

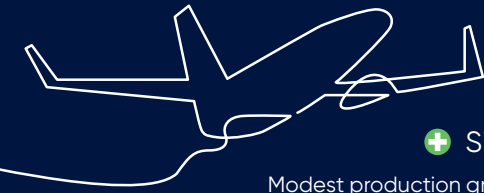
DAIRY SITUATION AND OUTLOOK

DECEMBER 2019



SEVEN KEY DRIVERS

OF THE AUSTRALIAN DAIRY INDUSTRY



Global supply

➕ Situation ⚪ Outlook

Modest production growth has been noted in key global dairy exporting regions. The United States and Europe are expanding by approximately 1%, while New Zealand is slightly behind last season's record October production. Overall, supply from the three key exporters are expected to grow by around 1% this year.

Australian market

⚪ Situation ⚪ Outlook

Australian supermarkets provide a stable market for dairy products. Value growth has been reported for all major products, especially for liquid milk. Over the past year, milk sales contracted 1.4% in volume but increased 3.5% in value. This was mainly driven by an increase in the average retail price of private label milk.



Global demand

➕ Situation ⚪ Outlook

Global demand for dairy remains strong as trade continues to increase, especially to China. Growth in demand for powders is particularly contributing to this strength, with SMP and WMP exports rising 7.4% and 6.5% respectively. Strong commodity prices are also seeing an increase in the value of this trade, up 4.5% in the 12 months to September 2019.

Inputs

➖ Situation ➖ Outlook

An unfavourable finish to what began as a promising year, has pushed national feed production lower for large parts of the country. Hay and grain prices remain historically high, despite easing from last year, while the lack of water availability sustained elevated irrigation prices. Overall high input costs have further pinched margins, prompting an increase in culling.



Global economy

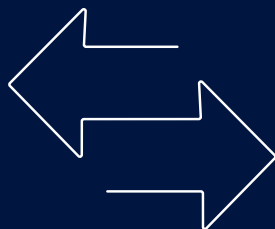
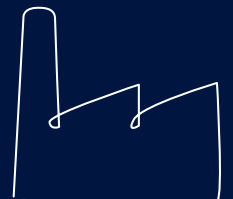
➖ Situation ⚪ Outlook

Global growth has continued to slow in the second half of 2019 and is on track to finish the year at the lowest rate since the global financial crisis. Ongoing geopolitical tensions continue to cast doubt over world trade. The International Monetary Fund downgraded their global growth forecast to 3% for 2019, while indicating a slight increase next year.

Australian production

➖ Situation ➖ Outlook

Milk production has continued to decline over spring, as conditions on most farms remain challenging. Further reduction in the national herd is predicted this year, and a forecast decrease of 3% to 5% in milk production has been reaffirmed.



Exchange rates

➕ Situation ➕ Outlook

Australian exporters continue to benefit from a relatively weak Australian dollar. This is supported by unstable global economies and unpredictable macroeconomic policy. While gaining some momentum in November, the Australian dollar is forecast to remain at current levels for the balance of the year.

➕ Positive ⚪ Neutral ➖ Negative

EXECUTIVE SUMMARY

While the end of a year normally signifies a busy time for the industry, it has been amplified by considerable external pressure to implement changes. Whether through political debate, government inquiry, proposed policy change, and related media coverage, the industry is under significant scrutiny. At the same time, operating conditions for dairy farms are mixed across the country. Farmers in part of southern Australia are experiencing a highly favourable season with plentiful pasture growth and many have been able to capitalise on a strong farmgate milk price. In comparison, those further north continue to face ongoing challenges.

For these farmers, ongoing drought, fires and high input costs have affected sentiment and made 2019 a tough year, especially in northern Australia. Weather forecasts predict another drier than average season for eastern Australia which, if realised, will further impact sentiment in drought-affected regions.

A clear north-south divide has emerged in purchased feed availability this season. Feed prices have eased slightly compared to last year, however, remain historically high and account for a larger share of total cost of production, according to Dairy Farm Monitor Project data. An unfavourable finish to spring has seen large areas of grain crop written off or cut for hay through Queensland, New South Wales (NSW) and northern Victoria. Northern Australia will therefore rely on the south for feed this year, which will maintain pressure on prices. In Western Australia (WA) feed prospects have diminished due to dry conditions and severe frosts. In comparison, southern Australia is faring much better, with southern South Australia (SA) and Victoria emerging as key states for feed production. Many farmers acted early this year to grow and secure feed following last year's shortage, which has seen fodder availability improve.

Notwithstanding the year-on-year improvements in southern feed markets, challenges on-farm in some regions have not eased.

Driven by the ongoing high cost of feed and water, milk production continues to contract in northern Victoria and east Gippsland. In NSW and Queensland, the severity of the drought is keeping expenses elevated and milk production suppressed. In WA higher fodder costs, in combination with steady-to-slightly lower milk prices, have compressed margins and are weighing on production. Conditions are more favourable in most of south-west Victoria, south-east SA and parts of Gippsland, as rain boosted pasture growth and resulted in milk production increases in Gippsland. At the same time, farm exits have reduced milk production in south-west Victoria and SA. Further south, reasonable conditions are keeping production steady in Tasmania, however, reduced rainfall in spring caused some concerns.

