Required Report: Required - Public Distribution **Date:** May 17, 2022

Report Number: AS2022-0011

Report Name: Dairy and Products Semi-annual

Country: Australia

Post: Canberra

Report Category: Dairy and Products

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Report Highlights:

Milk production in Australia in 2022 is forecast to decrease by over four percent to 8.6 million metric tons (MMT). Despite generally good production conditions for 2022, the slump in milk production is largely due farmers continuing to exit the dairy industry through farm sales and some dairy farms partially or fully transitioning to less labor-intensive beef cattle production. This started in 2021 and has continued into 2022 but its impact on milk production will largely be borne out in 2022. Fresh milk consumption in 2022 is forecast to decline slightly. A seven percent decline in factory use consumption is driving processors to prioritize their production towards products with higher returns. As whole milk powder prices have not kept pace with the other major dairy commodities, it is expected to see the largest production decline.

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT POLICY

Executive Summary

Milk production in 2022 in Australia is forecast to decrease by over four percent to 8.6 million metric tons (MMT) from 9.019 MMT in 2021. This is also a substantial four percent downward revision from an earlier forecast of 9.0 MMT for 2022. External forces have continued to have a negative impact on milk production in early 2022 which is also expected to limit the growth in milk production for the remainder of 2022. The shortage of labor initially influenced by COVID-19 lockdowns in the major dairy farming states has continued even after the easing of restrictions and reopening of Australia's international borders, with economy-wide labor shortages in Australia. This has also led to a continuation of some dairy farms partially or fully transitioning to less labor-intensive beef cattle production encouraged by record beef prices in Australia. Also, with the growth in land prices in recent years some have chosen to exit the industry. In addition, drier than usual conditions at the start of 2022 in two of the major dairy farming regions of Gippsland and northwest Tasmania have negatively impacted milk production. However, good fall rainfalls across all regions has set up good pasture growth leading into winter including the two key regions affected by dry conditions at the start of 2022.

The overall outlook for production conditions in 2022 remains strong. Milk prices are at record levels, hay prices are low, and there is expected to be ample water available for irrigators for annual pastures in the fall and in the spring/summer months. Although grain prices remain high and fertilizer prices are very high, dairy farmer profitability is expected to be good. However, the key hindrance is the lack of labor availability to enable dairy farmers to take advantage of these generally positive conditions.

Fresh milk consumption in 2022 is forecast to decrease slightly by around one percent to 2.45 MMT. This is a continuation of recent trends, in particular declining full cream, reduced fat and flavored milk consumption but increasing long-life milk consumption - but which has not been enough to arrest the overall declining trend. Fresh milk consumption is expected to account for 28 percent of overall milk production while factory use consumption is also forecast to decline to 5.705 MMT, from an estimated 6.140 MMT in 2021.

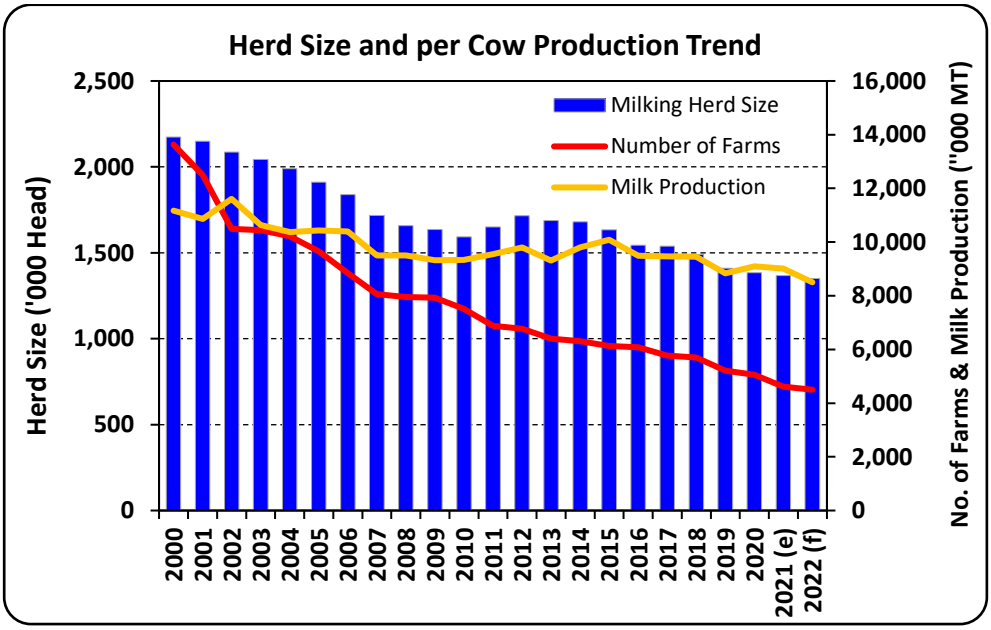
With a seven percent decline in factory use consumption, processors are expected to prioritize their production towards milk products with higher returns. Processors over recent years generally favored increasing cheese production with a transition away from cheddar cheeses to other softer cheese types. World market prices for the major manufactured dairy products over the last nine months has seen cheese, butter, and skim milk powder (SMP) prices increase at a greater pace than whole milk powder (WMP). With this, the trend of Australian dairy manufacturers prioritizing cheese production is expected to continue but also with support for skim milk powder production throughout 2022.

DAIRY INDUSTRY SUMMARY

The dairy industry has been one of the major agricultural industries in Australia for many decades. The milking herd size peaked in 2002 at 2.369 million head and milk production also peaked in the same year at 11.608 MMT (see Figure 1). This was merely two years after the dairy industry was deregulated. This deregulation involved breaking down the state-based regulated liquid milk market which was of strong benefit to smaller milk producing states. In such states, a high proportion of their milk went toward the much higher value regulated liquid milk market and little or none to the manufactured milk sector which was more exposed to the domestic and export markets. As part of the deregulation process dairy farmers were paid a substantial lump sum compensation (by the Federal Government) calculated based on the individual farms level of dependence on the regulated liquid milk market.

Dairy deregulation enabled some dairy farmers to invest in their business and others to sell and step away from the industry. It also enabled the industry to gradually right-size and those farms that were in less efficient producing areas and were not competitive in the free-market arrangement could step away from the industry allowing it to consolidate. Broadly, this resulted in there being a greater reduction in dairy farm numbers in the more northern tropical and sub-tropical regions than in the more southern temperate regions. Between 2002 and 2021, the industry has reduced the milking herd size by 35 percent to 1.365 million head and reduced dairy farm numbers by around 56 percent to 4,618. However, industry adaptation to the free market during this period allowed milk production to only decline by around 22 percent, from 11.6 MMT in 2002 to 9.0 MMT in 2021. During this period the average milking herd size increased by almost 50 percent from around 200 head to 295 head. At the same time, average milk production per cow has increased by almost 20 percent from approximately 5.6 metric tons (MT) per cow to almost 6.6 MT per cow.

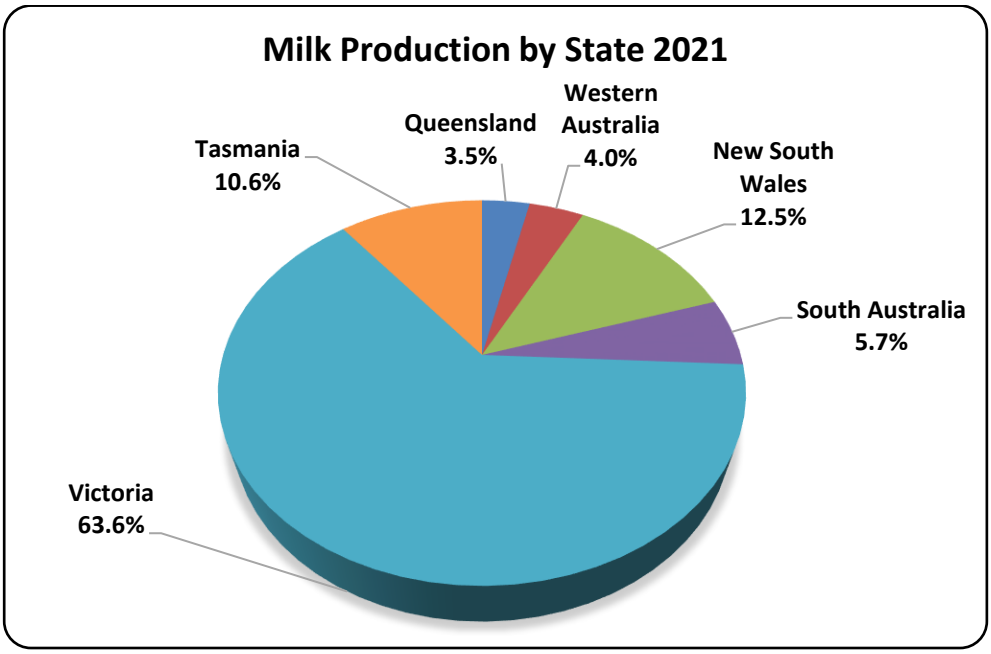
Figure 1 – Australian Dairy Herd Size, Farm Numbers and Production per Cow



Source: *Dairy Australia / ABS / PSD*

Almost two-thirds of milk production is from the southern state of Victoria (see Figure 2) which has a temperate climate. The north of the state, which is known as the Murray Dairy region, has traditionally been very dependent upon irrigation but has been forced to adapt as irrigation water prices have broadly increased and availability diminished due to competition from the horticulture sectors. The two southern dairy regions known as West Vic Dairy and Gipps Dairy are pasture-based relying on natural rainfall with only small pockets able to access irrigation water. Tasmania is also an important contributor at around 11 percent of overall national milk production. It, similarly to the two southern Victorian regions, is pasture-based and fed by natural rainfall and little irrigation. Milk production in New South Wales is mainly in the central and southern coastal areas and in the southern irrigation area adjacent to the Murray Dairy irrigation region in northern Victoria.

