

DAIRY SITUATION AND OUTLOOK

JUNE 2019

SEVEN KEY DRIVERS

OF THE AUSTRALIAN DAIRY INDUSTRY

Global supply

Global demand

has also increased.

🖶 Situation 🏾 🕕 Outlook

Global demand for dairy increased 3.2 per

cent in the 12 months to February. This has

helped keep dairy commodity prices supported for major dairy categories. Much of the growth

occurred in Greater China and South East Asia, however, export competition in the latter region

With New Zealand's milk flows dropping away quickly and relatively muted northern hemisphere production growth, global milk production is well matched to current market demand.

Australian market

Situation Outlook

Supermarket sales of major dairy

products continued to generate value growth for the dairy industry, with dairy spreads and cheese growing 7.3 per cent and 4.9 per cent respectively. The end of \$1/litre milk has seen value increase in the domestic milk market, despite a small decrease in overall sales.

Inputs



Limited rainfall continues to place pressure on feed and water supplies around the country. Hay prices firmed in early autumn, nearing the peaks of last year. Water is trading at close to record prices. The national herd has contracted as farmers reduce their herd sizes due to drought.

Australian industry Situation Outlook

Australian milk production continues to fall relative to last season, as farmers cull heavily in response to dry conditions and high feed prices. The recent autumn break offers some hope for consolidation in 2019–20.



Global economy Situation ① Outlook

Trade tension between the US and China, combined with weaker economic growth in major markets, has seen the global economy slow. Economic output in 2019 is forecast to reach 3.2 per cent, a downwards revision to previous projections. While growth over the first months of 2019 was subdued, it is forecast to improve later this year following more accommodating fiscal policies from central banks.



Exchange rates Situation Outlook

The Australian dollar continued to depreciate against the US dollar, in the four months to April. This helped improve cost-competitiveness of Australian dairy exports. However, as the US\$ also appreciated against other major dairy exporters' currencies, the effect was somewhat limited. If the Chinese economy continues to slow, the A\$ could continue to depreciate against the US\$.



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Global economy and exchange rates

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EXECUTIVE SUMMARY

Australian dairy farmers are reaching the end of what has been an exceptionally challenging season. Grain and hay prices have been universally high, and seasonal conditions mixed – but dry for most.

Some regions had the buffer of a favourable spring, but others have endured a long stretch of dry weather, exacerbating farmers' exposure to purchased feed markets. For irrigators in northern Victoria and southern New South Wales, limited water availability and the highest prices for temporary allocations in a decade have further limited options, draining finances and confidence.

Notwithstanding the fact that for most farmers the 2018–19 season has been one to forget, some things are going right. Global commodity markets have recovered from the softening seen in the first half of the season, and remain well balanced. The impact of the northern hemisphere spring has been pleasantly benign, with European and US milk production growing slowly. At the same time, New Zealand's milk flows have dropped faster than usual through the southern hemisphere autumn. Despite some headwinds and the disruption brought on by trade disputes, political instability and African Swine Flu (ASF), dairy demand has proven resilient and continues to support pricing.

Closer to home, Australian milk production is well below 2017–18 levels, and has continued to decline in year-onyear terms over the course of the season. Dry conditions continued to dominate most regions through autumn, until relief arrived in the form of several widespread rainfall events from late April onwards. Whilst little change to the current 2018–19 trajectory is expected, this rain will help establish pastures, give the winter grain crop a kick-start, and provide a much needed boost to confidence for the season ahead.

Dairy Australia's 2018–19 forecast for a decrease of between seven and nine per cent relative to 2017–18, is unchanged, implying a total of between 8.45 and 8.65 billion litres. Despite positive developments in recent weeks, a significantly smaller national herd, reduced farmer confidence, and ongoing cost pressures will continue to weigh on production in the short term. Hence, Dairy Australia's initial forecast for 2019–20 anticipates a further drop of between three and five per cent, to a total of 8.1 to 8.3 billion litres. The National Dairy Farmer Survey (NDFS), conducted in February, quantified the impact that successive difficult seasons has had on farmer confidence. The survey of 800 farmers showed that 34 per cent of farmers feel positive about the future of the dairy industry. This is the sixth consecutive year of declining sentiment nationally and there are now more negative than positive farmers in all dairying regions, except Tasmania. Although historical analysis indicates a limited linkage between sentiment and farm exits, lower sentiment is correlated with slower growth through less farmers operating in an 'expansion phase', and is strongly associated with changes in milk processor. The 2019 survey suggested a record 25 per cent of farmers had changed processor in the past 12 months, although one fifth of this was the result of corporate changes such as the transfer of the former Murray Goulburn Koroit site to Bega Cheese.

The National Dairy Farmer Survey ... quantified the impact that successive difficult seasons had on farmer confidence

Since the main NDFS survey was conducted in February, the outlook for farmgate prices, the domestic market, and weather conditions in some regions have improved. Consequently, a supplementary survey conducted in April showed that there has been a slight rise in farmer confidence. Comparing responses to the supplementary survey with the same farmers who took the main survey, confidence in the industry's future increased from 38 per cent to 46 per cent. The biggest driver of this change was amongst respondents with a neutral outlook in February, becoming more positive in April. The divergence between those with a positive and those with a negative outlook has grown, illustrating the wide variety of circumstances across the industry.

One positive development linked to the improvement in farmer confidence over recent months is the removal of the \$1/litre price point for private label fresh white milk. Following the example set by Woolworths, competitors Coles and Aldi added ten cents per litre to their two and three litre private label lines, promising distribution of the additional funds to supplying dairy farmers. This change appears to have had a negligible impact on private label milk sales, with volumes down only one per cent. Overall sales volumes of liquid milk are stable, as are those of yoghurt and dairy spreads. While the change in private label milk pricing has captured attention, unit value growth in the dairy spreads and yoghurt categories has delivered additional money to the dairy supply chain. This has been driven by a combination of higher price points and 'trading up' by consumers. Cheese sales continue to grow in both volume and value terms, while a shift in consumer purchasing behaviour towards deli cheese has boosted average values.

Together with stronger global markets and a weaker Australian dollar, these positive domestic market trends have supported a higher farmgate pricing in 2018–19, and look set to deliver further increases in 2019–20. With surging costs having outweighed the farmgate price increases this season however, Australia's milk



production will likely remain under pressure. A constrained production outlook has implications for the processing sector, with capacity rationalisation already underway in the form of older factories closing, and others operating at reduced throughput.

A timely autumn break has provided a kick-start for southwest Victoria, South Australia and parts of Gippsland, somewhat buffering the impact of high purchased feed costs. Cashflow remains an issue for many farmers, and milk production has slipped in year-to-date terms as culling continues in response. Other parts of Gippsland have struggled, as have northern Victoria and southern NSW, where water prices and availability dominate sentiment. Queensland and NSW have benefited from good rainfall across most areas from March, although high feed prices continue to strain cashflow. Tasmania has experienced slowing milk production due to the pressures of a dry season and increasing grain prices, though some areas recently saw this flip to wet conditions and waterlogging. Western Australia has followed a relatively consistent milk production track following a challenging start to the season, and pressure on feed prices from east coast demand.

The upcoming 2019–20 season is likely to be characterised by intense competition for a substantially smaller national pool of milk, with implications for the whole supply chain. For farmers, higher pricing will provide an opportunity to recover lost ground, on the condition that a sufficient timely rainfall drives lower grain, hay and irrigation water prices. Amongst processors, the lag associated with a production recovery, under even the most favourable conditions, will heighten competition in the short term. For some, this will force a choice between paying above market returns or losing market share, potentially into the long term. Across all in the industry, the translation of 'green shoots' to growth, confidence and cashflow is the great hope for 2019–20.

The June 2019 *Dairy Situation and Outlook* report complements the longer-term industry trend analysis published in the Australian Dairy Situation Analysis, released as part of the consultation process for the Australian Dairy Plan. The Situation Analysis can be downloaded at **dairyplan.com.au**.

NATIONAL DAIRY FARMER SURVEY

The National Dairy Farmer Survey (NDFS) is conducted each year as a means of quantifying dairy farmer sentiment and views regarding industry challenges and their own intentions. It provides a robust set of data to support or challenge anecdotal and other information sources.

Key findings



This year, the main survey (in February/March) was followed by a shorter supplementary survey in April, with the aim of providing a more up-to-date snapshot and reflection of changes in the intervening period. Unless specified, results presented here are from the main survey.

The 12 months to April 2019 proved to be some of the hottest and driest months on record. Challenging seasonal conditions have been felt across the country and have put dairy farmers under significant pressure. Despite a relatively high milk price, in historical terms, many farm businesses are facing high costs and low profitability, which have impacted farmer sentiment.

The latest National Dairy Farmer Survey (NDFS), conducted in February 2019 amongst 800 farmers nationwide, highlights how these challenges have affected farmer sentiment. The survey showed that only 34 per cent of farmers feel positive about the future of the dairy industry. This is the sixth consecutive year of declining sentiment nationally and there are now more negative than positive farmers in all dairying regions, except Tasmania.

Since February when the initial 2019 NDFS interviews were conducted, there has been a minor improvement in farmgate price, supermarkets removed \$1/litre milk and weather conditions have improved in some regions. Consequently, the April supplementary survey showed that while still low overall, there has been a slight rise in the proportion of respondents now confident about both the future of the industry and their own business. Comparing responses to the supplementary survey with the same farmers who took the main survey, confidence in the industry's future increased from 38 per cent to 46 per cent.

While farmers tend to be more positive about their own businesses than the general industry (45 per cent of farmers are positive about their business), current conditions have been impacting profitability expectations. Not surprisingly, more than a third of farmers report being in a 'holding pattern', as they wait to see what lies ahead in the next season.

The survey trends provide insight into what drives farmer sentiment and how farmers respond to changing conditions. It offers explanations, to the wider industry, of how current conditions will impact herd sizes and production intentions. This can help explain domestic milk supply changes for coming seasons.

Sentiment trends highlight six key insights about farmers' views of the state of the industry.



Milk price is not the only driver of farmer sentiment

The NDFS commenced in 2004 and trend data points to a number of drivers of farmer sentiment. Statistically, farmgate milk prices account for roughly 80 per cent of the variability in how farmers feel about the future of the industry. Traditionally, farmer sentiment often follows a similar pattern to the milk price at the time of the survey, however, this is not always the case.

During the three times when positivity in the industry was the lowest, it is particularly clear that a combination of factors was at play. In 2004, during 'Millennium drought', conditions were extremely challenging for many dairy farmers. At the same time, the farmgate milk price was low. Concern about the low milk price was seen to be the greatest challenge faced by farm businesses, while climate risk also was noted as a significant issue. Many farmers expressed concerns and frustrations about not being in control of the issues faced on farm. This impacted profitability, and these factors were the main drivers of negativity in 2004.

The next time farmer sentiment contracted substantially was in 2013. Again, a multitude of factors were at play. Farmgate milk prices eased and seasonal conditions proved challenging in parts of the country. At the same time, the Australian dollar appreciated, which impacted demand for Australian dairy overseas. Many farmers were also becoming increasingly disillusioned with low supermarket milk prices. As input costs increased while the farmgate milk price fell, 81 per cent of farmers in 2013 expected profits to be lower than the five-year average. Overall this decrease in profit expectations contributed to lower sentiment.

This year, the average farmgate milk price has been relatively high, compared to historical values. The Australian dollar has depreciated against the US\$, which has made Australian dairy exports relatively more cost-competitive. Supermarkets have scrapped \$1/litre milk and this has seen a slight value increase in the domestic market. Despite these positive influences, farmer confidence is down to 34 per cent. This is the lowest recorded confidence since the start of the survey. Ongoing impacts of the 2016 milk price step down, drought conditions and high feed costs have significantly impacted farm businesses and farmer sentiment. Elevated input costs have been listed as the greatest challenge by farmers this year. A record 64 per

Figure 1 Sentiment vs. farmgate milk price



cent of farmers agreed the shortage of feed and high feed costs were the main concern. Of those, 86 per cent reported that these high costs are impacting their business, while 74 per cent expect this impact on profitability will be ongoing over the next 12 months.