Despite promising conditions in southern Australia, ongoing challenges further north have seen the national herd shrink further, which will continue to impact milk production.

Dairy Australia has reaffirmed its full season production forecast, estimating milk production will decrease between 3% to 5% to 8.3 to 8.5 billion litres in 2019-20.

Australia's shrinking milk pool is affecting the whole industry, with pressure on processors to secure sufficient milk flows. With factories operating below capacity, several manufacturers have announced step-ups and competition remains fierce. Consolidation has also continued, with Mengniu's proposed acquisition of Bellamy's Organic and Lion Dairy & Drinks, the latest development.

While the Australian dairy industry faces challenges, global markets remain well balanced and supportive of steady-to-higher commodity prices, especially for powders. A relatively weak Australian dollar is also boosting Australia's competitiveness in export markets and allowing exporters to capitalise on higher prices. Trade disturbances, supply growth and the possibility of a global economic downturn still pose risks to the current balance.

Slower-than-forecast growth of global supply of dairy has so far been conducive to the higher pricing. Growth in United States (US) milk production has accelerated slightly, hitting 1.3% for October and 0.3% for the calendar year-to-date. Texas and the Midwest have driven this resurgence, whilst milk production declines in eastern states have slowed. Although the national milking herd remains well below last year's levels, large increases in per-cow production are more than compensating.

Milk intakes in Europe have followed a similar track, with year-on-year growth of 1% during August and early indications of similar numbers in September. This is led by late-season gains in Germany, France and the UK. Closer to home, New Zealand milk production in October fell 0.7% short of last year's record, but still represents ample product availability. Sub-1% full-year growth remains the outlook across all three exporters, however signs of a potential recovery in supply in 2020 are gradually building.

Increased demand for dairy, especially out of China, has so far helped to soak up additional supply growth. Exports to China grew 10.5% in volume over the 12 months to September, while overall global trade increased 4.4%. This was mainly driven by an increase in powder and liquid milk shipments. Demand growth is encouraging; however, trade disputes continue to cause instability. These disputes have seen traditional trade patterns change and increased competition in Asian markets, at a time when Australian product availability remains scarce.

Australia's domestic market also continues to deliver value growth opportunity for the dairy industry. Value growth is consistently reported for all major dairy products sold in Australian supermarkets and in the past year, milk sales value especially increased. While sales of milk contracted 1.4% in volume, value grew 3.5%, predominately due to the higher average price of private label milk. Simultaneously the average retail price of other products, such as cheddar cheese and UHT milk, also increased.

While tempered by well-balanced global markets and domestic value growth aside, current challenges are dominating the short-term outlook for Australian dairy. High costs of production continue to affect profitability, despite the strong farmgate milk price, and milk production will likely decline further. For some farmers, expensive feed will be a nuisance in an otherwise good year; for others it will represent an ongoing burden as they wait for the drought to break. As political and policy processes play out for the industry and the global commodity cycle slowly begins to turn, dairy farmers will continue to seek relief from the ongoing high cost and shortage of feed on-farm.





HARVEST AND PURCHASED FEED UPDATE

High purchased feed costs have now impacted milk production for two consecutive years and are having a significant impact on the capacity for Australian milk production to recover.

Last financial year, Australia produced less than nine billion litres of milk – the smallest volume since 1996. Many factors shaped the second-largest annual drop in national milk production, although 64% of dairy farmers acknowledged feed costs and availability as a key concern, according to the National Dairy Farmer Survey. This demonstrates the importance of purchased feed in Australian dairy farming and the influence prices can have on milk production. As harvest is underway in the southern regions and all but finished in northern Australia, now is a good time to assess the current progress and outlook for next year.

The relentless drought has impacted Australia's hay and grain production for two consecutive years. Following one of the largest hay and grain harvests in recent times in 2016-17, Australia's crop production declined significantly in 2018-19. The onset of dry conditions throughout 2017 and rapid depletion of hay and grain stocks caused the feed market to surge from early 2018. Since then, grain and hay production has endured back-to-back challenging seasons and prices have been elevated since.

While easing from last year's peaks, prices remain well above the historical averages in most regions. Diminishing crop prospects locally and ongoing geopolitical influences overseas have cast some doubt over the outlook. Nevertheless, many remain optimistic that prices will not again reach the lofty heights of last year.

The 2019 winter crop has been varied across the country. There has been a steady divide between the north and the south on the eastern seaboard, and more recently in WA.

As of the start of spring, grain production was forecast to increase 11% year-on-year (according to the ABARES September crop report). However, an unfavourable finish caused predications to be scaled back. At to the time of writing, grain volumes are expected to be down 3% year-on-year, to approximately 29 million tonnes.

Wheat is accounting for a large proportion of the downgrade from last season, falling by 8%. Barley production is anticipated to increase moderately compared to last year but remains 11% below the five-year average. Canola production is down 4%, following a significantly low yield last year therefore production is considerably lower than average.