Figure 2 – Milk Production by State 2021



Source: Dairy Australia

POLICY

UK-AU FTA

The United Kingdom (UK) and Australia signed an in-principle Free Trade Agreement (FTA) on June 15, 2021 and has since been finalized and signed virtually on December 18, 2021.

The FTA was tabled in the Australian parliament on February 8, 2022, with an accompanying National Interest Analysis (NIA). Interested parties were invited to make submissions by March 18, 2022, before progressing towards acceptance by parliament.

After the FTA is formalized, dairy tariffs will be eliminated over five years. During the transition period, Australia will have immediate access to a duty-free quota for cheese of 24,000 MT, rising in equal installments to 48,000 MT in year five. Immediate access will also be granted to Australia for 20,000 MT of non-cheese dairy products. Butter will also benefit with a duty-free quota of 5,500 MT transitioning to 11,500 MT in year five. Although welcomed by the Australian dairy industry as providing a further significant market access option, it is anticipated that Australia will continue to focus its trade to nearby Asian markets.

India-AU Economic Cooperation and Trade Agreement

An interim trade agreement with India (called the Australia-India Economic Cooperation and Trade Agreement) was signed by the two parties on April 2, 2022 after negotiations were launched in May 2011. After nine rounds of negotiations up to September 2015, progress had stalled until they recommenced in October 2021 before progressing to the recently announced interim agreement. The Agreement is expected to enter into force in the second half of 2022. However, Australian dairy products were excluded from this agreement. The dairy industry hopes the framework will more easily enable negotiations to expand the agreement to dairy products in the future.

FLUID MILK

Production

FAS/Canberra forecasts Australia's milk production at 8.6 million metric tons (MMT) in 2022, substantially lower than the official USDA forecast of 9.1 MMT. The revised forecast is also a substantial decrease from the 2021 result of 9.019 MMT. This slump in forecast milk production for 2022 is despite broadly good conditions for the industry where milk prices are at record high levels, good rainfalls have been received to date in most dairy farming regions, hay prices are low and feed grain prices are higher than usual but not excessive. However, fertilizer and chemicals (mainly herbicides) prices are very high. Broadly with these settings dairy farming is expected to remain relatively profitable in the forecast year which is counter intuitive to the forecast decline in milk production.

A combination of factors largely outside of the dairy industry's control emerged in 2021 and have extended into 2022 which resulted in dairy farmer exits, which are negatively influencing the 2022 forecast. These factors are:

- Increased dairy farm property prices
- Labor shortages
- High beef cattle prices

Labor shortages were a concern during border closures and intermittent lockdowns caused by the COVID-19 pandemic, and there was previously an expectation that as international borders opened in early 2022 allowing travellers to enter Australia more freely that this pressure would ease. Instead, the

labor shortages during the early part of 2022 if anything have intensified as part of an Australia-wide issue across most sectors of the economy. As the country emerges from COVID-19 related disruptions, the demand for employees is very high, and the national unemployment rate is at a 14-year low and anticipated to fall further in the coming months to levels not seen since 1974.

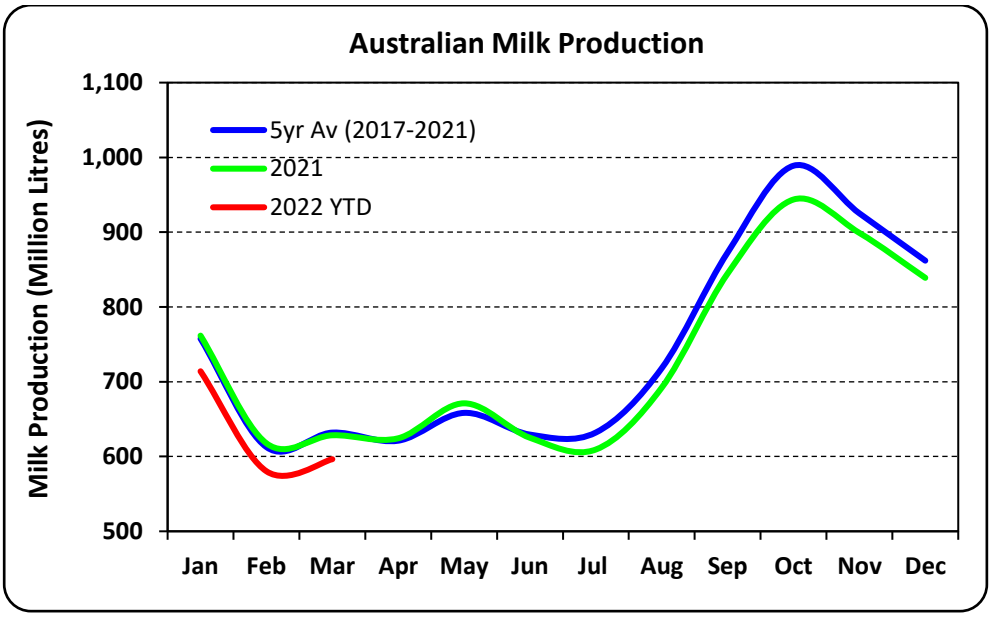
The labor shortages in combination with elevated dairy property prices had in 2021 triggered an increase in the number of dairy farmers choosing to retire earlier than planned which has reportedly continued into 2022. The sale of some of these dairy farms has gone to a conversion to beef cattle production. In addition to dairy farm sales, the challenge of maintaining or securing adequate labor, coupled with historical high beef cattle prices in Australia, according to industry sources, has resulted in some dairy farmers partially or fully converting their properties to beef cattle production.

The opening of international borders since early 2022 is yet to see any significant increase in the entry of overseas worker from the likes of the Pacific Islands and other nearby countries to provide labor relief. Nor has there been any significant increase in arrivals of working holiday makers, often referred to as backpackers, who typically form part of the labor force in the agricultural sector. The Federal Government in October 2021 introduced a new Australian Agriculture Visa which is a means to encourage farm workers to Australia from beyond the Pacific Islander Scheme and is designed as a transition towards permanent residency. But this involves bilateral agreements and is only available to approved employers, so it will take time before this starts to benefit Australian agriculture. Due to the time lag to entry of any significant increase in agricultural workers to Australia after the reopening of international borders and the current strong demand for workers across the whole economy, there could be further exits from the dairy industry and partial conversions to lower labor intensive beef production in 2022. However, as entry of farm workers from overseas increases, perhaps later in 2022, it could stem the tide of dairy farms partially or fully converting to beef production.

Despite very good overall conditions for dairy farmers, the lack of labor availability in 2021 which has carried through into 2022 has resulted in a further estimated decrease in dairy herd numbers from 1.365 million head in 2021 to a forecast 1.35 million head in 2022. For those dairy farmers who have decreased their herd size and diversified to beef production in order to manage the lower labor availability, it may require a further improvement in dairy farming returns relative to beef to increase their dairy herd size even if labor becomes more available. The recovery of national milk production in the years beyond 2022 is expected to be challenging.

As mentioned, FAS/Canberra's milk production estimate for 2022 is downward revised to 8.6 MMT from the official USDA forecast of 9.1 MMT, despite the broadly good production conditions. Milk production in the first quarter of 2022 is almost six percent below the same period the previous year and also compared to the previous five-year average (see Figure 3).

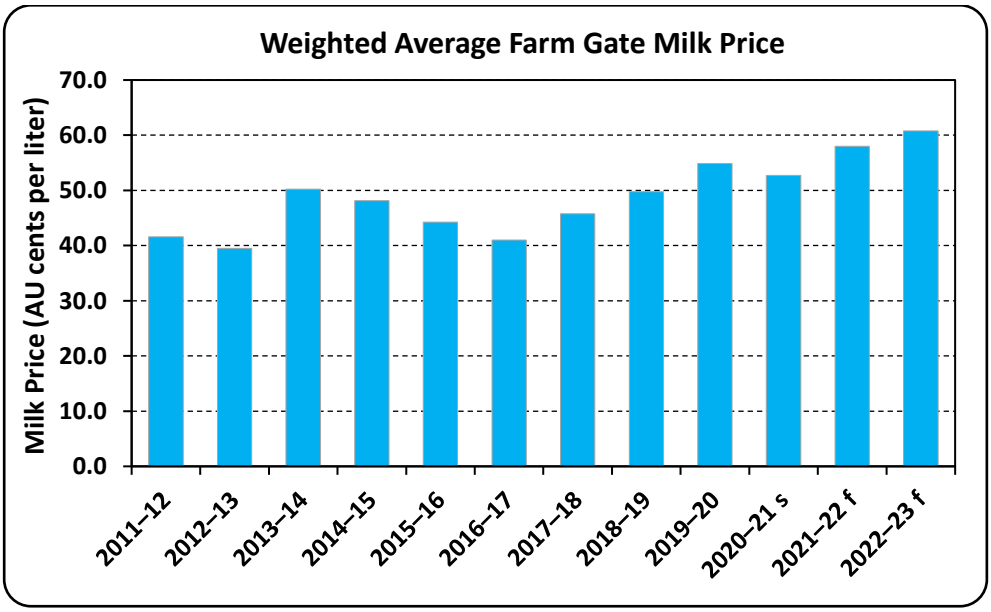
Figure 3 – Monthly Milk Production in Australia 2017 to 2022 YTD



Source: *Dairy Australia*

Over recent years world dairy commodity prices have strengthened and are currently at near peak historical levels. This has led to an estimated record milk price paid to farmers in Australia in 2021/22 and an even higher price forecast for 2022/23 (see Figure 4). Australian dairy farmers, particularly those supplying manufactured milk processors, are paid from a July to June period. An opening milk price is stated prior to July 1 and the price is progressively increased as certainty of commodity prices improves with the price being backdated to milk produced from July 1.