Hence, while farmgate milk price is a primary driver underpinning sentiment, it is apparent that other factors also have a substantial effect on the way farmers feel about the future of the industry.

2 Sentiment is very responsive to current conditions and can change quickly

While sentiment is currently the lowest reported, the survey data shows that sentiment can change quickly as circumstances change. The previously mentioned increase between the February main survey and April supplementary survey illustrate this.

In 2008, farmer sentiment increased 24 per cent yearon-year following a significant improvement in the farmgate milk price. Following this improvement, farmer sentiment then dropped 12 per cent, as farmers became more concerned about the future of the industry. These concerns resulted from the global financial crisis and challenging seasonal conditions.

Similarly, in 2013, after four years of relative stability, sentiment dropped 23 per cent. As noted above, this was the result of falling milk prices, tough seasonal conditions and reduced global demand for Australian dairy following the appreciation of the Australian dollar. This large drop in farmer confidence proved short-lived. In 2014, farmer sentiment improved quickly, up 32 per cent, as the average farmgate milk price grew by 27 per cent.

These quick changes in sentiment are a common feature in all dairy regions across Australia and for farms of all sizes.

Therefore, it is difficult to predict what sentiment will look like in the next 12 months. If weather conditions become more favourable and the farmgate milk price remains strong, sentiment could quickly improve. This reinforces the importance of monitoring market signals beyond milk price in order to predict farmer sentiment in the year ahead. Early indications suggest that milk prices will again be favourable, and weather conditions have improved with the autumn break. Sustained rainfall into spring will be required however, to boost pasture availability, reduce irrigation water prices, and maximise fodder and grain crop yields.

3 Low positivity is more strongly correlated with slower growth rather than higher exits

Since 2013, the proportion of farmers in a 'winding down' phase has remained around the 10 per cent mark, irrespective of the level of farmer sentiment. In contrast, the proportion of farmers in an expansion phase seem to have been correlated with farmer positivity. While sentiment remained relatively high from 2014 to 2016, the proportion of farmers in an expansion phase was stable. Since farmer sentiment started to decline, the number of farmers in an expansion stage has declined noticeably.

Data suggests that farmers can be in a winding down phase over a number of years, and that this stage does not necessarily indicate short term industry exits. In 2019, six per cent of farmers reported that they intended to exit the industry in the next two years. At the same time, 11 per cent said they were 'winding down'. Of farmers exiting the industry, they tend to be skewed to farms with herds of less than 300 cows.

While six per cent of farmers are intending to exit, a large proportion (70 per cent) are committed to the future of their business, regardless of their sentiment towards the industry's future. This commitment varies substantially between regions, from a low of 60 per cent in the Murray region and South Australia to a high of 82 per cent in Gippsland. Farmers' commitment to the industry is evident in ongoing capital investments on farm. More than 81 per cent of farmers have made capital investments in the last two years, and 70 per cent of farmers intend to invest further in the next two years. The survey data shows that the larger the farm, the greater the intention to invest.

4 Farmer sentiment appears to be a predictor of milk processor changes

Over the past four years, there have been significant changes in milk processors across the country. Startups, asset sales, bankruptcies and significant changes in ownership structure and regional footprints have all combined with market influences to uproot many previously stable farmer-processor relationships.

Since 2015, when survey data commenced tracking farmer movements between processors, it is apparent that farmers are feeling less certain or secure with their current processor. Data suggests that as many as two thirds of farmers have changed processor since 2015. This represents a significant change in farmer 'loyalty' over time, as 60 per cent of farmers reported that they had not changed processor in the past 10 years.

Farmers have reported different reasons for changing. These include dissatisfaction with the farmgate milk price or payment structure, as well as with penalties and 'clawbacks'. These factors have no doubt affected farmers' perceptions about the future of the industry as a whole.

A correlation is also evident between negativity towards the industry and farmers' willingness to change processor. When overall farmer sentiment declined, the proportion of farmers changing processor increased. In the 2019 survey, factory closures or company buy-outs accounted for 20 per cent of movements. Milk price remained the most dominant driver for change, with 66 per cent of farmers moving processor based on price.



Figure 3 Sentiment vs. processor changes



5 Sentiment does not necessarily predict herd size or production

Farmer sentiment in any given year, appears to have little bearing on whether farmers actually increased their herd size. For example, in 2018, 47 per cent of farmers felt positive about the industry's future and 51 per cent of farmers grew their herds. Furthermore, higher positivity the previous year does not appear to correlate with a herd size increase in the 12 months following. In 2016, 67 per cent of farmers were positive about the industry future and only 33 per cent of farmers increased herd size in 2017. This suggests that current conditions tend to have greater influence on actual herd changes than perceptions about the industry. Farmer sentiment does, however, seem to correlate with intentions to increase herd size in the year ahead. As sentiment has declined over time, fewer farmers look to grow their herds in the vear ahead.

In terms of milk production, there is no apparent correlation between farmer sentiment and milk production increases

Similarly, in terms of milk production, there is no apparent correlation between farmer sentiment and milk production increases. This is the case both in the same year or the year following positive sentiment.

Looking three years ahead, the proportion of farmers believing their milk production will increase, is not related to their positivity about the industry. It is more likely to reflect farmers' optimism about their own business, their commitment to staying on-farm and their herd predictions.

6 The industry is changing as it responds to challenges

Victoria accounts for about two thirds of total milk production, with the three Victorian regions traditionally contributing equal shares. As the proportion of milk produced in the Murray Dairy region falls, other regions (particularly Gippsland) are gaining share.

Changes are occurring on-farm too. Over time, the national average herd size has increased, as the proportion of farmers with small to medium herds (less than 300 cows) declines. Survey data indicates that the average herd size has grown 30 per cent in the past ten years. ABS and Dairy Australia data confirms this trend.

While almost all (98 per cent) of dairy farms are pasture based, survey results show dairy farming is becoming more feed intensive as farmers manage variations in seasonal conditions. Those feeding pastures plus a partial or total mixed ration now account for close to 30 per cent of total milk production. This has increased by about 10 per cent in the past five years.

As noted earlier, farmers are becoming less attached to their milk processor and more willing to make changes in order to receive a better milk price or payment structures. In 2015, 10 per cent of farmers reported changing processor in the prior 12 months. In 2019, 25 per cent of farmers changed processor.

Overall, fewer farmers are calving all year round (especially in the Victorian regions and Tasmania). More farmers are using a seasonal calving pattern, however, this varies significantly by region. In the Subtropical Dairy and Dairy NSW regions, more than 90 per cent of farmers still calve all year round.

For supporting trend data, please refer to the appendix.



Figure 4 Sentiment vs. herd changes

Figure 5 Sentiment vs. production



INPUTS

High temperatures and low rainfall have been a theme of 2019 to date; many hoped an early autumn break would provide much-needed respite.

Australia's 2018–19 summer was unseasonably warm and dry, with severely limited rainfall across much of the country. Despite this, tropical Queensland experienced extreme rain events throughout February, causing widespread flooding.

This increased Australia's national average rainfall for the month, although many regions in the southern states remained dry. Grain growers in the south continued to hope for an autumn break and drought continued to affect communities. Weather patterns reminiscent of summer continued into March and the new season began warmer and drier than average. Pockets of the east coast of NSW and Queensland had substantial rainfall in March, although the rest of the country received average to below average rainfall. Patchy rain fell across the eastern states throughout April, missing much of South Australia, Victoria and eastern NSW. Conversely, parts of Queensland, central NSW and Western Australia recorded above average rainfall which improved soil moisture. Rain in May has provided some respite across the much of Victoria, southern New South Wales and parts of South Australia. As welcome as this rain was, more is needed.

Temperatures have exceeded 'average' all year and autumn was no exception, commencing with the hottest March on record. Overall, the country's mean temperature was well above average, particularly WA which recorded the warmest March on record. April followed this trend, remaining warmer than average.

Although the Bureau of Meteorology (BoM) downgraded their ENSO outlook to El Niño Watch at the beginning of the year, by February the outlook was once again upgraded. BoM retained this level for the most of autumn as tropical Pacific Ocean temperatures remained high. Reports suggested a short-lived El Niño was likely, and BoM subsequently downgraded their outlook in late May. The three-month forecast (June to August) projects that WA can largely expect average rainfall with no definitive indication of wetter or drier than average conditions. Meanwhile, other dairy and cropping regions, particularly along the eastern states and northern Australia are experiencing drier than average conditions. Temperatures are forecast to be higher than average across most of the mainland.

🚯 Water	
Northern Victoria	Murray Irrigation System
353 \$/ml	337 \$/ml
↑ +255% LY	↑ +260% LY
↑ +111% 5Y	↑ +132% 5Y
1,997,027 ml	118,881 ml
	✔ -49% LY
↑ +2% 5Y	

Price of water traded is 12–month average and volume of water is 12 month total, both to April 2019, and compare to year earlier (LY) and last 5 years (5Y). Source: Victorian Water Register, Murray Irrigation Ltd

Winter rain is becoming increasingly important as water storage levels across northern Victoria and southern NSW continue to fall. The warm and dry start to autumn placed further pressure to storage levels. Some rainfall throughout May has helped moisten soils although it's done little to boost storage levels. At the time of writing, Lake Glenmaggie and the Hume Dam are at low capacity, seven and 15 per cent respectively. Compared to this time last year, Lake Eppalock and the Dartmouth Dam recorded the largest reductions, dropping by 26 and 24 per cent respectively.

Ongoing drought conditions have heavily impacted water availability and in turn placed upward pressure on prices. Water prices in northern Victoria have steadily increased throughout 2018–19, briefly peaking in February. Prices softened slightly in March before firming again in April. Currently trading at \$492/ML, prices are significantly higher than last year. The 12–month average of \$353/ML is 255 per cent above last year and 111 per cent above the five year average. This premium has restricted many farmers from purchasing water, and together with the impacts of lower total availability, the volume traded is down 14 per cent year-on-year.

Similarly, at zero per cent allocation the Murray Irrigation System in southern NSW has been short on water, driving a price surge. The average premium paid in the last 12 months is \$337/ML. This is significantly higher, 260 per cent than last year and 132 per cent above the five-year average. Spot prices exceed \$600/ML at the time of writing. As a result the volume traded in this system has decreased 49 per cent since last year and 27 per cent below the five year average. With low reserves to start the year and average to below average inflows forecast, it can be expected prices will remain firm for the coming months.



Fertiliser

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Ure (gra	Urea DAP (granular Black Sea) (US Gulf)		MOP (granular Vancouver)		
248	3 US\$/t	324	⊧US\$/t	266	US\$/t
Υ	+7% LY	1	-16% LY	1	+23% LY
$\mathbf{\Psi}$	-7% 5Y	$\mathbf{\Psi}$	-12% 5Y	$\mathbf{\Psi}$	+1% 5Y

Price is April 2019 average, compared to the 2018 April average (LY) and 5-year (5Y) April average. Source: World Bank

Following the highs of September 2018, the World Bank's Fertiliser Price Index fell 5.4 per cent in the first guarter of 2019. After three consecutive guarterly increases the index fell due to lower demand from China and North America. Prices have continued to drop in the start of the second quarter as the market remains volatile. The ongoing trade war between the US and China has caused soybean prices to soften resulting in many farmers looking to cultivate alternative crops such as corn (although wet weather has impacted planting for many). Reports suggest this will increase demand for fertiliser, particularly nitrogen. Prices are expected to increase correspondingly. This may be partly balanced by a reduction in fertiliser application by wheat growers. There has been some recent weakness in the Chicago Board of Trade (CBOT) wheat futures due to the lack of optimism on trade negotiations. This suggests growers may hold off on fertiliser contacts.

