Required Report: Required - Public Distribution **Date:** May 15, 2023

Report Number: AS2023-0009

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 2023 is forecast to decrease by three percent to 8.2 million metric tons (MMT). This is despite generally very good production conditions for 2023, particularly with record milk prices and easing grain and fertilizer prices. The slump in milk production is due to excessive rains last spring across much of the major dairy production regions and 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. Milk production for the first quarter of 2023 was four percent down on the previous year but the gap is forecast to narrow to three percent for the full year. A three percent decline in factory use consumption is forecast to result in a decline in butter, skim milk and whole milk powder production with cheese production remaining stable. The focus on cheese production has been strong in recent years and now uses 40 percent of the national milk pool.

Executive Summary

Milk production in 2023 in Australia is forecast to decrease by three percent to 8.2 million metric tons (MMT), from 8.455 MMT in 2022. This is also a substantial three percent downward revision from the earlier forecast of 8.475 MMT for 2023. These falls are despite broadly very good production conditions particularly with record milk prices and easing grain and fertilizer prices. However, excessive rains last spring (September to November 2022) across much of the major dairy producing regions impacted on animal health and fodder production, with milk production affects which have spilled into 2023. The shortage of labor, initially influenced by COVID-19 lockdowns in the major dairy farming states, has led to some dairy farms partially or fully transitioning to less labor-intensive beef cattle production, which was encouraged by record beef prices in Australia. The impacts of this transition over the last three years are flowing into 2023, although farmer exits out of dairy are expected to slow. This is because of beef cattle prices falling by around 40 percent since the end of 2022 and increasing numbers of working holiday makers entering the country, somewhat easing labor shortages. Beef cattle prices are not expected to bounce back in 2023, and along with continued easing of labor shortages anticipated throughout 2023, the rapid slide in overall milk production seen over recent years may dissipate in 2024.

Fresh milk consumption in 2023 is forecast to decrease slightly by around one percent to 2.42 MMT, with this segment over many years continuing to gain importance, and now accounting for 30 percent of overall milk production. The very gradual decline in fresh milk consumption is associated with Australia's declining full cream, reduced fat, and flavored milk consumption but increasing long-life milk consumption. However, the growth in long-life milk consumption has not been enough to offset the overall declining fluid milk consumption trend. Factory use milk consumption is also forecast to decline to 5.487 MMT for 2023, from an estimated 5.677 MMT in 2022, mainly due to the overall decline in milk production.

With a three percent decline in factory use consumption, processors are expected to continue prioritizing their production towards cheese, which now accounts for around 40 percent of the national milk pool. The high inflation in 2022 and flowing into 2023 in Australia has impacted consumers household expenditure. In response, processors are reported to have reduced production of soft cheeses typically associated with entertaining and increased hard cheese production. While cheese production is forecast to remain stable in 2023 from the previous year, its share of the national milk pool use is expected to increase at the expense of butter, skim milk powder (SMP) and whole milk powder (WMP) production.

For fluid milk, cheese, butter, SMP, and WMP, exports for the first quarter of 2023 have softened compared to the same time period for 2022. Industry sources report that global dairy buyers have in recent months been trading on an 'as needs basis' while global dairy prices have been declining. This position is expected to stabilize in the coming months with the back half of 2023 anticipated to achieve improved export pace.

POLICY

UK-AU FTA

The Australian government has in early May 2023 announced that the Free Trade Agreement (FTA) between the United Kingdom (UK) and Australia will come into force on June 1, 2023.

After the FTA comes into force, 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.

