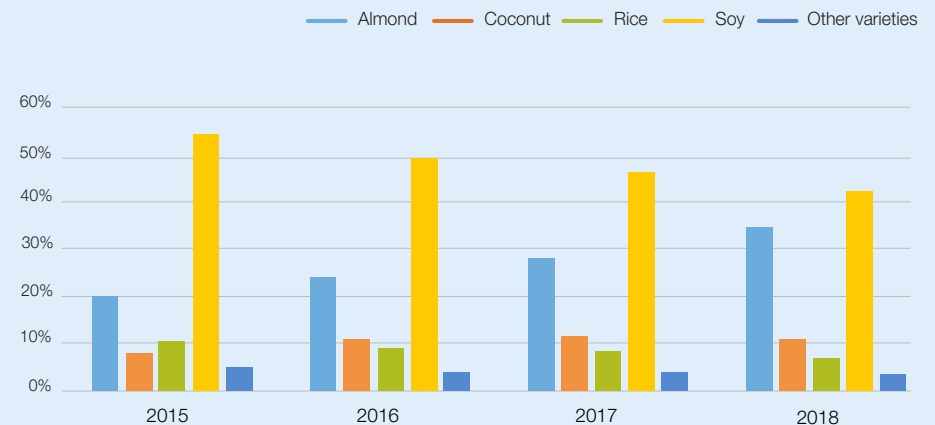
Reflecting similar to supermarket data, Dairy Australia's Domestic Sales Database shows that consumers in recent years have opted for other non-dairy drinks over soy drinks. The share of soy beverage in non-grocery markets has contracted. Almond and coconut beverages experienced the largest increase in sales to food services in 2017/18, driven by consumer preference for these types of drinks.

Figure 3 Non-Dairy Share of Total Supermarket Milk Sales



Source: Aztec-IRI

Figure 4 % Share of Total Non-Dairy Supermarket Sales



Source: Aztec-IRI

Australian economic settings

Optimists continue to outnumber pessimists among Australian consumers, according to the latest Westpac-Melbourne Institute Consumer Sentiment Index. The index reached 100.5 in September 2018, marking the 10th month of positive consumer sentiments. This continues to be the most sustained period of optimism in over three years. However, since July sentiment has weakened as consumers worry about household finance. The NAB Q2 2018 Quarterly Consumer Behaviour Survey indicated an increase in consumer anxiety over the past months. Consumers now seem more concerned about the rising cost of living in Australia, and the overall economic situation, than since 2016. Broadly speaking, an increase in consumer anxiety suggests consumers are more pessimistic about their future income and finances. This will make consumers more reluctant to increase consumption of 'discretionary items', such as premium-priced butter, instead of margarine. When consumers worry about household finances they are usually less willing to eat out at restaurants or cafes.

Dairy Australia's Food Service Index shows an increase in consumer spending on food and food service across major channels. Consumer reluctance to pay for 'non-essential' items can be detected in the slowdown in consumer spending on cafes and restaurants in the six months to July, compared to the 12 months year-on-year growth.

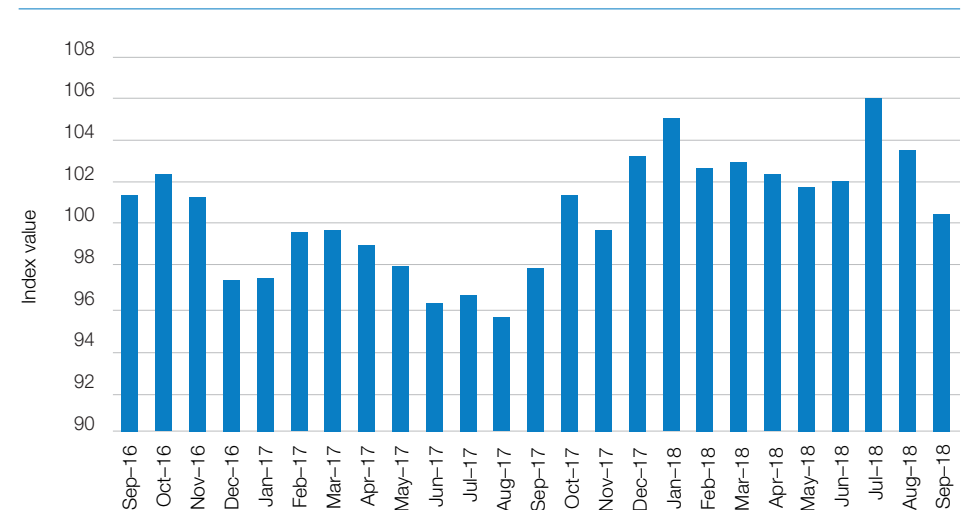
In its place supermarket sales have increased over the past six months, up from 3.0% to 3.4%. Much of this growth occurred over the past three months, possibly as consumers chose to eat at home in favour of dining out. An increase in Australian supermarket sales suggests growing demand in the domestic market, which accounts for a large proportion of Australian dairy products.

Takeaway sales have also grown over the past six months, and even more so in the past quarter. Competition in the food delivery industry intensified over winter following Foodora's decision to exit the market. Remaining food delivery companies have battled to win market share. Many food delivery companies have offered favourable discounts or promotions to attract sales, driving growth in takeaway sales.

The latest inflation data from the ABS June Quarter CPI shows that inflation rose 0.4% over the quarter to June. This brings the annual rate to 2.1% which is within the RBA's medium term target band. Over the quarter to June the food component of CPI contracted 0.4%, driven by a fall in vegetables and fruits. The dairy foods group grew 0.6% with an increase in both milk and cheese prices.

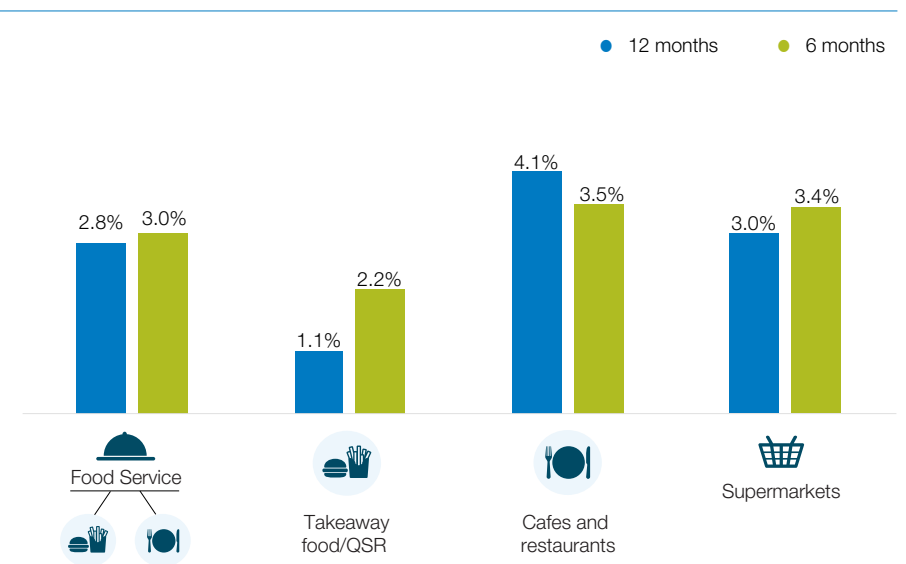
The economic setting in Australia still seems to suggest fairly limited domestic market potential for dairy products. Even though Australians generally remain positive about the future economy, growing financial anxiety is making consumers more budget conscious. This is likely to weigh on future demand growth for dairy products.

Figure 5 Australian consumer confidence



Source: www.tradingeconomics.com, Westpac Banking Corporation, Melbourne Institute

Figure 6 DA Food Service Index (YoY turnover growth to July 2018)



Source: Dairy Australia, ABS

Global economy and exchange rates

The new World Economic Outlook report (July) published by the International Monetary Fund (IMF) has projected global growth to be 3.9% in both 2018 and 2019, unchanged from previous predictions. We are now in the second year of an economic upswing (when the economy moves from a trough to a peak), and growth is anticipated to be less even than recently experienced. Economic growth in advanced countries is projected to decline 0.2% in 2019 as growth rates peak in major economies. Conversely, economic growth in emerging markets and developing countries is expected to strengthen by 0.2% (to 5.1%). Growth predictions have been revised down for Japan, Argentina, Brazil and the United Kingdom.

The threat to this forecast has recently increased due to the current escalation of trade tensions. Recently announced tariff increases by the United States and retaliation by trading partners has potential ramifications for not only bilateral economic ties but also the global economy. If trade tensions continue to escalate; trade volume, supply chain distributions and loss of confidence will all be reduced thus depressing medium term growth prospects. Loss of trade volume for commodities such as soybeans, pork and corn have already been observed in the United States. The impact will stretch further, having a negative impact on less developed economies due to the high cost of importing goods. This, along with rising oil prices (up globally by 16% since February), will continue to influence global growth.

After reaching a peak in January at 0.81 AUD/USD, the Australian dollar has depreciated throughout the year and is currently trading at 0.72 AUD/USD. The AUD hit a two year low in September, however, multiple reports are predicting a steadier forecast for the near future. This decrease has stemmed from China's economy slowing, and developing trade tensions.

