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Prepared By: Zeljko Biki

Approved By: Levin Flake

Report Highlights:

Milk production in 2020 in Australia has experienced a dramatic turnaround as a result of drought-breaking rains and an excellent pasture and crop growing season in eastern Australia. The impacts of this turnaround are expected to flow into 2021, with forecast milk production at 9.4 million metric tons (MMT), over a two percent increase above the 2020 estimate of 9.2 MMT and a four percent increase over the 2019 drought-impacted result of 8.83 MMT. With increased milk production, the manufacturing industry is expected to continue to prioritize cheese production over other manufactured products. As a result, cheese is anticipated to see the largest expansion in production, with exports subsequently expected to rise.

Executive Summary

Milk production in 2020 in Australia has experienced a dramatic turnaround as a result of drought-breaking rains and an excellent pasture and crop growing season in eastern Australia. The impacts of this turnaround are expected to flow into 2021, with milk production forecast at 9.4 million metric tons (MMT), over a two percent increase over the 2020 estimate of 9.2 MMT and a four percent increase over the 2019 drought-impacted result of 8.83 MMT. Increased fodder production in the spring of 2020 (September to November) will replenish reserves leading into 2021. With a bumper grain crop and lower grain prices, coupled with improved water availability and lower irrigation prices, the scene is set for 2021 milk production to recover to near pre-drought levels.

Fresh milk consumption in 2021 is forecast to remain stable at 2.55 MMT, accounting for 27 percent of overall milk production. Factory use consumption, however, is forecast to rise to nearly 6.6 MMT, from 6.4 MMT in 2020. Of this amount, 58 percent is set to be used for cheese production in 2021, with cheese production forecast to expand 10,000 metric ton (MT) over the 2020 estimate.

Despite the COVID-19 pandemic resulting in lockdowns and restrictions to varying extents in the states and territories in Australia, the impact on the overall consumption of milk and dairy products has essentially been relatively minor. The pandemic has resulted in a significant shift in reduced consumption in the food service sector but compensated by increased retail sales.

With increased milk production, the manufacturing industry is expected to continue to prioritize cheese production over other manufactured products, which is a continuing trend which has been evident over the last five years. As a result, cheese is anticipated to see the largest rise in production, with practically all of this increase being exported. Butter and whole milk powder (WMP) production are also both expected to rise slightly, while skim milk powder (SMP) production is forecast to remain steady.

After going through a challenging period caused by the drought across most of the dairying regions in Australia in 2018 and 2019, the dairy industry now has a positive outlook as a result of the much improved pasture and grain growing conditions and lower feed prices in 2020. These conditions are expected to continue into 2021.

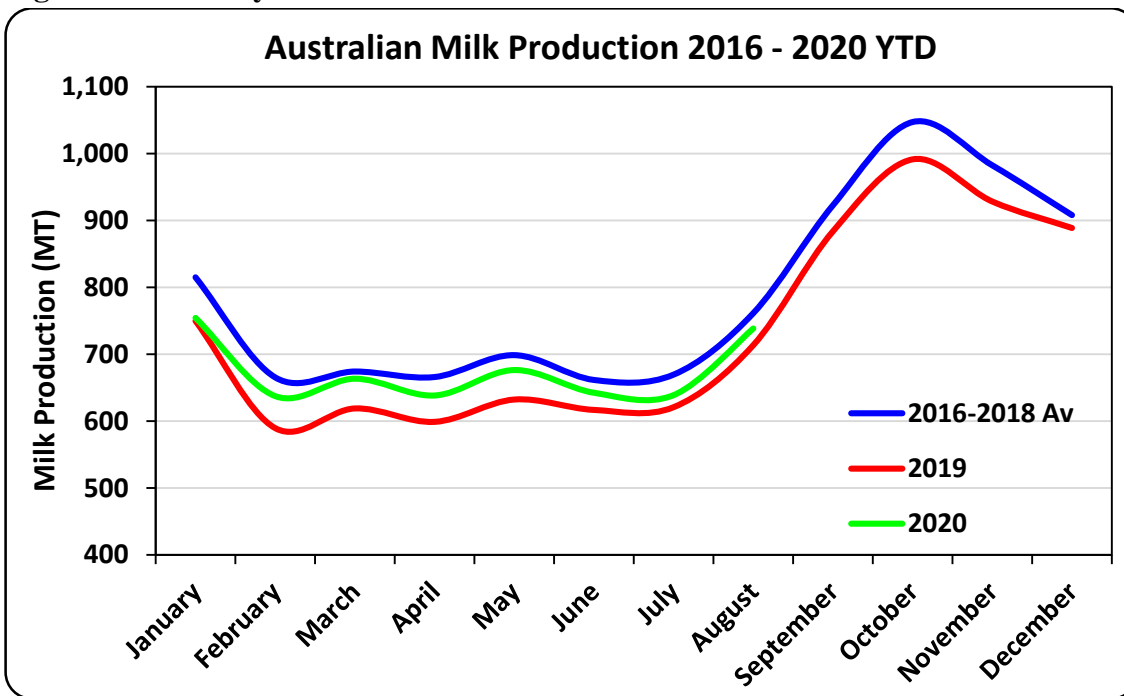
FLUID MILK

Production:

FAS/Canberra forecasts Australia's milk production to increase to 9.4 million metric tons (MMT) in 2021, up from the 2020 estimate of 9.2 MMT. The growth in milk production is a result of improved fodder and grain availability, and subsequently lower feed costs, on the back of large harvests in the spring of 2020.

The FAS/Canberra milk production estimate for 2020 remains unchanged from the previous official USDA forecast. After enduring a two-year drought in 2018 and 2019, the industry has partially recovered as drought-breaking rains commenced in early 2020. However, fodder and grain availability and their costs remained elevated throughout the first half of 2020, albeit down from the peak of the drought in 2019. Milk production in 2020 for the January to August period was well above 2019 levels, but still below the average of the 2016-2018 levels (see figure 1). Although 2018 was impacted by drought, farmers had access to fodder and grain from prior year production, enabling them to maintain production (9.45MMT) at similar levels to 2016 (9.49MMT) and 2017 (9.48MMT).

Figure 1 – Monthly Milk Production in Australia 2016 to 2020 YTD



Source: Dairy Australia

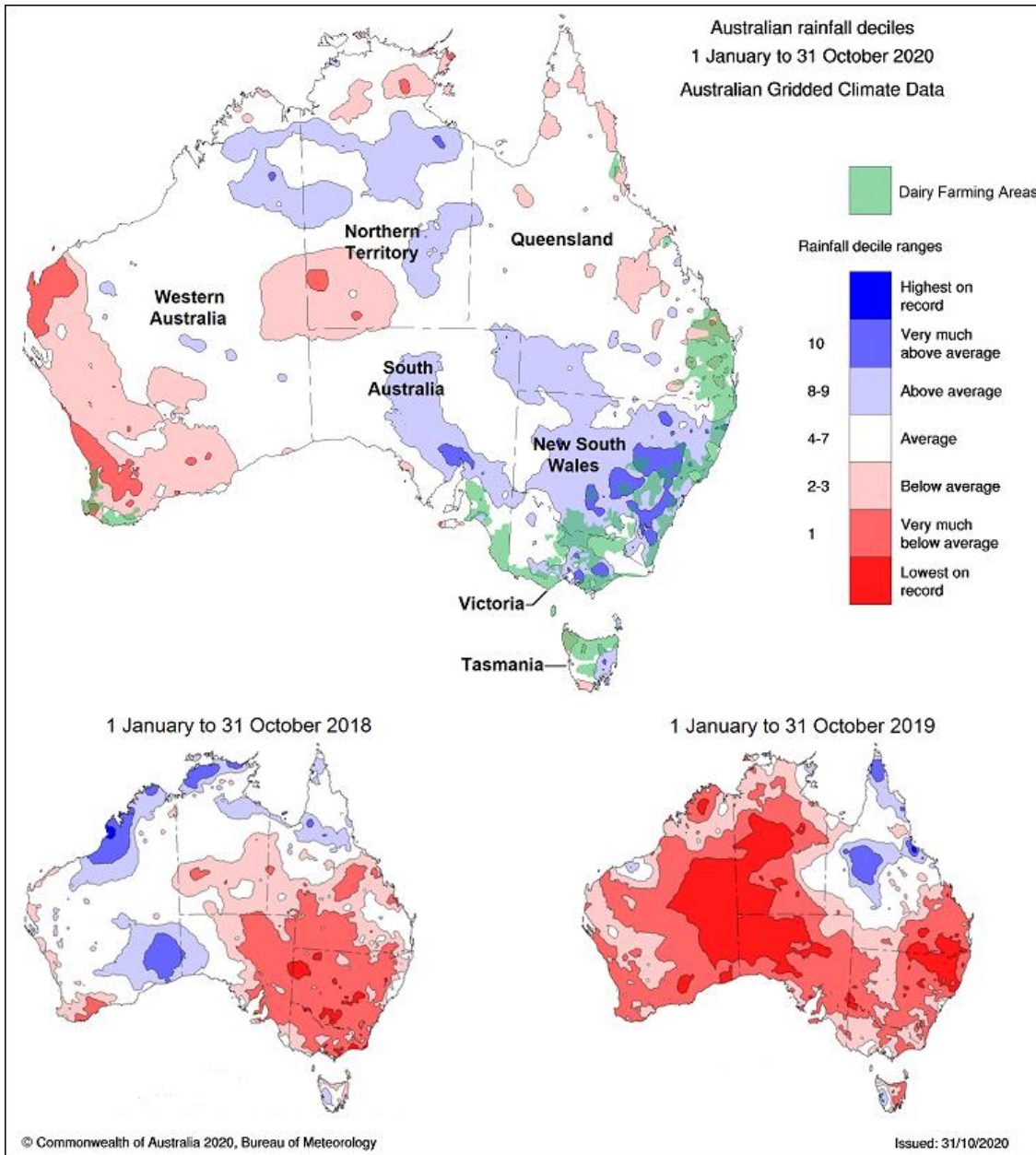
The three key factors influencing improved 2020 production are:

- 1) Average to above average rainfall across the major dairying regions since early 2020
- 2) Declining hay and grain prices during 2020
- 3) Improved irrigation water availability and lower costs in irrigated regions

1) Average to above average rainfall across the major dairying regions from early 2020

The primary influence on the milk production estimate for 2020 and the further forecast improvement in 2021 is the improved rainfall across most of the dairy producing regions during 2020. This is in vast contrast to the two-year drought across 2018 and 2019 (see figure 2).