FLUID MILK

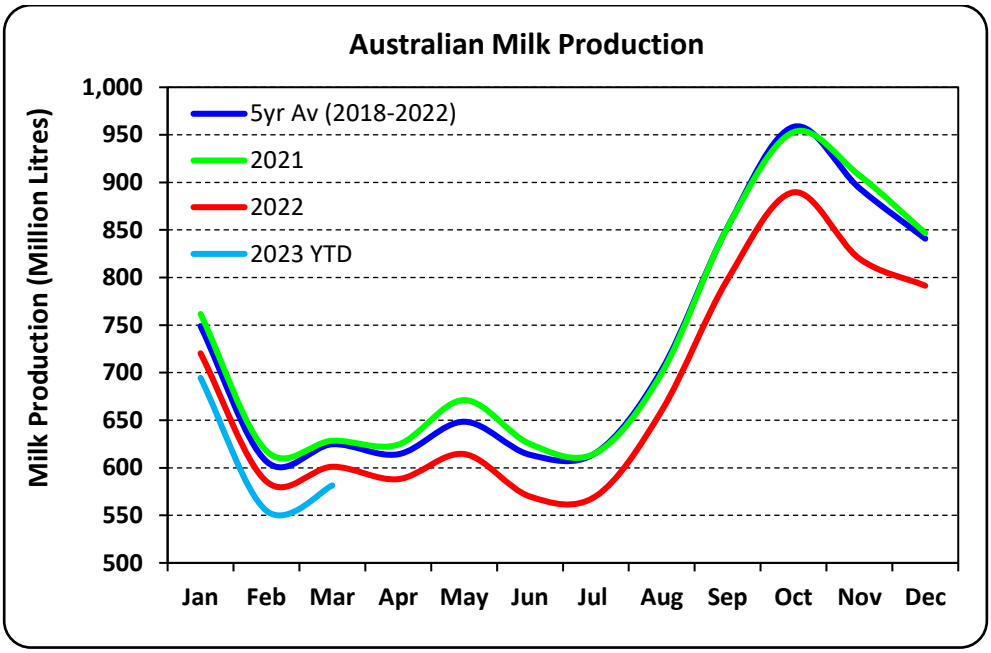
Production

FAS/Canberra has revised down the forecast for Australia's milk production to 8.2 MMT for 2023, around three percent lower than the current official USDA forecast of 8.475 MMT and the result for 2022 at 8.455 MMT. As recently as 2021 annual milk production was 9.067 MMT, 10 percent higher than the 2023 forecast (see Figure 1). Milk production in the first quarter of 2023 was 1.83 MMT compared to 1.91 MMT the same time the previous year, which is a four percent drop. Some catch up is expected throughout the rest of 2023 and for the full year a three percent drop is forecast compared to 2022. This continued slump in milk production for 2023 is despite broadly good conditions for the industry. Milk prices are at record levels, rainfalls in 2023 so far have been at around average across the major production areas, and the prices of key input costs of feed grain and fertilizer have eased.

However, the excessive rains in the spring of 2022 (September to November) impacted fodder production resulting in a shortage of hay supply at significantly increased cost. In addition, dairy farmer exits from the industry (including partial exits) associated with labor shortages and record high beef prices over the last few years are continuing to have an impact in 2023. But these issues (labor shortages and high beef cattle prices) are easing considerably during 2023, placing milk industry prospects for 2024 in a position to arrest the slide in production.