The volume of hay produced remains variable across different regions but is expected to be higher than last year, particularly in south-eastern Australia, where on-farm stocks are strong. Frost presence and a lack of soil moisture stressed canola and cereal crops, which were subsequently cut for hay, in turn increasing supply. It is hard to estimate how much of this will enter the market as many growers (including many dairy farmers) are indicating they will fill empty hay sheds before selling.

Figure 1 Australia's winter crop production

	2019-20 (t)	Year-on-year percentage change	5-year average percentage change
QLD	678	-5	-62
NSW	3,616	26	-62
SA	6,279	19	-14
VIC	7,184	92	22
WA	11,550	-35	-27
Australia	29,405	-3	-27

Source: ABARES (unit Kt)

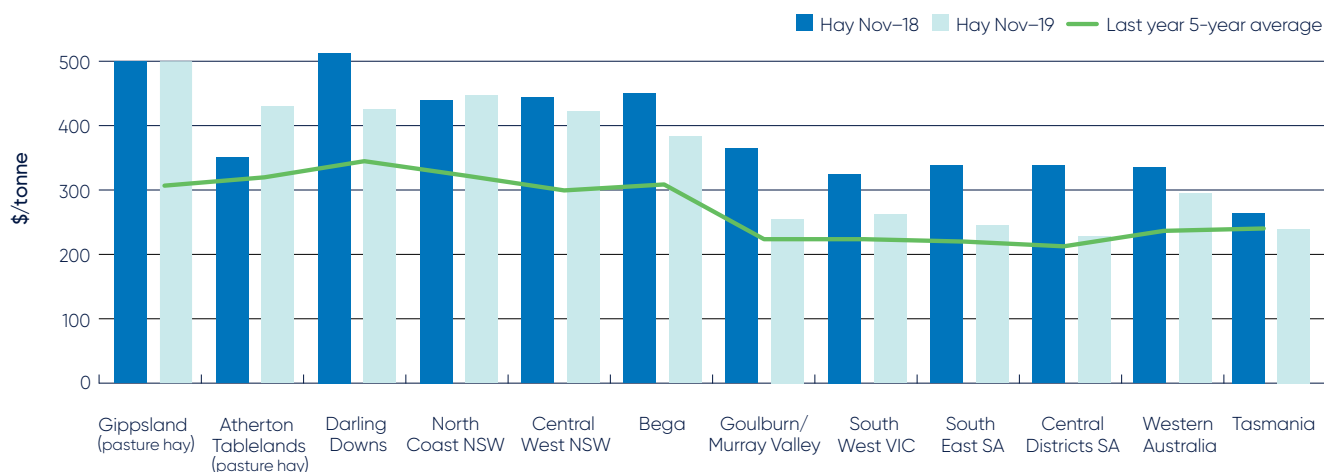
WA accounted for a large proportion of the recent harvest downgrade, as climatic forces damaged crops and harvest failed to meet expectations. Initially, WA received favourable growing conditions in the months leading up to spring and was on track for another noteworthy season. Dry conditions and severe frost in September caused harvest to be scaled back. At the time of writing, grain production is now forecast to be 35% below last year and overall yields of hay are also down.

This trend follows a productive year which helped supply the eastern states' feed requirements. With a smaller volume of feed made in this region and an above average harvest in Victoria, it is unlikely this year will see the same volume of transshipments to the eastern states.

The eastern seaboard has shown a strong north-south divide throughout the year. The Murrumbidgee River has been commonly referenced as the divider between production expectations between the eastern states. Victoria, SA and southern NSW all experienced a very good start to the season, while northern NSW and Queensland remained dry. For the northern states it's been a very challenging year and feed production is expected to be considerably down.

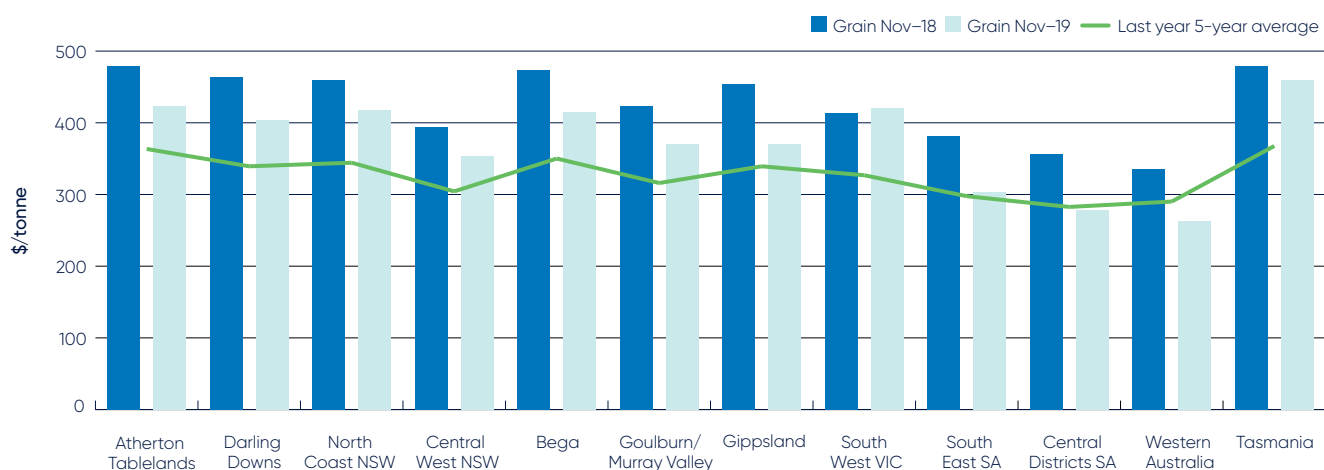
There has been limited hay and grain produced and northern Australia will rely on the south to supply the shortfall this year. With a lack of rain and low soil moisture, concerns extend to the summer crops. Queensland's sorghum crop has been flagged due to low stocks and below average area planted, down 48%. Further south, the NSW harvest has improved compared to last year but remains well below long-term averages. ABARES has estimated NSW grain production to be up 26% year-on-year but 62% below the long-term trend. The lack of rain, particularly in central and northern NSW in the previous three months, has been detrimental for both winter and summer crops.