Figure 4 – Farm Gate Milk Price – Recent History and Forecast

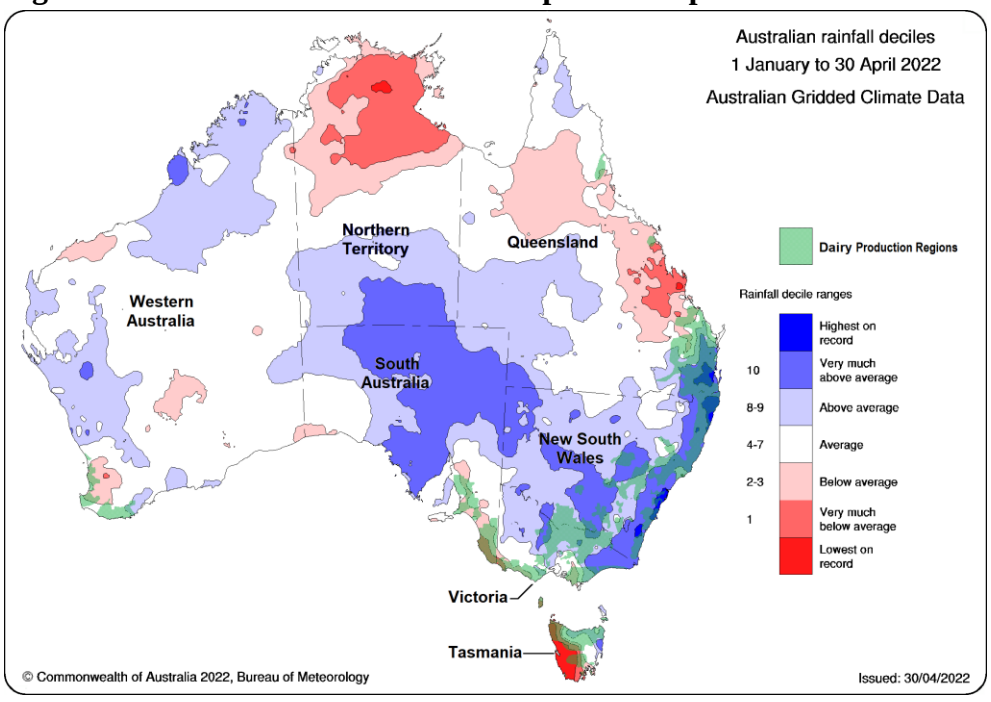


Source: *Australian Bureau of Agricultural and Resource Economics and Sciences*

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) forecast for a record milk price for 2022/23 on the back of an estimated record price for 2021/22 would generally be enough to overcome other challenges, such as weather and input cost increases, and encourage a resurgence in national milk production. However, as mentioned farmer exits have continued despite these high prices.

In the first four months of 2022 dairy farming regions for the most part have received good rainfalls (see Figure 5), especially in north-east Tasmania, northern Victoria, all of New South Wales and southern Queensland. Parts of south-western Victoria, South Australia, and Western Australian dairy producing regions have been below average but not considered to be drought conditions. The north-western corner of Tasmania has been hardest hit with below average rainfall. The Gippsland region in the south-east of Victoria has had dry periods in amongst well above average rainfall periods which has affected production there. There has also been some major flooding in south-east Queensland and north-east New South Wales with some cattle losses which may bring forward some exits from the industry in these areas.

Figure 5 – Australia Rainfall Decile Maps – Jan-Apr 2022

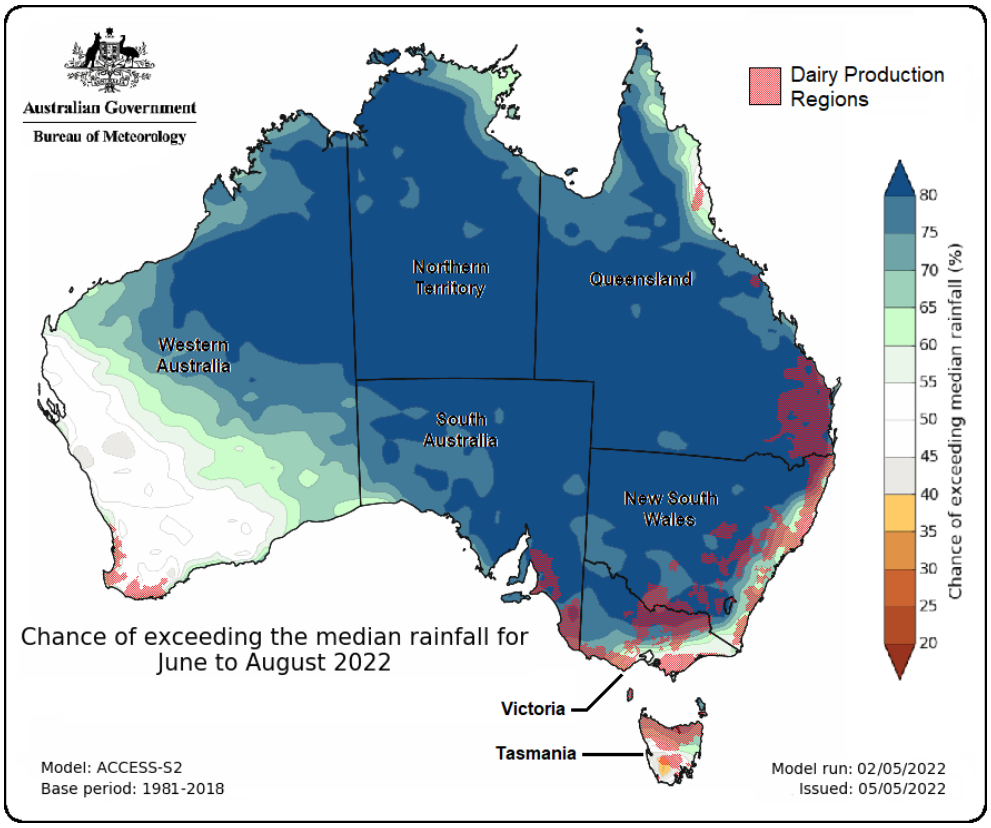


Source: Bureau of Meteorology / Dairy Australia

The Bureau of Meteorology forecast for rainfall is generally for an average to well above average chance of exceeding median rainfall over the June to August period (see Figure 6). If realized this will support the overall good start to the year so far in terms of rainfall. But it is possible that this may also

lead to too much rain over the winter in some dairy farming areas which may have a negative impact on their milk production.

Figure 6 – Chance of Above Average Rainfall – June to August 2022

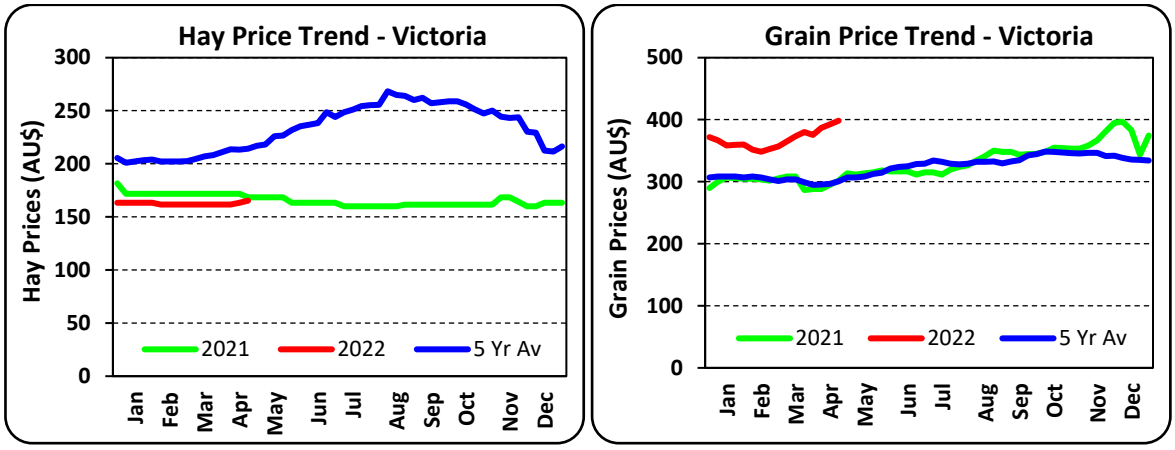


Source: Bureau of Meteorology

Dairy producers have the benefit of low costs for hay in 2022 after successive favorable spring conditions enabled higher than average fodder production and a build-up of on farm reserves. Hay prices, although similar to 2021, are almost one-third lower than the previous five-year average (see Figure 7).

Feed grain prices in 2022, however, are around one-third higher than for 2021 and the previous five-year average (see Figure 7). Dairy farmers typically purchase substantially more grain than hay so the higher prices will have an impact on dairy farmer profitability in 2022. These high grain prices are despite Australia producing big wheat and barley crops in 2021 and record production in 2022. The strong world demand for feed grains has led to robust exports and a rise in domestic prices. Australian grain export ports are hitting logistical capacity, limiting the drain of grain supplies, and along with prospect of another big winter crop in 2022, are likely to minimise any further significant increase in feed grain prices for dairy farmers in 2022.

Figure 7 – Hay and Grain Price Trends in Victorian Dairying Regions



Source: Dairy Australia

For dairy farmers fertilizer inputs are a significant cost to the business primarily for the production of pastures and other fodder crops. Phosphatic and nitrogenous fertilizers or blended products of the two are mostly used. Although phosphatic fertilizer prices have increased over the last year it has been small compared to the rise in nitrogenous fertilizer prices which have increased almost three-fold in a little over the last year.