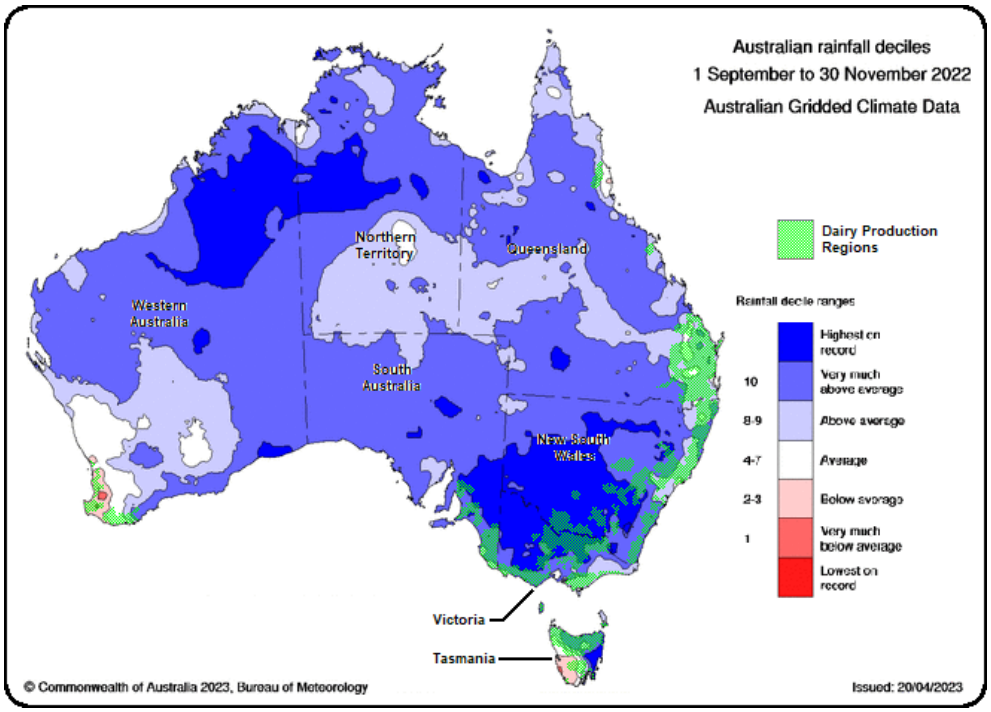
Excessive rains in the spring period from September to November 2022 (see Figure 2) had in some parts caused severe flooding and for many dairy producing regions not only had short term impacts on animal health and milk production, but also substantially impacted the capacity to produce hay and silage. This has reportedly resulted in a shortfall of fodder availability and has led to a big increase in the price of hay in 2023 (see Figure 3). This impact has substantially contributed to the lowering of the milk production forecast for 2023.

Figure 1 – Australian Milk Production - 2021 to Mar 2023



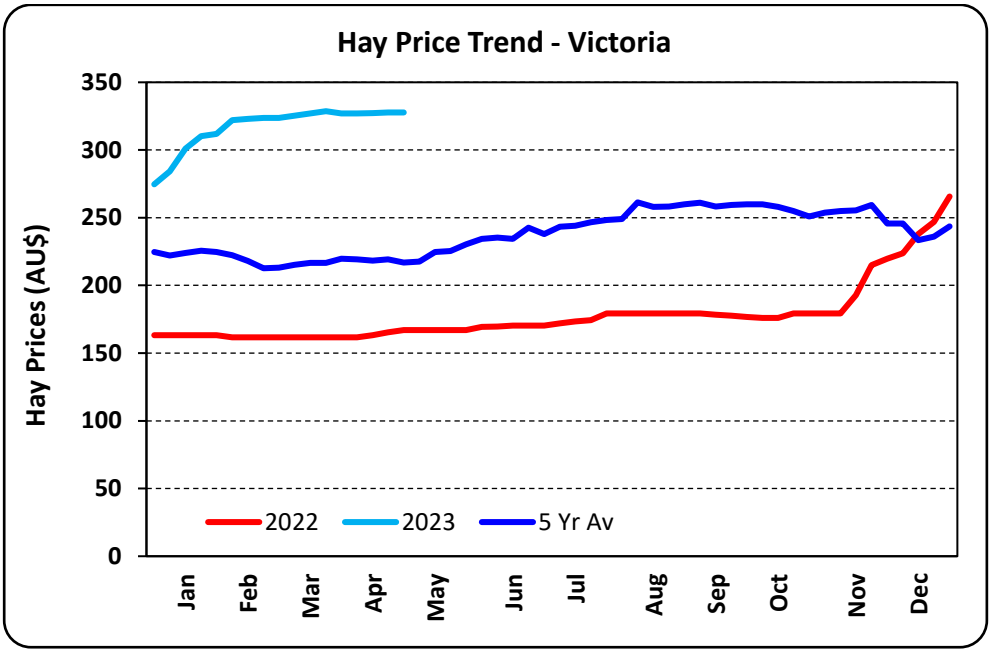
Source: *Australian Bureau of Agricultural and Resource Economics and Sciences*

Figure 2 – Australia Rainfall Decile Maps – Sep-Nov 2022



Source: *Bureau of Meteorology / Dairy Australia*

Figure 3 – Hay Price Trends in Victorian Dairying Regions



Source: *Dairy Australia*

Dairy farmer exits to pursue beef cattle farming, along with dairy farmers reducing their dairy herd size to enter beef cattle production, has been occurring over recent years and has had a major impact on milk production. Despite broadly very good production conditions since 2020, milk production including the 2023 forecast is expected to fall by 10 percent. This has been driven by two key factors associated with major labor shortages and record high beef cattle prices which are largely outside the dairy industry's control.