Australia's fertiliser prices are typically influenced by the international benchmark, given the predominance of imports. Currently, urea is trading seven per cent higher than last year and seven per cent above the five-year average at US\$248/tonne. Conversely, DAP prices have softened, down 16 per cent since last year and 12 per cent compared to the long term tend, trading at US\$324/ tonne. After over a year of subdued prices potash has increased in the last two months to trade 23 per cent above last year and slightly more than the five-year average. An uncertain rainfall outlook is likely to impact local demand for fertiliser, prompting more farmers to engage hand to mouth buying. With a lack of forward contracts local suppliers will find it hard to plan ahead, potentially causing a supply issue if timely rain causes a surge in demand. This would consequently increase pressure on Australian prices.

T Cows	
Cull cows	
309 c/kg	76,283 head
	↑ +11% LY
Dairy cattle exports	↑ +74% LY
78,235 head	↑ +9% 5Y

Price is March 2019 average, compared to March last year (LY) and 5-year (SY) averages. Number of head is last 12 months, cull cows and dairy cattle exports to March 2019, compared to year earlier (LY) and 5-year (SY) averages. Source: NLRS, ABS

The national dairy herd has undergone a significant reduction, as a result of challenging farm and climatic conditions. The cull cow market has seen substantial sales volume in the past 12 months. Following the previous Situation and Outlook report in February, sales have increased steadily month-to-month. Persistent warm and dry conditions through autumn, especially in Victoria and parts of NSW, placed further pressure on already stressed water and feed supplies which in turn, saw an increase in culling. A total of 76,283 cows were culled in the 12 months to March. This figure is up 11 per cent compared to last year and five per cent more than the last Situation and Outlook report. Annual cull volume tracked one per cent below the five-year average. It must be noted there was unprecedented culling in 2016 that inflated the average. The overall national beef herd size is expected to decline 7.7 per cent to 25.2 million head this financial year. Severe flooding in northern Queensland early in 2019 reduced the herd dramatically, with 500,000 to 700,000 cattle estimated to be lost. This combined with ongoing drought conditions and increasing production costs, is projected to result in the largest drop in the national herd in decades. Multiple reports suggest that culling rates are expected to slow later in 2019 as the country aims to rebuild its herd.

The average price for culled dairy cows in March was the lowest since 2015. Receiving an average price of 309c/kg, the price for cull cows has been steadily decreasing since the period of strong US demand in 2016. Despite this being 20 per cent below the same time last year and the five-year average, historically speaking, it is above the long-term trend. Following March, prices increased in April and expected to steadily climb this year if culling rates slow. The climate will play the biggest influence on



Hay and grain prices

Australian dairy regions		ð		%	0000		%
1	South-west WA	\$278	•	-4	\$340	\bigcirc	+94
2	Central districts SA	\$320		+19	\$372		+172
3	South-east SA	\$345	•	+22	\$332	•	+202
4	South-west Victoria	\$373		+26	\$368	•	+145
5	Goulburn/Murray Valley	\$369		+26	\$390		+255
6	Gippsland [*]	\$424		+30	\$447		+141
7	North-west Tasmania	\$443		+25	\$150	•	-21
8	Bega Valley	\$419		+26	\$450		+78
9	Central west NSW	\$314	•	+9	\$488	•	+110
10	North coast NSW	\$379		+8	\$525	•	+81
11	Darling Downs	\$409		+15	\$563		+76
12	Atherton Tablelands [*]	\$428	0	+19	\$350	0	+27

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

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

Hay quoted is sourced and delivered locally, GST exclusive unless stated otherwise. Prices are estimates in \$/tonne at April 2019, compared to April 2018. *Prices quoted is for pasture hay in Atherton Tablelands and Gippsland and cereal hay in all other regions.

Source: AFIA, Profarmer

the market, and a rebuilding phase can be expected if ongoing favourable weather is received. The longer the beef herd continues to destock, the larger the expected price correction will be when Australia enters the restocking cycle.

International demand for beef remains relatively strong as a lower exchange rate improves cost competitiveness and demand grows in China and the US. First quarter beef exports to the US for 2019 are up 16 per cent yearon-year. This has been well supported by the high culling rates locally. Looking ahead, the African Swine Fever (ASF) outbreak is likely to increase demand in all protein markets.

Hay

The dry start to autumn caused a spike in hay prices across most dairy regions. At the time of the February Situation and Outlook report, prices had begun to drop and appeared to have reached a floor by end of month. As autumn commenced with a dry outlook, market sentiment drove prices back to near the peak of last year. The lack of carry-over stock and sudden increase in demand raised concerns for the upcoming season, forcing farmers to purchase fodder. Reports suggested feed supplies became limited, with many farmers only selling to regular buyers. Demand has eased slightly as recent rain across the south eastern states helped rejuvenate pasture. The hay market is responsive to rain and this sparked some optimism in the current outlook. However, it will take substantial follow up rain and time to rebuild supplies. Hay continues to be transported across the country from previous orders. With the current outlook suggesting a high chance of drier than average conditions in the eastern states, it can be assumed that demand will remain firm. even if it does not reach the same levels of last year.

Northern Australia

The north of the mainland experienced both drought and flooding throughout the start of 2019. These events reduced herd sizes significantly, as farmers destocked and lost cattle in the floods. Initially these challenging conditions drove fodder inquiry, with product sourced from across the country. Demand has since softened slightly, but prices are yet to respond and remain elevated. Hay is still being transported as outstanding contracts are fulfilled. Notwithstanding this, multiple reports suggest numerous growers have cancelled upcoming orders as they believe their supply will be sufficient for the near future. An unfavourable rain outlook for the coming months may increase demand, although this will be tempered by a smaller herd. As the supply situation remains precarious, upcoming weather will be a major influence on new season pricing.

Southern Australia

Following a relatively subdued fodder market over summer, demand picked up at the start of autumn. This was predominantly sentiment driven as winter crept closer and many producers had little to no carry-over stock. Prices increased and have remained at similar levels for most of these regions as supply continues to tighten. Some areas were fortunate enough to receive rain however most paddocks remain dry and short of feed. At the end of last year seed availability was discussed as potentially causing issues. Currently, this is not a factor, as oat seed supply was tight but controllable. New season crops have been planted and many are waiting for more rain to see some growth. South-west Victoria has had considerable rainfall although fodder demand remains strong. Gippsland and northern Victoria have had some rain, although this has been patchy. Follow up rain is required for further pasture growth. South Australia remains very dry, demand continues locally and from interstate. Some rain throughout the start of May missed most of the region. The volume of hay on the roads is lower simply due to the lack of availability. Tasmania on the other hand received a very good finish to last year and prices dropped accordingly, as the fodder market remains subdued and prices steady. Timely rain in the coming months will be the main driver of prices until new season hay enters the supply chain.

Western Australia

Following a slight price increase after February, the hay market in WA has steadied. Demand picked up locally at the start of March, resulting in prices firming. Since then, prices have remained steady throughout autumn as enquiry from the eastern states slows. The WA export market continued to influence local supplies. Starting reasonably active in the beginning of the year, the export market is expected to slow as supply tightens and international competition drives a strong domestic market. With much of the carryover stock having made its way to the eastern states, supply is limited in the west. Farmers have planted new season crop and received some follow up rain, although conditions for the most part remain dry.

Grain

The latest United States Department of Agriculture (USDA) monthly supply and demand report illustrates a bearish outlook for the alobal grains market. Overall total grains production (wheat and coarse grains) for 2018–19 is forecast to end down year-on-year. With an increase in consumption it is expected carry-over stocks will reduce by 37 million tonnes. Increases in soybean, maize and rice production is expected to be outweighed by lower production of global wheat. Larger maize crops in Argentina and Brazil assisted the increase, while a smaller than average yield in Australia weighed down production. Looking ahead, 2019–20 total grain production is projected to grow two per cent year-onyear. Led by increases in global wheat, barley and maize harvests, there is expected to be an extra 50 million tonnes in the pipeline. Wheat is expected to contribute the greatest percentage, up 26 million tonnes. This volume is largely projected to come from increases in production in the European Union (EU), Russia and the neighbouring Ukraine. Similarly barley production is projected to increase on the back of favourable weather conditions and bigger crops in the EU, Russia, Ukraine and Canada. Soybean output is forecast to increase 21 million tonnes as a result of improved crop prospects in South America. With the current volatility of soybean markets many growers in the United States are turning to maize this season. However, maize planting in the US Midwest has been delayed due to heavy rain.

Recent weakness in the CBOT futures, especially soybean, was a result of the latest trade tensions between the US and China. Over a year since the first tariffs were issued, the hope for a swift resolution continues to fade. The latest retaliation measures from two of the world's most powerful countries rocked the markets. With China being the world's top oilseed buyer, a decrease in appetite placed pressure on CBOT soybeans. Multiple reports suggest the ongoing trade tension, combined with the latest outbreak of African Swine Fever (ASF), will significantly reduce China's demand for soybeans. With ASF affecting 25 per cent to 35 per cent of the total pig population in China, feed demand is expected to reduce drastically. US president Donald Trump and Chinese president Xi Jinping are set to meet at the G20 summit in Japan. Until then, a lack of optimism can be expected in global trade, particularly between the US and China.

Multiple reports suggest the ongoing trade tension, combined with the latest outbreak of African Swine Fever (ASF), will significantly reduce China's demand for soybeans

Locally, international pressure is the biggest influence of grain prices. In particular, Western Australian grain prices have followed offshore markets. The market has weakened in order to remain competitive internationally. Recently, multiple permits were allocated under strict biosecurity conditions allowing shipments of high protein grain to be imported. This is the first time since 2007 Australia imported grain from overseas. Grain continues to move from Western Australia ports to the eastern states. Prices in these regions continue to reflect the export price plus freight. This is likely to remain the biggest influence until the new season's crop harvest. According to ABARES, Australia's winter crop production is down 20 per cent for the 2018–19 year. Planting of new season crop is underway across the country. Many began dry sowing and some were fortunate enough to have considerable subsequent rain. In particular, the southeast of the country received some timely rainfall which helped kick-start growth. With a later than ideal 'seasonal break' many have turned away from canola this season and planted wheat or barley. Projections of 2019-20 crop yields have increased year-on-year despite the bleak rain outlook for the next three months.

For ongoing information and updates on farm inputs, readers can subscribe to Dairy Australia's weekly Hay and Grain Reports, or the monthly Production Inputs Monitor, found on the Dairy Australia website **dairyaustralia.com.au/hayandgrain**.



AUSTRALIAN MARKET

Figure 6 Australian supermarket sales

		Volume	YoY growth	Retail value \$m	YoY growth
0	Milk [*]	1,476 m. litres	↓ -0.2%	2,424	↑ 2.0%
E)	Cheese	151kt	↑ 1.9%	2,316	▲ 4.9%
Ś	Dairy spreads	52 kt	↑ 0.3%	618	↑ 7.3%
Î	Yoghurt and snacks	213kt	↑ 0.4%	1,523	↑ 3.0%

Source: Iri Worldwide. Please note: available data is taken from different periods; milk and dairy spreads from MAT 31/03/2019; cheese and yoghurt and snacks from 06/01/2019. *Milk sales represent supermarket sales and exclude other sales channels

Milk

The supermarket sector accounts for a large proportion of demand for Australian dairy. In the 12 months to March 2019 supermarket sales of milk eased slightly, down 0.2 per cent to 1.5 billion litres. At the same time sales of fresh milk grew 0.9 per cent to 1.3 billion litres. UHT milk sales continued to decline, down 7.6 per cent to 181 million, as consumers favoured fresh products at the expense of UHT. While company branded UHT milks dropped 17.4 per cent to 100 million litres, sales of private label UHT grew 8.1 per cent to 82 million litres. Private label UHT milk was sold at a substantial discount to company branded equivalents (\$1.05/litre compared to \$1.76/litre).