Figure 2 – Australia Rainfall Decile Maps – Jan-Sep 2018 to 2020



Source: Bureau of Meteorology / Dairy Australia

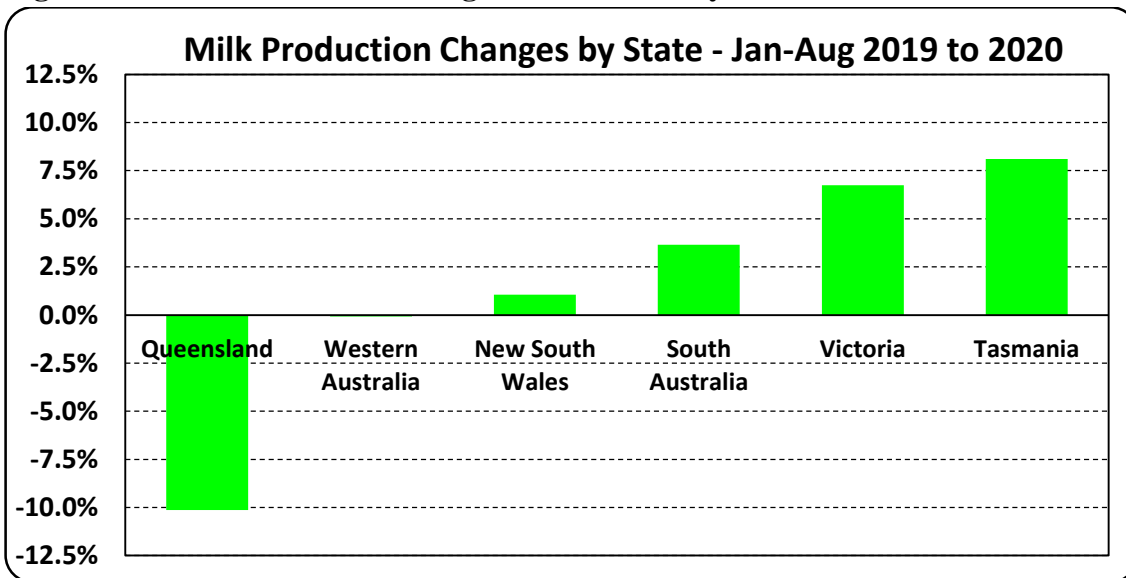
The dairy regions in New South Wales, Victoria, and South Australia - which represents around 81 percent of national milk production - have experienced a major turnaround in rainfall from January to September 2020. Rainfall across the dairying regions in these states has been at average to well above

average, compared to the same periods in 2018 and 2019 when they experienced rainfall ranging from below average to the lowest on record.

The dairy regions in Queensland, Tasmania, and Western Australia in the January to September 2020 period also saw improvement in rainfall compared to the same periods in 2018 and 2019, but to a lesser extent than those regions mentioned previously. Further improvement in rainfall in these regions, which represent around 19 percent of national milk production, in 2021 would provide some upside to the forecast milk production.

The impact of the drought-breaking rains (which started in early 2020) on milk production is most evident in the southern states of Australia, with Tasmania showing an 8.1 percent increase in the 2020 January to August period compared to the prior year. Victoria similarly had a 6.7 percent improvement followed by South Australia with 3.6 percent (see figure 3). Victoria, with 63 percent of national production, has by far the greatest influence on overall production (see table 1). Although all three production regions in Victoria are of similar scale and have all shown production improvement, the Gippsland region in southeast Victoria has had the greatest year to date increase of 14 percent. The production regions in the southern states rely primarily on their own on-farm pasture, hay and silage production so are highly reliant on good rainfalls. For instance, in Victoria in recent pre-drought seasons, almost 50 percent of the energy consumed by the dairy herd (includes dry stock and replacement heifers) comes from pasture. Another 20 percent comes from hay and silage, much of which is produced on farm, while around 30 percent is from various forms of grain feeds (Dairy Farm Monitor Project – Victoria Annual Reports).

Figure 3 – Milk Production Changes 2019 to 2020 by State



Source: Dairy Australia

Table 1 – Milk Production by State 2019

State	Milk Production
Victoria	63%
New South Wales	12%
Tasmania	11%
South Australia	6%
Western Australia	4%
Queensland	4%

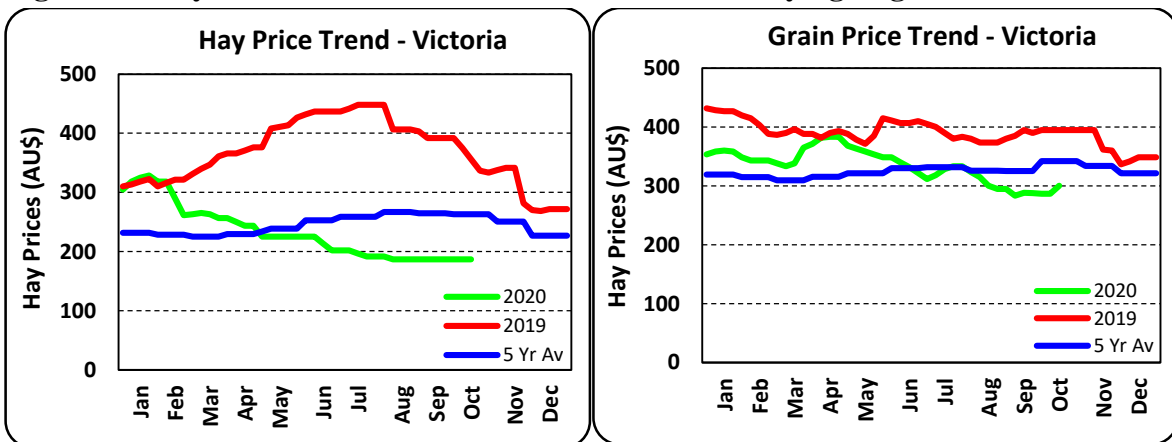
Source: Dairy Australia

Although the drought breaking rains from early 2020 have not been as pronounced in Queensland, the main reason behind the ten percent decline in production relates to the large number of farms that have exited the industry. Ultimately the most significant reason for this decline is that these dairy farms are located in sub-tropical regions which are less suited to dairy farming than temperate climates.

2) Declining hay and grain prices during 2020

Dairy producers have also benefited from reduced feeding costs. Hay and grain prices have steadily declined in 2020 from high levels at the start of the year. During 2019, in the peak of the drought conditions, hay prices reached levels well above the five-year average (see figure 4) as availability of fodder to balance nutritional requirements (fiber sources) was scarce due to there being little pasture growth. However, after rains commenced and pasture production started to rebound, the demand and price of hay has declined. In early May the price of hay fell below the five-year average and prices continued to fall with continued good rainfall and positive rainfall forecasts into the spring period. These conditions provided confidence of good hay and silage production prospects and the replenishment of fodder stocks to carry into 2021.

Figure 4 – Hay and Grain Price Trends in Victorian Dairying Regions



Source: Dairy Australia

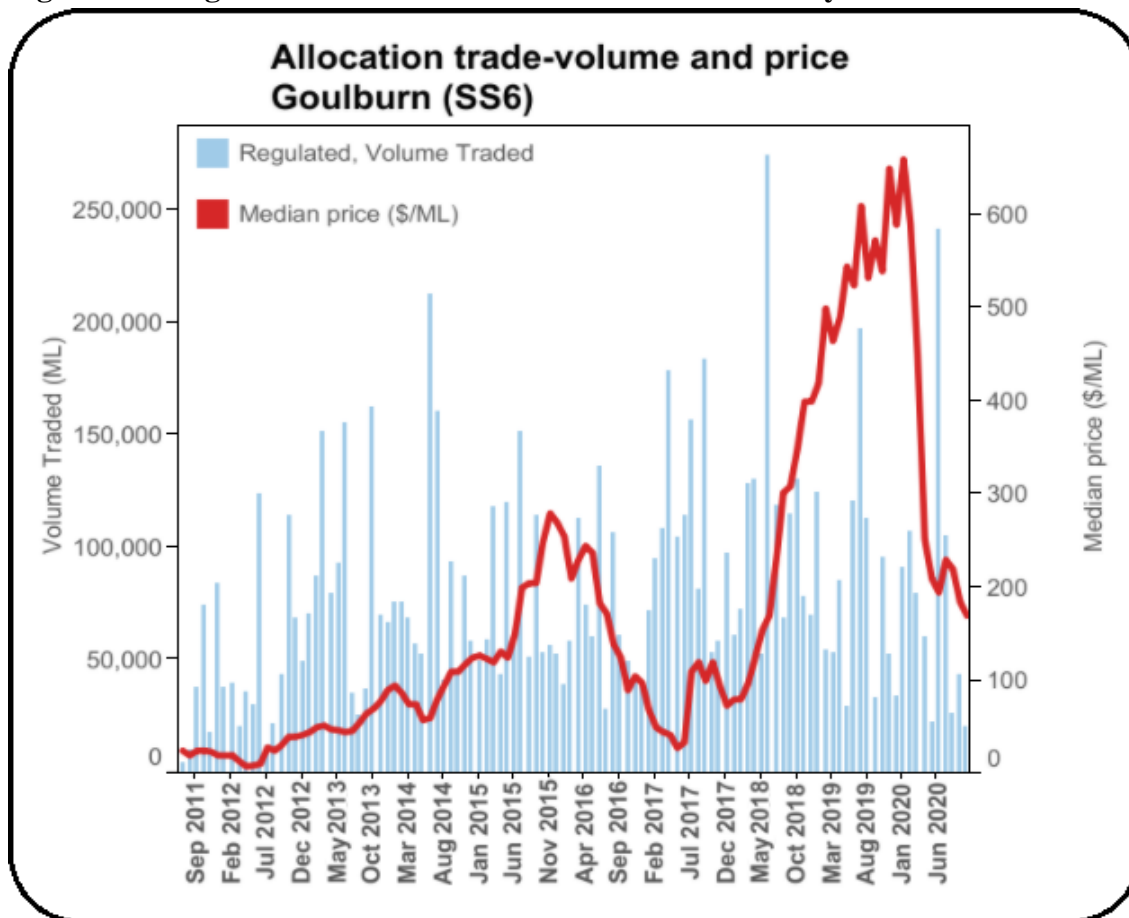
A similar trend of falling prices occurred for grain, although the variances were not as extreme as that for hay. This is because grains were able to be shipped from Western Australia to deficit areas in