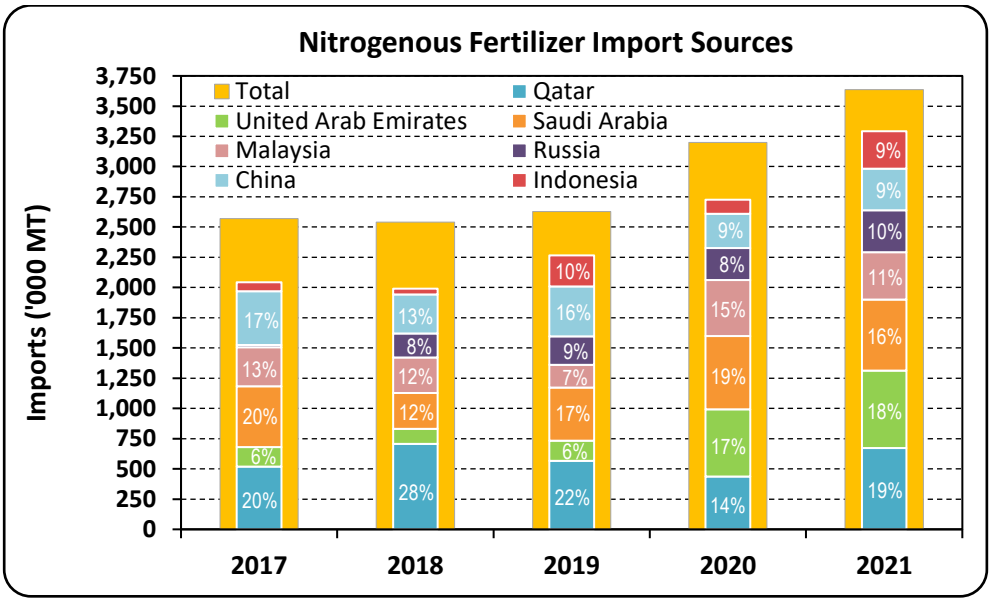
A key trigger for the rise in nitrogen-based fertilizer prices has been due to Chinese state-owned producers in September 2021 being banned from exporting fertilizer, which appears to be for the purpose of reducing their own domestic prices. However, non-state-owned fertilizer producers at this point are reportedly free to continue to export their products. In December 2021, Russia imposed fertilizer export restrictions reportedly for the purpose of curbing rising food prices. This further tightened world supply of fertilizer. In addition to the Chinese ban on fertilizer exports and fertilizer export restrictions imposed by Russia, the Russian invasion of Ukraine is further adding to these impacts. Russia is a major exporter of fertilizers, in particular nitrogenous fertilizers, and with limited shipping out of the Black Sea region during hostilities, has led to a shortage of fertilizer on the world market which is evident by the recent large escalation in price.

A positive for Australian producers is that for many years its primary source of nitrogenous fertilizer is the Middle East and only around 10 percent or less is sourced from both Russia and China (see Figure 8). With a strong spread of nitrogenous fertilizer sources, Australia is reasonably well placed to secure its requirements during the year.

The average import price of nitrogenous fertilizers to Australia peaked at almost US$700 per MT (AU$970 per MT) in January/February 2022 from broadly flat monthly prices across 2020 of around US$235 per MT (AU$325 per MT), an almost three-fold increase (see Figure 9). The price may have

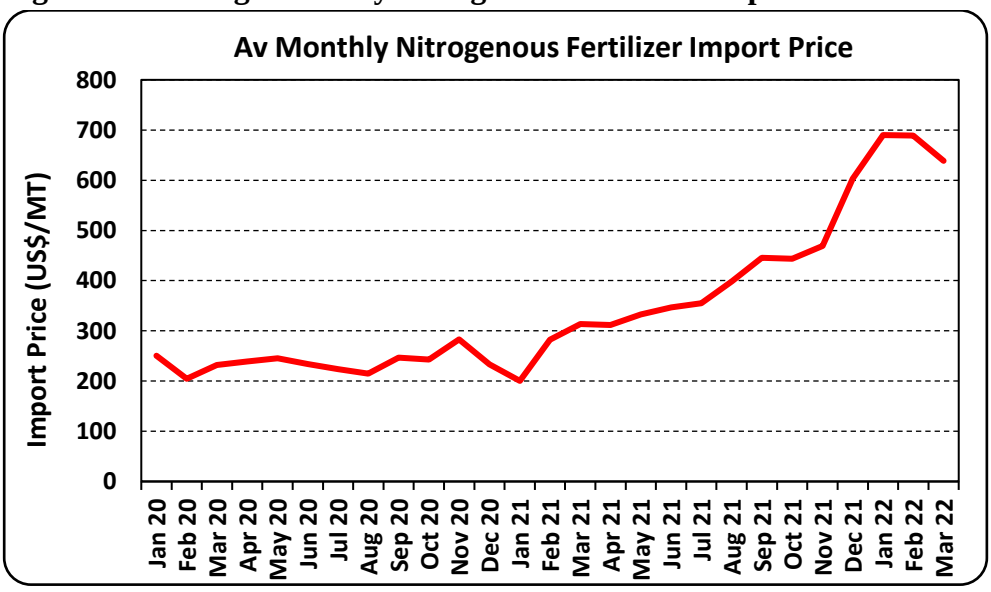
peaked after a small decrease in the import price for March 2022. These increases are attributed to the rising energy costs (gas is a major input cost to the production of nitrogenous fertilizers) in 2021 and the restriction of supply from China, Russia and Ukraine.

Figure 8 – Nitrogenous Fertilizer Import Sources



Source: *Australian Bureau of Statistics*

Figure 9 – Average Monthly Nitrogenous Fertilizer Import Price



Source: *Australian Bureau of Statistics*

For the most part it is the exits from the dairy industry along with partial conversion to beef production, as outlined earlier, during 2021 which is having the greatest impact on milk production results in 2022.

With this trend yet to stabilize in 2022 there is likely to be further impacts on national milk production in 2023.

FAS/Canberra's fluid milk production for 2021 is revised up to 9.019 MMT from the official USDA estimate of 9.0 MMT. This revision is based on Dairy Australia's full year published production data. This is only a small decline in milk production from the 2020 result of 9.099 MMT. This highlights that the effects of labor shortages leading to farm sales and partial conversions to beef production during 2021 have lagged and largely impacted milk production in 2022.

Consumption

Fluid milk consumption is forecast by FAS/Canberra to marginally decline in 2022 to 2.45 MMT, from the 2.482 MMT in 2021. The forecast is a downward revision from the official USDA forecast of 2.5 MMT. The forecast decline in consumption is in line with the trend in recent years. But with a significant decline in milk production forecast for 2022 the domestic fluid consumption is expected to increase in importance to reach 28 percent of overall milk production.

Overall drinking milk consumption in Australia remains high compared to world levels but domestic consumption of fluid milk per capita has been gradually declining over recent years. Australia's population has remained flat in recent years, mainly because of the international border closures associated with the management of the COVID-19 pandemic. It is anticipated that it will take some time before net migration, a key driver of population growth in Australia, will return to pre-pandemic levels and with this there is little impetus to arrest the recent trend of a slow decline in overall fluid milk consumption.

Consumers have shifted their milk preference towards Ultra-High Temperature (UHT) milk, which now accounts for 11 percent of fluid milk consumption, and away from regular full-fat milk (56 percent), reduced fat/skim milk (23 percent) and flavored milk (10 percent). The trend towards UHT milk may in part be related to COVID-19 related lockdowns in 2020 and 2021. This shift may reverse in 2022 as the risk of pandemic-related lockdowns in the short term in Australia is now low.

FAS/Canberra forecasts factory milk consumption in 2022 to reach 5.705 MMT, a decline of seven percent from the 6.14 MMT in 2021. This is also a substantial downward revision from the official USDA forecast of 6.225 MMT. This is due to a large reduction in the forecast milk production for 2022 which will cause a decline in the production of manufactured dairy products.

Trade

Exports

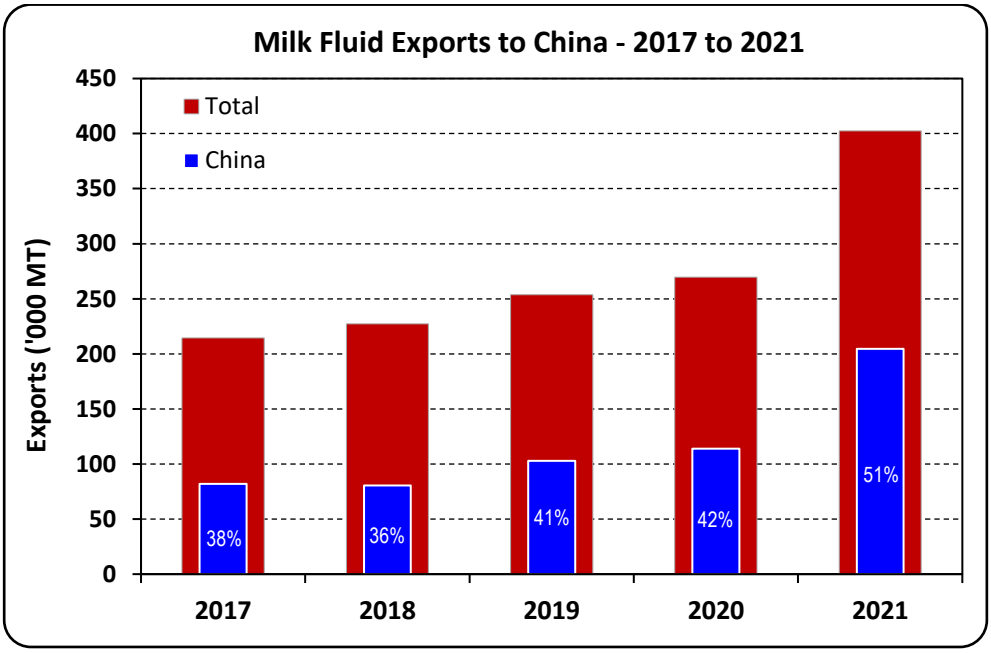
FAS/Canberra forecasts fluid milk exports to reach 450,000 MT in 2022, a twelve percent increase over the 2021 outcome of 402,000 MT. This is a continuation of strong growth in fluid milk exports, which grew by 49 percent from 2020 to 2021. The majority of milk exported (around 98 percent) is long life

UHT milk, which is transported by sea freight. The current freight disruption challenges, although a concern, are less of an issue compared to perishable goods requiring refrigerated containers.

Exports for the first quarter of 2022 are at 109,000 MT and 68 percent above the same period in 2021. Almost all of this growth is to China which may be a response to securing non-perishable food supply related to the current COVID-19 related lockdowns. It is anticipated that as the situation improves in China that the rate of growth in fluid milk exports will slow for the remainder of 2022.