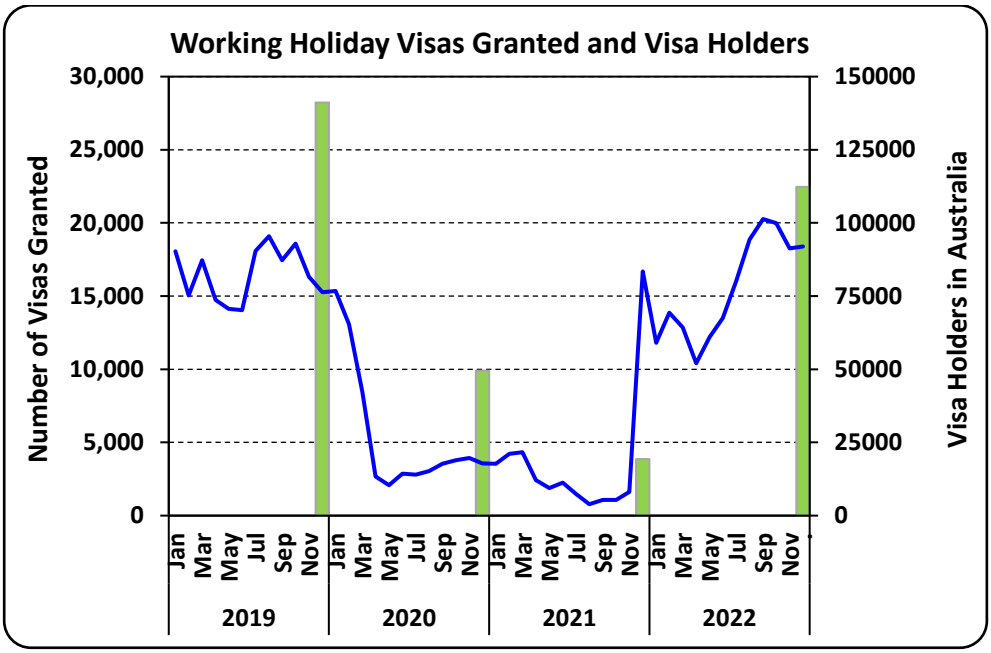
Labor shortages became an issue for dairy farmers as a result of the international border closures triggered by the COVID-19 pandemic. Dairy farmers along with other agriculture sectors sourced some of their labor from working holiday makers. Since the reopening of Australia's international borders at the beginning of 2022 the number of working holiday visas granted has returned to near pre-pandemic levels, and by the end of 2022 the number of working holiday visa holders has increased substantially but not yet reached the pre-pandemic level seen at the end of 2019 (see Figure 4). Industry sources report that the strains on labor for the dairy industry have alleviated to some extent but are still challenging.

The working holiday visas are sub-classes 417 and 462. These visas are held for 12 months, but those who complete 3 months of specified work are able to apply for a second 12 month working holiday visa and those who then complete 6 months of specified work are eligible for a third 12 month working holiday visa. For visa sub-class 462 specified work includes agriculture and a large proportion of these visa holders elect to work in this sector. By the end of 2023 after two years of visas being granted at near pre-pandemic levels the number of working holiday visa holders in Australia is expected to improve

further. The number is anticipated to reach near pre-pandemic levels, and this is anticipated to provide some further easing of labor shortages in the dairy industry.

Australian agriculture also sources some of its labor needs from the Pacific Australia Labor Mobility (PALM) scheme. Many of these workers work in the horticulture sector but some also support the dairy industry labor needs.