eastern Australia, lessening the price impact. After a large increase in grain planted area in 2020, and favorable conditions and positive rainfall this season, grain production forecasts for Australia began to become more optimistic. This led to a fall in domestic grain prices around early May 2020, and in June 2020 grain prices fell below the five-year average. They have continued to trend downward, and this is expected to continue as harvest of a bumper grain crop commenced in October.

3) Improved irrigation water availability and lower costs in spring 2020 in irrigated regions

The majority of irrigated dairy farmers are located in northern Victoria and are part of the Goulburn irrigation system. Dairy farmers in this region and the adjoining Murray irrigation system which covers part of northern Victoria and southern New South Wales, not only had to contend with low pasture production during the drought period but also much lower irrigation water availability and very high traded irrigation water prices. During the peak of the drought in 2019, irrigation water prices reached over AU\$600 (approximately US\$415) per million liters (ML) but have since declined to well below AU\$200 per ML at the start of the irrigation season in September 2020 (see figure 5).

Figure 5 – Irrigation Water Trade Volume and Price History

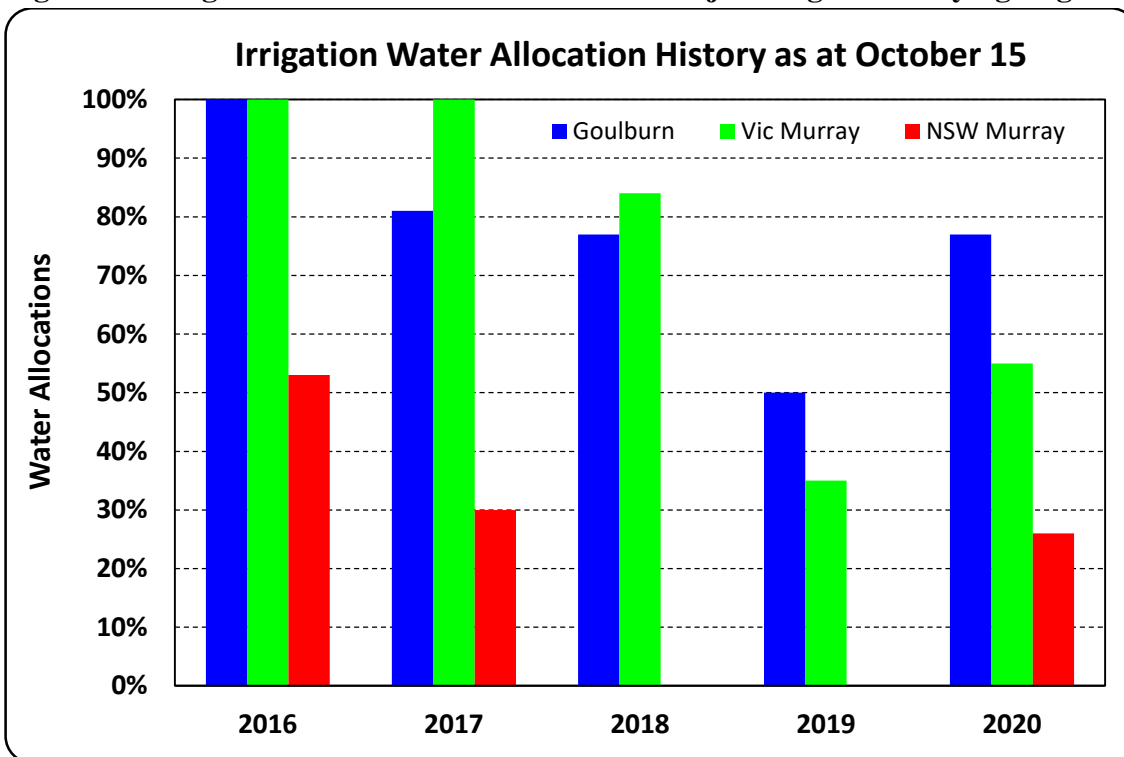


Source: Bureau of Meteorology

Current prices are still far higher than long term average prices of well below AU\$100 per ML. This is due to the fact that water catchments are yet to be fully replenished after being heavily depleted during the drought. If forecasts of above average rainfall in the coming months are realized, there is likely to be further increases in water availability and reductions in traded water prices in 2020 and continuing into 2021.

The irrigation season typically commences in early September each year and water allocations are revised upwards as inflows into water catchments occur in the spring period. The multi-year drought in 2018 and 2019 dramatically impacted water allocations to irrigators, with significantly lower water allocations in 2018, and particularly 2019, than before the drought in 2016 (see figure 6). Although rainfall in 2020 in these regions has been average to above average, irrigation water allocations in 2020 are still below pre-drought levels.

Figure 6 – Irrigation Water Allocation Trend in major Irrigated Dairying Regions



Source: Victoria Department of Environment Land Water and Planning / NSW Department of Planning Industry and Environment

Notes: Goulburn and Murray Vic system allocations are High Reliability Water Shares
NSW Murray system allocations are General Security

Northern Victoria is a key irrigated region and for the January to August period in 2020 improved by 4.2 percent over the prior year, but this was below the state average of 6.7 percent. This demonstrates that the benefit from drought-breaking rains has a time lag in irrigated regions. While areas that rely on pasture feeding see near immediate benefit from strong rains, irrigation water availability generally does

not fully recover in the first year after the drought and requires further time before irrigation catchments are replenished. This is the reason for the milk increase in this region being below other parts of the state. However, this provides scope for further improvements in milk production in these irrigation regions in the 2021 forecast year.

As was mentioned, the recovery in dairy production is expected to continue in 2021. The three key factors influencing further improvement of milk production in 2021 are:

- 1) Increased fodder reserves entering 2021
- 2) Expected continued La Niña conditions
- 3) Lower grain prices across the entire year

1) Increased fodder reserves into 2021

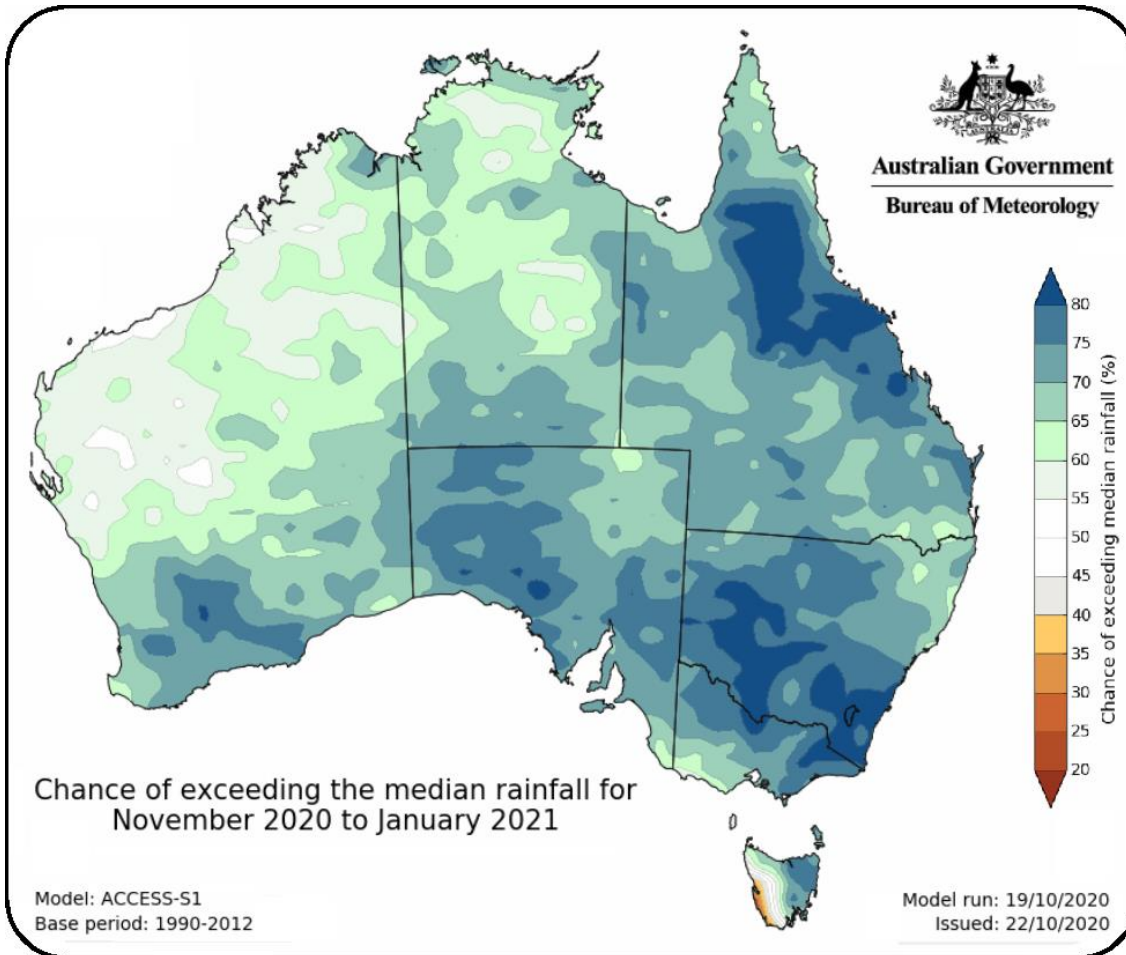
With very plentiful rainfall across the major dairy producing regions in 2020, farmers are in position to replenish hay and silage reserves in the spring period in 2020 and be well set up going into 2021. This is a major improvement for dairy farmers compared to the lead into 2020, when the peak of the multi-year drought resulted in very poor conditions in spring 2019 and very little hay and silage was produced. The very positive crop and pasture conditions in spring 2020 in the major dairy producing regions will provide those dairy farmers with confidence that they have adequate and good quality fodder reserves leading in to 2021, enabling them achieve higher yield per cow and overall milk production through at least early 2021.