Figure 2 Average cereal hay prices by region



South of the Murrumbidgee River is faring much better than northern regions. Victoria has emerged as the key state for feed production this year and combined with SA, is expected to supply most of the northern deficit. Demand for hay remains strong, mostly coming from outside the region. Fodder is being transported across the country and this is expected to continue throughout the year. Currently, prices have been steady to slightly softer, the market should show a better indication to the price direction once baling finishes in the south. Total grain production in SA is 19% up on last year. Victoria is the key growing region this year and is expected to be up 92% year-on-year to a total of nearly 7.2 million tonnes. In theory, the market price should structure itself as the Victorian price plus freight for the coming year.

Figure 3 Average wheat prices by region

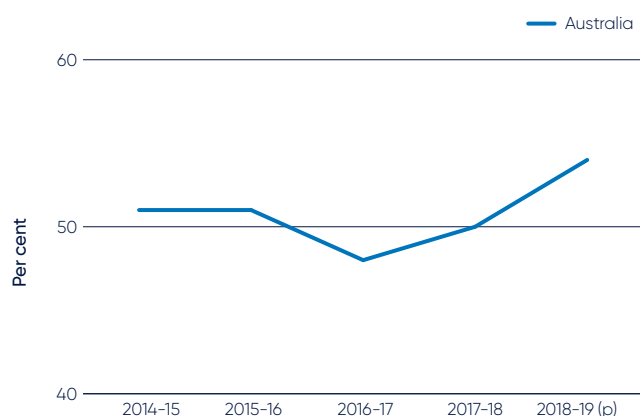


The feed market is currently in a more favourable position than this time last year, despite the ongoing insecurity of varying production. Both hay and grain prices are above the historical averages in nearly all regions but down year-on-year. Once hay making finishes in the south and volumes are fully realised, the market will have a stronger price direction.

Grain prices haven't shown the normal downside pressure from harvest, although more is expected as it moves further south where most of the volume rests. It has been noted that growers will potentially be more inclined to sell this year compared to holding off like last season; if this eventuates, theoretically it will add some further weakness to the market. Internationally, total grain stocks (wheat and coarse grains) are expected to end down 4%, predominately weighed down by drop in maize. Global wheat stocks are set to reach record levels following an increase in global production, this is expected to keep global prices of wheat low.

Overall, global markets remain well supplied compared to recent years, however, international prices are sensitive to unpredictable developments; these include the trade wars, African Swine Fever and international trade policy. These factors can both underpin global commodity prices and disrupt the usual flow of trade. The international market has some influence on local prices, particularly in WA which is more closely linked to the export market. In saying that, with most of the grain residing in south-eastern states and low production in the north, it is expected that local prices will be driven by interstate demand and climate.