Exchange rate forecasts for New Zealand and the European Union suggest the NZD and Euro will appreciate in the near future, improving the competitiveness of Australian and US exports.



Global supply and demand overview

While overall growth has slowed, demand in key markets is robust, particularly China and Japan

United States

The new USMCA agreement will limit the fallout from trade wars, normalising trade relations with Mexico, the largest buyer of US dairy

Export volume trends

Total volume change:

▲ 10%

Significant product shifts

- ▲ SMP/NDM (14%)
- ▲ Lactose (12%)
- ▲ Cheese (10%)
- ▲ Whey powder (10%)

Mexico

North America remains the largest dairy exporter to Mexico. The value of exports contracted 7.3% due to the subdued global SMP price.

Import volume trends

Total volume change:

▼ -0.5%

Significant market shifts

- ▼ European Union (-36.9%)
- ▲ South America (79.8%)
- ▲ North America (7.9%)
- ▼ New Zealand (-42.8%)
- ▼ Australia (-59.5%)

Greater China

Chinese imports have increased strongly, particularly WMP and fat-based products, as well as infant formula.

Import volume trends

Total volume change:

▲ 10.1%

Significant market shifts

- ▲ Australia (16.5%)
- ▲ New Zealand (7.9%)
- ▲ South America (36.8%)
- ▲ European Union (8.9%)
- ▲ North America (13.7%)

Russia

Russia trade embargoes remain in place and exports are well down compared to pre-embargo levels. Export volumes fell over the year driven by a significant drop in butter exports.

Import volume trends

Total volume change:

▼ -19.2%

Significant market shifts

- ▲ European Union (34.8%)
- ▼ North America (-15.5%)
- ▼ South America (-37.6%)
- ▼ New Zealand (-69.3%)

Southeast Asia

Dairy exports to the region continued to ease. WMP exports increased while SMP was redirected from Indonesia and the Philippines (both down), to Singapore (up).

Import volume trends

Total volume change:

▼ -1.8%

Significant market shifts

- ▲ South America (13.4%)
- ▼ European Union (-7.3%)
- ▼ New Zealand (-3.6%)
- ▲ North America (10.9%)
- ▼ Australia (-3.7%)

Australia

Australian exports continue to reflect growth in liquid milk shipments. WMP volumes have stagnated, whilst less SMP is being sold, but maintaining a price premium.

Export volume trends

Total volume change:

▲ 5%

Significant product shifts

- ▲ Liquid milk (18%)
- ▲ Cheese (4%)
- ▼ WMP (-1%)
- ▼ SMP (-8%)

Middle East and North Africa

Dairy exports to the region grew for the first time in over three years. Increases in powder exports were a major contributor to this growth.

Import volume trends

Total volume change:

▲ 8.1%

Significant market shifts

- ▲ European Union (8.9%)
- ▲ North America (46.5%)
- ▼ New Zealand (-12.5%)
- ▲ Australia (22.4%)
- ▲ South America (225.3%)

New Zealand

Slower milk production reduced volumes for export, but resurgent growth means this will soon change

Export volume trends

Total volume change:

▼ -2%

Significant product shifts

- ▼ Liquid milk (-1%)
- ▼ WMP (-1%)
- ▼ Cheese (-7%)
- ▼ SMP (-10%)

Changes 12 months to July
Source: GTIS, Dairy Australia

 Four largest exporters

Global demand

Overview

Global dairy exports increased over the twelve months to July 2018, as a result of healthy demand from major markets. Dairy exports from the six largest exporters (New Zealand, the EU, US, Australia, Argentina and Uruguay) grew 3.7% to 11.7 million tonnes. The value of the global dairy trade rose 6.6% to US\$33.8 billion, supported by strong international commodity prices.

Australian exports increased 4.1% to 745,000 tonnes over the same period, driven by strong growth in liquid milk and infant powder exports. Liquid milk exports rose 18.2% to 222,000 tonnes,

while infant powder exports grew 19.1% to 29,000 tonnes. Most Australian infant powder was destined for Greater China. Over the past five years, Australian liquid milk exports have grown significantly due to increased demand from China and southeast Asian markets. Australian butter production dropped over the past year, which led to a decrease in butter exports. Australian exports of butter contracted 33.7% to 8,800 tonnes. This is well below (-60.8%) the five-year average and the lowest volume reported since the 1980s. Australian WMP exports recovered slightly in recent months, but remain down 1.4% year on year, at 58,000 tonnes.

Improved global commodity prices have supported value growth of Australian exports. In value terms, Australian exports rose 12.7% to US\$2.2 billion. Shipments of cheese, Australia's most valuable export product, grew 14.6% in value to US\$736 million. The value of Australian liquid milk exports rose 24.1% to US\$208 million while infant powder increased 21.9% to US\$369 million. While Australian butter exports contracted considerably in volume, butter exports only eased 6.5% in value, due to the elevated global price of butter.

Greater China

Greater China's (PRC, Macau and Hong Kong) demand for dairy has continued to increase. In the twelve months to July 2018, exports from major dairy exporters grew 10.1% to 2.8 million tonnes. Liquid milk has grown steadily and accounted for 20.2% of total export volumes. Infant powder exports to Greater China continued to surge, up 35.8% in volume to 300,000 tonnes and 18.6% in value to US\$2.7 billion. Butter exports were up 20.3% in volume to 94,000 tonnes while the value of butter exports increased considerably more, up 55.9% to US\$555 million.

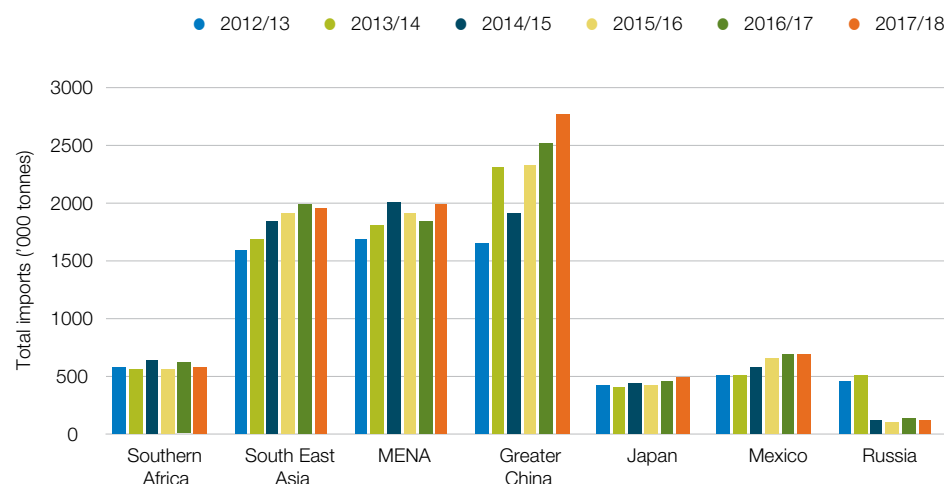
Australian export growth to Greater China outpaced the EU and New Zealand, up 16.5% to 220,000 tonnes.

The value of Australian exports increased even more, up 26.4% to US\$795 million, propelled by strong commodity prices. Over the past twelve months, Australian milk exports grew to a record 100,000 tonnes, up 20.6%, while the value of milk exports increased 31.3% to US\$96 million. Australian WMP exports rose 76.2% in volume, to 21,000 tonnes while the value increased 83.1% to US\$137 million. Infant powder is Australia's most valuable export product into a single market and exports grew 22.1% in value to US\$339 million. As reported elsewhere in this publication, the fall in Australian butter production resulted in a drop in butter exports, down 9.6% to 2,900 tonnes. The value of butter exports rose 22.4% over the same period.

Japan

Over the past twelve months dairy exports to Japan increased 10.9% to nearly 500,000 tonnes, whilst the value of exports to Japan grew 15.7% to US\$1.7 billion. Cheese, Japan's most sought after dairy commodity, increased 9.7% to 264,000 tonnes and represented more than half of total export volumes over this period. Cheese consumption in Japan has increased over the past ten years. The increased appetite for cheese helped drive export growth over the past year.

Figure 7 Exports to key markets



Source: Dairy Australia, GTIS
Data represents 12 months to July

The value of cheese exports increased 19.2% to US\$1.1 billion, and made up 64.7% of total export value. Over this period the EU increased its share of the Japanese cheese export market, from around 14.2% five years ago to 27.1%.

Australia is still the largest cheese exporter to Japan, however over the past twelve months Australia's share of the Japanese cheese market decreased, down from 36.6% to 33.1%. Protein exports, in the form of SMP and whey, proved to be main drivers of the export growth, with SMP exports increasing 23.6% to 39,000 tonnes while whey powder exports rose 20.5% to 64,000 tonnes.

Australian dairy exports to Japan increased 13.6% to 108,000 tonnes, whilst the value grew 30.4% to US\$423 million, underpinned by a strong commodity price of cheese. Of the 108,000 tonnes of dairy products Australia exports to Japan, 82.2% were cheese. Australian exports cheese to Japan grew 8.8% to 88,000 tonnes, worth US\$365 million. Australian SMP exports experienced exceptional growth, up 208.9% in volume to 8,600 tonnes, and 177.6% in value to US\$18.7 million.