2) La Niña conditions

The Bureau of Meteorology has forecast a La Niña event. This is the culmination of a series of indicators leading to a strong likelihood of above average rainfall in the tropical Pacific, which has a strong influence in rainfall in Australia. The current La Niña is forecast to last at least until January 2021. This La Niña event has led to the forecast of a high chance of exceeding median rainfall across most of Australia, including all of the dairy farming regions for the November 2020 to January 2021 period (see figure 7).

If the forecast is realized this will benefit all dairy farming regions leading into 2021, but in particular the irrigation regions. These areas will not only require less irrigation water across the current irrigation season (typically from September 2020 to April 2021), but it will allow the major irrigation water storage dams to replenish further and place them in a better position for increased water allocations leading into the start of the subsequent season.

Figure 7 – Chance of Above Average Rainfall – November 2020 to January 2021



Source: Bureau of Meteorology

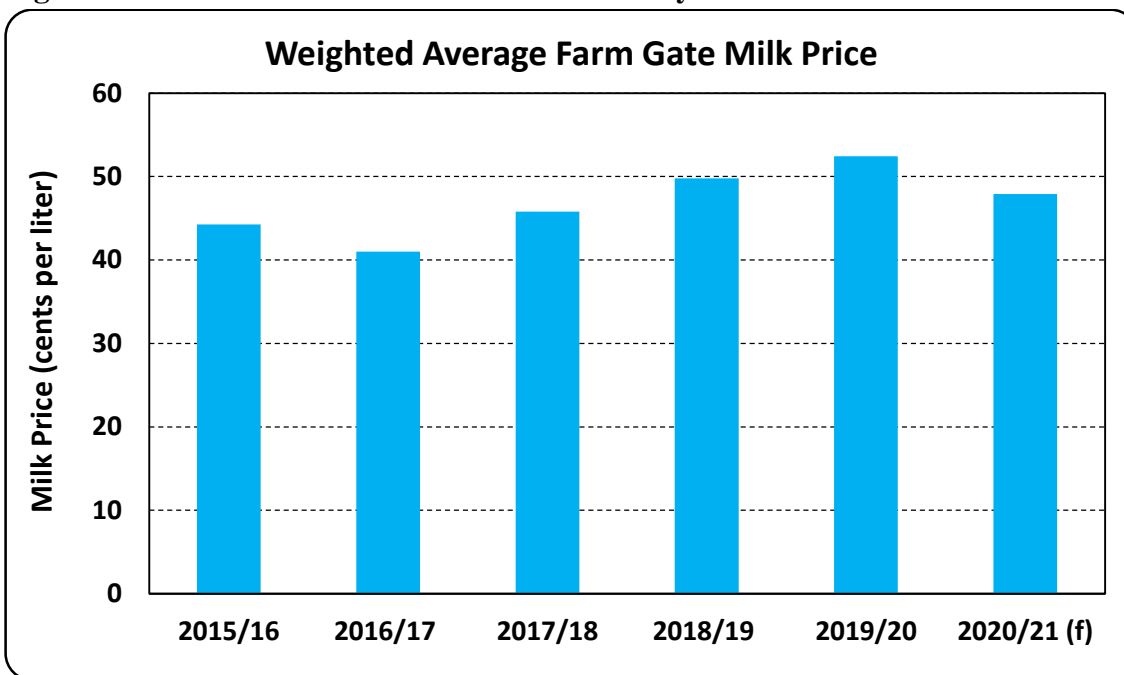
3) Lower grain prices across the entire year

As previously mentioned, grain prices were high in the early part of 2020 and only started to fall when prospects improved for the next harvest (see figure 4). With a bumper 2020 grain crop now being harvested, there is optimism that grain prices may remain below the five-year average well into 2021. If this happens, this will provide dairy farmers with the confidence to feed higher levels of supplementary feed and increase milk yields.

In addition to reduced input costs, dairy farmers will also benefit from continued strong milk prices, albeit somewhat lower than those during the drought. Domestic milk prices vary from one manufacturer to the next and from region to region. Areas which almost exclusively supply the liquid milk market for domestic consumption receive the highest milk prices, whereas for those regions where the majority of milk is used for manufactured products, the milk price to dairy farmers is lowest. On a weighted average basis, dairy farmers received a very high milk price in 2019/20, and also a strong price in the 2018/19 drought-affected seasons. Despite the disruptions to world dairy markets caused by COVID-19 and the declining world market prices for manufactured dairy products, manufacturers have offered

lower but still strong opening milk prices for the 2020/21 season. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) forecasts the 2020/21 weighted average milk price at 47.9 cents per liter, some nine percent lower than the 52.4 cents per liter in 2019/20, but remaining above the five year average of 46.9 cents per liter.

Figure 8 – Farm Gate Milk Price – Recent History and Forecast



Source: Australian Bureau of Agricultural and Resource Economics and Sciences

Although the above factors are supporting milk production, 2021 production is still expected to remain lower than the 2016-2018 period as a result of fewer cows. Any recovery in cow numbers is expected to be partially delayed by the fact that the drought caused many dairy farmers in Queensland and northern New South Wales to exit the industry. According to industry sources, the numbers are not expected to recover in those areas.

Consumption

Fluid milk consumption is forecast by FAS/Canberra to remain stable in 2021 at 2.55 MMT, in line with the revised estimate of 2.55 MMT for 2020. Domestic fluid milk consumption is forecast to account for 27 percent of all milk produced in Australia in 2021. This is a marginal reduction from an estimated 28 percent in 2020 and 29 percent in 2019. Domestic consumption of fluid milk per capita has been gradually declining over recent years.

Fluid milk consumption in 2020 is estimated by FAS/Canberra to reach 2.55 MMT, which is a slight increase over the official USDA estimate of 2.5 MMT. The revised consumption estimate is nearly the same as consumption in 2019. With reduced travel and the closing of cafes and restaurants due to

COVID-19 restrictions, which varied from state to state for much of 2020, there was some expectation that consumption would decline. However, during this period consumers have increased home cooking and baking, which has resulted in improved sales via the supermarket channel and made up for declining sales through other channels. According to Dairy Australia, milk sales figures for the January to June period in 2020 were 1.276 MMT, compared to 1.261 MMT during the same period in 2019, equivalent to a 1.2 percent increase.

Overall drinking milk consumption in Australia remains high compared to world levels. Consumers have shifted their milk preference towards regular (full-fat) and away from reduced fat/skim milk over the last decade. Regular milk accounts for 57 percent of milk sales and reduced/non-fat has over time declined to be 24 percent. Flavoured milk sales are around nine percent and UHT milk is ten percent, and they have remained relatively constant over the last decade.

FAS/Canberra forecasts factory milk consumption in 2021 to reach 6.59 MMT from the revised 2020 estimate of 6.40 MMT. A large proportion of this increase will be channelled towards cheese production.

The FAS/Canberra 2020 estimate of factory milk consumption is 6.40 MMT, only slightly lower than the official USDA estimate.

Trade

Exports

FAS/Canberra forecasts fluid milk exports to reach 265,000 MT in 2021, a four percent increase over the 2020 estimate of 255,000 MT. This reflects a continued increasing trend for milk exports that the industry has managed to maintain despite the trade disruptions caused by the COVID-19 pandemic in 2020. The majority of milk exported (around 98 percent) is long-life UHT milk which is transported by sea freight, and this has minimized the trade disruption impact caused by the COVID-19 pandemic. A further important contributing factor is that the main trading partners for Australian fluid milk (China, Hong Kong, Singapore and Vietnam) have recovered faster from COVID-19 impacts than many other markets. Malaysia and the Philippines are the other two significant destinations, which account for about 17 percent of total exports, and despite more difficulties with the pandemic have both increased imports and show no signs of trade disruption.

The FAS/Canberra 2020 milk exports estimate remains in line with the official USDA estimate.

Imports

Fluid milk imports by Australia are forecast to remain stable at a very low level of 5 MT in 2021. This level of imports has remained relatively constant for over five years.

Policy

There are two important current industry initiatives that will impact the dairy industry in Australia. The first is a new legislated 'Industry Code of Conduct' which was implemented on January 1, 2020, primarily to protect dairy farmers from potential adverse behavior from milk processors.

The second initiative is 'The Australian Dairy Plan 2020-2025' involving an industry-wide organizational restructure with a range of goals focused on improving the dairy industry in Australia.