Flavoured milk is a significant value creator for dairy companies, due to its premium retail price and growing demand across the country. Over the 12 months to March, flavoured milk sales increased 0.6 per cent in volume to 155 million litres and 2.8 per cent in value to \$564 million. The average retail price of flavoured milk also rose, up 2.2 per cent to \$3.65/litre. Flavoured milk is also sold through non-grocery outlets. Data from Dairy Australia's domestic sales database shows that approximately 36 per cent of all flavoured milk is sold outside of supermarkets. Flavoured milk is likely to remain an important product in the future, due to its ability to generate value growth in the domestic market.

The main development, in 2019, for the milk market has been the removal of the \$1/litre price point for white milk. This took place in early 2019, after Aldi and Coles decided to follow Woolworths' example by raising the retail price of private label milk. This resulted in an increase in the (annualised) average retail price of fresh white milk, up 1.5 per cent to \$1.42/litre. A majority of the growth stems from an increase in the private label average price (up 2.3 per cent to \$1.05/litre on an annualised basis).

Fresh white milk is the most popular dairy product purchased in supermarkets. Since 2011 private label fresh white milk has been sold in supermarkets for \$1/litre. This has seen private label's share of total fresh white milk sales expand. Over the past eight years consumers have at different times changed purchasing behaviour, in turn influencing private label's share of the market. These changes have been the result of changing consumer sentiment following media campaigns. The most notable took place in 2016 when the TV program The Project aired a segment called Milked Dry. This segment lobbied for sales of company branded milk at the expense of private label milk. The public response was immediate and private label's share of the total market dropped. Since 2016 private label milk has largely regained its previous market position (roughly 58 per cent market share).

Following the start of 2019, in conjunction with the higher average retail price, private label milk sales have eased. Over the three months to March, private label milk sales eased one per cent to 164 million litres. Worth noting is that, due to the higher average retail price of private label milk, the value of sales over the same period increased 3.8 per cent. This would indicate that despite a drop in volume sales, further value growth was generated following the removal of the \$1/litre milk price. Over the same time period, company branded milk sales increased one per cent to 119 million litres, resulting in flat sales of fresh white milk overall. This did however, see company branded



milk increase its share of the market, up to 42.5 per cent, the highest market share reported in 17 months. As company branded milk is retailed at a higher average price to private label (\$1.93/litre), this has generated further value growth. Overall, the sales value of fresh white milk increased two per cent to \$2.4 billion over the year. If sales of fresh milk continue to hold steady, further value growth can be expected in the domestic market going forward.

Cheese

Cheese is a key driver of demand for dairy, both in Australia and overseas. In supermarkets it is the second-largest value creator for the dairy industry. Demand for cheese in supermarkets grew over the 12 months to January 2019, up 1.9 per cent to 151,000 tonnes. Whilst chilled cheese sales only increased modestly, up 0.9 per cent to 126,000 tonnes, deli cheese sales surged, up 7.4 per cent to 26,000 tonnes. Deli cheese continued to grow in popularity with Australian consumers and deli cheese sales made up 17 per cent of cheese sold. This marked an increase of almost six per cent compared to 2009, as it is becoming increasingly popular to consume a wide range of cheeses. Deli cheese is retailed at a significantly higher price compared to chilled cheese, and continued to be the main driver of value growth. Overall the value of cheese sales rose 4.9 per cent to \$2.3 billion dollars, with deli cheese sales increasing 8.1 per cent to \$649 million.

Chilled cheese (for example cheddar) grew 3.9 per cent in value over the 12 months to January 2019, to \$1.7 billion. This increase was first reported in the February Situation and Outlook report following three years of contracting sales value. The average retail price of chilled cheese increased 2.8 per cent to \$13.25/kg, with the majority of the growth taking place for larger pack sizes. The average retail price of one to 1.5kg block cheese reached \$7.91/ kg, up 2.9 per cent from last year. This is a positive sign for the industry, following years of heavy discounting of dairy products in supermarkets. Private label share of chilled cheese sales grew 1.8 per cent in volume and accounted for 22.5 per cent of the market. Private label cheese is offered at a substantial discount to branded chilled cheese and is partly responsible for the drop in the average retail price of cheese. Due to the discounted price, private label sales only made up 14.2 per cent of total sales value for the category.

Yoghurt and dairy snacks

Supermarket sales moderated over the 12 months to January 2019. Sales grew 0.4 per cent to 213,000 tonnes, the slowest rate since 2016. This slowing can be attributed to drops in sales of sweetened yoghurt and dairy snacks. Traditional style yoghurts (such as Greek style yoghurt) was the most popular product within the category and made up 40.7 per cent of total sales, increasing 2.7 per cent to 87,000 tonnes. The average retail price of traditional style yoghurts grew 1.3 per cent over the year to \$7.26/kg.



Figure 7 Share of fresh white milk market

Source: IRi Worldwide

In contrast, sales of sweetened yoghurts eased 0.2 per cent as many consumers continued to eliminate sugar from their diets. While traditional style yoghurts drove volume growth, sweetened yoghurt sales played an important role in generating value growth. Overall the sales value of yoghurt and dairy snacks increased three per cent, while sweetened yoghurt value rose 9.7 per cent. The average retail price of sweetened yoghurt grew 9.9 per cent to \$6.30/kg. This saw sweetened yoghurt sales accounting for more than 25 per cent of total sales value. Dairy companies are likely to continue to view sweetened yoghurts as an important source of value creation for the industry. This might see the average retail price increase further to compensate for falling volume sales.

Private label sales of yoghurt and dairy snacks made up 7.2 per cent of all sales in the 12 months to January 2019. This is significantly lower than for other dairy products, however represented an increase of 1.7 per cent. This marked the second consecutive year of private label expansion in the yoghurt market, mainly due to the lower per-unit price. Due to the high popularity of yoghurt products and dairy snacks, further private label penetration is likely.

Dairy spreads

Supermarket sales of dairy spreads continued to increase over the 12 months to March 2019. This increase was first reported in the February *Situation and Outlook* report and occurred after months of declining sales figures, following the global butter price rally. Blend sales drove this volume growth, with sales growing 5.9 per cent to 27,000 tonnes. Blend sales accounted for a majority, 51.3 per cent, of volume sales in the dairy spread markets for the first time since 2009. Blends are traditionally retailed at a lower average price compared to butter which saw some consumers favour blends when butter prices rallied. The average retail price of blends eased 0.2 per cent over the year to \$10.84/kg. A majority of consumers who purchased blends bought the product in the 500g pack size, which retailed at a discount compared to other pack sizes (\$10.05/ kg). Close to all blends sold in supermarkets are company branded blends and in the 12 months to March the sales value of blends increased 6.6 per cent to \$283 million.

Butter sales contracted over the 12 months to March, down five per cent to 25,000 tonnes. The value of butter sales increased 8.8 per cent to \$330 million, due to the 14.6 per cent growth in the average retail price of butter (to \$13.09/ kg). Private label sales of butter dropped more than company branded butter, down 7.7 per cent, and made up 44 per cent of all sales. Over the year, butter imports rose 5.3 per cent to 31,000 tonnes. As domestic milk production continues to decline, pressures on butter imports are likely to remain elevated, in order to satisfy domestic demand.

Australian economic settings

During 2018 optimists outnumbered pessimists every month among Australian consumers. During 2019, the Westpac-Melbourne Institute Consumer Sentiment Index has fluctuated significantly, but overall trended downwards. Falling house prices in major cities and weak wage growth have weighed on consumer's minds. Consumers are more concerned about the rising cost of living in Australia and this has resulted in a decrease in the index, compared to last report in February. Low wage growth and a perceived high cost of living can result in less spending by consumers, which in turn impacts overall demand for dairy products.

Consumer anxiety has also increased according to the NAB Q1 Quarterly Consumer Anxiety report, which showed that consumers are more worried about stagnating income growth, compared to last year. This is reportedly affecting consumer spending, with fewer consumers willing to spend on 'non-essential' goods. At the same time spending on 'essential goods' has increased. Conventionally, during times when consumers are less willing to spend on 'nonessential' goods and services, restaurant sales decrease while supermarket sales increase.



Figure 8 Consumer confidence

Source: IRi Worldwide

Dairy Australia's Food Service Index reported an increase in consumer spending on food and food service across all major channels. Consumer spending in supermarkets has increased 4.2 per cent over the past 12 months, however, in the past three months the growth rate has increased. In the three months to February, spending rose 5.2 per cent. At the same time, growth in consumer spending in cafes and restaurants moderated to 2.4 per cent, compared to the yearly growth rate of 3.1 per cent. Consumer spending growth in food service has also slowed over the past three months. This change in spending patterns is in line with usual trends during periods of elevated consumer anxiety. It shows that consumers allocate more spending towards essential items, (purchased in supermarkets), and less on non-essential services, such as restaurants. Supermarkets account for a large proportion of demand for Australian dairy products. An increase in consumer spending in supermarkets is a positive sign which often supports an increase in demand for dairy. However, the increase in consumer anxiety is likely to place a limit on the growth opportunity.

In March 2019, the inflation rate remained flat compared to the previous quarter. Over the year to March inflation rose 1.3 per cent, slower than reported in December, according to the ABS March Quarter CPI Report. The dairy food group's component of CPI grew 0.2 per cent over the quarter to March, supported by a growth in the price of cheese. The CPI for milk has increased 0.8 per cent over the year as a result of a higher average retail price of milk.

Global economy and exchange rates

The outlook for global economic growth deteriorated over the course of 2018. In the International Monetary Fund's (IMF) latest World Economic Outlook report (April), global growth in 2018 reached 3.6 per cent, a downwards revision of 0.1 per cent compared to previous forecasts. This revision was the result of an economic slowdown during the second half of the year. IMF expects global growth to contract further

12 months 6 months 5 Per cent 01 Food service Takeaway Cafes and Supermarkets food/QSR restaurants

during 2019, down to 3.3 per cent. Slower economic growth out of China explains part of this decline. As China is the world's largest market for dairy exports, any decrease in economic growth is likely to impact global demand for dairy.

The ongoing trade tension between the US and China has been one of the main contributors to the slowdown of China's economy, and consequently, global growth. However, weaker economic output from the EU also added to the global decline. In Germany, new emission standards disrupted the automobile industry while in Italy, demand for Italian made products softened. The IMF forecasts growth prospects to improve towards the second half of 2019. This is likely to occur as major central banks in developed countries implement more accommodating fiscal policies to counter the decline in overall growth. If this eventuates, global growth is forecast to recover in 2020.

During the first four months of 2019, the A\$/US\$ rate depreciated further, down to 0.71 A\$/US\$ in April. For Australian dairy exporters, this was favourable, improving Australia's cost-competitiveness in overseas markets. However, over the same period costcompetitiveness also improved in competitors markets, as the US\$ appreciated against the euro and the NZ\$. Exchange rate forecasts for the remainder of the year remain mixed. While some forecasts suggest the A\$/US\$ rate has 'bottomed out' and that the A\$ will appreciate, others suggest the US\$ might strengthen further. The latter view originates from the fact that the US Federal Reserve Bank is more likely to increase exchange rates faster than other major reserve banks. This would make US dollars more attractive, increasing demand for the currency. The Australian exchange rate has historically been influenced by China's economy, due to China's importance as a trade partner. If Chinese growth stalls, this is likely to impact Chinese demand for Australian products. In turn this could result in a further depreciation of the A\$ against other major currencies.

The ongoing trade tension between the US and China has been one of the main contributors to the slowdown of China's economy, and consequently, global growth

Source: Dairy Australia, ABS



Figure 9 Food service index (YoY turnover growth)

GLOBAL DEMAND

Global demand for dairy remains strong and continues to support global commodity prices. In the 12 months to February 2019, dairy exports from the six largest suppliers (New Zealand, the EU, US, Australia, Argentina and Uruguay) increased 3.2 per cent to 8.8 million tonnes. This increase was supported by growing demand in key markets, such as Greater China and South East Asia.