Southeast Asia

Dairy exports to southeast Asia eased over the past twelve months, down 1.8% in volume to nearly 2.0 million

tonnes, while the value of exports grew 2.4% to US\$4.5 billion. SMP, the most popular export product, was the product which experienced the largest change over the period, down 8.9% to 604,000 tonnes. This is the lowest amount of SMP exported to the region since 2013/14. The value of SMP exports contracted even more, down 17.5% to US\$1.1 billion, due to the weak global commodity price. SMP exports contracted particularly in Indonesia and the Philippines, down 15% in both countries to 144,000 tonnes and 143,000 tonnes respectively. These declines were moderated by a 16.9% increase in SMP exports to Singapore, up to 66,000 tonnes. WMP exports grew 1.4% in volume to 262,000 tonnes and 14.5% in value to US\$807 million, making it the second most valuable export product to the region, after SMP. Elevated butter prices resulted in a surge in the export value of butter, up 54.0% to US\$328 million, while volumes increased 9.3% to 53,000 tonnes.

Exports from the US to southeast Asia grew 10.9% to 426,000 tonnes, which saw the US increasing its market share in the region, up from 19.3% last year to 21.7%. South American (Argentina and Uruguay) exports increased 13.4% in volume to 34,000 tonnes, representing 1.7% of the total export market in the region. New Zealand exports contracted 3.6% in volume to 636,000 tonnes but grew 11.3% in value to US\$2.1 billion.

In value terms, New Zealand exports made up close to half of all exports to the region.

Australian exports to southeast Asia declined 3.7% in volume to 262,000 tonnes and 2.2% in value to US\$554 million. Milk powder exports dropped the most, with SMP volumes down 23.3% to 78,000 tonnes and WMP volumes down 27.2% to 16,000 tonnes. Milk powder also decreased in value with SMP exports easing 26.2% to US\$159 million and WMP exports contracting 20.0% to US\$45 million. These declines were partially offset by an increase in liquid milk exports. Liquid milk exports to the region have grown significantly, up 19.3% in volume to 94,000 tonnes and 23.0% in value to US\$79 million, making it the third most valuable export product from Australia to the region. Almost half of these exports were destined for Singapore while the Malaysian liquid milk export market has been the fastest growing market over the past five years.

As incomes in southeast Asian countries rise, consumers' taste appear to change with many opting for fresh dairy products and more westernised food. Combined with large investments into exporting fresh milk from Australia to these markets, made by several Australian companies, increasing liquid milk exports is a trend we are likely to see more of in the near future.



Mexico

Dairy exports to Mexico from major exporters eased slightly over the twelve months to July, down 0.5% to 682,000 tonnes. The value of this trade contracted more, down 7.3% to US\$1.6 billion. SMP represents close to half of all dairy exports to Mexico. Due to subdued global SMP prices, the export value of SMP shrank 7.7% to US\$600 million, despite a 2.7% increase in export volumes over the period. Fat products, such as butteroil, contracted 41.8% to 26,000 tonnes. This saw a decrease in the export value of butteroil, down 34.3% to US\$130 million. Despite trade tensions, the US share of the Mexican export market increased from 80.4% last year to 87.2%, whilst the EU's market share decreased.

Middle East and North Africa

Dairy exports to the Middle East and North Africa (MENA) region grew over the past twelve months, up 8.1% to 1.99 million tonnes. This marks the first increase in export volumes to the region in over three years. Total value of exports from major dairy exporters rose 11.2% to US\$5.8 billion. Increasing powder exports were some of the main contributors to the growth. Cheaper priced SMP increasing 12.6% in volume over the period to 375,000 tonnes, while contracting 4.8% in value to US\$642 million. WMP exports rose 13.3% to 522,000 tonnes. Butter and condensed milk exports fell 5.7% and 6.8%, down to 129,000 tonnes and 170,000 tonnes respectively.

Over the past twelve months, Australian exports to the MENA region grew 22.4% in volume to 32,000 tonnes and 27.9% in value to US\$99 million. Despite these increases, MENA is a small export market for Australia and Australian exports made up less than 1.6% of total MENA imports. Australian milk powders saw the most growth, with SMP exports increasing 15.7% to 16,000 tonnes and WMP exports up 119.4% to 9,000 tonnes. Cheese exports increased 10.9% in volume to 7,000 tonnes and 21.7% in value to US\$36 million, making cheese Australia's most valuable export product to the MENA region.

Russia

Russian trade embargoes remain in place on dairy imports from the US, EU, Australia, Canada and Norway and exports have been well down compared to pre-embargo levels. Over the past twelve months to July, dairy exports to Russia from major dairy exporters contracted 19.2% in volume, from 142,000 tonnes to 115,000 tonnes, and 23.9% in value to US\$360 million. Export volumes of dairy fat products have fallen significantly. Butter exports, which previously were a key export product to Russia, dropped 64.0% to 8,000 tonnes while butteroil exports contracted 61.8% to 4,000 tonnes. Exports from New Zealand and south America (Argentina and Uruguay) decreased substantially, down 69.3% to 13,000 tonnes and 37.6% to 30,000 tonnes respectively.

Regardless of the trade embargo, the EU remained the largest exporter to Russia with a 55.2% market share. This growth is made up by dairy products not subject to the trade embargo, such as lactose-free dairy products.

The decrease in dairy buying has diminished Russia's presence as a major dairy buyer. Combined with reduced affordability following financial sanctions and a weaker Russian ruble, Russia's importance as a dairy importer is likely to remain low in the near future.

Global affordability and substitutes

Global Dairy Import Affordability

Dairy Australia's Import Affordability Index tracks the affordability of dairy imports for consumers in importing countries. The index measures changes in global commodity prices adjusted for local currency effects and serves as an indicator of purchasing activities in major dairy markets. An increase in the index reflects worsening affordability for importing countries and could signal a future slowdown in imports, particularly in price-sensitive markets. Worsening affordability might lead consumers to reduce the order size or hold off purchases all together until prices are more favourable.

Since the last report in June, import affordability has improved across all of the major dairy importer markets. Dairy Australia's benchmark monthly WMP spot price eased 12.1%, which contributed to this improvement.

Over the same time the US dollar appreciated against all major importers' currencies, partly offsetting the improved affordability in each market. A depreciation of local currencies makes \$US denominated dairy imports relatively more expensive. The most notable depreciations of currencies took place in Saudi Arabia, Algeria, Mexico and Japan, with local prices decreasing by 12.1%, 9.6%, 8.9% and 8.5% respectively. Imports to Algeria and Saudi Arabia decreased over the past three months to July, suggesting despite improved affordability in these markets import levels have not been affected. While in Japan the depreciation of the yen did not seem to impact import levels, as it was offset by lower dairy commodity prices, which drove imports higher.

Improved import affordability in Indonesia, due to the decrease in global commodity prices, has not translated into an increase in imports since the last report. The Indonesian rupiah has continued to depreciate and this seems to have kept some importers from placing orders. Dairy imports to Indonesia decreased 3.3% over the twelve months to July, reflecting a weaker rupiah and reduced ability to pay for imports.

Dairy price premiums and substitutes

Food and ingredient manufacturers will generally alter the product mix of particular products to capture favourable price movements. This includes substituting dairy fats, when butter prices increase, for cheaper vegetable oils or swapping between milk protein and soy protein depending on price. Historically the milk protein premium has been above the butter premium, but since March 2017, the premium inverted. Strong global butter prices caused the Australian price to rise, resulting in this new trend.

The butterfat premium is measured as the difference in US \$/kg prices between palm oil substitutes and dairy butter fats. The butterfat premium in July 2018 reached \$6.72/kg, only 0.5% below the peak price in July and August 2017. Global butter prices have started to ease but Australian prices remain strong due to a drop in butter production.

This has caused Australian consumers to reduce butter consumption and opt for substitute products while dairy companies have created new fat-filled products (SMP with vegetable fats added). Despite these measures, the butterfat premium remains well above the historical average. Looking ahead, lower global butter prices are expected to influence the Australian market. However, as milk production is forecast to contract, Australian butter prices will likely remain fairly stable in the short term. This will continue to support above average butterfat premiums.

The milk protein premium is measured as the difference in US\$/kg prices between soy protein and skim milk powder (SMP). While high global butter prices led to butterfat premium growth, weak SMP prices caused the milk protein premium to plummet. SMP prices are still suppressed and keeping the milk premium low. A major factor in the weakness of SMP and milk protein prices has been the severe market distortion produced by the EU's market intervention. Almost 100,000 tonnes of SMP has been sold from intervention over the past year, however in recent months volumes have slowed. As the attractiveness of SMP from intervention stocks diminishes, it may yet be some time before the stockpile is gone.