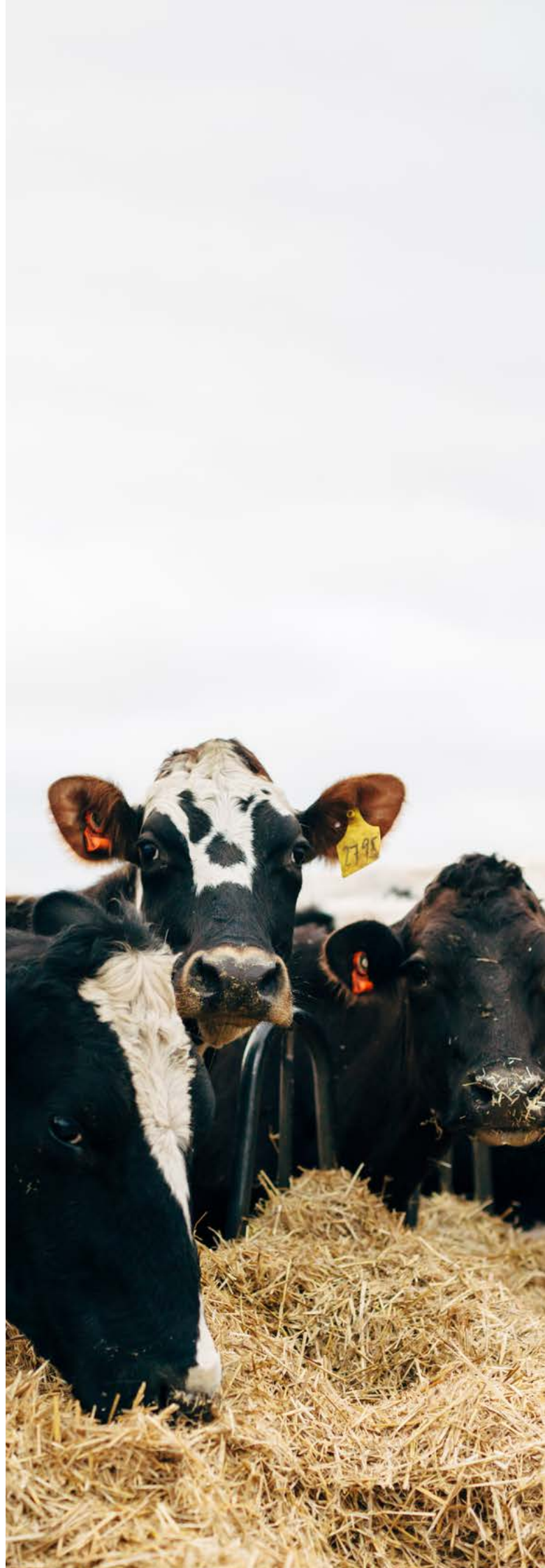
Figure 4 Feed costs: percentage of cost of production



Source: Dairy Farm Monitor Project

So what?

Purchased feed is a staple component to milk production across most Australian dairy farms. The Dairy Farm Monitor Project (DFMP) illustrated that feed costs accounted for 54% of total cost of production in 2018-19. Consecutive dry years have hampered hay and grain production and restrained farmers' ability to access feed. This has ultimately curbed milk production and confidence across the industry. With a new year quickly approaching, any change to feed prices will be crucial for farmers to capitalise on the strong farmgate milk price.



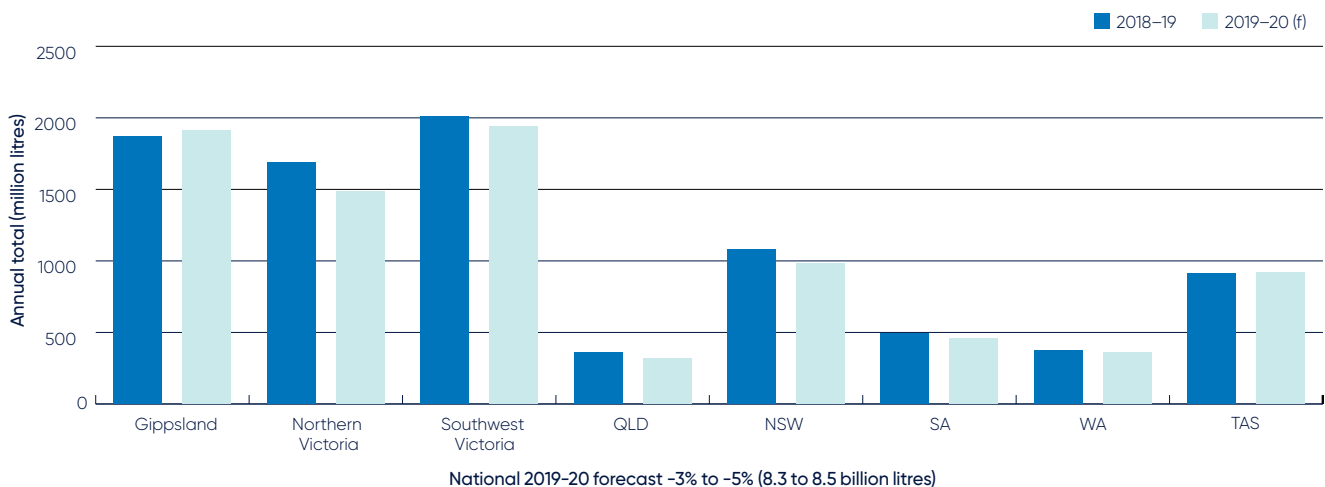
MILK PRODUCTION

WHERE TO FROM HERE?

Following a tough 2018-19 season, Australian milk production has entered 2019-20 with a series of year-on-year monthly declines. Although seasonal conditions have been highly favourable in some regions, milk volumes were down 5.5% nationally for the month of October, and 5.8% for the season to date. It's important to note that the October numbers are only provisional at the time of writing and may still be revised as data is confirmed.