Greater China

Dairy exports to Greater China (PRC, Macau and Hong Kong) grew 4.7 per cent to 2.9 million tonnes in the 12 months to February 2019. A large portion of this growth occurred in late 2018 as China re-entered the market, following a period of limited buying and slow domestic production growth. Powder exports have in particular increased significantly, as WMP and SMP exports grew 16.4 per cent and 10.3 per cent respectively. The greatest volume growth occurred in the lactose market, where exports surged 56 per cent to 156,000 tonnes.

While the volume of exports to China remained robust, export value contracted 0.7 per cent to US\$8.5 billion. A drop in the value of infant powder exports proved a major factor in this decline. Infant powder remained the most valuable product exported to China, however, over the year, infant powder export contracted 4.7 per cent to US\$2.6 billion. Despite this drop, infant powder made up 30.7 per cent of total export value.

The ongoing trade dispute between China and the US continued to impact competitive dynamics in the market. Exports from the US dropped, down 16 per cent in volume over the year, while those from other markets expanded. Exports from South America (Uruguay and Argentina) and New Zealand are up 54.3 per cent and 12.6 per cent respectively. New Zealand has now surpassed the EU, as the largest exporter to China. With the US announcing new tariff measures in early May, the trade dispute is likely to continue. This will impact US competitiveness in the market and could potentially leave further room for exports from other countries.

Australian exports to China increased 0.9 per cent to 218,000 tonnes despite an overall drop in Australian milk production over this time. Milk exports to the market grew 0.3 per cent to 218,000 tonnes and made up 45 per cent of total exports. Infant powder exports to the market dropped 45.5 per cent in volume to 14,000 tonnes. This marks the first decline in infant powder exports in three years. Infant powder remained Australia's most valuable export to China, but the value also contracted sharply, down 50.5 per cent to US\$175 million.

From January 2018, China enforced strict regulations about which infant powder products can be imported, resulting in a sharp decrease in the number of registered



Figure 10 Exports to key markets

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



brands allowed to enter the market. Reports suggest that in the lead up to this change, many manufacturers pushed additional products into China, taking advantage of the fact that products already over the border would still be allowed to be sold. This stockpiling would have generated elevated infant powder figures in the year prior. While official exports of the product to China have decreased, information suggests unofficial trade channels, such as the Diagou trade, has become even more important. This is likely to make it more difficult to correctly judge the size of the infant powder market in the future, but nevertheless, it will remain a key market for Australian manufacturers.

Japan

Japan is a premium market for dairy exports and a key battleground for major global suppliers. In the 12 months to February 2019, exports to this market rose 1.7 per cent to 509,000 tonnes, worth US\$1.7 billion. Butter exports grew rapidly, up 96.5 per cent to 20,000 tonnes. Cheese made up 53 per cent of total exports and increased six per cent over the year. In value terms cheese exports grew even more quickly, up 6.4 per cent to US\$1.1 billion. Due to the premium price of cheese, cheese export accounted for 65.3 per cent of total export value.

Australian exports to Japan contracted 4.5 per cent over the year due to a fall in SMP and whey powder exports. Australian cheese exports grew 1.8 per cent to 86,000 tonnes, worth US\$361 million. Over the past 12 months Australia's cheese exports to Japan made up 33.1 per cent of total exports, closely followed by the EU at 27.1 per cent. The EU's cheese shipments to the market have grown considerably in the past five years, up 77 per cent.

Traditionally Australia has been Japan's largest cheese exporter and has recently enjoyed favourable market access due to the trade agreement (JAEPA) currently in place. Since the signing of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the EU-Japan Economic Partnership Agreement, Australia, New Zealand and the EU now have an equivalent level of market access into Japan. This has decreased Australia's competitiveness in the market for cheese. The US and Japan have also started negotiations for a trade arrangement which could result in equivalent market access for the US as well. The Japanese government has openly said it is willing to offer the US the same deal as negotiated during the CPTPP agreement. However, the US is likely to negotiate aggressively to try to obtain better market access. Regardless of the result of the US–Japan negotiations, Australia's trade advantage into Japan's market has dwindled.

South East Asia

In the 12 months to February 2019, dairy exports to South East Asia surged, up 10.5 per cent to 2.1 million tonnes. Exports to Vietnam and the Philippines increased the fastest, up 17.9 per cent and 19.7 per cent respectively. Sharp increases in powder exports helped drive overall growth, as SMP exports in particular grew 16.3 per cent and made up 32.7 per cent of total shipments. Lactose sales to the region also spiked, up 32.9 per cent to 141,000 tonnes. The value of exports to South East Asia increased 2.6 per cent to US\$4.6 billion over the year. A majority of this value growth was also generated from SMP deliveries to the region.

With the US and China trade dispute continuing, US exports to South East Asia have grown, as products were redirected to this region. Over the past year, US exports to the market rose 23.3 per cent and made up 21.1 per cent of total trade. The increased presence of US exports in the market has intensified competition and seen New Zealand's market share ease 2.7 per cent to 30.7 per cent. With no end in sight to the current trade stalemate between China and the US, competition into the South East Asian market is forecast to remain strong.

Australia has so far managed to remain competitive and increased exports to the market with 12.6 per cent over the year to 284,000 tonnes. Liquid milk exports have surpassed SMP in volume and grew 10.2 per cent over the year to 98,000 tonnes. Whey powder exports experienced strong growth as well, up 70.2 per cent to 30,000 tonnes. In value terms SMP exports remained Australia's most valuable export to the market, closely followed by cheese.

In the past few months, African Swine Flu cases have been reported in the South East Asian region, for example in Vietnam and Cambodia. As the flu spreads it may affect demand for dairy-derived animal feed products in the region, and potentially increase demand for beef. While this might provide some opportunity for Australian beef, and support the price of cull cows, it poses a risk for the dairy industry in the form of a drop in demand for dairy-derived animal feed products.

Global demand

MEXICO

Import volume trends Total (tonnes) 727,895 Total volume change

▲ 8.6%

Significant product shifts

- ↑ South America 30.5%
- ↑ North America 15.8%
- New Zealand
- ✤ European Union -46.1% -88.5%

1.4%

RUSSIA

Import volume trends Total (tonnes) 129,075

Total volume change

↓ -3.2%

Significant product shifts

South America	1.6%
---------------	------

- ✤ European Union -4.8%
- ✤ New Zealand -4.9% -30.2%
- $\mathbf{\Psi}$ North America -37.2%
 - Australia

JAPAN

Import volume trends Total (tonnes) 509,387 Total volume change

↑ 1.7%

Significant product shifts

•		Union	1/ 00/
Т	European	Union	14.8%

- ✤ New Zealand -1.7%
- ✤ North America -3.2%
- -4.5%
- South America -98.0%

MIDDLE EAST AND NORTH AFRICA

Import volume trends

Total (tonnes) 1,917,883 Total volume change

↑ 0.0%

Significant product shifts

60.6%

-34.4%

- ↑ South America
- ▲ European Union 0.3%
- ✤ North America -2.4%
- ✤ New Zealand -9.5%

GREATER CHINA

Import volume trends
Total (tonnes) 2,887,633
Total volume change
▲ 4.7%

Significant product shifts

54.3%

0.9%

♠	South America	ļ

- 12.6% New Zealand ▲ European Union 4.4%
- ↑ Australia
- ✤ North America -16.0%

SOUTH EAST ASIA

Import volume trends

Total (tonnes) 2,125,392 Total volume change

↑ 10.5%

Significant product shifts

1	North America	23.3%
	Australia	12.6%

- ▲ European Union 12.6%
- ↑ New Zealand 1.6%
- South America -12.3%

Mexico

Global dairy exports increased 8.6 per cent to 728,000 tonnes over the past year, worth US\$1.7 billion. Almost half of all product shipped to Mexico is SMP (or the analogous Non-fat Dry Milk), and this volume grew 15.9 per cent to 365,000 tonnes. The US remains Mexico's largest trade partner and accounted for 88.1 per cent of all dairy exports. The US and Mexico are still in trade negotiations as the United States-Mexico-Canada Agreement (USMCA) is yet to be ratified, despite negotiations ending last year. The US imposed tariffs on steel and aluminium from Mexico and in retaliation Mexico implemented tariffs on US cheese exports. This has resulted in a drop in US cheese exports to the market, which are down 3.4 per cent compared to last year. As a result, South Korea has surpassed Mexico as the premier market for US cheese exports for the first time in five years. In mid-May 2019, the US announced the lifting of the tariffs imposed on steel and aluminium, however, in late May the US announced a five per cent import tariff on all products exported from Mexico. This tariff rate entered into force in June and will increase by five per cent each month for the following four months, unless illegal immigration from Mexico to the US stops. Mexico has warned that they will retaliate strongly to any tariffs imposed on Mexican exports. These retaliatory tariffs are likely to upset and prolong ongoing trade negotiations.

Middle East and North Africa

Over the 12 months to February 2019, dairy exports to the Middle East and North Africa (MENA) remained virtually flat at 1.9 million tonnes. This differs noticeably from the February *Situation and Outlook* report which reported strong growth in imports as a result of the upcoming Algerian election. In the midst of political turmoil, dairy imports fell. In the three months to February 2019, Algerian imports fell 14 per cent compared to the same time last year. With political unrest set to continue, a new boost to imports appears unlikely.

SMP is the highest volume product exported to the MENA region, and these exports represented 17.6 per cent of total exports over the past year. SMP exports contracted 7.1 per cent while infant powder exports rose 7 per cent to 126,000 tonnes. Australian exports to the market only accounted for a small portion of total trade. Over the past year, Australian exports dropped 34.4 per cent to 23,000 tonnes, the lowest amount reported in years. With a shrinking Australian milk pool it is unlikely Australia will expand its market share in the region in the near future.

Russia

Russia is no longer a major export market of dairy products as a result of the trade embargoes in place. Russia only accounted for 1.5 per cent of global dairy trade in the 12 months to February and the market is likely to remain limited until embargoes are lifted. As of May 2019, there is no clear indication suggesting embargoes will be removed.

THE AFRICAN SWINE FLU AND ITS IMPACT ON GLOBAL DAIRY TRADE

Greater China (PRC. Macau and Hona Kona) accounted for 32.8 per cent of total dairy exports in the 12 months to February 2019. It is the world's largest market for dairy exports and thus impacts the price of dairy commodities. Any changes in China's purchasing pattern are key to keep track of, as they also are likely to impact the global price of dairy. In August 2018, the African Swine Flu (ASF) was detected in China and reports have suggested it has spread to all provinces. China is the world's largest producer of pork, and consumer, accounting for roughly 50 per cent of total world production. Due to the outbreak of ASF, pig slaughter rates in China are forecast to increase by 25 per cent to 35 per cent. This will equate to an equally large drop in pork production, which is likely to impact global dairy markets.

Firstly, a drop in pork production in China is expected to increase demand for other animal derived proteins. According to Meat and Livestock Australia, in the first guarter of 2019, Australian beef exports to China grew 67 per cent compared to the year prior. China's enhanced need to satisfy domestic demand for protein could result in increased demand for beef. Through higher prices, this would increase incentives to cull Chinese dairy cows to satisfy demand. Any growth in culling rates of Chinese dairy cows is likely to generate further demand for dairy from overseas markets, and improve global commodity prices. Secondly, a sharp drop in pork production is forecast to contract demand for dairy used as animal feed. This would in turn negatively impact global dairy commodity prices as China is the largest market for dairy animal feed. Whey powder and lactose are especially used by the pork industry and demand looks set to decline substantially. In the first months of 2019 whey and lactose exports from the US to China contracted significantly. A drop in whey demand could additionally affect returns for cheese manufacturers and see global commodity prices weaken.