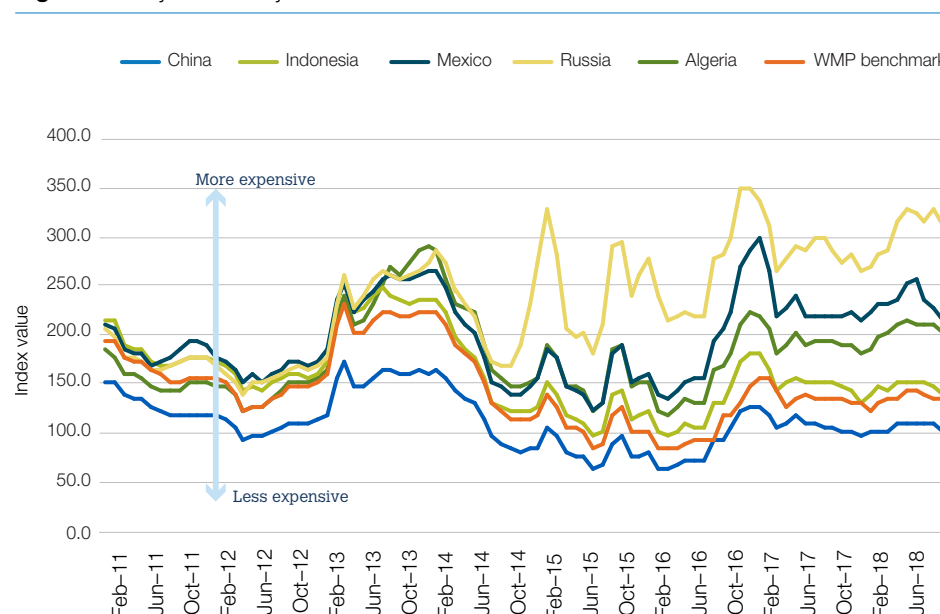
Butter and SMP are co-products, utilising the fat and protein components in milk respectively. Since they are co-products the commodity price of one product affects total returns of the butter/SMP manufacturing stream. Ongoing weakness in SMP prices has lowered the total price a manufacturer can obtain for butter/SMP production. Many manufacturers have instead opted to produce WMP or cheese to capture higher commodity prices. Hence, over-supply and low prices of SMP created a shortage of butter, and higher butter prices. Greater demand and production of butter will in turn lead to ongoing over-supply of SMP. It is likely manufacturers will seek new applications and uses for SMPs, such as fat-filled milk powders. This will also act to keep milk protein premiums below historical levels for the foreseeable future.

Figure 8 Dairy price premium vs palm/soy substitutes



Source: Dairy Australia, Oil World

Figure 9 Dairy affordability



Source: Dairy Australia, Bloomberg

South America: A growing exporter or fleeting recovery?

With abundant natural resources, South America is an oft-cited land of opportunity for agricultural production, including dairy. However, volatile climatic and political conditions, together with widespread infrastructure challenges and competing land uses have historically kept the level of dairy production and exports well below expectations. In addition, rapid growth in the Brazilian economy through the 2000s boosted dairy consumption in that country to the point where Brazil became more of a dairy importer than exporter. Within the protection of the Mercosur trading bloc, Argentina and Uruguay became major suppliers to their former competitor. Apart from the market opportunities closer to home, both of these countries had less dairy product to sell for most of 2016 and 2017, as repeated floods inundated key dairy regions.

Recently, things have changed. From late 2017, weather conditions moderated and – with the exception of Brazil – farmgate milk prices rose. The better weather also boosted crop yields, which saw grain prices ease. More stable economic conditions and lower inflation helped improve the general business environment, and reduced financial pressure. Whilst the renewed economic slowdown in Brazil (and more recently Argentina) is likely to impact dairy demand, other opportunities are emerging.

Russia's ongoing embargo on most of its other dairy suppliers has generated some openings, whilst the US trade disputes with China and Mexico could also benefit South American exporters.

Milk is increasingly available to take advantage. Argentina's milk production grew just over 7% for the first half of 2018, as did that of Chile, whilst Uruguay is up 6.5% for the year to July. Brazil had been following a slower trajectory (up 2% for Q1) but has since slowed, overall volumes are roughly steady for the first half of 2018, compared to the same period in 2017.

Production may be up, but the payoff in trade volumes is yet to materialise. For the first two quarters of 2018, total export volumes from South American suppliers fell 10% compared to the same period in 2017. All countries have seen falls, with Brazil the most severe (down 36%), followed by Chile (-12%) and Uruguay (-9%). Argentina has seen a more modest 2% decrease, having had a particularly severe drop in 2017 and thus a weaker comparable.

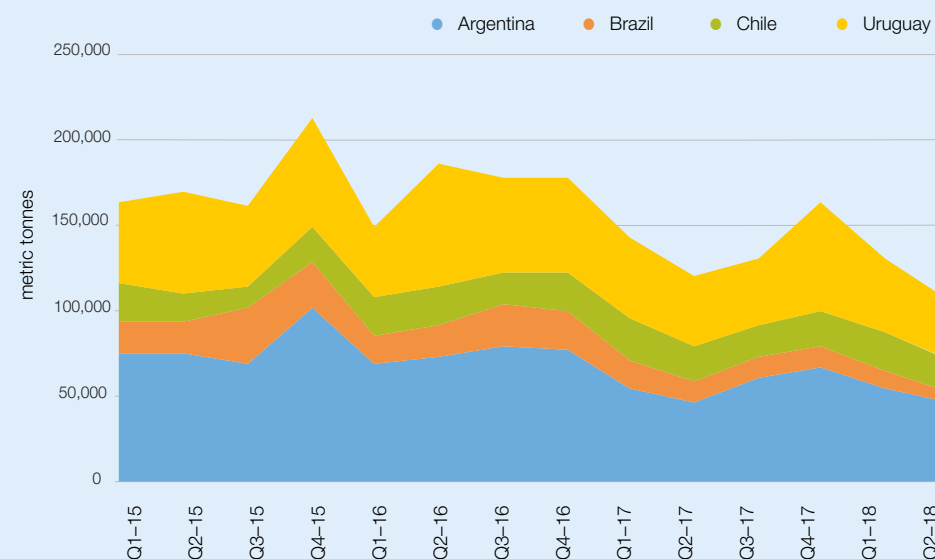
At a product level, the biggest volume dairy commodities traded within and out of the region tend to be wholemilk powder (WMP), condensed milk, and (to a lesser extent) whey powder and cheese. Of these, only WMP has seen gains, with 12% more exported for the first half of 2018. Far from Russia or China, this growth has been driven

by Algeria, with South American suppliers delivering over 44,000 tonnes of product as part of the Algerian government's regular tenders – a threefold gain from the same time a year prior.

Algeria's tenders are highly price-competitive and widely discussed in dairy trading circles.

Anecdotal reports suggest that over the last few months, South American sellers have become increasingly noticeable in other pricing negotiations globally. As the chart shows, there is a lot of ground to make up. Whether the current nascent turnaround is the beginning of a sustained re-emergence, or another false dawn, remains to be seen.

Figure 10 Exports from major South American suppliers



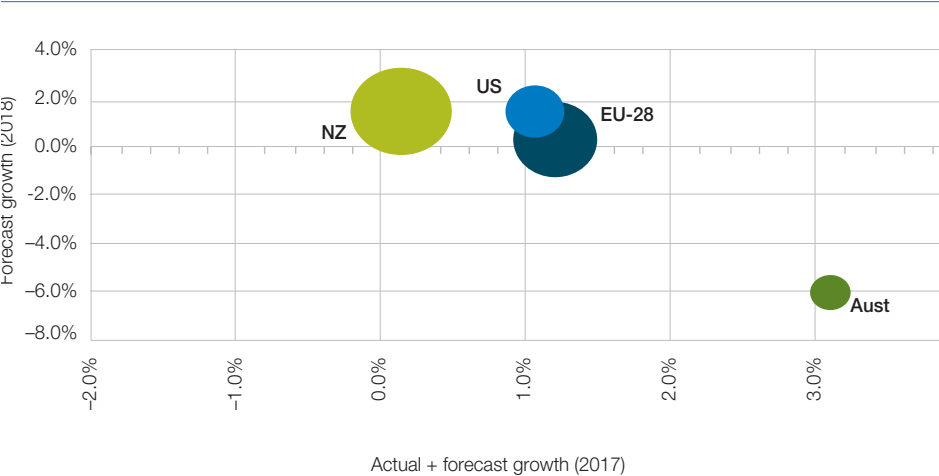
Source: GTIS

Global supply

Overview

Favourable prospects in New Zealand have far outweighed Australia’s challenging season, pushing commodity prices down. Europe and the US have seen milk volumes recover as the northern hemisphere season begins to wind down, meaning the global market is well supplied.