Industry Code of Conduct

The new compulsory dairy industry code of conduct took effect in Australia from January 1, 2020 and replaced a previous voluntary industry code. The purpose of introducing the code was to establish a fairer process for negotiating contractual agreements between dairy farmers and dairy processors and include a dispute resolution and mediation process. The new code also empowers the Australian Competition and Consumer Commission (ACCC) to monitor the conduct of farmers and processors to support compliance. Key aspects of the code are:

- Processors must publicly release standard forms of agreement on June 1st of each year. This primarily relates to the initial milk price offered for the upcoming period of July 1 to June 30. As domestic and world market prices change for manufactured goods, processors typically offer multiple increases to milk prices during the year which are retrospective from July 1. These are referred to as 'step-ups'.
- Retrospective 'step-downs' are prohibited under the code. For the first time in the history of the dairy industry, in 2015/16 two of Australia's largest milk processors announced a step-down requiring dairy farmers to re-imburse the processors for surplus payments. This caused significant hardship to many of their dairy farm suppliers at the time. This was the key trigger for calls to prevent this from ever reoccurring via the establishment of a mandatory Code of Conduct.
- Prohibiting unilateral prospective step-downs, except in exceptional circumstances.
- Restricting unilateral changes to the terms and conditions of agreements between producers and processors.

The new code of conduct has in particular been welcomed by those dairy farmers who, in many instances, have no option other than to supply their milk to a single processor due to their distance to alternate processors.

The Australian Dairy Plan 2020-2025

The dairy industry in Australia has experienced milk price volatility in the past few years, as well as the recent severe drought, and this impacted dairy farm profitability and caused the contraction of the number of dairy farms and the size of the national milk pool. This resulted in a group of key industry stakeholders recognizing the need for the industry to reset its direction via a strategic plan. After a lengthy consultation process led by a former Premier of Victoria, which included producers and

manufacturers and industry bodies, the draft Dairy Plan was released in December 2019. This has since been refined and the final plan was released in September 2020.

At the core of the plan is a commitment to reform industry structures to create a more cohesive industry with a clear direction. A new national organization will be established that incorporates advocacy, research and development, and marketing across producers and manufacturers. A reform steering committee is now overseeing the development of an operating model which is then to be agreed upon via industry signatories and stakeholders by mid-2021. The new industry organization is to be established and fully operational by the end of 2022.

The key goals of the new industry organization set by the consultation process are:

- 1) Identify and tackle the barriers to entry for people to work and invest in dairy farming, in order to encourage more people and fresh capital into the industry.
- 2) More effective marketing and promotion; establishing more recognition of the inherent value and benefits of consuming dairy; and building higher levels of trust and support for Australian dairy products and the industry.
- 3) Improve farm profitability and risk management through training dairy farmers to use physical and financial data to improve decision making and establish and work towards their own effective farm business plans.
- 4) Develop tools to increase the understanding of raw milk production costs and farm gate milk prices to restore trust and transparency between dairy farmers and processors.

Some measurable metrics have been identified to track the progress of each of the above key goals. One metric is the target to increase milk production by almost ten percent from 9.04 MMT in 2019/20 to 9.89 MMT in 2024/25. Dairy Australia forecasts milk production in 2020/21 to reach around 9.22 MMT.

Table 2 - Dairy, Milk, Fluid

Dairy, Milk, Fluid Market Year Begins Australia	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk (1000 HEAD)	1440	1440	1435	1435	0	1445
Cows Milk Production (1000 MT)	8832	8832	9200	9200	0	9400
Other Milk Production (1000 MT)	0	0	0	0	0	0
Total Production (1000 MT)	8832	8832	9200	9200	0	9400
Other Imports (1000 MT)	6	6	5	5	0	5
Total Imports (1000 MT)	6	6	5	5	0	5
Total Supply (1000 MT)	8838	8838	9205	9205	0	9405
Other Exports (1000 MT)	254	246	255	255	0	265
Total Exports (1000 MT)	254	246	255	255	0	265
Fluid Use Dom. Consum. (1000 MT)	2550	2536	2500	2550	0	2550
Factory Use Consum. (1000 MT)	6034	6056	6450	6400	0	6590
Feed Use Dom. Consum. (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	8584	8592	8950	8950	0	9140
Total Distribution (1000 MT)	8838	8838	9205	9205	0	9405
(1000 HEAD) ,(1000 MT)						

CHEESE

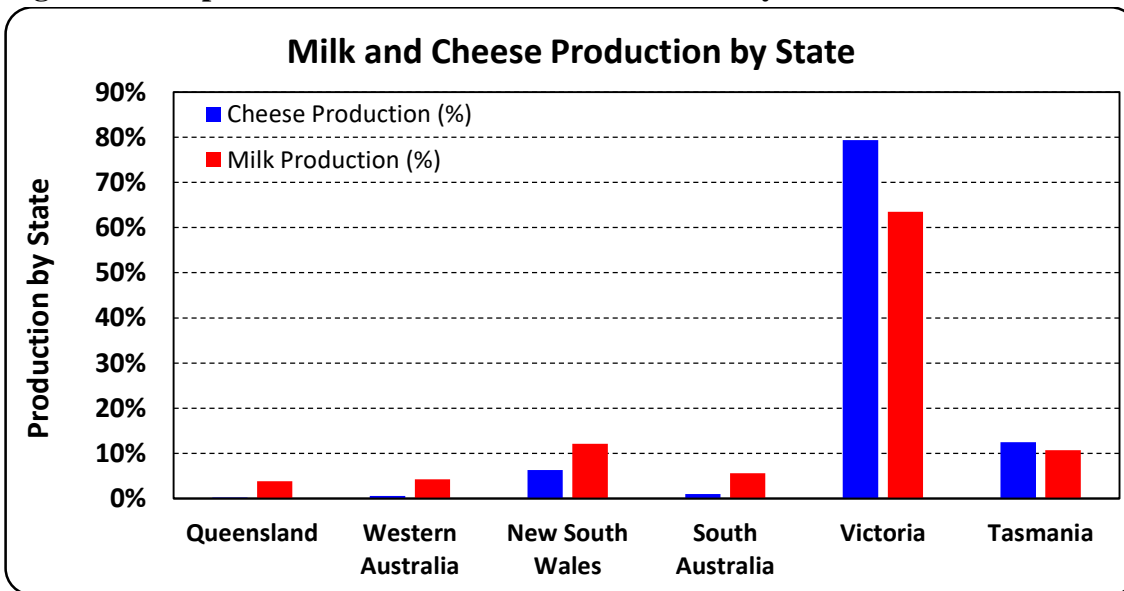
Production:

FAS/Canberra forecasts cheese production to reach 395,000 MT in 2021, a three percent increase on the revised 2020 estimate of 385,000 MT. If realized this would be the highest production since 2002 and the second highest in Australia's history. The primary reason for the increase in cheese production is the forecast for expanded milk production in 2021, along with the trend by manufacturers in Australia over recent years to focus on cheese production at the expense of WMP, butter, and SMP.

Cheese production is forecast to account for 39 percent of total fluid milk production and, after accounting for forecast domestic fluid milk consumption and fluid milk exports, this represents 58 percent of fluid milk available for manufacturing products. Since 2015 there has been a clear trend of cheese becoming of increasing focus by processors, and merely five years ago cheese only accounted for 34 percent of national fluid milk production and 47 percent of fluid milk used for manufacturing products. Cheese accounts for more milk usage in Australia than any other dairy product.

Almost 80 percent of Australian cheese is produced in Victoria, where milk production is 63 percent of national production (see figure 9). The only other state that produces a higher proportion of national cheese compared to their proportion of national milk production is Tasmania. In other dairy-producing states such as Queensland, Western Australia, South Australia and New South Wales, the vast majority of production is directed towards domestic fluid milk sales, leaving significantly lower volumes of milk available for manufactured dairy products. This is a result of smaller production volumes, coupled with strong demand for fluid milk from populations centers in these states.

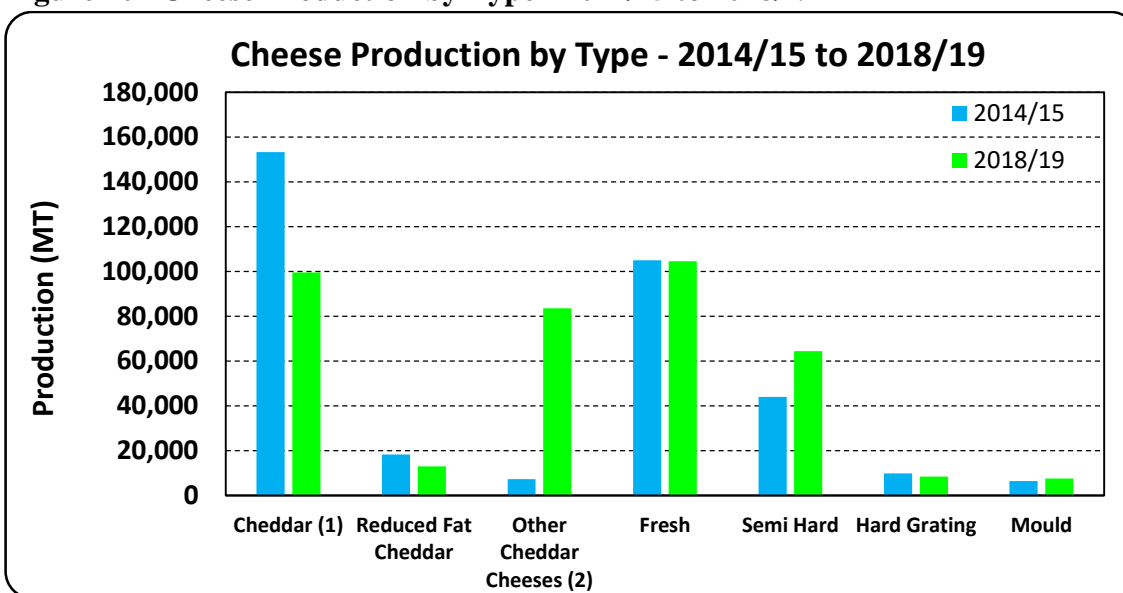
Figure 9 – Proportion of Milk and Cheese Production by State



Source: Dairy Australia

Despite producing more cheese than is consumed, Australia still imports a significant amount of cheese. There has also been an increasing trend of soft cheese imports during this time as Australian manufacturers have shifted away from producing these cheese types. Instead, they have been increasing production of more specialized cheddar varieties and semi-hard cheeses, predominantly mozzarella (see figure 10).