It is too early to entirely determine the impact of the ASF. However, it is clear that it will take time for the pork industry in China to recover. This in turn, will flow to other markets and it is likely to affect the global dairy industry and commodity prices.

Dairy affordability and substitutes

Global dairy import affordability

Dairy Australia's Import Affordability Index sets out to track changes in affordability for local customers in key import markets. It uses global dairy commodity prices and local currency movements to analyse purchasing activity in major dairy import markets across the globe. The index uses whole milk powder (WMP) as the underlying basis for dairy commodity prices and any increase in the index indicates reduced affordability for importing countries. Reduced affordability could suggest a potential decrease in import volumes, foremost in price sensitive markets. This tends to see customers in importing markets decrease the size of orders and/or hold of purchases until affordability improves.

Over the four months to April, the US\$ has depreciated against all major importers' currencies, except the Korean won and the Algerian dinar. Traditionally, this would improve affordability in each market, as an appreciation of the index makes US\$ denominated dairy imports relatively more affordable. However, over the same period, Dairy Australia's benchmark monthly WMP spot price increased 16.7 per cent to US\$3,500/tonne. This has offset the impact of a lower US\$. Overall import affordability across all major importers decreased since the latest report in February.

The Algerian dinar depreciated 0.5 per cent against the US\$ over the past year. Combined with a higher price of WMP, import affordability in the north African country worsened. Despite this, imports in Algeria grew over the year, up 1.9 per cent to 431,000 tonnes, due to political reasons. This shows that despite worsened affordability, imports into a market can still grow for other reasons.

Dairy price premiums and substitutes

The relative price of various ingredients will, in the medium term, impact the product mix food manufacturers use, as they seek to capture favourable price movements. When butter prices surge, manufacturers tend to swap the expensive butter for cheaper vegetable oils. The same applies to milk protein and soy protein. Since December, the butterfat premium has tracked above the protein premium. This is in line with long-term trends, even though it has not been the case since March 2017, when the premiums inverted. In April, the price premiums inverted once again, with the butter price premium coming in above the protein premium.

The milk protein premium is measured as the difference in US\$/kg prices between soy protein and skim milk powder (SMP). Following the final disposal of the European stockpile, the global price of SMP increased. As a result, the milk protein premium rose and surpassed the butter premium. As the European stockpile was cleared quicker than anticipated, not all SMP was consumed. A portion of the SMP went from a public storage to private. In April, this resulted in a slight consolidation in SMP prices, which saw the premium once again fall below the butter premium. Overall, prices for SMP remain supported however, and the short term commodity outlook suggests a robust dairy premium into the new southern hemisphere season.

Globally, butter prices have started to diverge. In the northern hemisphere dairy fat prices have eased, however, in Australia the price remains firm. This is the result of a shrinking milk pool and drop in butter production. As a result, Dairy Australia's surveyed butter price firmed, up 16.7 per cent since the last report, to US\$5,600/tonne. This has seen the butter fat premium grow, and in April it reached just above the protein premium. As the milk pool in Australia continues to shrink, the Australian butter fat price is likely to remain supported. This could result in further increases in the local premium in the near future, even if international indicators move in a different direction.





Source: Dairy Australia, Bloomberg





Source: Dairy Australia, Oil World



47.07

GLOBAL SUPPLY

WORLD'S FOUR LARGEST EXPORTERS

With New Zealand's milk flows dropping away quickly and relatively muted northern hemisphere production growth, global milk production is well matched to current market demand.

European Union

European milk production slowed further over the northern hemisphere winter, recovering only slightly to total 0.1 per cent higher in February 2019, compared to the year prior. This relatively flat result is a product of varied trends amongst the larger dairy producing member states. Ireland (2.5 per cent) the United Kingdom (3.1 per cent), Poland (4 per cent) and Italy (2.4 per cent) all saw gains for the month, whilst Germany (-0.1 per cent), France (-2.5 per cent) and the Netherlands (-1.8 per cent) were down.

Recent indications suggest that these trends have continued since then. Notwithstanding improvements in weather, milk production through the spring peak has remained insufficient to upset futures markets, which continue to reflect a firm market. Some member states such as Germany will likely see year-on-year drops turn to increases in the coming months as weaker comparables from a drought-affected 2018 come into play. However, this is not expected to dramatically sway the overall market balance. In the case of the Netherlands, limitations on herd sizes brought on by phosphate control regulations continue to weigh on overall milk production. Although the dramatic reduction in SMP stocks held by the European Commission has supported a sustained recovery in SMP prices, cheese remains a favourite product for processors with the choice of manufacturing streams. In addition to offering the best returns, cheese prices have remained relatively stable, and market opportunities have continued to improve for European sellers. In addition to a slowly growing domestic market, the European Commission's April Short Term Outlook highlights increases in exports to Japan and Switzerland. In the case of the former, European commentators expect further growth as a result of the recently ratified EU-Japan Economic Partnership Agreement. SMP exports are also expected to grow, whilst WMP is likely to continue its slide from favour in 2019, due to better returns from other products, and a slowdown in key markets such as Algeria.

With market opportunities readily soaking up additional product, European milk production is expected to grow this year, although a lacklustre spring will limit the upside potential. The European Commission expects around 0.7 per cent growth for 2019, with this growth almost entirely in the second half of the year. This represents a slight downwards revision from the previous outlook of 0.8 per cent growth, and remains more optimistic than the USDA, which forecasts growth of less than half that rate at 0.4 per cent for the full year. The EU Commission forecast, if realised, would see European milk production total close to 154 billion litres in 2019.



Figure 13 Actual and forecast milk production

Source: USDA, DCANZ, Eurostat, Dairy Australia. Data covers production seasons for Aust and NZ, calendar years for US and EU



United States

Milk production in the US posted its first year-on-year monthly decline for years in March, easing 0.4 per cent compared to March 2018. The level of commentary attached to this development illustrates the extent to which slow but steady growth has been a fixture of the US industry for most of the last decade. Underneath the national figures however, the gap between the 'haves' and 'have nots' reported in previous *Situation and Outlook* commentary and elsewhere, has continued to grow.

US farmers in the more traditional Midwest and north-east dairy states continue to struggle with low prices brought on by growth in production and decreasing liquid milk consumption

US farmers in the more traditional Midwest and north-east dairy states continue to struggle with low prices brought on by growth in production and decreasing liquid milk consumption. Farm exits in these regions have mounted, and calls for regulatory intervention along the lines of Canada's supply management system have followed. Recently released data from the 2017 USDA Agriculture Census shows that since 2012 the states of Wisconsin, Minnesota, Ohio, Indiana, and Kentucky each saw more than a quarter of their dairy businesses exit the industry. In total, these states alone lost 5,591 dairy businesses (more than the total number of Australian dairy farms) over the five-year period, around half of which were in Wisconsin.

Cow numbers across the US have also fallen, with 94,000 less milkers in herds nationally, compared to the peak in January 2018. Until March this year, per-cow production gains had more than compensated for a smaller herd, but whether this can continue is far from certain. Feeding for milk is likely to remain profitable if the USDA's forecasts of a near-record corn crop and prices reaching 10-year lows are borne out. On the other hand, adverse weather conditions have held up planting, with most areas of the Corn Belt well behind their average area sowed for this time of year.

Table 1 Farmgate price movements

Change in indicative farmgate price (%)	NZ	EU-28	US	AU
Compared to last report Feb 2019	↑ 5	↓ -2	↑ 4	↑ 3
Compared to prior year Jun 2018	↓ -2	↑ 7	↑ 12	1 6

Figure 14 Market trends by volume



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

Global supply

World's four largest exporters

UNITED STATES

Whey products are the exception to booming US exports, brought down by trade disputes and China's ASF crisis.

Export volume trends

Total (m. tonnes) 2.34

- Total volume change
- ↑ 6%

Significant product shifts

♠	SMP/NDM	13%	
♠	Lactose	4%	
↑	Cheese		
¥	Whey powder	-7%	

EUROPEAN UNION

Cheese continues to be a focus, exports of fresh and ex-intervention SMP are also growing

Export volume trends

Total (m. tonnes) 5.13

- Total volume change
- **↑** 2%

Significant product shifts

r	Lactose	24%
r	SMP	9%
r	Cheese	3%
L	Liquid milk	-1%

AUSTRALIA

Falling production has constrained availability: cheese and liquid milk are export favourites; SMP being a by-product of a strong domestic dairy fat market

Export volume trends

Total (m. tonnes) 0.84

Total volume change

↑ 2%

Significant product shifts

♠	Liquid milk	5%
♠	SMP	6%
♠	Cheese	1%
$\mathbf{\Psi}$	WMP	-10%

NEW ZEALAND

Ceding SMP share to Europe, NZ is exporting more WMP and significantly more liquid milk

Export volume trends

Total (m. tonnes) 3.32

Total volume change

↑ -1%

Significant product shifts

♠	Liquid milk	19%
♠	WMP	3%
$\mathbf{\Psi}$	Cheese	-3%
Т	SMD	_8%

On the milk pricing front, the US industry seems to have made it through the spring flush without excess milk; domestic markets are mixed but export demand is healthy. The US exported almost 15 per cent of its milk production in March, sending record volumes of cheese to key markets in north Asia, South East Asia, Middle East and North Africa, and Central America. The other component of the cheese equation is the fly in the ointment, however. The combination of the trade dispute with China, and that country's ongoing African Swine Fever (ASF) outbreak have sharply reduced demand for US dairy products, particularly whey products that make up over half of US exports to China.

Local sources suggest that in general New Zealand's farmers are well placed as the 2018–19 season winds down and preparations for 2019–20 begin

Overall Chinese demand for most dairy products has been healthy, with the current tariff disadvantage generally only altering relative competitiveness of global suppliers. In the case of the ASF outbreak, China's ongoing sow cull, and consequent reduction in feed requirements for piglets, has implications for global whey demand and cheese market economics that are yet to fully play out. Because of its significant exposure to whey demand, numerous US analysts believe the implications of ASF will ultimately generate more of an impact on US industry than the ongoing trade dispute.

The USDA has flagged its expectation that per-cow production will continue to grow slowly, cutting its forecast for 2019 milk production as the national herd shrinks. The agency now anticipates growth of just 0.5 per cent above 2018 for the year, for a total of 99 billion litres. Building on the expectation of lower feed prices and a renewed expansionary phase in the dairy herd, milk production is forecast to grow a further 1.8 per cent in 2020, exceeding 100 billion litres for the first time.

New Zealand

Following a bumper spring and summer period, New Zealand's milk production hit something of a wall in March, dropping 8.2 per cent relative to March 2018, and representing the lowest March total since droughtaffected 2013. Fewer cows, dry conditions and a strong prior year comparable have all been noted as factors by local analysts, in addition to suggestions that some farmers had dried off cows earlier than usual. Notwithstanding the slowdown, milk production is up 3.2 per cent for the (June to May) season to date, and a recovery in pasture growth through April will likely limit further year-on-year declines.

The New Zealand industry hasn't had difficulty in selling the additional product produced this year, with strong growth of exports, particularly milk powders and particularly to China. China, South East Asia and the Middle East and North Africa have all seen growth in shipments of NZ WMP, in some cases filling demand vacated by European and South American suppliers. After a period of strong growth, demand in Algeria has retreated in the face of economic and political upheaval. The key short-term risk in most markets however, is the potential for slowing purchases by Asian buyers who took advantage of lower prices and build up inventories in late 2018. The worst fears of sellers in this regard have yet to be realised, and more muted supply growth both in New Zealand and the northern hemisphere looks set to limit the immediate downside risk.

Farmgate prices have followed the improving trend on the Global Dairy Trade (GDT) auction platform since the February *Situation and Outlook* report. Fonterra's most recent forecast flags a range of NZ\$6.30 to 6.60/kg MS (around A\$6.38 to 6.69/kg MS in Australian terms) for the 2018–19 season, whilst Synlait is forecasting NZ\$6.25/kg MS and Westland Milk products a range of NZ\$5.80 to 6.00/kg MS.