Figure 4 – Working Holiday Visas Granted and Visa Holders



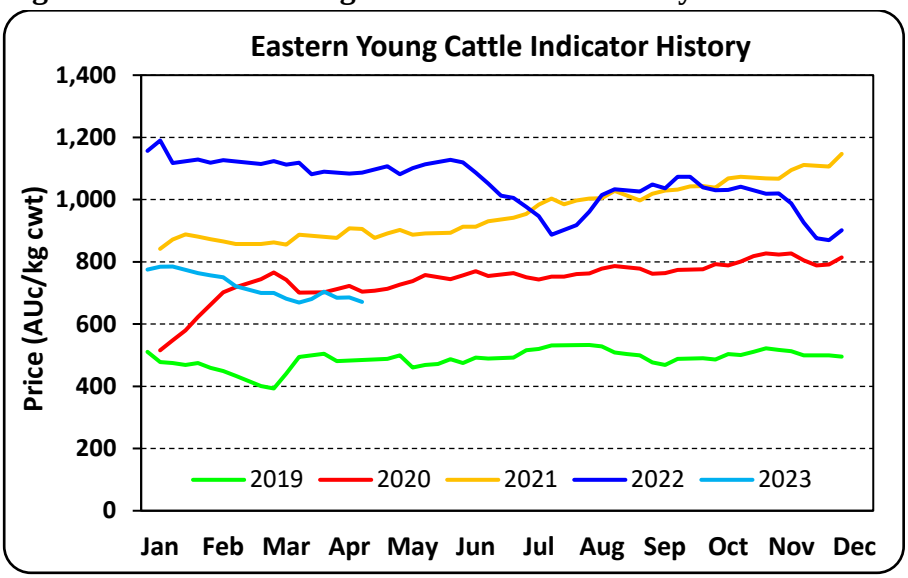
Source: *Australian Government – Department of Home Affairs*

The shortage of labor for the dairy industry has over recent years resulted in farmers seeking alternate solutions. This has included partially or fully converting to beef production and the record high beef cattle prices encouraged this transition. However, since the end of 2022 beef cattle prices have declined from record highs by around 40 percent (see Figure 5). With such a steep fall in beef prices, improved labor availability, and dairy milk prices remaining firm, it is anticipated that the conversions from dairy to beef production will dissipate. Those who partially converted to beef may even consider rebuilding their dairy herd numbers. These factors may not significantly impact milk production in 2023 due to the lag period for transition, but it may auger well for stabilizing milk production in 2024.

A further looming concern for the dairy industry is that that according to the Australian Bureau of Meteorology there is an increasing prospect of El Niño conditions emerging which typically brings drier and warmer conditions to the eastern states. The forecast for the three months from May to July 2023 is for below average rainfall (see Figure 6). However, the forecast for April 2023 was similar but the actual outcome was in fact average-above average rainfalls. Rainfalls in the late winter and spring months (August to October) are the most important months for pasture and fodder production and it is still too

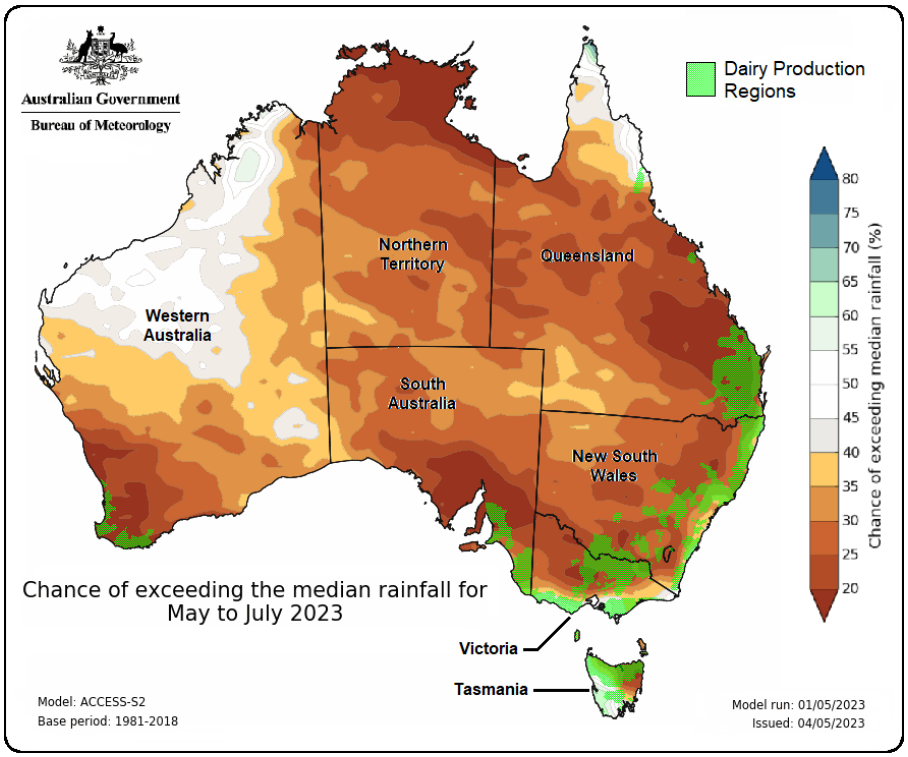
early to predict the rainfall outcomes for these months with any confidence. However, if low rainfalls are realized, lower milk production in the spring months will further impact the already lower 2023 milk production forecast and into 2024.