Figure 11 Actual and forecast milk production growth – four largest exporters

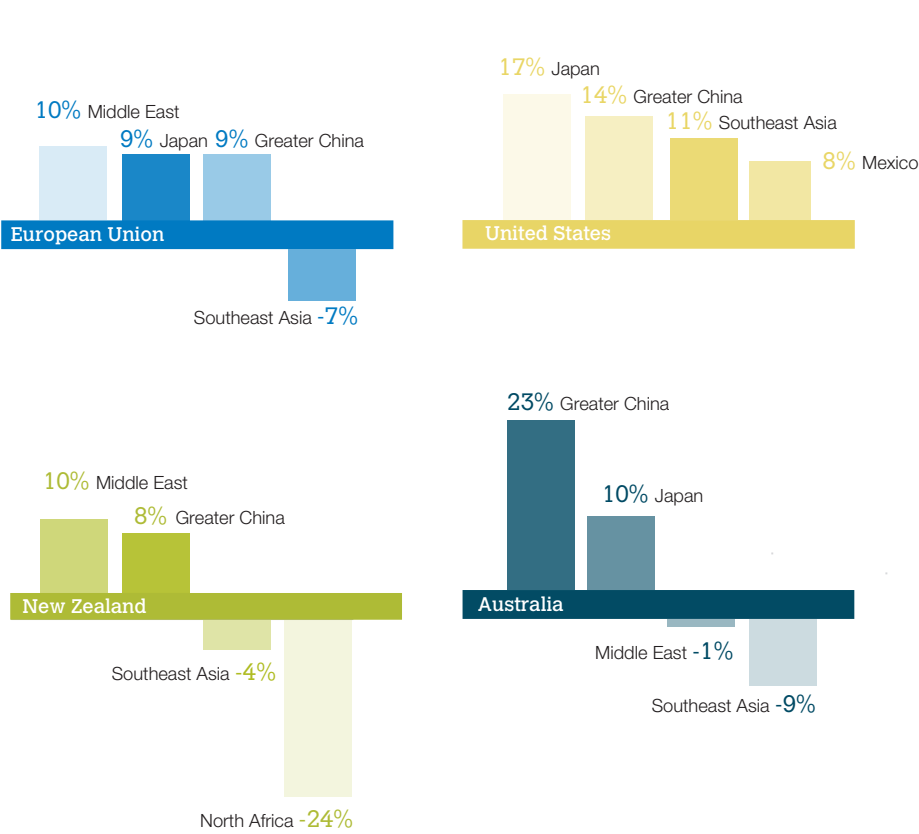


*Note: Size of bubble represents share of global dairy exports.
Data covers production seasons for Aust and NZ, calendar years for US and EU.*
Source: USDA, DCANZ, Eurostat, Dairy Australia

Figure 12 Farmgate price movements – four largest exporters

Change in indicative farmgate price	NZ	EU-28	US	Australia
Compared to last report (Jun 2018)	✓ -2%	✓ -11%	∧ 2%	∧ 3%
Compared to prior year (Oct 2017)	✓ -5%	✓ -4%	✓ -8%	∧ 9%

Figure 13 Market volume trends – four largest exporters



Source: GTIS, Dairy Australia
Data represents 12 months to July 2018

European Union

Europe's cold weather and late spring were quickly forgotten by most, as the continent moved into a hotter and drier than average summer. Farmers in member states such as Ireland, who had already struggled with fodder shortages through winter, found conditions particularly challenging, with many using next winter's feed to fill the fodder gap. This has created an inventory shortage which the Irish industry is working to fill over the autumn months; recent government estimates suggest around 11% of the country's expected winter fodder requirements have yet to be found. Culling has been another strategy employed by many, with numbers well up on last year across western Europe – estimates suggest as much as a 50% increase in Germany. Major cooperative Arla plans to distribute its entire profit to its farmer shareholders to assist them with cash flow.

Notwithstanding the challenges, European commodity prices have begun to weaken in Q4 as product supply grows. Whilst official data is time lagged, anecdotal reports suggest that with the hot weather past, fat and protein levels are closing in on prior-year levels and volumes are also recovering. The ongoing impact of heavy culling will emerge in the coming months, but the current feeling is that the overall impact of the summer drought on milk flows has been shorter and less severe than expected; hence the downward pressure on pricing.

Sales of skim milk powder (SMP) from the European Union's intervention stockpile have continued to ebb and flow. The northern hemisphere summer saw nearly 80,000 tonnes of product leave storage; with no new volumes accepted, the reported total stands at just over 282,000 tonnes – about 100,000 tonnes down on the peak. Volumes have slowed down in recent tenders, and it is widely believed that only a small proportion of the aged product purchased from intervention has actually been consumed. The picture is further complicated by reports that some contracted sales have been washed out, with the product reverting back to the intervention program. In addition to age and a full supply pipeline, its attractiveness is now being diminished further by easing prices for fresh SMP. Thus, it may be some time yet before the stockpile is fully worked through.

Looking ahead, the European Commission expects a gradual easing in the number of dairy cows across the 28 nation bloc in 2018, continuing a 1% decline in 2017. Milk production is expected to grow, but at a slower rate: around 0.6% for the full year, which implies a total of almost 152 billion litres.

United States

Milk production has continued to grow in the United States, with August's 1.4% increase representing the eighteenth consecutive month of year-on-year growth.

Profitability challenges have continued to drive farm exits in the northeastern states, however most other regions have continued to expand. The national herd dipped briefly in July but cow numbers were 5,000 higher in August, suggesting that the hotter than average northern hemisphere summer has not impacted the production intentions of the majority of farmers. Whilst the total herd is about the same size as last year, production per cow was 1.4% higher in August – largely driven by the hottest parts of the country in the west and southwestern states. For the year to date, overall milk production is up 1.1%.

Many of the issues facing the US industry at present exist beyond the farmgate; chief amongst them are the ongoing trade disputes with major markets – particularly China. European suppliers are already muscling in on US whey exports to China, and the USDA has lowered its overall dairy export forecasts for 2018 and 2019. US industry players are particularly concerned about the lingering impact of the current disruption, as customers develop relationships with suppliers in competing dairy exporting regions.

With no end in sight to the current trade disputes, the US government has announced a three-part package to assist dairy farmers in the interim. The first is a payment of US\$0.12 for each 100 pounds of 2018 milk production (around A0.37c/L), up to a total of US\$125,000 (A\$176,000) per farm. The USDA will also oversee purchases of up

to US\$84.9 million (A\$120 million) worth of dairy products for donation. In addition, US\$200 million (A\$282 million) will be spent on developing export opportunities for US dairy products.

Meanwhile, the US domestic market for cheese is outperforming expectations, both through retail and foodservice channels. Butter and SMP/Nonfat Dry Milk prospects are more neutral, whilst fluid milk consumption continues its seemingly perennial drop – down 2.1% for the year to date through all channels according to the USDA. Logistics remains a thorn in the side for many US dairy (and other) companies, with the availability and pricing of trucking widely cited as a current pinch point. One of the country's largest dairy companies, Dean Foods, recently told investors that trucking rates are up 26% compared to last year, weighing heavily on profitability. Part of this additional cost has been attributed to recently mandated Electronic Logging Devices (ELDs) that monitor driver hours. These have also introduced logistical challenges by stretching some transport routes by an additional day.

Notwithstanding these challenges, the USDA is expecting milk production to hold the current trajectory of 1.1% growth through the balance of 2018. This represents a lower forecast than the agency had previously published, and some observers believe growing cow numbers could lead to a higher total. In either case, the 99 billion litres foreshadowed would set another record for US milk production.

New Zealand

New Zealand is currently experiencing highly favourable winter weather, with above average temperatures through July and August boosting pasture growth. In contrast to last year, rainfall has been close to average for the season so far, minimising pasture damage as the spring flush approaches. Milk volumes are up 5.5% for the season to date (June-August) – partly reflecting a sub-par August in 2017.

The current conditions are setting farmers up for a strong season, and although early indications of an El Nino weather event have not gone unnoticed, these have yet to impact forecasts. The disruption caused by the ongoing Mycoplasma Bovis outbreak has also receded into the background. Whilst the disease has recently been detected in Northland (effectively traversing the country), over 30 farms nationally (of around 70 identified as infected) have now been depopulated and cleared of the disease. These farms can now resume operations. The Ministry for Primary Industries has culled almost 40,000 dairy cows since efforts to eradicate the disease began.

Milk pricing remains supportive for New Zealand farmers. The August revision of Fonterra's 2017/18 forecast farmgate price down 5c to NZ\$6.70/kg MS (around A\$6.52/kg MS in

Australian terms) came too late to impact production decisions, and the two (September and October) reductions of the 2018/19 forecast are unlikely to impact milk volumes until at least after the spring flush. In any case, Fonterra's current forecast range of NZ\$6.25 to \$6.50/kg MS (A\$6.08-\$6.32) remains profitable for the majority of NZ dairy farmers, and coupled with a continuation of favourable weather conditions, will generate a production response.

Apart from weather, risk attitudes could act to moderate production growth. Most processor forecasts are in the same ballpark as Fonterra's, but a number of non-processor analysts are flagging further downward revisions, including NZX-linked AgriHQ, who are predicting a \$6.43/kg MS (A\$6.25/kg MS) outcome. This price would still be profitable, but the resulting uncertainty, coupled with any deterioration to the climate outlook, may influence farmers to reduce their risk exposure – through carrying less stock or reducing supplementary feeding rates. With structural growth at a standstill, these on-farm decisions will be a key driver of growth. AgriHQ are forecasting relatively modest growth of 1.4% in NZ milk production for the season through to May, for a total of around 21.7 billion litres.