Although hay and grain pricing is currently lower in year-on-year terms, the challenges facing many farmers have not eased to any material extent. Consequently, a sluggish remainder of the season is foreshadowed, and milk volumes are expected to decline accordingly. Dairy Australia has reaffirmed its full season forecast for 2019-20, estimating a 3% to 5% decrease relative to the 2018-19 national total, or a full year range of between 8.3 and 8.5 billion litres. By region, the outlook reflects relatively strong signs in Gippsland, emerging challenges in Tasmania, unexpectedly weak results in southwest Victoria and SA, and the impact of the drought elsewhere.

Figure 5 Actual and forecast milk production by region



With grain, hay and irrigation water prices remaining well above long-term averages (and climbing), the inflation of production costs seen in the 2018-19 season has not moderated substantially for many farmers in northern Victoria, the Macalister Irrigation District (MID) and east Gippsland. In NSW and Queensland, the severity of the drought means that many farmers are even more severely impacted. Parts of these states are entirely reliant on purchased feed, much of which is trucked thousands of kilometres, at significant cost.

In addition to physical and financial impacts, the protracted nature of the drought has continued to depress sentiment. Some farmers in domestic-focused regions are in the process of renegotiating farmgate prices, which has added further financial uncertainty in a high cost environment.

Similarly, in WA, some farmers with expiring longer-term supply contracts are now faced with lower prices.

Others on shorter-term agreements have seen modest increases. For most, inflation of feed costs driven by local and east coast demand have compressed margins.

In south-west Victoria, south-east SA, and much of west and south Gippsland however, seasonal conditions are highly favourable. Some farmers are labelled the spring of 2019 as amongst the best ever, as pasture production benefited from regular rain and mild weather. With high milk prices and good supplies of home-grown fodder, farmers in these regions are likely to be able to navigate another season of high purchased feed costs without significant setbacks. Gippsland has already seen a milk volume increase in year-on-year terms, which is expected to persist despite the challenges in parts of the region.

In contrast, south-west Victoria and SA have continued to see substantial year-on-year decreases in milk volumes.

This is under continued scrutiny considering the favourable seasonal conditions that those regions have been experiencing. However, a significant number of farm exits has been noted, with properties converted (under the same ownership or through sale) to beef or sheep production. Furthermore, sentiment remains fragile and many farmers are adopting more risk averse practices such as maintaining lower herd sizes to reduce purchased feed requirements. Production expectations for these regions have been reduced to reflect the data to date, and the fact that if borne out, such drivers are unlikely to be quickly reversed. Forecasts do anticipate some improvement from the current track however, as well as potential revisions where preliminary data has been used. This is based on greater home-grown feed availability supporting a stronger season shoulder, and higher farmgate pricing driving increased feeding rates and lower (or later) culling.

Tasmania is experiencing a season somewhere in between the mainland extremes, with reasonable conditions but concern around early drying and missed rainfall in October and November. Cold weather impacted the west of the state soon after the spring peak, slowing production.

The preparedness and responsiveness of individual farms will play a key role in influencing the overall full season outcome, as will the occurrence of 'fortuitous' rainfall events, as were reported on several occasions last season. Tasmania's milk volumes are expected to end the season steady to slightly higher.

In export regions farmgate milk pricing remains a significant positive driver, with dairy markets stable and milk processors remaining focused on securing intakes to match their requirements. Announced prices in southern regions are hovering around \$7/kg MS, with widespread reports of significantly higher pricing across a large number of specialist buyers and targeted price offers. Fresh milk regions have experienced less movement, with prices in WA and Queensland remaining steady, despite some exceptions. NSW farmers signing direct retailer supply agreements have seen improvements, and demand for milk to ship north has also produced more attractive pricing for other suppliers.

Cull numbers have remained high, up 10% through saleyards for the season to October. This rate has slowed in month-on-month terms however, suggesting that higher milk pricing and favourable weather in some regions has prompted farmers to hold onto cows. Dairy Australia's baseline forecast assumes continued slowing but higher-than-replacement cull rates, and a 6% smaller herd by the end of the season. Some areas are expected to see a boost in per-cow production due to higher milk prices influencing feeding decisions, whilst others will be flat due to lower quality feed and/or financial constraints limiting options.

Farm exits in the 2018-19 season totalled 9% of the total population, with the eastern states experiencing the highest rates of exit. Whilst these exits generally represent a mix of consolidation and genuine removal of productive capacity, available evidence suggests that the latter is more significant at present. Drought-related exits and sales to larger institutional investor-backed buyers are well publicised, but similarly, reports of dairy farm sales to sheep and beef producers in the Heytesbury and other parts of western Victoria are growing. Farm numbers are far less correlated with milk production than cow numbers, but these exits reduce the potential for milk production to rebound in the current and future seasons.