Although Australia exports to over 40 nations, the major trading partner for Australian fluid milk is China which now accounts for half of all exports. The growth in fluid milk exports to China has been rapid over the last five years, and in particular from 2020 to 2021 (see Figure 10). This is likely to be related to securing a staple non-perishable food product in case of COVID-19 related lockdowns. For this reason, the 2022 forecast rate of export growth in more reflective of pre-pandemic increases.

Figure 10 – Milk Fluid Exports to China 2017 to 2021



Source: Australian Bureau of Statistics

2021 milk exports reached 402,000 MT according to finalized Australian Bureau of Statistics trade data.

Imports

Fluid milk imports by Australia are forecast to remain stable at a very low level of 5,000 MT in 2022. This level of imports has remained relatively constant for over five years.

Table 1 - Production, Supply, and Distribution of Dairy, Milk, Fluid

Dairy, Milk, Fluid	2020		2021		2022	
Market Year Begins	Jan 2020		Jan 2021		Jan 2022	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk (1000 HEAD)	1420	1385	1410	1365	1420	1350
Cows Milk Production (1000 MT)	9099	9099	9000	9019	9100	8600
Other Milk Production (1000 MT)	0	0	0	0	0	0
Total Production (1000 MT)	9099	9099	9000	9019	9100	8600
Other Imports (1000 MT)	5	5	5	5	5	5
Total Imports (1000 MT)	5	5	5	5	5	5
Total Supply (1000 MT)	9104	9104	9005	9024	9105	8605
Other Exports (1000 MT)	270	270	350	402	380	450
Total Exports (1000 MT)	270	270	350	402	380	450
Fluid Use Dom. Consum. (1000 MT)	2528	2528	2470	2482	2500	2450
Factory Use Consum. (1000 MT)	6306	6306	6185	6140	6225	5705
Feed Use Dom. Consum. (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	8834	8834	8655	8622	8725	8155
Total Distribution (1000 MT)	9104	9104	9005	9024	9105	8605
(1000 HEAD) ,(1000 MT)						

CHEESE

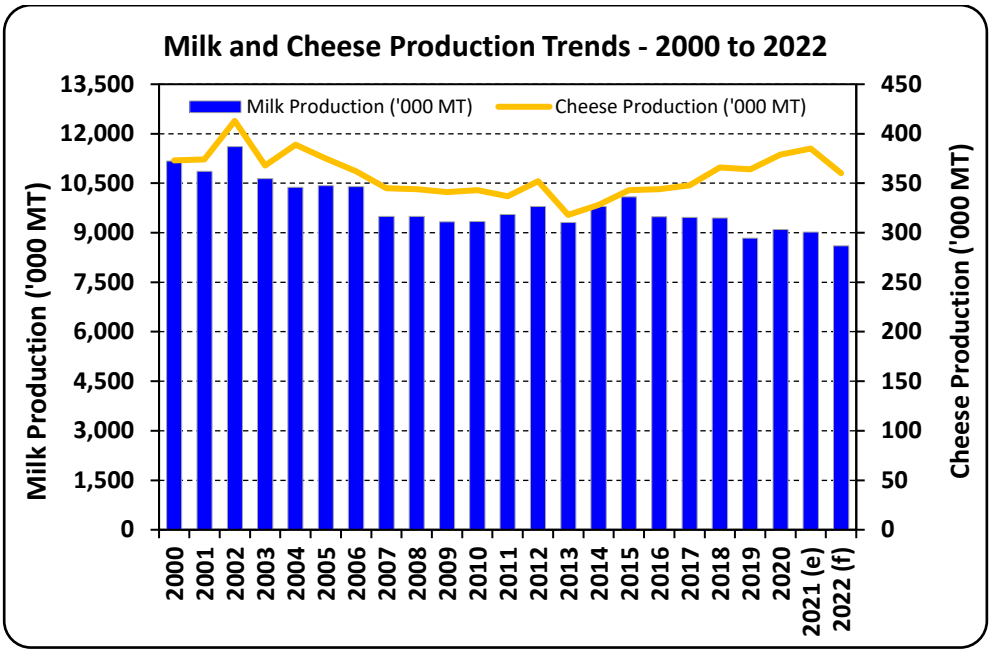
Production

FAS/Canberra has revised down the 2022 cheese production forecast to 360,000 MT from the official USDA forecast of 370,000 MT. The forecast is a six percent decline from the estimated result for 2021 of 385,000 MT. The reduced cheese production forecast is due to the downward revised forecast milk production (a five percent reduction from the estimated 2021 result) and in turn reducing milk volume available for manufacturing by seven percent.

After an upward trend in cheese production in recent years it is expected to decline in 2022 due to the slump in milk production. However, this reduction is slightly less than the overall decline in factory milk consumption, indicating processors will continue to prioritize cheese. Cheese by far accounts for more milk usage in Australia than any other dairy product, accounting for around 34 percent of total fluid milk production, and around 50 percent of fluid milk available for manufacturing products. For many years changes in cheese production was broadly reflective of variation in milk production from year to year. However, from around 2016 there has been a distinct shift in focus towards cheese production (see Figure 11).

The continued focus on increasing cheese production is reflective of the increasing price gap between the average cheese price relative to WMP particularly over the last nine months (see Figure 12). Although prices for all of the major manufactured dairy commodities have declined over the last month, cheese, butter and skim milk powder prices remain strong. The prices of these products are all almost 50 percent higher than nine months earlier. However, WMP has only risen around 12 percent in that time and is not expected to be a focus for milk processors in 2022.

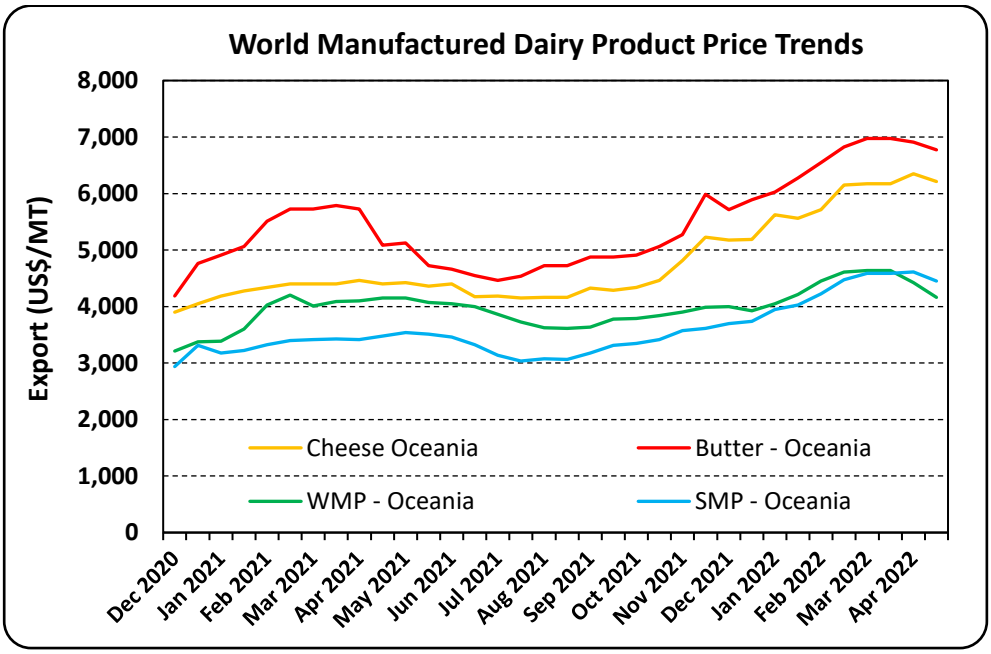
Figure 11 – Milk and Cheese Production Trends – 2000 to 2022



Source: *Dairy Australia / Dairy Manufacturers*

Butter (and other associated products such as cream) is typically produced concurrently with SMP, and their prices have risen by almost as much as cheese over the last nine months. During 2022, milk processors are expected to continue their focus on producing cheese but will compete for milk volume from SMP and butter processors.

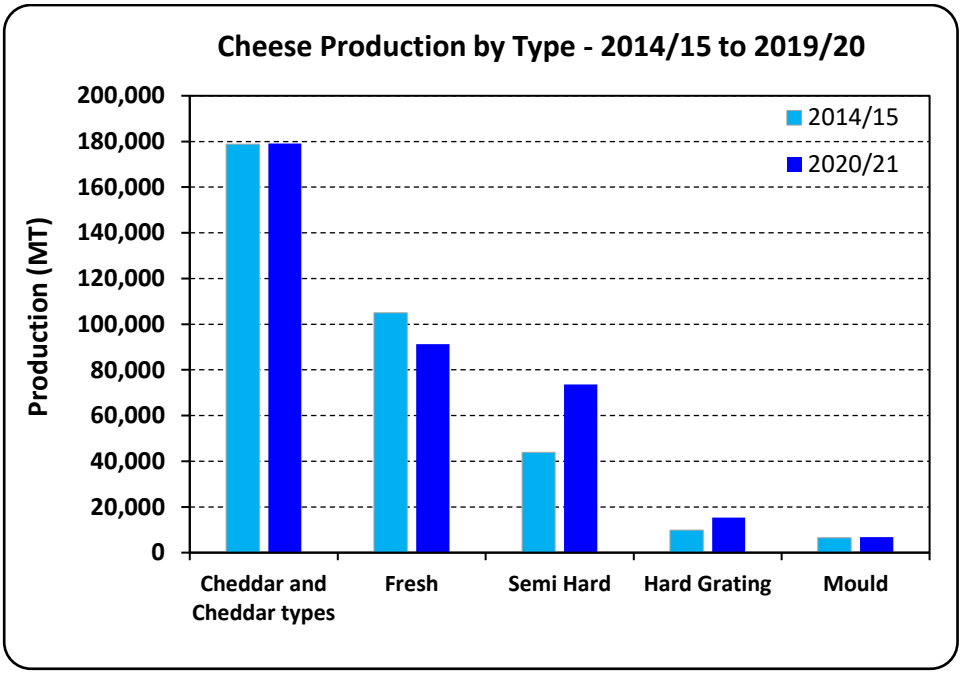
Figure 12 – Australian Dairy Export Price Trend



Source: *USDA Agricultural Marketing Service*

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 13).