Australia

Despite a challenging season for many farmers, and confidence levels trending down, Australian milk production finished 2017/18 at the high end of the forecast range, growing 3% to 9.29 billion litres. Drought-affected Queensland and New South Wales ran against the trend, with numerous exits and increasingly expensive feed inputs weighing on cow numbers and production yields. Western Australia stabilised on par with last year's 385 million litres, whilst South Australia, southwest Victoria, and Gippsland posted modest growth rates. The largest year-on-year increases came in northern Victoria and Tasmania, which both saw milk production grow 9% for 2017/18. Both results represented a rebound from two successive declines, although northern Victoria remains well below historical peaks at 1.91 billion litres while Tasmania set a new state record at 913 million litres.

For a full breakdown of seasonal conditions, profitability by region, and Dairy Australia's outlook, see the following section.



2017/18 Dairy Farm Monitor results, and 2018/19 Dairy Australia forecast

About the Dairy Farm Monitor Project

Dairy Australia has been involved in the Dairy Farm Monitor Project since 2007. This project collects high-quality comprehensive physical and financial data from 250 participating dairy farms across Australia. The data is collected on-farm by trained and experienced data collectors and is validated to ensure quality and accuracy.

Participants are selected for the project in order to represent a distribution of farm sizes, herd sizes and geographical locations within each region. The results presented do not represent population averages as the participant farms are not selected using random population sampling. While the data presents results and trends, these need to be interpreted carefully as participant farms may not be representative of the whole dairy industry and not all farms participate every year.

2018/19 milk production outlook

The following pages detail the story to date for Dairy Farm Monitor farms in each region. Each area has been subjected to a unique set of circumstances in preceding years, but the outlook for 2018/19 has deteriorated substantially for most in recent months.

Queensland and NSW are expected to see continued impacts from the ongoing feed shortage and drought conditions on farm. Although these regions have weak prior-year comparables, the exhaustion of feed and financial reserves and pre-existing structural challenges will likely drive further exits.

Northern Victoria faces a number of headwinds. High prices for hay in northern regions have seen stocks shipped north and local prices increase sharply. High water prices and ever-increasing competition from alternative water users are constraining the ability to respond by producing more on-farm, and a dry winter-spring period has impacted crop growth on dryland blocks. Generally lower equity levels, 'crisis fatigue', and the early signs of a potential El Nino event will also have an influence. Whilst the northeast is considered to be in better shape, and improvements to water availability may provide some late season relief, many farmers will be choosing (or forced) to take action now. The year-on-year change will be further amplified by a relatively strong production result in 2017/18.

Further south, Gippsland and southwest Victoria are more varied. Some areas such as east Gippsland, and the Yarram area continue to face prolonged conditions of extreme dryness. The Macalister Irrigation District is

moderately dry (and partially offset by a 100% irrigation allocation), whilst west Gippsland and the western part of south Gippsland are relatively well placed – but still drier than average and in need of follow up rain. High feed costs are affecting all these regions, and abattoirs have experienced high throughput in August and September. Southwest Victoria has had the opposite challenge in being too wet for much of winter after a late autumn break. Local contacts suggest the second half of September has seen improving pasture conditions, which should help boost home grown fodder consumption. Hay and grain markets will be tight for this region as with everywhere else, although better local crops may provide a limited (freight-related) pricing advantage. Across the border, South Australia is considered likely to stabilise – based on year to date data and competition for milk amongst recent entrants, tempered with the impact of feed pricing challenges. Other background challenges such as skilled labour availability could add to the incentive to trim herd numbers.

Western Australia is expected to remain stable, being relatively insulated from the feed shortage facing the east coast. Despite quality issues and a supply squeeze through winter, recent reports suggest that grain will be plentiful, and frost damage will generate ample cereal hay.

In Tasmania, input costs have increased and winter conditions have proven wet in some parts. The current outlook suggests drier conditions may take hold through spring. The state is coming off a period of structural growth however, and unless local conditions deteriorate substantially the current milk price outlook is likely to allow a stable production outcome.

In modelling these various regional outlooks and in particular the impacts of the ongoing feed shortage, Dairy Australia's forecast for 2018/19 milk production has been revised to reflect the expected downside associated with these severe challenges. The revised forecast is for a decrease of between 5% and 7% relative to 2017/18, implying a total of between 8.6 and 8.8 billion litres.

Gippsland

- › After a fair spring period very little rain fell in Gippsland until December 2017. A dry summer and autumn period led to reduced amounts of pasture available for conservation
- › The climatic conditions varied considerably across the regions and dryland farms found the conditions challenging to manage. While coastal Gippsland from Wonthaggi to Yarram fared well, areas east of Yarram and west of Inverloch saw significant reductions in rainfall over the year
- › East Gippsland experienced very poor pasture growing conditions for the entire season, having only one large rainfall event in December with little or no respite for the remainder of the season
- › The Macalister Irrigation District had an initial seasonal determination of 40% high reliability water shares which was upgraded to 100% later on in the season, with up to 20% low reliability water shares
- › Milk price improved 19% to \$5.74/kg MS, however, as the dry conditions persisted, farmers utilised fodder reserves and purchased additional fodder
- › Average EBIT increased slightly from the previous year to \$144,000/farm and net farm income increased to \$49,500/farm
- › Return on total assets in Gippsland was the highest of all the Victorian regions in 2017/18 at 3.0% and return on equity was up 1.0% on average.

	2015/16	2016/17	2017/18
Cash			
Milk Income (net) \$/kgMS	5.28	4.84	5.74
Total Farm Cash Income \$/kgMS	5.81	5.46	6.15
Total Farm Working Expenses \$/kgMS	4.33	3.74	4.24
Farm Operating Cash Surplus \$/kgMS	1.49	1.72	1.91
Profit			
Total Farm Gross Income \$/kgMS	5.88	5.50	6.26
Total Variable Costs \$/kgMS	3.34	2.68	3.21
Total Overhead Costs \$/kgMS	2.29	2.17	2.21
Cost of Production (includes inventory change) \$/kgMS	5.63	4.85	5.42
Earnings Before Interest and Lease (EBIT) \$/kgMS	0.26	0.65	0.84
Finance Costs (Interest & Lease) \$/kgMS	0.64	0.68	0.69
Net Farm Income \$/kgMS	-0.38	-0.02	0.15
Wealth			
Return on Total Assets %	1.0	2.1	3.0
Return on Equity %	-2.8	0.1	1.0

Northern Victoria

- › The 2017/18 season presented some challenges for farmers in northern Victoria, yet it was a better season than the previous year with good pasture growth, higher milk production and an improved milk price
- › Rainfall tracked close to (92%) the long-term average over the season, boosted by a large rainfall event in December
- › Conditions turned hot heading into summer and autumn, forcing farms to use more irrigation allocations, purchase additional feed and utilise fodder reserves
- › Farmers who acted early in the season were rewarded as the price of water and feed increased towards the end of the year
- › By the end of the season, irrigators received 100% allocation of their high reliability water shares and the median price of temporary (allocation) water was \$110/ML
- › A 14% increase in milk price to \$5.87/kg MS supported a positive return on total assets of 2.6% and EBIT increased to \$188,300
- › Return on equity returned to positive values, posting 1.3% in 2017/18 and net farm income was \$77,000.

	2015/16	2016/17	2017/18
Cash			
Milk Income (net) \$/kgMS	5.46	5.13	5.88
Total Farm Cash Income \$/kgMS	6.16	5.85	6.25
Total Farm Working Expenses \$/kgMS	5.09	4.73	4.74
Farm Operating Cash Surplus \$/kgMS	1.06	1.11	1.51
Profit			
Total Farm Gross Income \$/kgMS	6.04	5.92	6.55
Total Variable Costs \$/kgMS	4.16	3.35	3.75
Total Overhead Costs \$/kgMS	1.94	2.20	2.13
Cost of Production (includes inventory change) \$/kgMS	6.29	5.74	5.68
Earnings Before Interest and Lease (EBIT) \$/kgMS	-0.07	0.37	0.67
Finance Costs (Interest & Lease) \$/kgMS	0.46	0.59	0.55
Net Farm Income \$/kgMS	-0.53	-0.22	0.12
Wealth			
Return on Total Assets %	-0.5	1.0	2.6
Return on Equity %	-5.0	-2.1	1.3

Southwest Victoria

- › Southwest Victoria experienced a year of extreme seasonal conditions in 2017/18
- › The season started out with an exceptionally wet spring. This limited milk production and quality fodder production
- › Conditions then turned dry from November onwards resulting in significant reduction in pasture production
- › When the autumn rain arrived in May, some farmers found their pastures had died due to the lack of moisture. Farmers re-sowed their pastures; however, they had not reached full production before colder temperatures arrived heading into winter
- › Farmers supplemented their lower pasture production with additional fodder purchases and fodder reserves were utilised during the year as farmers fed back the quantities they conserved in spring, as well as long-term reserves
- › While milk price improved 8% to \$5.80/kg MS, it didn't compensate for the steep rise in feed costs
- › Average EBIT halved compared to the previous year, falling from \$240,000/farm to \$147,000/farm
- › Return on total assets fell from 3.9% to 1.9%. Average net farm income also decreased to \$24,300/farm and return on equity to negative 1.1%.