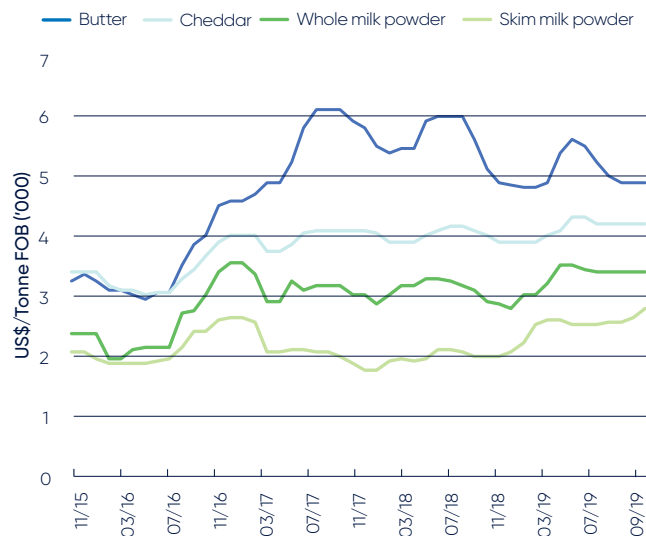
So what?

Discussion around national milk production can be contentious amongst farmers. As the adage goes, 'production is vanity, profit is sanity', and there is a decidedly mixed relationship between the two. However, milk production is still widely regarded as one barometer of industry health. Suppliers, processors, customers and government all look to production trends to determine our industry's ability to maintain supply, its need for infrastructure, and services, and its merits around policy attention and investment. The key takeaway for all audiences is that whilst some regions are experiencing more favourable conditions than others, the current environment of high costs continues to drag overall industry profitability down, and consequently, milk production.

MARKET DASHBOARD

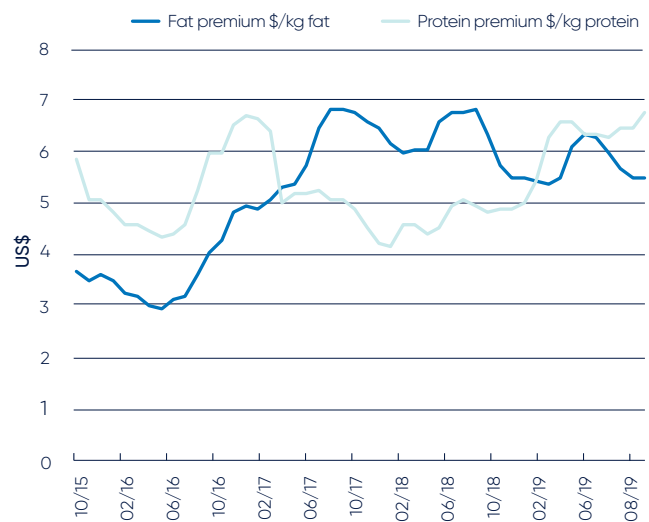
Commodity prices

Figure 6 Key dairy commodity price indicators



Source: Dairy Australia

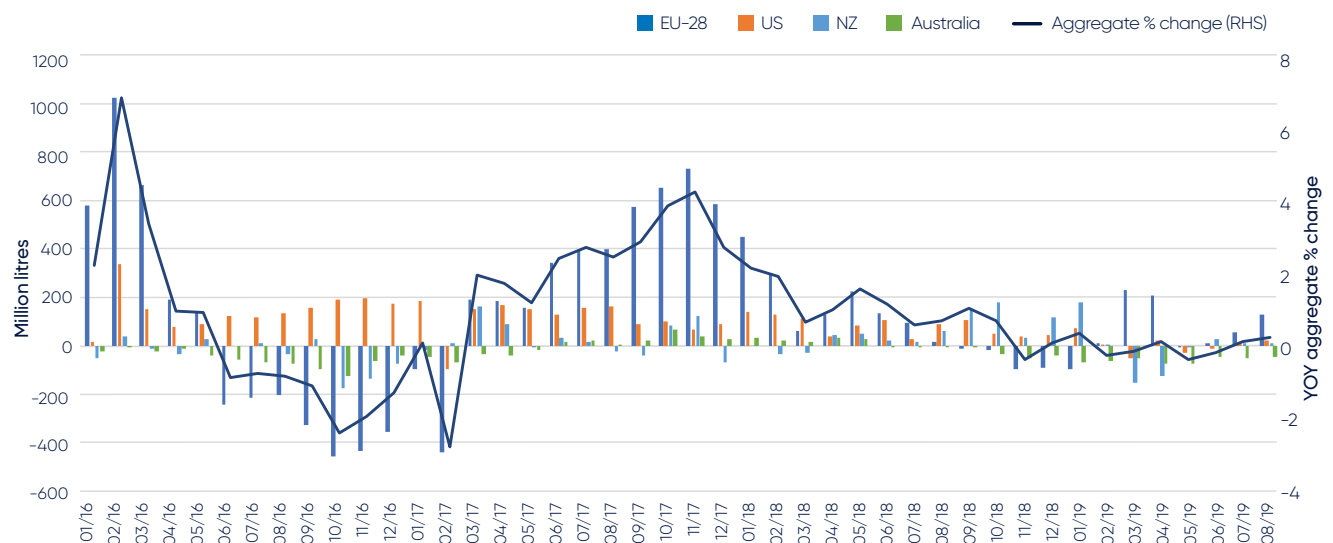
Figure 7 Dairy fat and protein—pricing relative to substitutes