Figure 13 – Cheese Production by Type - 2014/15 to 2019/20



Source: Dairy Australia / Dairy Manufacturers

FAS/Canberra's cheese production estimate for 2021 is revised up to 385,000 MT from the official USDA estimate of 360,000 MT as a result of industry data indicating larger production volumes than previously estimated.

Consumption

FAS/Canberra forecasts a marginal increase in cheese consumption in 2022 to 310,000 MT, from the 2021 estimate of 305,000 MT, primarily due to the expectation that Australia will transition away from state-based COVID-19-related lockdowns in 2022 and has begun to allow entry of international travellers to Australia. In recent years overall growth in cheese consumption has slowed, primarily caused by international border closures related to the COVID-19 pandemic curtailing net migration and causing population growth to stagnate. In recent years there has also been a shift in consumer preferences from processed towards natural cheeses, and from cheddar to non-cheddar varieties.

As Australia transitions away from COVID-19 pandemic related lockdowns in 2022, and with state and international borders opened up from early 2022, there is an expectation that there will be a shift towards increased food service sector consumption, partially at the expense of retail sales. Consumers are

expected to partly transition back towards pre-pandemic levels of eating out, frequenting restaurants and cafes once again, and reduced home cooking. This may in part be tempered by current economy wide inflationary pressures that is impacting consumers costs of living.

FAS/Canberra estimates consumption of cheese in 2021 at 305,000 MT which is in line with the official USDA estimate and the previous year. This is the highest level of cheese consumption recorded in Australia.

Trade

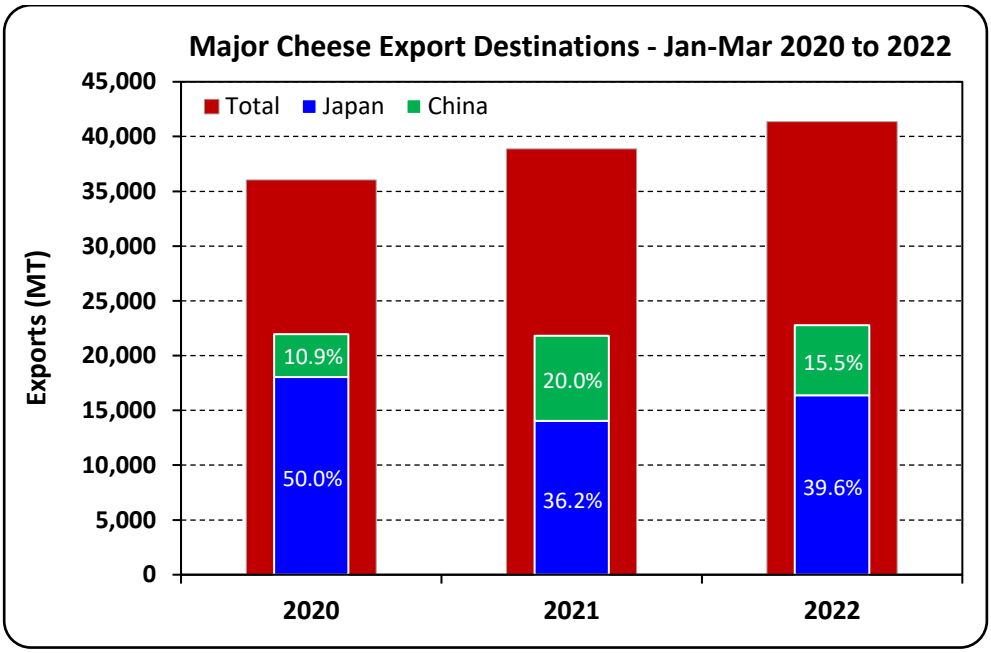
Exports

Cheese exports in 2022 are forecast by FAS/Canberra at 165,000 MT, a small increase over the 157,000 MT achieved in 2021. Despite a forecast 25,000 MT-decrease in cheese production in 2022, exports are anticipated to increase slightly as a result of some stock build up in 2021 (Note: cheeses require varying periods of maturity before sale, so it normal for production and exports to cross over from one year to the next). There has been a six-precent higher rate of exports in the first quarter of 2022 compared to the same period in 2021, a rate that is in line with the FAS/Canberra forecast.

Australia is a net exporter of cheese, and it is the largest dairy product exported. In 2021 around 41 percent of all cheese produced in Australia was exported. With the expectation of manufacturers continuing to favor cheese production and with limited scope to increase domestic consumption of cheese, any increase in production is likely to go to the export market.

Japan has consistently, and by far, been the largest market for Australian cheese over the last decade, typically accounting for around half of all cheese exports. However, in 2021 there was a significant decline in exports to Japan, falling to 37 percent of overall exports. China also became a more significant destination at 18 percent in 2021. The first quarter of 2022 shows that the trend from the 2021 result has continued, although Japan has clawed back some volume and overall share of Australian Cheese exports from China (see Figure 14).

Figure 14 – Major Cheese Export Destinations – Jan-Mar 2020 to 2022



Source: Australian Bureau of Statistics

Based on updated trade data, cheese exports reached 157,000 MT in 2021.

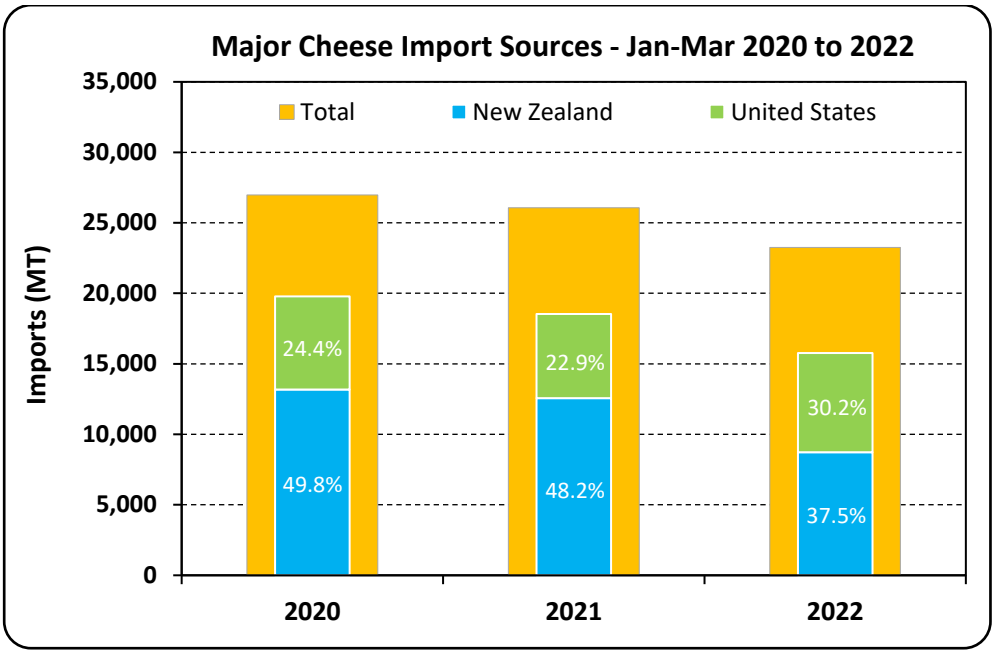
Imports

FAS/Canberra forecasts for cheese imports in Australia is revised downward to 95,000 MT in 2022 from the official USDA forecast of 100,000 MT and is 2,000 MT lower than the 2021 outcome. Although the cheese forecast is for lower production in 2022, there has been a build-up of cheese stocks in 2021 negating the need for an increase in imports to maintain typical domestic consumption levels. There has also been a significantly slower rate of imports in the first quarter of 2022 compared to the same period in 2021, down eleven percent, but it is expected that there will be some catch up during the year bringing the result more closely in line with the FAS/Canberra forecast.

Manufacturers in Australia over recent years have been moving away from standard cheddar cheese production and further toward more specialized cheddar varieties and semi-hard cheeses, predominantly mozzarella in line with shifting consumer demand. This is expected to continue to gradually drive a diminishing level of imported product.

Typically, almost one-half of all cheese imports have for many years come from New Zealand and around one-quarter from the United States. There has however been a shift in the first quarter of 2022 with an increase from the United States at the expense of New Zealand (see Figure 15). This is despite an increase in cheese production in New Zealand in 2021 which would typically lead to higher available stocks in early 2022.

Figure 15 – Major Cheese Import Sources – Jan-Mar 2020 to 2022



Source: Australian Bureau of Statistics

Imports for 2021 were at 97,000 MT, nearly unchanged from the previous year.

Table 2 - Production, Supply, and Distribution of Dairy, Cheese

Dairy, Cheese	2020		2021		2022	
Market Year Begins	Jan 2020		Jan 2021		Jan 2022	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	54	54	67	73	62	93
Production (1000 MT)	373	379	360	385	370	360
Other Imports (1000 MT)	98	98	100	97	100	95
Total Imports (1000 MT)	98	98	100	97	100	95
Total Supply (1000 MT)	525	531	527	555	532	548
Other Exports (1000 MT)	153	153	160	157	165	165
Total Exports (1000 MT)	153	153	160	157	165	165
Human Dom. Consumption (1000 MT)	305	305	305	305	310	310
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	305	305	305	305	310	310
Total Use (1000 MT)	458	458	465	462	475	475
Ending Stocks (1000 MT)	67	73	62	93	57	73
Total Distribution (1000 MT)	525	531	527	555	532	548
(1000 MT)						

BUTTER

Production

FAS/Canberra forecasts butter production in 2022 to reach 65,000 MT, a downward revision from the official USDA forecast of 75,000 MT and 5,000 MT lower than the 2021 estimate. This downward revision is despite high world butter prices which would typically encourage increased production. The large downward revision in forecast milk production is expected to result in a general decline in manufactured dairy products including butter.