Westland's board recently accepted an offer of NZ\$588 million (A\$560m) for the sale of the co-operative to Chinese dairy giant Yili, which already owns Canterburybased processor Oceania Dairy. The sale agreement is subject to shareholder approval (anticipated in July), and guarantees farmer shareholders a minimum of the Fonterra farmgate milk price for 10 seasons, commencing August 2019.

Local sources suggest that in general, New Zealand's farmers are well placed as the 2018–19 season winds down and preparations for 2019–20 begin. NZX analysts are forecasting growth of three per cent for the 2018–19 season ending May. This implies a further slowing during the final two months, but an overall season record of 22 billion litres.

AUSTRALIAN INDUSTRY

Milk production

Australia's milk production continues to trail 2017–18 levels. The year-to-date decline has worsened steadily over the course of the season but has remained within expectations established at the time of the forecast published in February. At 6.7 per cent, the drop for the season to date remains above the seven per cent to nine per cent full season drop envisaged at that time, and while it will fall into this range shortly, a drop greater than nine per cent is considered unlikely.

Dry conditions dominated most regions through autumn, until relief arrived in the form of several widespread rainfall events from late April onwards. By mid-May, most dairy regions had experienced at least one significant rainfall event, and the majority of cropping areas also registered an autumn break. Whilst little change to the current 2018–19 trajectory is expected, this rain will help establish pastures, give the winter grain crop a kick-start, and provide a boost to confidence for the season ahead.

Queensland and NSW have benefited from good rainfall across most areas from March, although high feed prices continue to strain cashflow. Many farmers have also received supplementary increases to farmgate milk prices, following the addition of a 10 cent per litre price increase for private label white milk. Data from the recent supplementary NDFS survey suggests confidence has improved over recent months, however these regions remain well below the national average, along with northern Victoria.

Northern Victoria continues to record substantial yearon-year declines in milk production, with the effect exacerbated by a strong second half of 2017–18. Water prices and availability dominate sentiment, with confidence deteriorating as prices have steadily increased. Quantifying this, the May NDFS supplementary survey suggests overall confidence has fallen eight per cent since the February survey – an unsurprising contrast to all other regions (except WA).

Many farms have reduced herd numbers in stages as feed availability has declined, and research suggests exits are likely to continue at a steady pace, particularly if conditions fail to improve. This region remains a key battleground for milk, and the divergence between southern and northern Victorian pricing appears increasingly entrenched. Nonetheless, the widespread second half culling and exits suggest a significant 'hangover' next season, with a shortage of cows likely to drive further milk production drops in 2019–20, even if terms of trade improve markedly.

A timely autumn break has provided a kick-start for south-west Victoria, buffering the impact of high purchased feed costs. Cashflow remains an issue for many farmers however, and milk production has continued to slip in year-to-date terms as culling is carried out in response. Similarly across the border in South Australia, year-on-year production trends have worsened but the state seems better placed than most to capitalise on improvements to terms of trade in 2019–20. Farmers in both regions appear relatively confident as the season winds down, more so in May than February, and more overall than any region apart from Tasmania.

While the south-west of Victoria has exceeded production expectations, Gippsland has fallen well behind over summer. Many irrigators in the Macalister Irrigation District (MID) have seen water availability fall short of requirements, and those areas to the east, and south have struggled to overcome a challenging start to the season. The west and south-west have fared better, but high purchased feed prices have weighed heavily on profitability. Looking ahead, these regions will most likely bounce back quickly if autumn rainfall is followed up with lower feed costs. The MID will depend on strong inflows into Lake Glenmaggie, and drier rain-fed regions will have a slower road to recovery. Overall confidence results from the April supplementary NDFS suggest a resilient farmer base, however it is likely that there are diverse pockets within the regional result, as described above.

Tasmania has continued to see slowing milk production due to the previously noted pressures of a drying season and increasing grain prices. Recent rains have brought wet conditions and even waterlogging to parts of the north-west, whilst eastern Tasmania remains dry. Although the remainder of the current season may see year-on-year drops against a very strong 2017–18, the state appears well placed for a strong 2019–20.

WA has followed a relatively consistent milk production track below the 2017–18 season, after a challenging start to the season, and pressure on feed prices from east coast demand. Strong numbers from 2017–18 are expected to maintain the pressure on year-on-year comparisons, but with timely rainfall, WA is another state that could consolidate or grow production in 2019–20.



Confidence, as measured by the supplementary NDFS, may suggest a lean towards consolidation, however. In contrast to most other states, WA farmers re-interviewed in May expressed a significantly (19 per cent) lower level of confidence overall, with a resounding 67 per cent noting farmgate price as a factor in this. This compares with a 17 per cent average nationally, against a backdrop of firming east coast milk prices.

Dairy Australia's national forecast for 2018–19 milk production remains unchanged. The forecast is for a decrease of between seven per cent and nine per cent relative to 2017–18, implying a total of between 8.45 and 8.65 billion litres. For 2019–20, Dairy Australia's initial forecast anticipates a further drop of between three per cent and five per cent, for a total of 8.1 to 8.3 billion litres.

ERWCII

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

- Milk prices remain relatively high in historical terms, however the prospect of further increases for this season appears to be retreating, in favour of earlier opening price announcements from some processors
- High input costs have more than outweighed the margin relief delivered by a strong dairy market, leaving many

farmers in a difficult cashflow position. Although prices for key inputs are likely to moderate in 2019–20, the first half of the season is expected to remain challenging

• The upcoming 2019–20 season looks set to offer substantially higher pricing than the current season, but heavy culling and tight feed inventories will constrain many farmers' opportunities to capitalise.

Corporate developments

Whilst limited milk supplies and higher farmgate pricing slowed corporate investment, some noteworthy developments have occurred. Saputo Dairy Australia (SDA) has continued its expansion in the Australian dairy industry, acquiring Lion Dairy & Drinks' speciality cheese brand. The deal, worth \$280 million, is awaiting approval from the Australian Competition and Consumer Commission (ACCC) and the Foreign Investment Review Board. The purchase is expected to be approved later this year and includes brands such as King Island Dairy, Mersey Valley, South Cape and Australian Gold. If approved, SDA will also acquire two manufacturing plants on King Island and a cheese-making plant in Burnie, Tasmania. The most recent takeover is part of the Canadian company's rapid expansion, directly following the purchase of the UK's Dairy Crest earlier this year and Murray Goulburn in 2018.



Figure 15 Export region weighted cost and income indices

Source: Dairy Industry Farm Monitor project, Dairy Australia analysis



In other news, Fonterra is reviewing its relationship with Bonlac Supply Company (BSC). BSC was formed in 2000, following Fonterra's acquisition of the Bonlac Foods business. BSC was established to represent all dairy farmers who supply milk to Fonterra Australia. The current supply arrangement between BSC and Fonterra Australia is set to expire at the end of 2019. Fonterra Australia has acknowledged that circumstances have changed considerably since the establishment of BSC. While Fonterra Australia has indicated the current BSC arrangement is up for review, they have suggested that they will continue to fund BSC.

The decision originated from a review of the company's factory capacity and location. According to Bega Cheese, the factory was no longer viable to support future growth

Incremental consolidation in processing capacity has continued, as various plants have operated at under capacity following the continued decline of the overall milk pool. In late February 2019, Bega Cheese announced the closure of their cheese processing plant in north Coburg, Victoria. The factory produced cheddar and mozzarella cheese for Bega Cheese private label and for the food service sector. Bega had owned the plant since 2009, and it was closed immediately following the announcement. The decision originated from a review of the company's factory capacity and location. According to Bega Cheese, the factory was no longer viable to support future growth.

In May 2019, Fonterra Australia announced the closure of their Dennington factory in south-west Victoria. All operations in the factory are set to be suspended later this year and the milk processed at Dennington will be moved to the Cobden plant. Fonterra Australia acquired the Dennington plant in 2005 and due to lower milk intakes, the Dennington factory is currently underutilised. Fonterra Australia described their decision as part of a push to direct milk to higher value commodities, to generate better returns for the business.

Freedom Foods have commenced production of Lactoferrin at their Shepparton plant. Lactoferrin is a protein found in both human and cow milk and is considered important for the body's immune system. The protein is used in nutritional foods, such as infant formula and sports nutrition. Freedom's Shepparton plant is capable of producing 16 tonnes of Lactoferrin per year, and the company expects sales of the product to commence mid–2019.

Policy updates

While this season has seen considerable volatility in milk production, the post-farmgate sector has also seen a multitude of policy developments.

In the lead up to the Federal election, both parties announced a range of policies that would impact the dairy industry. The Coalition pledged \$22 million to various projects, aimed to improve profitability for dairy farmers. Following the results of the May 18th election, these policies are likely to see implementation from mid-year onwards. One item is the creation of a milk market trading platform with Australian Dairy Farmers (ADF), aimed at increasing price transparency and flexibility, and giving farmers more choices in sales contracts. Another promise was the introduction of a dairy specialist working with the ACCC. The Coalition also pledged to increase funding to the ACCC agriculture unit and to appoint a 'dairy specialist' within the ACCC. The purpose of this specialist is to be a 'dedicated voice for the industry' and to ensure compliance with the Mandatory Code of Conduct.

In other news, amendments to gene technology regulations will clarify the regulatory status of organisms developed using a range of new technologies. The Australian dairy industry supports the deregulation of the gene edit 'delete' technique in plant breeding. This was the recommendation of Australia's Gene Technology Regulator following extensive scientific review establishing safety to human health and the environment. An example of the technique being employed is by DairyBio, to increase the digestibility of perennial ryegrass. The dairy industry welcomes the decision by the Legislative and Governance Forum on Gene Technology and looks forward to the decision's smooth passage through parliament as the final step in removing this regulatory burden from research and development for dairy farmers.

Australia and the EU commenced negotiations toward a free trade agreement (FTA) in mid-2018. For many Australian agricultural commodities, a FTA will provide an opportunity to improve market access arrangements to an important export market destination. However, for Australia's dairy industry, there is a risk posed by the EU's interest in protecting food names with European origin, many of which the dairy industry and consumers consider to be common food names, such as feta, halloumi and parmesan. The EU's approach in recent trade negotiations with other countries suggests one of its clear objectives for any FTA with Australia will be to extend the protocols and protections for geographical indications (GIs). GIs are food products whose name incorporates a specific place of origin or possesses specific characteristics. Similar rules exist for the wine industry (such as restricting the use of the terms champagne and burgundy) and it is anticipated that the EU will push for Australia to introduce rules that restrict the future domestic production and sale of food products with names that are recognised as GIs under internal EU regulations.

Australia and Peru finalised negotiations for a bilateral free trade agreement on 12 February 2018 ... The dairy industry is now urging parliament to complete domestic ratification and enter the agreement into force as soon as possible

In the last couple of months several developments have occurred concerning Australian trade agreements with Peru and Hong Kong. Australia and Peru finalised negotiations for a bilateral free trade agreement on 12 February 2018. Both countries have been following their own domestic treaty making processes before the Peru-Australia Free Trade Agreement (PAFTA) can enter into force. On 22 February 2019, Peru completed their domestic ratification process. The dairy industry is now urging the Australian Parliament to complete domestic ratification and enter the agreement into force as soon as possible.

Australia and Hong Kong announced the conclusion of negotiations on the Australia-Hong Kong Free Trade Agreement on 15 November 2018. Both sides will 'scrub' the full text of the agreement, to verify its accuracy and internal legal consistency. Once the scrub has been completed the agreement will be ready for formal signature. The full text of the agreement will be released publicly once it has been signed.

To receive updates on the Australia–EU FTA negotiations and geographical indications, subscribe at **dairyaustralia.com.au**.