Source: Dairy Australia, Oil World

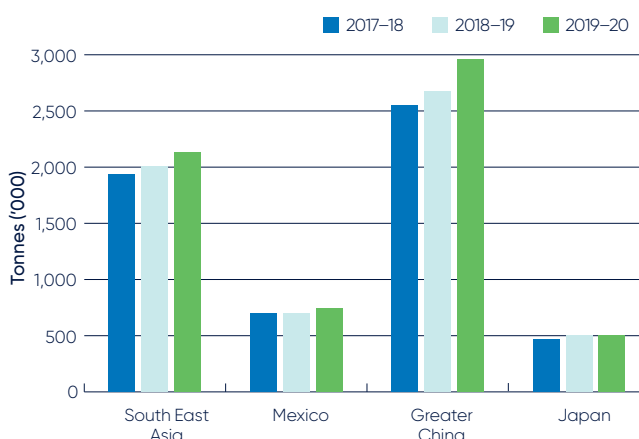
Global supply and demand

Figure 8 Milk production - key exporters



Source: USDA, DCANZ, Eurostat, Dairy Australia

Figure 9 Exports to key markets



Source: Dairy Australia, TDM. Data represents 12 months to September 2019.

Figure 10 Australian supermarket sales

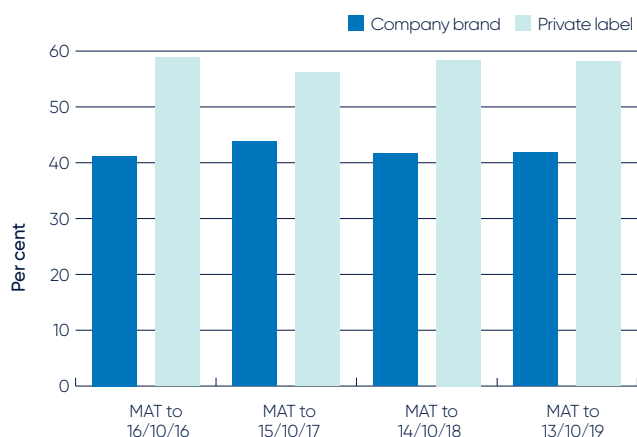
	Volume	YoY growth	Retail value \$m	YoY growth
Milk* (As of 10/11/19)	1,459 m. litres	↓ -1.4%	2,488	↑ 3.5%
Cheese (As of 30/06/19)	160kt	↑ 0.9%	2,503	↑ 3.4%
Dairy spreads (As of 10/11/19)	52.0kt	↑ 0.3%	625.2	↑ 2.0%
Yoghurt and snacks (As of 30/06/19)	233kt	↑ 0.1%	1,685	↑ 2.1%

Source: Iri Worldwide. Please note - available data is taken from different periods; milk and dairy spreads from MAT 10/11/2019; cheese and yoghurt and snacks from 30/06/2019.

*Milk sales represent supermarket sales and exclude other sales channels

Inputs

Figure 11 Fresh white milk sales (share of total sales)



Hay and grain prices

Australian dairy regions			%		%
1	South-west WA	\$263	↓ -22	\$335	↑ +14
2	Central districts SA	\$278	↓ -22	\$228	↓ -32
3	South-east SA	\$303	↓ -21	\$245	↓ -27
4	South-west Victoria	\$420	↑ +1	\$262	↓ -19
5	Goulburn/Murray Valley	\$370	↓ -13	\$255	↓ -30
6	Gippsland*	\$370	↓ -19	\$500	0
7	North-west Tasmania	\$460	↓ -4	\$240	↓ -9
8	Bega Valley	\$415	↓ -12	\$383	↓ -15
9	Central west NSW	\$353	↓ -11	\$422	↓ -5
10	North coast NSW	\$418	↓ -9	\$447	↑ +2
11	Darling Downs	\$404	↓ -13	\$425	↓ -17
12	Atherton Tablelands*	\$424	↓ -12	\$430	↑ +23



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



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

Prices are estimates at November average 2019. Compared to November average 2018. Hay quoted is sourced and delivered locally, GST exclusive unless stated otherwise.

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

Source: AFIA, Profarmer



Fertiliser

Urea (granular Black Sea)	DAP (US Gulf)	MOP (granular Vancouver)
237 US\$/t	277 US\$/t	266 US\$/t
↓ -12% LY	↓ -34% LY	↑ +23% LY
↓ -1% 5Y	↓ -21% 5Y	↑ +10% 5Y

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

Source: World Bank



Cows

Cull cows

436 c/kg	85,792 head
↑ +29% LY	↑ +17% LY
↑ +6% 5Y	↑ +1% 5Y

Dairy cattle exports

102,045 head	↑ +94% LY
	↑ +39% 5Y

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

Source: NLRS, ABS



Water

Northern Victoria

529 \$/ML
↑ +190% LY
↑ +128% 5Y
2,167,961 ML
↓ -1% LY
↑ +7% 5Y

Murray Irrigation System

512 \$/ML
↑ +164% LY
↑ +201% 5Y
63,638 ML
↓ -63% LY
↓ -56% 5Y

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

Source: Victorian Water Register, Murray Irrigation Ltd