Forecast butter production remains well below past levels which for almost three decades prior to 2018 were well in excess of 100,000 MT, peaking at 180,000 MT in 2000. Over recent years, processors have restructured their infrastructure in order to prioritize cheese production over butter, SMP and WMP. A return to high rates of butter production based on short term spikes in world prices is unlikely.

FAS/Canberra estimates butter production in 2021 to have reached 70,000 MT, a downward revision of 10,000 MT from the official USDA estimate. This estimate is based on Dairy Australia reported production data and the downward revision reflects the processors focus on increased cheese production.

Consumption

FAS/Canberra forecasts butter consumption to decline slightly in 2022 at 90,000 MT, from an estimated 95,000 MT in 2021. The 2022 consumption has been revised down from the USDA official forecast of 105,000 MT primarily due to the reduced production forecast and a gradual continuing tightening of domestic stocks.

The revised butter forecast is in line with the trend over the last five years of declining per capita consumption. Dairy Australia reports that the impacts of COVID-19 on the food service sector were negated via increased retail sales due to a noticeable increase in home baking and cooking, so a post COVID-19 increase is not anticipated. However, Dairy Australia also reports that in recent years some Australian consumers have opted for alternate high-fat products which has been reflected in increased cream sales.

Butter volume includes butteroil and anhydrous milk fat in butter equivalent terms. Anhydrous milk fat is essentially dehydrated butter which is used in food manufacturing such as bakery and confectionary products. Although butter is also used in food manufacturing it is primarily sold through retail channels and used by the food service sector.

FAS/Canberra's butter consumption estimate for 2021 has been downward revised to 95,000 MT from the official USDA estimate of 105,000 MT. This is reflective of the general downward butter consumption trend over recent years.

Trade

Exports

Butter exports in 2022 are forecast at 20,000 MT, the same as the 2021 result and unchanged from the USDA official forecast. Australia is a net importer of butter and consumes far more than it produces, consequently any significant change in exports from already low levels is unlikely. Butter exports for the first quarter of 2022 are slightly lower than for the same period in 2021 but within expectation to achieve the forecast.

China raised its imports of Australian butter substantially in 2021 but for the first quarter of 2022 this has fallen by 60 percent to more typical levels seen in prior years. This fall has in the main been supported by increases in exports to Thailand, Malaysia, Kuwait, Mexico, and the United States in the first quarter of 2022.

Butter exports for 2021 were 20,000 MT based on Australian trade data.

Imports

Imports of butter to Australia are forecast to decline to 35,000 MT in 2022, 10,000 MT lower than the official USDA forecast. The forecast is also in line with the 2021 result. The downward revised forecast is supported by the first quarter imports in 2022 which are down by almost 2,000 MT from the same period in 2021. It is anticipated that the rate of imports will lift in the coming months to overcome the slower start and achieve the forecast result.

The dominant source of butter imports is from New Zealand, representing around 85 percent of total imports from 2017 to 2021. The lower import result for the first quarter of 2022 is entirely related to reduced imports from New Zealand who have favored shipments to China thus far in 2022.

The import result for 2021 was 35,000 MT based on final trade data.

Table 3 - Production, Supply, and Distribution of Dairy, Butter

Dairy, Butter	2020		2021		2022	
Market Year Begins	Jan 2020		Jan 2021		Jan 2022	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	81	81	78	77	70	67
Production (1000 MT)	75	75	80	70	75	65
Other Imports (1000 MT)	43	41	40	35	45	35
Total Imports (1000 MT)	43	41	40	35	45	35
Total Supply (1000 MT)	199	197	198	182	190	167
Other Exports (1000 MT)	16	15	23	20	20	20
Total Exports (1000 MT)	16	15	23	20	20	20
Domestic Consumption (1000 MT)	105	105	105	95	105	90
Total Use (1000 MT)	121	120	128	115	125	110
Ending Stocks (1000 MT)	78	77	70	67	65	57
Total Distribution (1000 MT)	199	197	198	182	190	167
(1000 MT)						

SKIM MILK POWDER

Production

FAS/Canberra forecasts SMP production in 2022 to remain relatively stable at 150,000 MT, in line with the official USDA forecast and slightly above the 2021 estimate of 147,000 MT. The forecast level of production remains relatively high given the forecast seven percent reduction in milk available for factory use in 2022. This is reflective of the strong world demand and high prices for the low-fat content SMP which enables processors to produce secondary products such as butter and cream from the surplus fat.

SMP and butter are typically produced as part of the same manufacturing process and production. The fat content of milk is initially reduced and then dried to produce SMP. Of the extracted milk fat from the production of SMP, according to industry reports, approximately one-quarter is used to produce cream and three-quarters is further processed to produce butter, the mix of which can readily be altered by manufacturers. Although butter production is forecast to decline despite SMP production remaining stable, this enables processors to alter the balance of butter production to other fat based secondary products.

Similar to butter, SMP production is now well below past levels which for almost a decade prior to 2018 was well in excess of 150,000 MT, peaking at 266,000 MT in 2015. The industry has in recent years had a focus on channelling milk towards cheese production. Typically, with a reduction in milk available for manufacturing, a reduction in SMP would be expected as the industry continues to focus on cheese production. However, over the last nine months there have been strong gains in SMP prices of almost 50 percent. SMP, unlike cheese, does not require a period of maturing or refrigerated containers for sea freight, which has been more challenging than standard containerised sea freight in recent months, so it is not unsurprising that there is expected to be a temporary shift towards supporting SMP production in 2022.

FAS/Canberra's estimate of SMP production in 2021 of 147,000 MT is 3,000 MT lower than the official USDA estimate. This revised estimate is based on Dairy Australia reported SMP production data for 2021.

Consumption

FAS/Canberra's SMP consumption forecast for 2022 is downward revised to 40,000 MT from the official USDA forecast of 45,000 MT. The revised forecast brings consumption in line with the 2021 estimate of 40,000 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 supply chains.

A great majority of the end products containing SMP are sold through retail and supermarket stores and to a lesser extent the food service sector. Accordingly, it is anticipated that as the nation transitions out of COVID-19 pandemic related impacts in 2022 that there will be very little impact on overall consumption.

FAS/Canberra's SMP consumption estimate for 2021 of 40,000 MT is in line with the official USDA estimate.

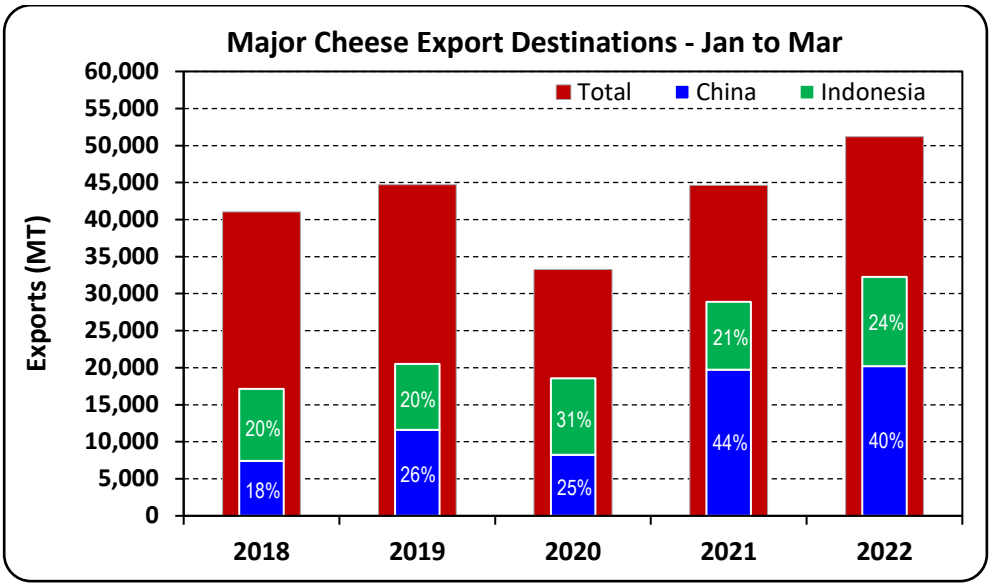
Trade

Exports

FAS/Canberra forecasts exports of SMP in 2022 at 130,000 MT, some 10,000 MT higher than the official USDA forecast. This forecast is still 26,000 MT lower than the 2021 result of 156,000 MT. The forecast decline in exports is despite SMP production in 2022 forecast to remain similar to the 2021 estimate. The spike in exports for 2021 was due to high world demand and prices which is believed to have resulted in stocks being run down to low levels in this year. This has now restricted the industry capacity to take advantage of continued high world market prices in 2022.

Prior to 2018, Indonesia was the major destination for Australian SMP exports, but since then China has become the main export destination. However, in the first quarter of 2021 China substantially increased its share of Australian exports from around one-quarter to 44 percent and this trend has continued for the first quarter of 2022 with a similar volume of exports. However, Indonesia has also crept up its volume and market share of SMP exports from Australia (see Figure 16).