	2015/16	2016/17	2017/18
Cash			
Milk Income (net) \$/kgMS	5.47	5.25	5.80
Total Farm Cash Income \$/kgMS	6.13	5.87	6.42
Total Farm Working Expenses \$/kgMS	4.67	3.98	4.56
Farm Operating Cash Surplus \$/kgMS	1.46	1.89	1.87
Profit			
Total Farm Gross Income \$/kgMS	6.02	5.98	6.42
Total Variable Costs \$/kgMS	3.66	2.62	3.43
Total Overhead Costs \$/kgMS	2.26	2.30	2.51
Cost of Production (includes inventory change) \$/kgMS	6.08	4.84	6.00
Earnings Before Interest and Lease (EBIT) \$/kgMS	0.11	1.06	0.48
Finance Costs (Interest & Lease) \$/kgMS	0.68	0.63	0.60
Net Farm Income \$/kgMS	-0.57	0.43	-0.11
Wealth			
Return on Total Assets %	0.3	3.9	1.9
Return on Equity %	-3.4	3.5	-1.1

South Australia

- › In South Australia the 2017/18 season did bring some challenges to farms but was a good season overall. Despite an average spring and a drier than average summer, the latter half of the season was more favourable, with good winter rains, lower concentrate costs and an increase in milk price
- › Rain events have been sporadic across South Australia, with some parts of the central region recording drier than average winter conditions
- › Despite improved winter conditions for the south east and some parts of the central region, the flow on effects from other drought affected areas in the country have been felt through an increase in price for purchased fodder, grain and concentrates
- › Average EBIT increased compared to the previous year, rising from \$167,200/farm to \$293,400/farm
- › Return on total assets increased from 2.6% to 4.4%. Average net farm income also increased to \$172,700/farm and return on equity 4.1%.

	2015/16	2016/17	2017/18p
Cash			
Milk Income (net) \$/kgMS	6.16	5.78	6.20
Total Farm Cash Income \$/kgMS	6.80	6.59	6.85
Total Farm Working Expenses \$/kgMS	5.31	5.09	4.89
Farm Operating Cash Surplus \$/kgMS	1.49	1.50	1.95
Profit			
Total Farm Gross Income \$/kgMS	6.96	6.75	7.06
Total Variable Costs \$/kgMS	3.56	3.28	3.42
Total Overhead Costs \$/kgMS	2.66	2.77	2.47
Cost of Production (includes inventory change) \$/kgMS	6.10	6.09	5.75
Earnings Before Interest and Lease (EBIT) \$/kgMS	0.74	0.70	1.17
Finance Costs (Interest & Lease) \$/kgMS	0.57	0.47	0.54
Net Farm Income \$/kgMS	0.16	0.22	0.63
Wealth			
Return on Total Assets %	2.9	2.6	4.4
Return on Equity %	0.0	1.3	4.1

p: provisional

Tasmania

- › There was a cold start to the 2017/18 season with Tasmania experiencing below average temperatures over winter and several snowfall events. Average rainfall was reported during winter but drier conditions started earlier than usual in the northeast which required an early irrigation start-up. The remainder of Tasmania had a reasonable spring
- › Summer was drier than average which stretched irrigation resources but an early autumn break reduced the pressure on feed resources. Excellent pasture growth through the autumn was a large contributor to increased milk production for the season
- › The milk price in 2017/18 was higher than previous years and this supported improved profitability for Tasmanian dairy businesses
- › A continued focus on pasture consumption has helped to keep variable costs stable but there has been an increase in overhead costs from the previous year
- › Average EBIT increased compared to the previous year, rising from \$268,400/farm to \$379,100/farm
- › Return on total assets increased from 3.6% to 5.1%. Average net farm income also increased to \$244,800/farm and return on equity 4.9%.

	2015/16	2016/17	2017/18 ^p
Cash			
Milk Income (net) \$/kgMS	5.55	5.03	5.92
Total Farm Cash Income \$/kgMS	6.10	5.73	6.35
Total Farm Working Expenses \$/kgMS	4.70	4.19	4.36
Farm Operating Cash Surplus \$/kgMS	1.40	1.54	1.99
Profit			
Total Farm Gross Income \$/kgMS	6.04	5.84	6.59
Total Variable Costs \$/kgMS	3.22	2.87	2.99
Total Overhead Costs \$/kgMS	1.93	2.03	2.28
Cost of Production (includes inventory change) \$/kgMS	5.26	4.89	5.16
Earnings Before Interest and Lease (EBIT) \$/kgMS	0.90	0.94	1.32
Finance Costs (Interest & Lease) \$/kgMS	0.56	0.63	0.67
Net Farm Income \$/kgMS	0.34	0.31	0.65
Wealth			
Return on Total Assets %	3.8	3.6	5.1
Return on Equity %	0.6	2.5	4.9

p: provisional

New South Wales

- › Most regions in New South Wales started the 2017/18 year with a very dry spring, some regions reported the driest September on record. Only the Murray and north coast region had near average rainfall for April to September. This significantly affected pasture growth and limited fodder conservation, also restricted cereal crop yields
- › The current drought began to really impact the state from March 2018, with well below average rain across all areas of New South Wales. By June 2018, 99% of the state was drought affected. Only farms with irrigation have been able to grow pasture or crops
- › Many dairy farmers have, since late summer, been buying in hay in much larger quantities than usual. The price has been steadily rising during the year, as demand for hay exceeded supply. This resulted in declining hay availability and quality throughout autumn and winter. Hay prices are above \$500/tonne landed on farm, sourced from South Australia and southwest Victoria
- › Grain prices have risen significantly as regular supplies dwindle, and are currently costing \$500/tonne on farm in many areas of New South Wales. Feed companies have short supplies and are only servicing existing customers
- › Average EBIT halved compared to the previous year, falling from \$157,000/farm to \$83,200/farm
- › Return on total assets fell from 2.1% to 1.2%. Average net farm income also decreased to \$6,400/farm and return on equity to negative 0.2%.

	2015/16	2016/17	2017/18 ^p
Cash			
Milk Income (net) \$/kgMS	7.34	6.89	7.27
Total Farm Cash Income \$/kgMS	8.06	7.76	7.91
Total Farm Working Expenses \$/kgMS	5.72	5.75	6.25
Farm Operating Cash Surplus \$/kgMS	2.34	2.01	1.66
Profit			
Total Farm Gross Income \$/kgMS	8.24	7.94	8.01
Total Variable Costs \$/kgMS	3.98	3.95	4.54
Total Overhead Costs \$/kgMS	3.25	3.18	3.13
Cost of Production (includes inventory change) \$/kgMS	7.14	7.01	7.70
Earnings Before Interest and Lease (EBIT) \$/kgMS	1.01	0.82	0.33
Finance Costs (Interest & Lease) \$/kgMS	0.54	0.51	0.51
Net Farm Income \$/kgMS	0.47	0.30	-0.18
Wealth			
Return on Total Assets %	2.7	2.1	1.2
Return on Equity %	1.7	1.0	-0.2

p: provisional

Queensland

- › The 2017/18 season was a challenging one for Queensland farmers with the drought severely affecting the Darling Downs and other inland dairy districts
- › Many dairy farmers have been buying in additional fodder and stored feed supplies were very low by the end of 2017/18
- › High concentrate prices have impacted all Queensland regions, especially in the second half of the season
- › Average EBIT decreased compared to the previous year, falling from \$195,600/farm to \$113,600/farm
- › Return on total assets fell from 3.6% to 1.8%. Average net farm income also decreased to \$61,900/farm and return on equity to 1.7%.

	2015/16	2016/17	2017/18 ^p
Cash			
Milk Income (net) \$/kgMS	8.00	7.96	7.93
Total Farm Cash Income \$/kgMS	8.63	8.77	8.69
Total Farm Working Expenses \$/kgMS	6.27	6.18	6.63
Farm Operating Cash Surplus \$/kgMS	2.36	2.59	2.05
Profit			
Total Farm Gross Income \$/kgMS	8.77	8.97	8.81
Total Variable Costs \$/kgMS	4.51	4.32	4.80
Total Overhead Costs \$/kgMS	3.29	3.45	3.46
Cost of Production (includes inventory change) \$/kgMS	7.78	7.69	8.27
Earnings Before Interest and Lease (EBIT) \$/kgMS	0.96	1.20	0.55
Finance Costs (Interest & Lease) \$/kgMS	0.61	0.51	0.40
Net Farm Income \$/kgMS	0.35	0.69	0.14
Wealth			
Return on Total Assets %	2.8	3.6	1.8
Return on Equity %	4.2	6.7	1.7

p: provisional

Western Australia

- › Western Australia experienced favourable conditions for pasture growth and fodder making in spring 2017
- › A thunderstorm in mid-January 2018 assisted irrigators with summer production
- › Most of the west coast experienced a good autumn break before Anzac Day but then a five to six week dry period, followed by a very wet winter. A lot of farmers have described this season as a particularly challenging one. South coast farmers, particularly around Denmark, have never experienced such a difficult start to the season
- › Grain prices were a lot higher for the year and continued to rise in June 2018
- › Fodder prices increased quickly due to the dry start across the state. Feed prices and availability came under more pressure as the sheep and cattle markets improved
- › The milk price remained stable in 2017/18.
- › Average EBIT decreased from the previous year to \$369,600/farm and net farm income decreased to \$246,000/farm
- › Return on total assets decreased from 6.5% to 3.8% and return on equity was 5.7% on average in 2017/18.