APPENDIX

NDFS trend data

Table A Feed system trend (per cent)

	2015	2016	2017	2018	2019
Pasture only	4	3	3	3	3
Pasture + low concentrates	19	13	20	17	17
Pasture + moderate to high concentrates	64	67	60	64	58
Pasture + partial mixed ration (more than 9 months of year)	7	11	12	8	11
Pasture + partial mixed ration (less than 9 months of year)	5	5	3	6	7
Total mixed ration	1	1	1	2	2

Table B Processor changes trend (per cent)

	2015	2016	2017	2018	2019
Changed supplier in past 12 months	10	4	11	17	25
Considering changing supplier	7	6	9	14	10

Table C Calving system trend (per cent)

	2015	2016	2017	2018	2019
Seasonal	38	38	39	40	38
Split/batch	36	38	38	36	37
Year round	25	24	23	24	25

The regional summaries that follow reflect the NDFS results for the eight dairy regions throughout Australia.

GippsDairy

Confidence continues to trend downwards and is now at its lowest level on record. Low farmgate prices and growing concerns with input costs, drought and irrigation are key drivers of negativity and these are expected to continue over the next six months.

While 70% of the region's respondents were profitable in 2017–18, a significantly lower proportion (53%) expect to be this year. Profit lower than the 5-year average is anticipated to be more widespread than last financial year.

Since 2018, a significantly higher proportion of farms have destocked (18%, was 6%) and production reduced on 32% of the region's farms (up from 8%).

Over the next 12 months, herd sizes are predicted to remain static on the majority of farms, however almost one third expect to increase and only 8% anticipate a decrease.

Sentiment





Profitability and investment

70%	Made profit 2017–18	86%	Invested on farm 2017–19
53%	Expect profit 2018–19	76%	Intend to invest 2019–21
15%	Profit higher than 5-year average	27%	Invest in machinery
34%	Profit about same	19%	Invest in dairy plant
49 %	Profit lower than 5-year average	17%	Invest in land

Next 6-months' challenges per cent



Current herd size and production



Forecast herd size and production



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers

Demand for dairy	
Expect favourable weather	
mproved management	

Negative drivers Farmgate price low Input costs Irrigation/drought 10%

Regional profile

Enterprise phase per cent



The 'average' GippsDairy farmer

59% No to su 56% Pc ov



69 %	Feeds moderate to high level of concentrates
1.5t	Average grain fed

per cow per year

Dairy NSW

Growing concerns with milk price, input costs (including grain) and irrigation and drought have resulted in confidence among respondents falling a significant 17 points to 28%.

Similarly, less than half of the region made an operating profit in 2017–18 and only one quarter expect to be profitable this financial year.

Challenges with input costs, feed, milk price and climate are expected to continue to be an issue for the vast majority of respondents over the next six months.

Herd sizes have reduced on a significantly higher proportion of the region's farms than in 2018 (21%, was 8%) and 31% experienced a decrease in production (up from 17%).

Sentiment

Current sentiment per cent



Sentiment trend percentage positive



Profitability and investment

49 %	Made profit 2017–18	84%	Invested on farm 2017–19
24%	Expect profit 2018–19	64%	Intend to invest 2019–21
8%	Profit higher than 5-year average	33%	Invest in machinery
12%	Profit about same	17%	Invest in irrigation
80%	Profit lower than 5-year average	13%	Invest in dairy plant



Current herd size and production



Forecast herd size and production

Anticipated change in herd size 2019–20 vs. 2018–19 per cent



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers

Demand for dairy Improved management Optimistic outlook



2017

2018 2019

Regional profile

Enterprise phase per cent



The 'average' Dairy NSW farmer





DairySA

Confidence in the industry has decreased significantly over the past year, resulting in 24% of respondents positive.

Low farmgate prices remain the most commonly mentioned driver of negativity, however, production and grain costs are a concern for substantially more respondents than in 2018.

Profitability has declined over the past two years and only 39% of the region's respondents expect to be profitable this financial year.

1 in 10 respondents plan to exit the industry, the highest result nationally.

Herd sizes reduced on 27% of respondent farms (up from 8% in 2018) and production decreased on a similar proportion.

Sentiment



Sentiment trend percentage positive



Profitability and investment

66%	Made profit 2017–18	71%	Invested on farm 2017–19
39 %	Expect profit 2018–19	53%	Intend to invest 2019–21
11%	Profit higher than 5-year average	1 9 %	Invest in machinery
21%	Profit about same	16%	Invest in irrigation
61%	Profit lower than 5-year average	13%	Invest in dairy plant

Next 6-months' challenges per cent



Current herd size and production

Herd size per cent



Forecast herd size and production



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers

Improved management Farmgate price ok Demand for dairy

Negative drivers 10% Farmgate price low 43% 9% Cost of production 27% 7% Increased grain price 14%

Regional profile

Enterprise phase per cent



The 'average' DairySA farmer



to change company supplied 36% Positive towards own business future

67% No change/intention

61%	Feeds moderate
	to high level
	of concentrates

1.8t Average grain fed per cow per year

DairyTas

Respondents in this region remain the most likely to be fairly to very positive in the industry's future, but this proportion is trending downwards and is considerably lower than in 2018.

Negativity this year is significantly more widespread due to increased input and grain costs. Milk price continues to be an issue.

Profitability in 2018–19 is expected to be on par with 2017–18 (79%), meaning the region's respondents are significantly more likely to be profitable than their counterparts.

In line with 2018, respondents were the most likely to increase herd size over the past year (42%) and the highest proportion nationally increased production (48%).

Sentiment



Sentiment trend percentage positive



Profitability and investment

79%	Made profit 2017–18	85%	Invested on farm 2017–19
79%	Expect profit 2018–19	73%	Intend to invest 2019–21
29 %	Profit higher than 5-year average	51%	Invest in irrigation
34%	Profit about same	13%	Invest in dairy plant
36%	Profit lower than 5-year average	12%	Invest in machinery

Next 6-months' challenges per cent



Current herd size and production

Herd size per cent



Forecast herd size and production

Anticipated change in herd size 2019–20 vs. 2018–19 per cent



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers

 Improved management
Low input/cost farm
Currently contracted



2017 2018 2019

Regional profile

Enterprise phase per cent



The 'average' DairyTas farmer



58% Feeds moderate to high level of concentrates
1.5t Average grain fed per cow per year

Murray Dairy

Issues with cost and availability of irrigation water, dry conditions and increased production costs (including grain) have led to a significant decrease in respondents' confidence in the industry's future.

As a result, negative sentiment (65% of respondents) is significantly more widespread than in other Victorian regions and results suggest the current challenges are expected to continue over the next six months.

For the second time in 3 years, profitability among businesses is expected to be the least widespread nationally, at 21%.

Compared to 12 months ago, herd numbers have reduced on 40% of farms and production decreased on approximately half of farms (both results the highest nationally).

Sentiment



Sentiment trend percentage positive



Profitability and investment

60%	Made profit 2017–18	79%	Invested on farm 2017–19
21%	Expect profit 2018–19	65%	Intend to invest 2019–21
6%	Profit higher than 5-year average	23%	Invest in irrigation
12%	Profit about same	18%	Invest in land
81%	Profit lower than 5-year average	17%	Invest in machinery

Next 6-months' challenges per cent



Current herd size and production



Forecast herd size and production

Anticipated change in herd size 2019–20 vs. 2018–19 per cent



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers Demand for dairy

Industry exits mean less competition Improved management



Regional profile

Enterprise phase per cent



The 'average' Murray Dairy farmer



48% Feeds moderate to high level of concentrates1.6t Average grain fed ber cow per year

Subtropical Dairy

Since 2015, confidence has trended downwards and it is now the lowest on record. Farmgate price, climate and input costs (including grain) are key drivers of negativity for a growing proportion of respondents.

While approximately two thirds (65%) of respondents made a profit in 2017–18, considerably fewer expect to be profitable in 2018–19 (28%).

Over the next 6 months more than two thirds of respondents expect to face challenges with input costs, feed shortages and the climate.

Compared to 2018, a significantly higher proportion of farms destocked (30%, up from 5%) and reduced production (41%, was 10%).

Sentiment

Current sentiment per cent



Sentiment trend percentage positive



Profitability and investment

65%	Made profit 2017–18	75%	Invested on farm 2017–19
28%	Expect profit 2018–19	60%	Intend to invest 2019–21
5%	Profit higher than 5-year average	20%	Invest in irrigation
12%	Profit about same	18%	Invest in machinery
79%	Profit lower than 5-year average	12%	Invest in dairy plant

Next 6-months' challenges per cent



Current herd size and production



Forecast herd size and production



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers
Demand for dairy
Improved management

Negative drivers Farmgate price low Cost of production Irrigation/drought 29%

Regional profile

Currently contracted

Enterprise phase per cent



The 'average' Subtropical Dairy farmer



to change company supplied 27% Positive towards own business future

78% No change/intention

- 50% Feeds moderate to high level of concentrates
- 1.5t Average grain fed per cow per year

Western Dairy

While confidence among respondents was unchanged in 2018, negativity this year is significantly more widespread.

Over the next six months, input costs and feed costs and availability are expected to be a challenge for the majority of the region's respondents.

Profitability in 2018–19 is expected to be considerably less widespread than in 2017–18 and more likely to be lower compared to the 5-year average.

Over the past year, herd sizes typically remained static and the majority of respondents expect this to continue over the next 12 months.

Sentiment



Sentiment trend percentage positive

- Western Dairy National



Profitability and investment

85%	Made profit 2017–18	91%	Invested on farm 2017–19
60%	Expect profit 2018–19	85%	Intend to invest 2019–21
8%	Profit higher than 5-year average	43%	Invest in machinery
23%	Profit about same	18%	Invest in dairy plant
68%	Profit lower than 5-year average	18%	Invest in cows/bulls



Current herd size and production

Herd size per cent



Forecast herd size and production

Anticipated change in herd size 2019–20 vs. 2018–19 per cent



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive drivers		Negative drivers	
Improved management	15%	Farmgate price low	
Demand for dairy	5%	Cost of production	
Farmaate price ok	5%	Increased grain price	





The 'average' Western Dairy farmer



to change company supplied 48% Positive towards own business future

70%	Feeds moderate
	to high level
	of concentrates
2.3t	Average grain fed
	per cow per year

40%

25%

13%

WestVic Dairy

While confidence in the industry's future among respondents has continued to trend downwards, the decrease since 2018 is not significant.

Over the next six months a considerably higher proportion of respondents than in 2018 anticipate challenges through input costs and feed availability and cost.

68% of respondents made a profit in 2017-18, but a slightly lower proportion expect to be profitable this financial year (60%). Additionally 6 in 10 farms expect profit levels to be lower than the 5-year average.

Over the past 12 months, herd sizes have typically remained static (62%), but one quarter of the farms increased numbers and 13% destocked. Similarly, production was unchanged on half of the region's farms, but a significantly higher proportion than in 2018 reported decreases (25%, was 8%).

Sentiment



Sentiment trend percentage positive



Profitability and investment

68%	Made profit 2017–18	78%	Invested on farm 2017–19
60%	Expect profit 2018–19	75%	Intend to invest 2019–21
16%	Profit higher than 5-year average	28%	Invest in machinery
22%	Profit about same	15%	Invest in irrigation
60%	Profit lower than 5-year average	14%	Invest in land

Next 6-months' challenges per cent



Current herd size and production



Forecast herd size and production

Anticipated change in herd size 2019–20 vs. 2018–19 per cent



Anticipated change in production 2021–22 vs. 2018–19 per cent



Positive driversImproved management12%Pemand for dairy8%Cost



Regional profile

Currently contracted

Enterprise phase per cent



9%

The 'average' WestVic Dairy farmer



60% Feeds moderate to high level of concentrates1.5t Average grain fed per cow per year

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