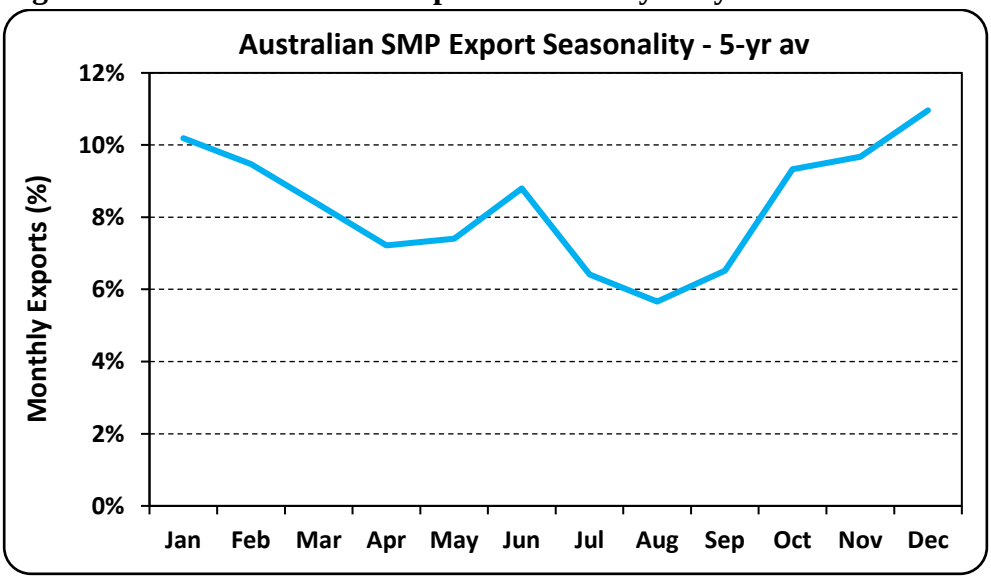
Figure 16 – Change in SMP Exports – Jan to Mar 2018 to 2022



Source: *Australian Bureau of Statistics*

Exports for the first quarter of 2022 are 15 percent higher than for the same period in 2021. This would typically indicate that full year exports would be higher in 2022 but this is contrary to the lower forecast. This is due to the seasonality of milk production which also similarly impacts the seasonality of SMP exports. Exports are usually highest in December after the spring milk production peak before falling and reaching a smaller peak after the fall spike in production before declining again (see Figure 17). The exports in the first quarter of 2022 are mainly from SMP produced in the spring peak milk production in 2021. It is anticipated that as SMP exports become dependent on the much lower milk production from 2022 that the seasonality of exports will show greater falls than during past five-year average.

Figure 17 – Australian SMP Export Seasonality – 5-yr av



Source: *Australian Bureau of Statistics*

SMP exports for 2021 were 156,000 MT, based on trade data, which showed a strong final quarter for 2021 compared to recent past years.

Imports

FAS/Canberra forecasts SMP imports to remain stable at 15,000 MT in 2022, the same as the 2021 estimate. Imports of SMP are very low and as a result of being a large net exporter, variances of imports from year to year are minimal.

SMP imports in the January to March period of 2022 are a little under 3,000 MT and similar to the 2021 result for that period. Overall imports are tracking to reach the estimated 15,000 MT for the full year.

By far the primary source of SMP imports over many years have been from New Zealand, with lower volumes from Germany and Austria. This trend has broadly continued in the first quarter of 2022.

The import result for 2021 was 14,000 MT. Imports in the last quarter of 2021 were a marginally stronger than previously anticipated.

Table 4 - Production, Supply, and Distribution of Dairy, Milk, Nonfat Dry

Dairy, Milk, Nonfat Dry	2020		2021		2022	
Market Year Begins	Jan 2020		Jan 2021		Jan 2022	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	55	55	53	54	36	19
Production (1000 MT)	154	155	150	147	150	150
Other Imports (1000 MT)	16	16	13	14	15	15
Total Imports (1000 MT)	16	16	13	14	15	15
Total Supply (1000 MT)	225	226	216	215	201	184
Other Exports (1000 MT)	129	129	140	156	120	130
Total Exports (1000 MT)	129	129	140	156	120	130
Human Dom. Consumption (1000 MT)	43	43	40	40	45	40
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	43	43	40	40	45	40
Total Use (1000 MT)	172	172	180	196	165	170
Ending Stocks (1000 MT)	53	54	36	19	36	14
Total Distribution (1000 MT)	225	226	216	215	201	184
(1000 MT)						

WHOLE MILK POWDER

Production

FAS/Canberra forecasts WMP production in 2022 to decline to 45,000 MT from the 2021 estimate of 55,000 MT. This is directly related to the forecast fall in milk production for 2022 and global WMP prices not keeping pace with those of other major manufactured dairy commodities. In fact, in April 2022 WMP prices were below that of SMP. As a result, processors will further minimize their production of WMP, which was already low.

Peak WMP production in Australia was in 2002 at 239,000 MT and has gradually declined by around 80 percent to an around 50,000 MT in 2016 and has since stabilized at around this level. With Australian manufacturers channelling greater volumes of milk towards cheese production, the reduced volumes of WMP have been focused towards producing more specialized higher value powders such as infant milk formula.

The FAS/Canberra WMP production estimate for 2021 at 55,000 MT is in line with the official USDA estimate. The estimate is based on Dairy Australia data from manufacturers voluntary reporting.

Consumption

FAS/Canberra's forecast WMP domestic consumption in 2022 has been revised down to 40,000 MT from the official USDA forecast of 44,000 MT. The revised forecast is in line with the estimated consumption for 2021. 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 as the nation transitions away from COVID-19 related impacts in 2022.

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. A key difference though is that WMP is used in the production of infant milk formula whereas SMP is not.

Trade

<u>Exports</u>

Exports of WMP in 2022 are forecast by FAS/Canberra at 50,000 MT, and in line with the official USDA forecast. This forecast is merely 1,000 MT lower than the result for 2021. Despite forecast WMP production for 2022 declining by 10,000 MT from 2021, exports are expected to remain stable mainly through a reduction in stock levels.

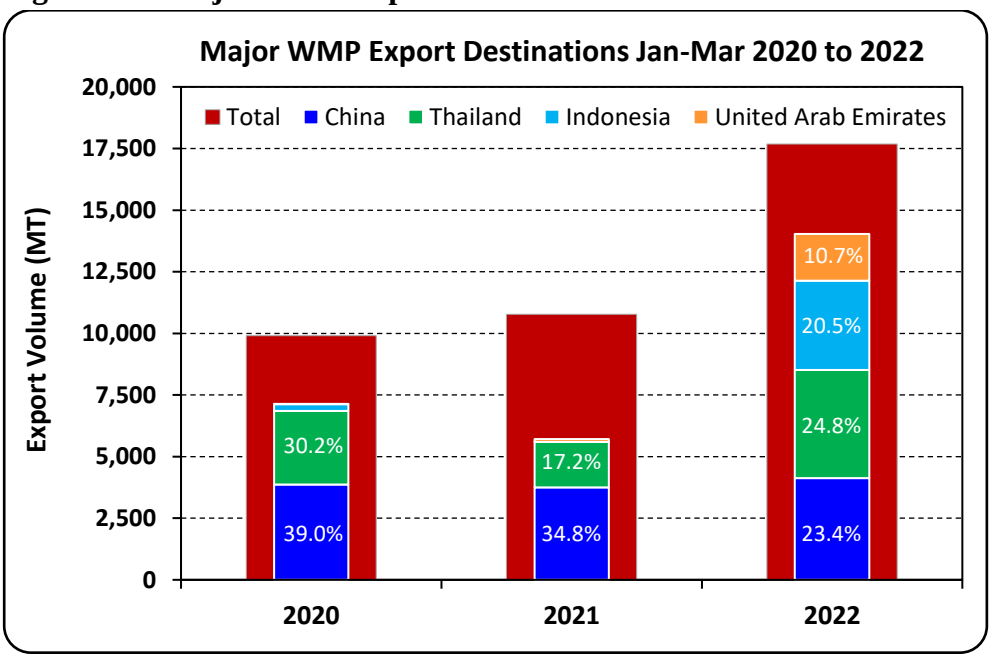
Exports in the first quarter of 2022 are well up on the same time the previous year. However, the seasonality of WMP exports is similar to that for SMP (see Figure 19) and it is anticipated that the

impact of the much lower milk production from 2022 will flow through to a lower rate of exports in the remaining months of 2022.

With relatively low WMP production, Australian manufacturers focus on producing higher value WMP predominantly for export, while imported product is mainly used as an ingredient in manufactured products.

In past years China and Thailand typically accounted for over half of all WMP exports from Australia. However, there has been a significant shift in the first quarter of 2022 with the share of exports to China diminishing but increasing for Thailand (see Figure 18). Also, in recent past years exports to Indonesia and United Arab Emirates have been very low but have become substantial at 21 and 11 percent of overall exports, respectively, for the first quarter of 2022.

Figure 18 – Major WMP Export Destinations Jan-Mar 2020 and 2022



Source: Australian Bureau of Statistics

The WMP export result for 2021 was 51,000 MT based on Australia's trade data.

Imports

FAS/Canberra forecasts WMP imports of 40,000 MT in 2022, in line with the official USDA forecast, but slightly higher than the 37,000 MT for 2021. This import level is second only to the peak achieved in 2020 of 43,000 MT. The decrease in forecast WMP production in 2022 is a contributing factor to the forecast increase in WMP imports.

The majority of WMP imports to Australia are from New Zealand, the volume and proportion of which have crept up in recent years to now being in excess of 90 percent of imports. Imports for the first quarter of 2022 are at 9,490 MT and are higher than for the same period in 2021. If this trend continues the results to date are on track for the full year forecast to be achieved.

WMP imports for Australia in 2021 were 37,000 MT based on Australia's finalized trade data.

Table 5 - Production, Supply, and Distribution of Dairy, Dry Whole Milk Powder

Dairy, Dry Whole Milk Powder	2020		2021		2022	
Market Year Begins	Jan 2020		Jan 2021		Jan 2022	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	24	24	37	37	36	38
Production (1000 MT)	47	47	55	55	50	45
Other Imports (1000 MT)	43	43	38	37	40	40
Total Imports (1000 MT)	43	43	38	37	40	40
Total Supply (1000 MT)	114	114	130	129	126	123
Other Exports (1000 MT)	37	37	52	51	50	50
Total Exports (1000 MT)	37	37	52	51	50	50
Human Dom. Consumption (1000 MT)	40	40	42	40	44	40
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	40	40	42	40	44	40
Total Use (1000 MT)	77	77	94	91	94	90
Ending Stocks (1000 MT)	37	37	36	38	32	33
Total Distribution (1000 MT)	114	114	130	129	126	123
(1000 MT)						

Attachments:

No Attachments