	2015/16	2016/17	2017/18 ^p
Cash			
Milk Income (net) \$/kgMS	7.22	7.05	6.87
Total Farm Cash Income \$/kgMS	8.22	7.83	8.01
Total Farm Working Expenses \$/kgMS	5.46	5.33	5.73
Farm Operating Cash Surplus \$/kgMS	2.76	2.51	2.28
Profit			
Total Farm Gross Income \$/kgMS	8.30	8.12	8.09
Total Variable Costs \$/kgMS	3.96	3.76	4.18
Total Overhead Costs \$/kgMS	2.37	2.44	2.60
Cost of Production (includes inventory change) \$/kgMS	6.33	6.14	6.80
Earnings Before Interest and Lease (EBIT) \$/kgMS	1.97	1.92	1.31
Finance Costs (Interest & Lease) \$/kgMS	0.53	0.53	0.44
Net Farm Income \$/kgMS	1.44	1.40	0.87
Wealth			
Return on Total Assets %	6.4	6.5	3.8
Return on Equity %	9.1	18.4	5.7

p:provisional

Corporate sector updates

In corporate sector news, Bega Cheese emerged as the successful purchaser of the Koroit facility in southwest Victoria, acquiring the ex-Murray Goulburn plant from Saputo for \$250 million. As part of the deal, and in addition to Bega's own suppliers, Saputo will also supply 300 million litres of milk per year to the plant, which is capable of processing as much as 800 million litres per annum.

A trial date of 5 February 2020 has been set for one of the class actions filed against Murray Goulburn (MG) by disgruntled investors, suggesting that the final payout of any remaining funds from the sale of MG's assets and liabilities to Saputo may be some time off. This action, filed by investor John Webster, was joined in August by a second action filed by Slater and Gordon, which is yet to be assigned a trial date. The company also remains in mediation with the ACCC. All of these actions relate to the April 2016 decision to cut MG's 2015/16 farmgate milk price and downgrade its profit forecast. MG has retained \$235 million of the \$1.31 billion sale to Saputo, with \$195 million of this to defend the actions. Once all actions are concluded, any remaining funds will be distributed to shareholders, in addition to the 80c/share received in May when the Saputo transaction took place.

Australian Consolidated Milk's (ACM) new Girgarre plant near Shepparton in northern Victoria continues to take shape, with the company reportedly working towards a late November commissioning date, and commercial production from April 2019. ACM manages conventional, organic and A2 milk pools, and the new plant is designed with the flexibility and segregation capacity to produce cream, butter and powders from each of these.

Cohuna-based No Bull Milk Processing Pty Ltd (NBMP) has taken steps towards its proposed powder/butter plant in the northern Victorian town. Backed by prominent local businessmen and supported by local and state government, the 300 million litre per year plant is described as approaching the 'Next to Turn Key' stage, with the company now seeking external investment to complete the project.

Bellamy's Organic has acted to shore up supplies of organic ingredients, entering new agreements with Fonterra, ACM and Bega Cheese (via Tatura Milk Industries) to source and process Australian organic milk. The increased focus on Australian sourcing coincides with the July 2018 launch of the new Country of Origin Labels that require reporting of the percentage of Australian ingredients on packaging.

Also making further moves into the organic space is the Australian Dairy Farms Group (ASX: AHF), with the listed dairy farming business purchasing Flahey's Nutritionals, headed by ex-Bellamy's executive Chris Flahey, for \$1.5 million in cash and AHF shares. Flahey's markets the organic Flahey's Future brand of milk powders for children aged one to 10 years, and has 'intellectual property for the rollout of an extensive range of infant formula products'. AHF owns six farms in southwest Victoria (all of which are currently converting to organic production) and the Camperdown Dairy organic yoghurt, milk and butter manufacturer.

The company billing itself as 'Victoria's only urban dairy', Saint David's Dairy, was sold in June to the recently-listed Longtable Group. Longtable, headed by ex-Bellamy's CEO Laura McBain, also purchased the South Australian biodynamic organic farm B.-d Paris Creek earlier this year. Saint David's has been operating out of a small plant in Melbourne's Fitzroy for around five years, producing milk, butter, cream and yoghurt. The total paid to founding owners Ben and Bianca Evans was \$15.25 million, of which \$12.25 million was cash with the balance in Longtable shares.

On 10 October, Kirin-owned Lion announced plans to divest its Lion Dairy & Drinks (LDD) unit, following a strategic review. LDD is intended to be sold as a whole and Kirin expects the sale process to take between six to 12 months. In the meantime, the company has promised 'business as usual' for milk suppliers and other stakeholders.

In September Coles, Woolworths and Lion Dairy & Drinks each introduced a 10 cent 'drought levy' on milk sales to aid farmers in drought affected regions. Coles added a 30 cent surcharge to its three-litre private label milk bottle sales, while Woolworths added a 10 cent levy to its one-litre private label milk bottles. Lion Dairy & Drinks applied the levy to its Dairy Farmers and Pura white milk brands. The mechanisms for distribution of funds to dairy farmers remain unclear, and the three companies have chosen different ways to do this. At the time of writing this report, there is no data available on the effects of this levy. Drinking milk sales represent a small portion of total milk production in Australia. In 2017/18 about 27% of all milk produced was sold as drinking milk and roughly 60% of drinking milk was sold in supermarkets.

Policy updates

Added sugar labelling

Limiting the intake of added or 'free' sugar has been advocated by many government and public health organisations in a push to reduce rates of overweight and obesity and tooth decay. All types of milk, cheese and yoghurt, regardless of whether these are plain or sweetened are classified as one of the Five Food Group foods in the Australian Dietary Guidelines.

An emerging issue in the food regulation area is the debate around added sugar and the potential for new labelling laws to alert consumers to the presence of added sugars in foods and beverages. In July, the Australian Government released a consultation paper outlining seven different added sugar labelling options for food products and beverages which will impact dairy products, including flavoured milk and yoghurt.

Current product labelling lists total sugars however, they do not specify the difference between what is added to the product and the intrinsic or 'natural' sugars (like lactose). Added sugar labelling on foods and beverages may form a small element in helping to improve dietary habits, however evidence suggests labelling alone will not be enough to help to improve nutritional habits.

As a result, Dairy Australia and the broader industry have been recommending two main policy options: quantifying added sugars in the Nutrition Information Panel, together with public education around a healthy diet.

Reformulation targets for dairy foods

Reformulation (or reducing certain nutrients such as sodium, sugar and fat from foods) is promoted by many public health experts as a way to improve the nutritional profile of foods and beverages. The Government-led Healthy Food Partnership has released draft reformulation targets for a range of foods and food categories, including sodium reduction targets for processed and cheddar cheese and sugar reduction targets for flavoured milk and flavoured yoghurt.

Dairy Australia support healthy eating strategies where there is a clear public health benefit and is working hard to ensure that all milk, cheese and yoghurt are accurately recognised for the health benefits they provide, as opposed to concerns around single nutrients. It is also important to recognise that ingredients such as sugar and salt are not added to foods just for taste, but due to their functional roles, including those related to food safety.

Trade policy update: Trade agreements

Dairy Australia works closely with the Australian Government (DFAT) and with industry to support achievement of the best possible outcome for Australian dairy in all trade negotiations.

Australia currently has ten trade agreements in force: These are with New Zealand, Singapore, Thailand, USA, Chile, ASEAN, Malaysia, South Korea, Japan, and China. Australia has recently completed negotiations for bilateral agreements with Peru and with Indonesia. Australia is a member of the 11 nation CPTPP which has also been concluded.

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (TPP-11) is a free trade agreement (FTA) between Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore and Vietnam. The deal was signed by the 11 countries on 8 March 2018 in Santiago, Chile. On 17 October, the Australian Parliament ratified the agreement, making Australia the fourth nation to ratify the agreement.

Australia and Peru finalised negotiations for a bilateral free trade agreement on the 12 February 2018. Both countries are now following their own domestic treaty making processes before PAFTA can enter into force.

Australia and Indonesia announced the conclusion of negotiations for the Indonesia Australia Comprehensive Economic Partnership Agreement (IA-CEPA) on 31 August 2018. For dairy, IA-CEPA will see the elimination of all tariffs on Chapter 4 dairy lines, including some that were not eliminated under the AANZFTA agreement. These include:

- › elimination on entry into force for SMP and WMP
- › elimination on entry into force for grated or powdered cheese
- › eventual elimination of all remaining tariffs on milk (liquid and non liquid).

Under the agreement there will also be the establishment of a cooperative mechanism to enable regular discussion of Non- tariff measures (NTMs).

Australia has recently entered into FTA negotiations with the European Union. A specific area of concern for the Australian dairy industry is the handling of Geographical Indications (GIs) and the impact that could have on cheese varieties and dairy products manufactured in Australia. Dairy Australia is working with the industry and with the Australian Government towards achieving the best possible outcome for dairy.



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