Figure 10 –Cheese Production by Type - 2014/15 to 2018/19



Source: Dairy Australia / Dairy Manufacturers

Notes: (1) Includes vintage, (2) Includes Cheedam, Colby, Cheshire, Gloucester, Lancashire, Nimbin and semi processed cheddar

The FAS/Canberra cheese production estimate for 2020 is revised down to 385,000 MT from the official USDA estimate of 390,000 MT. The revised estimate is based on the Dairy Australia’s January to June 2020 production data. Despite the revision, the 2020 cheese production estimate is still an increase of almost six percent over 2019 production of 364,000 MT.

Consumption

FAS/Canberra forecasts a marginal increase in cheese consumption in 2021 to 310,000 MT, from the 2020 official USDA estimate of 308,000 MT, primarily due to greater domestic production. Cheese consumption in Australia expanded rapidly during the 1990s and 2000s, but in recent years overall growth has slowed. During this period there has also been a shift in consumer preferences from processed towards natural cheeses, and from cheddar to non-cheddar varieties.

Surprisingly, there appears to have been little overall impact on cheese consumption in Australia as a result of the lockdowns associated with the COVID-19 pandemic. The lockdowns have varied in degree and duration from state to state during 2020. After the initial lockdowns across all states in March and April 2020, trade through restaurants, clubs and cafes recommenced with limitations on the number of

people in the premises. However, from August to September Victoria went back into lockdown but in November reopened with some restrictions.

Consumption of cheese in the food service sector is strongly linked to the take-away (to go) trade, particularly for the likes of mozzarella on pizza. During the lockdown periods take-away stores were able to continue to be open for the most part and consumers increased at-home cooking and baking. This resulted in increased retail sales of cheeses, particularly cheddar and shredded types, while other cheese types associated with entertaining such as halloumi, feta and parmesan declined. According to industry sources, with reduced restrictions and consumers able to frequent restaurants and cafes once again, patterns of sales of cheeses have reverted back towards normal.

The estimated consumption of cheese in 2020 is unchanged from the official USDA estimate at 308,000 MT but is an increase by almost four percent from 2019.

Trade

Exports

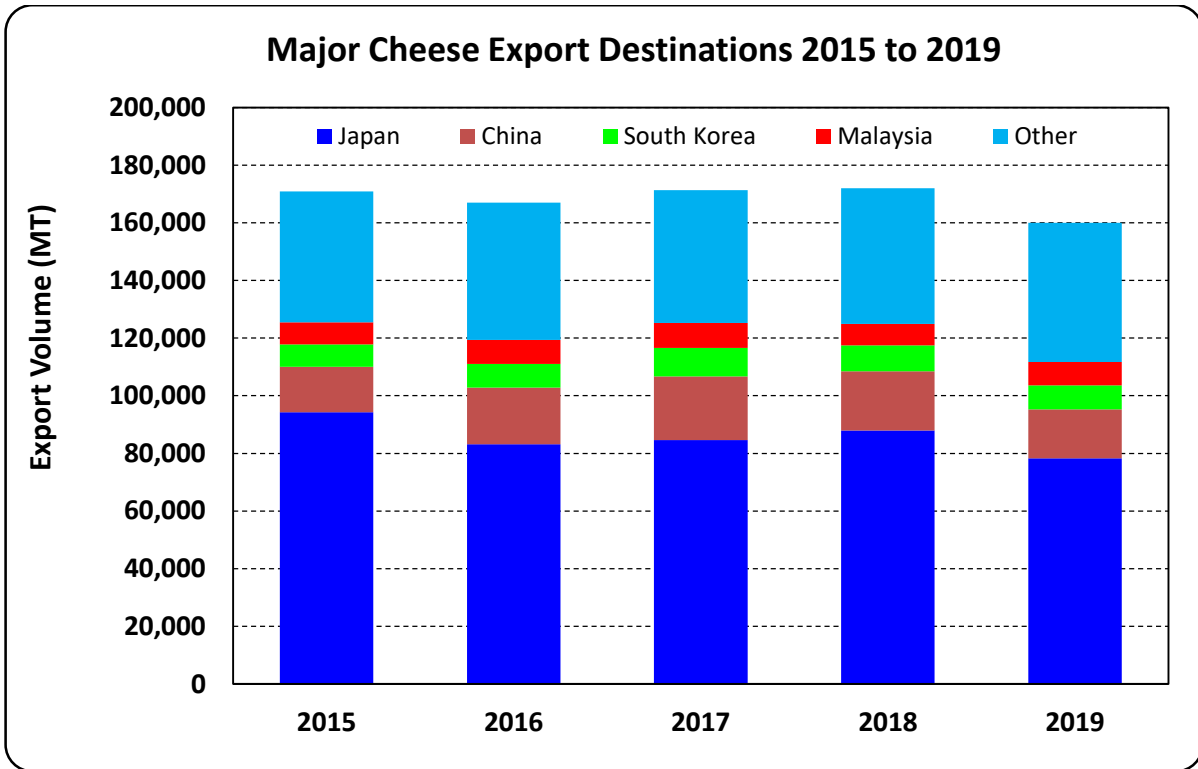
Cheese exports in 2021 are forecast by FAS/Canberra to continue to expand to 170,000 MT, a six percent rise from the revised estimate of 160,000 MT in 2020. This 10,000 MT increase in cheese exports correlates with the same volume rise expected in cheese production.

Australia is a net exporter of cheese, which is the largest dairy product exported. Around 42 percent of all cheese produced in Australia is exported. With limited scope to increase domestic consumption of cheese, any increase in production is likely to go to the export market.

Japan has consistently been the largest market for Australian cheese over the last decade, accounting for at least half of all cheese exports. China is the second largest destination at around ranging from 9 to 13 percent per annum, with Malaysia and South Korea each accounting for five percent (see figure 11). The January to September 2020 exports results show that shipments to the major destinations are very similar to the previous five-year average.

FAS/Canberra estimates cheese exports at 160,000 MT, a reduction from the official USDA estimated of 170,000 MT. Exports for the January to September 2020 period are at 112,380 MT, marginally below the same period in 2019. There was a significant dip in exports in April and May 2020, during the height of the pandemic in key Asian markets, compared to the previous year. Monthly exports from June to September 2020 are almost equivalent to the same period in 2019. It is anticipated that exports for the remainder of the year will be at or higher than the same period in 2019 which would achieve an overall export result of around 160,000 MT in 2020.

Figure 11 – Major Cheese Export Destinations 2015 and 2019



Source: Australian Bureau of Statistics

Imports

FAS/Canberra forecasts cheese imports in Australia to decline to 90,000 MT in 2021, from the estimate of 95,000 MT in 2020. The forecast increase in cheese production of 10,000 MT in 2021 is expected to increase supplies available domestically. Manufacturers are also expected to continue to move away from standard cheddar cheese production and further towards more specialized cheddar type cheeses, driving a diminishing demand for imported product.

Almost one-half of all cheese imports are from New Zealand and around one-quarter from the United States. The import estimate for 2020 remains unchanged from the official USDA estimate. Imports in the January to September period imports are at 72,966 MT and are on track to achieve the estimate by December 2020.

Table 3 - Dairy, Cheese

Dairy, Cheese Market Year Begins Australia	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	50	50	60	54	0	66
Production (1000 MT)	370	364	390	385	0	395
Other Imports (1000 MT)	97	97	95	95	0	90
Total Imports (1000 MT)	97	97	95	95	0	90
Total Supply (1000 MT)	517	511	545	534	0	551
Other Exports (1000 MT)	160	160	170	160	0	170
Total Exports (1000 MT)	160	160	170	160	0	170
Human Dom. Consumption (1000 MT)	297	297	308	308	0	310
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	297	297	308	308	0	310
Total Use (1000 MT)	457	457	478	468	0	480
Ending Stocks (1000 MT)	60	54	67	66	0	71
Total Distribution (1000 MT)	517	511	545	534	0	551
(1000 MT)						

BUTTER**Production**

FAS/Canberra forecasts butter production in 2021 to reach 80,000 MT, a seven percent increase from the 2020 estimate of 75,000 MT, due to the forecast boost in milk supply in 2021.

Processors have changed their processing infrastructure balance in recent years in order to prioritize cheese production over butter, WMP and SMP. However, increasing milk production after the multi-year drought is anticipated to also result in a lift in butter production. Even though butter production is expected to rise, it remains well below past levels, which for almost three decades prior to 2018 were well in excess of 100,000 MT and peaked at 180,000 MT in 2000.

Consumption

FAS/Canberra forecasts butter consumption to increase by almost five percent in 2021 to 110,000 MT from the estimate of 105,000 MT in 2020. This is driven by the increasing milk and butter production resulting in more domestic supplies.

The FAS/Canberra 2020 butter consumption estimate is unchanged from the official USDA estimate of 105,000 MT. This is a marginal increase from 104,000 MT consumption in 2019. Overall butter consumption, similarly to cheese, has not been seen major disruption despite the impacts of the COVID-19 pandemic on the food service sector. During periods of lockdowns and restricted movement there was a noticeable increase in home baking and cooking which resulted in an increase in butter sales through supermarkets which countered the drop in butter demand from the food service sector.

The overall consumption of butter decreased sharply in 2019 and the 2021 forecast remains well below butter consumption in 2018. This is in part due to the reduced domestic supply in recent years when milk production fell during the drought and processors continued preference for the production of cheese. According to industry sources, the impact has been an increase in butter prices over the last two to three years by around 40 percent, which has also contributed to the decline in domestic consumption of butter.

Trade

Exports

Butter exports are forecast by FAS/Canberra to remain stable at 15,000 MT in 2021. As a net importer of butter, Australia consumes far more butter than it produces and any significant change from already low levels is unlikely.

FAS/Canberra's estimate for 2020 butter exports is 15,000 MT, which is a 5,000 MT increase over the official USDA estimate of 10,000 MT. In a somewhat similar trend to cheese exports there has been a dip in exports during the peak of the COVID-19 pandemic in comparison to monthly exports in the prior year, but July to September 2020 exports are well up on those in 2019.

Although Thailand remains the main export destination, it declined considerably in the January to September 2020 period relative to the same time the previous year, as has the United States, Indonesia and Japan. Exports to the Philippines and Turkey, however, have increased. Australian exports of butter are shipped to over 30 countries, and although Thailand and the United States represent around 24 and 12 percent of overall exports, respectively, they are not dominant destinations. As a result, the diversity of destinations minimizes trade risk for Australian processors.

Imports

FAS/Canberra forecasts import of butter to decline to 40,000 MT in 2021, from the 2020 estimate of 45,000 MT. The forecast increase in butter production in 2021 is the key driver behind the reduced need for imports. Since 2017, Australia has been a net importer of butter and this is forecast to continue into 2021 as a result of ongoing very low butter production.

The dominant source of butter imports is from New Zealand, representing around 88 percent of total imports from 2017 to 2019, and the trend is set to continue in 2020 with January to September imports from New Zealand at 82 percent of overall imports.

Table 4 - Dairy, Butter

Dairy, Butter Market Year Begins Australia	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	93	93	81	81	0	81
Production (1000 MT)	70	70	75	75	0	80
Other Imports (1000 MT)	40	40	45	45	0	40
Total Imports (1000 MT)	40	40	45	45	0	40
Total Supply (1000 MT)	203	203	201	201	0	201
Other Exports (1000 MT)	18	18	10	15	0	15
Total Exports (1000 MT)	18	18	10	15	0	15
Domestic Consumption (1000 MT)	104	104	105	105	0	110
Total Use (1000 MT)	122	122	115	120	0	125
Ending Stocks (1000 MT)	81	81	86	81	0	76
Total Distribution (1000 MT)	203	203	201	201	0	201

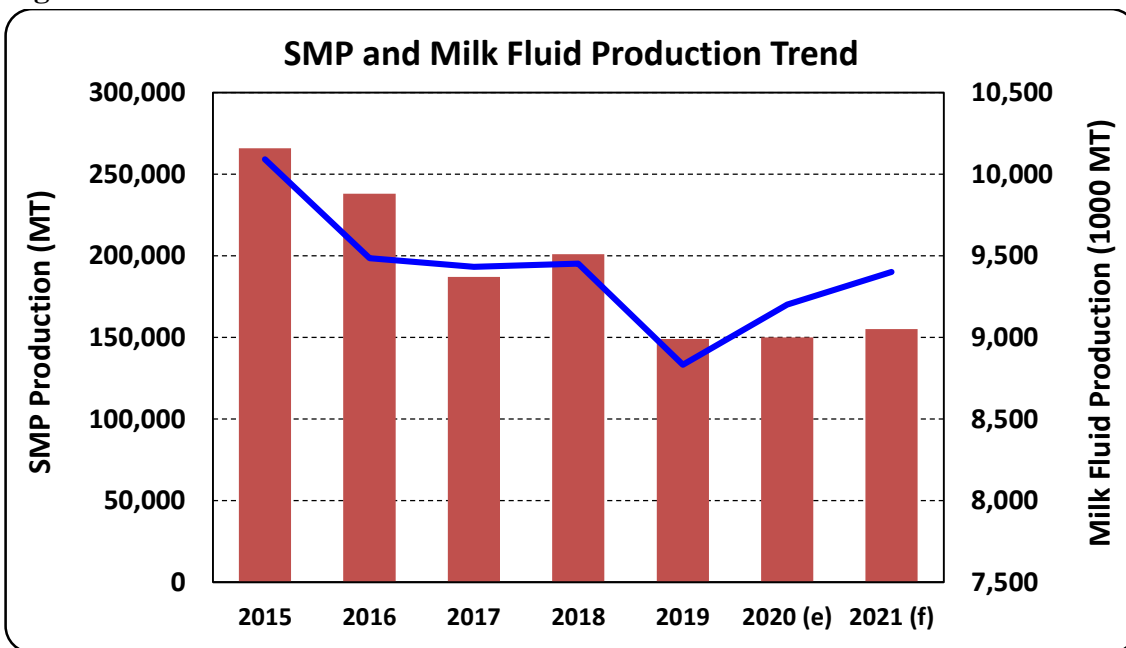
(1000 MT)

SKIM MILK POWDER

Production

FAS/Canberra forecasts SMP production in 2021 to remain stable at 155,000 MT, and in line with the official USDA estimate for 2020. Even though SMP and butter are typically produced as part of the same manufacturing process, SMP production is forecast to remain stable even though butter production is forecast to increase. The fat content of milk is initially reduced and then dried to produce SMP. According to industry reports, of the extracted milk fat from the production of SMP approximately one-quarter is used to produce cream and three-quarters is further processed to produce butter. This mix can readily be altered by manufacturers.

Figure 12 – SMP Production Trend 2015 to 2021



Source: FAS/Canberra

Production of SMP in Australia has trended downwards since 2015, from a peak of 266,000 MT, partly due to the previously mentioned manufacturers focus on increased cheese production, but also exacerbated by lower milk production during the recent drought period (see figure 12). Despite the increased milk production in 2020 and anticipated in 2021, SMP production is forecast to rise only slightly as part of the continued trend for manufacturers to focus on increased cheese production.

Consumption

SMP consumption in 2021 is forecast by FAS/Canberra to marginally increase to 45,000 MT from the 2020 official USDA estimate of 43,000 MT.

Skim milk powder has a wide range of uses in the food manufacturing sector as additive products, such as:

- breads, cakes and biscuits (improving volume and binding capacity, browning, freshness extension);
- beverages, confectionary (such as milk chocolate to add a milky texture and flavour);
- dry mixes and infant products (assists with adding a dairy flavour, texture and aroma to foods);
- prepared foods such as processed meats and seafoods, seasoning and flavours (adding texture and flavor and acting as a flavour carrier);
- snacks;
- animal feeds.

SMP can also be reconstituted to produce yoghurts, dairy desserts and ice creams, and skim milk, particularly in countries without adequate refrigerated food chain networks.

Taking into consideration the key uses of SMP in food manufacturing, where the great majority of the end products are sold through retail and supermarket stores and to a lesser extent the food service sector, it is not a major surprise that the impact of the COVID-19 pandemic has had a modest impact on overall consumption. Consequently, little change has been forecast for 2021.

Consumption in 2019 was 45,000 MT with only a small decline to 43,000 MT in the pandemic-affected 2020 year.

Trade

Exports

FAS/Canberra forecasts exports of SMP in 2021 at 130,000 MT, which is 5,000 MT lower than the revised 2020 estimate of 135,000 MT. With SMP production in 2021 forecast to remain the same as the 2020 estimate, a small increase in domestic consumption along with declining ending stocks is expected to result in a moderate decline in exports in 2021.

Australia exports over 80 percent of SMP production, but over the last five years export volumes have declined along with the fall in SMP production. China has become an expanding destination for Australian SMP, increasing from 16,516 MT five years ago to 41,550 MT in 2019, and now representing 33 percent of overall exports. Indonesia over the same period has been a destination for 20 to 23 percent of Australian total SMP exports. These two countries are the major export destinations and, although Australia exports to a further 20 or more countries, their volumes have all generally declined over recent years.

FAS/Canberra estimates the 2020 export volume to reach 135,000 MT, a 5,000 MT increase over the official USDA estimate of 130,000 MT. The January to September export result of 97,306 MT is almost 4,000 MT higher than the same period in 2019 and this trend is expected to continue for the remainder of the year.

Imports

FAS/Canberra forecasts SMP imports to remain stable at 15,000 MT in 2021, the same as the 2020 estimate. As a large net exporter of SMP, imports are very low and as a result, variances from year to year are minimal.

SMP imports in the January to September period in 2020 are 12,620 MT and tracking a little higher than the same period in 2019. However, with an anticipated increase in spring 2020 milk production, the production of SMP is anticipated to increase for the remainder of the year and may reduce the demand for imports.

By far the primary source of SMP imports is from New Zealand, equivalent to 78 percent of total imports in 2019.

Table 5 - Dairy, Milk, Nonfat Dry

Dairy, Milk, Nonfat Dry Market Year Begins	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	63	63	55	55	0	47
Production (1000 MT)	150	150	155	155	0	155
Other Imports (1000 MT)	15	15	15	15	0	15
Total Imports (1000 MT)	15	15	15	15	0	15
Total Supply (1000 MT)	228	228	225	225	0	217
Other Exports (1000 MT)	128	128	130	135	0	130
Total Exports (1000 MT)	128	128	130	135	0	130
Human Dom. Consumption (1000 MT)	45	45	43	43	0	45
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	45	45	43	43	0	45
Total Use (1000 MT)	173	173	173	178	0	175
Ending Stocks (1000 MT)	55	55	52	47	0	42
Total Distribution (1000 MT)	228	228	225	225	0	217
(1000 MT)						

WHOLE MILK POWDER

Production

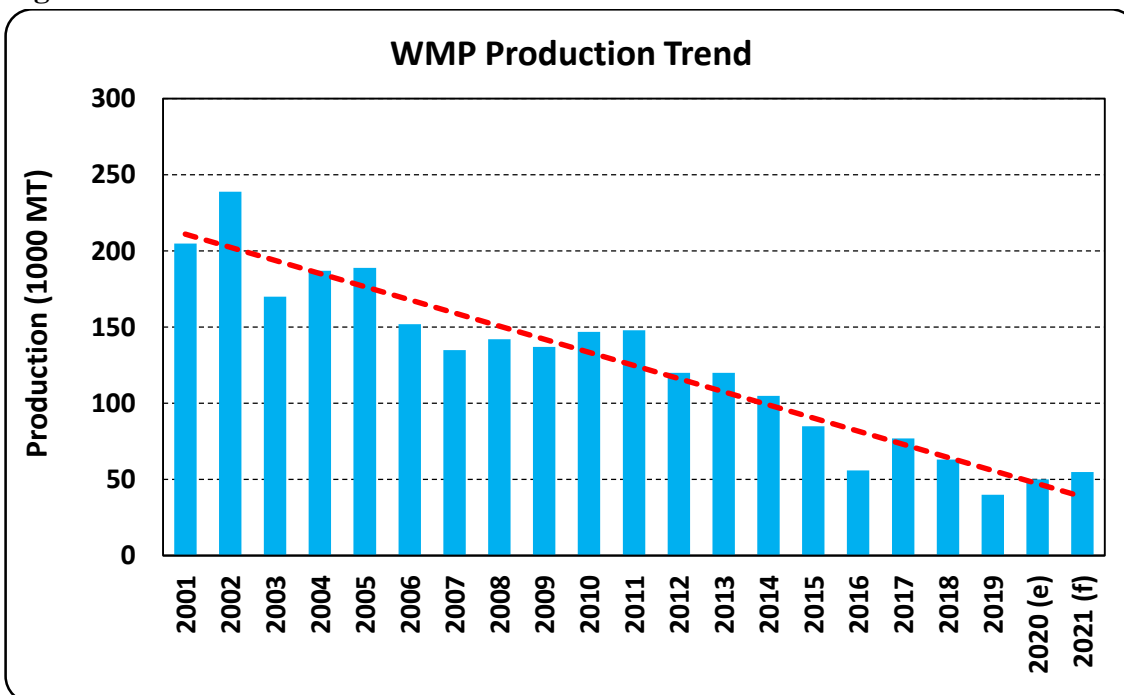
FAS/Canberra forecasts 2021 WMP production at 55,000 MT, a 5,000 MT increase over the 2020 revised estimate of 50,000 MT. This is similar to the moderate increases in butter production forecasts, which are driven by the increase in milk production in 2021.

Over the last two decades there has been a strong declining trend in WMP production as manufacturers have focused their attention to the production of cheese. Peak WMP production in Australia was in 2002 at 239,000 MT and has gradually declined by around 80 percent to an estimated 50,000 MT in 2020 (see figure 13).

With very low production of WMP in Australia, manufacturers have focused on producing more specialized higher value powders such as infant milk formula with the WMP available.

The FAS/Canberra WMP production estimate for 2020 is revised up to 50,000 MT, 5,000 MT higher than the official USDA estimate. According to Dairy Australia data the industry production of WMP for the January to June period is 21,379 MT, and the production for the same period in 2019 was 40 percent of the final annual WMP production. The anticipated boost in milk production during the spring period is expected to result in WMP production continuing to rise during late 2020.

Figure 13 – WMP Production Trend 2001 to 2021



Source: FAS/Canberra

Consumption

FAS/Canberra forecasts WMP domestic consumption in 2021 to remain at 40,000 MT, in line with the revised 2020 estimate. Due to the nature of the use of WMP in manufactured products, there has been no significant impact on consumption caused by the COVID-19 pandemic and there is no significant change in forecast consumption.

WMP is an important ingredient for a wide range of manufactured food products and it can be reconstituted to produce milk drinks, yoghurts and ice cream. In the food manufacture sector, it is used similarly to SMP in baking products, such as breads, cakes and biscuits, beverages, confectionaries, dry mixes and prepared foods. Of significant importance and differentiation from SMP, WMP is also used in the production of infant milk formula.

FAS/Canberra estimates the 2020 WMP consumption at 40,000 MT, up 5,000 MT from the official USDA estimate. An important contributor to the higher estimate has been due to a significant increase in flavoured and plain Greek yoghurt sales through supermarkets according to industry reports.

Trade

Exports

Exports of WMP in 2021 are forecast by FAS/Canberra at 50,000 MT, some 15,000 MT higher than the revised 2020 estimate. This increase in forecast exports is primarily due to the forecast rise in milk production in 2021.

Australia now exports almost as much WMP as it produces, and also imports a similar quantity of WMP to meet domestic consumption demands. In a broad sense this does not seem logical, however, Australian manufacturers focus on producing higher value WMP predominantly for export, while imported product is primarily used as an ingredient in manufactured products.

Over the last two years China and Hong Kong have combined to be a destination for over 22,000 MT of WMP each year, and in 2019 accounted for 55 percent of all of Australia's exports. Thailand, Singapore and Sri Lanka were also significant export destinations for WMP in 2019, accounting for a further 30 percent of all exports.

The FAS/Canberra WMP export estimate for 2020 is revised down by 5,000 MT from the official USDA estimate to 35,000 MT. This would result in Australia becoming a net importer of WMP for the first time. However, this is expected to be temporary as trade forecasts for 2021 are for Australia to revert back to being a net exporter. Exports for the January to September 2020 period are 24,938 MT, almost 20 percent below the same period in 2019. Exports to Thailand and Singapore have been similar to the same period in 2019 but China and Hong Kong are down by 10 percent and exports to Sri Lanka are down sharply. However, industry anticipates an improvement in the rate of exports for the remainder of the year via demand from Australia's major trading partners in Asia.

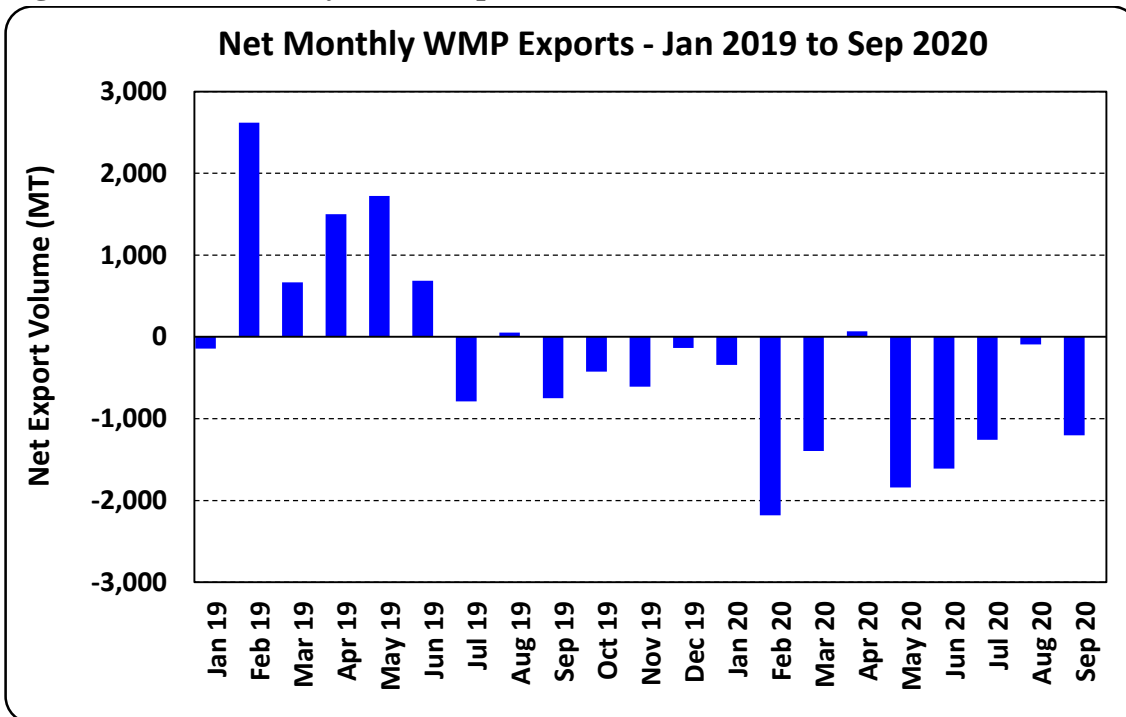
Imports

FAS/Canberra forecasts WMP imports of 40,000 MT in 2021, a reduction of 10,000 MT on the revised 2020 estimate. The import estimate for 2020 is at a high level relative to past trends and likely a response to the low production in 2019 associated with the drought. This is forecast to be partially corrected in 2021 via a reduction in imports.

The FAS/Canberra import estimate of WMP in 2020 is 50,000 MT, an upward revision to the official USDA estimate of 35,000 MT. This is on the basis of the high import rate so far in 2020, with the result for the January to September period already at 34,721 MT.

During the first half of 2019 WMP exports were higher than imports and then promptly turned in the second half of 2019 with imports exceeding exports (see figure 14). This trend has continued throughout 2020 and Australia for the first time on an annual basis became a net importer of WMP.

Figure 14 – Net Monthly WMP Export Trend 2019 and 2020



Source: Australian Bureau of Statistics

Table 6 - Dairy, Dry Whole Milk Powder

Dairy, Dry Whole Milk Powder Market Year Begins Australia	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	25	25	27	24	0	49
Production (1000 MT)	40	37	45	50	0	55
Other Imports (1000 MT)	37	37	35	50	0	40
Total Imports (1000 MT)	37	37	35	50	0	40
Total Supply (1000 MT)	102	99	107	124	0	144
Other Exports (1000 MT)	42	42	40	35	0	50
Total Exports (1000 MT)	42	42	40	35	0	50
Human Dom. Consumption (1000 MT)	33	33	35	40	0	40
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	33	33	35	40	0	40
Total Use (1000 MT)	75	75	75	75	0	90
Ending Stocks (1000 MT)	27	24	32	49	0	54
Total Distribution (1000 MT)	102	99	107	124	0	144
(1000 MT)						

Attachments:

No Attachments