Figure 5 – Eastern Young Cattle Indicator History



Source: *Meat & Livestock Australia*

Figure 6 – Australia Rainfall Forecast Map – May to July 2023

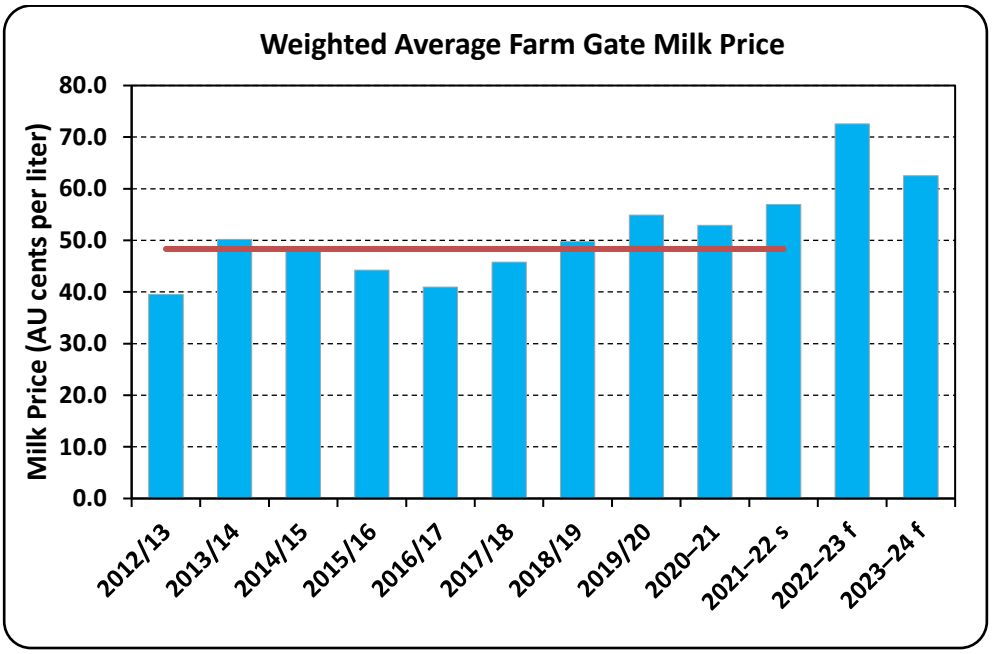


Source: *Australian Bureau of Meteorology*

The industry also has a series of positive influences on milk production without which overall milk production is likely to have declined much further than forecast for 2023. Milk prices are very strong and key input costs for grain and fertilizer have decreased along with good rainfalls so far in 2023.

Milk prices for the 2022/23 season (July 2022 to June 2023) are by far the highest on record (see Figure 7). Although milk prices are expected to fall for the 2023/24 season on the back of lower world dairy commodity prices, the fall will not be as large as may be expected as a result of the very strong competition from milk processors for the lower available supply of milk. Such high milk prices would be expected to support a strong growth in milk production, but other factors, as mentioned, are having a stronger influence.

Figure 7 – Farm Gate Milk Price – Recent History and Forecast

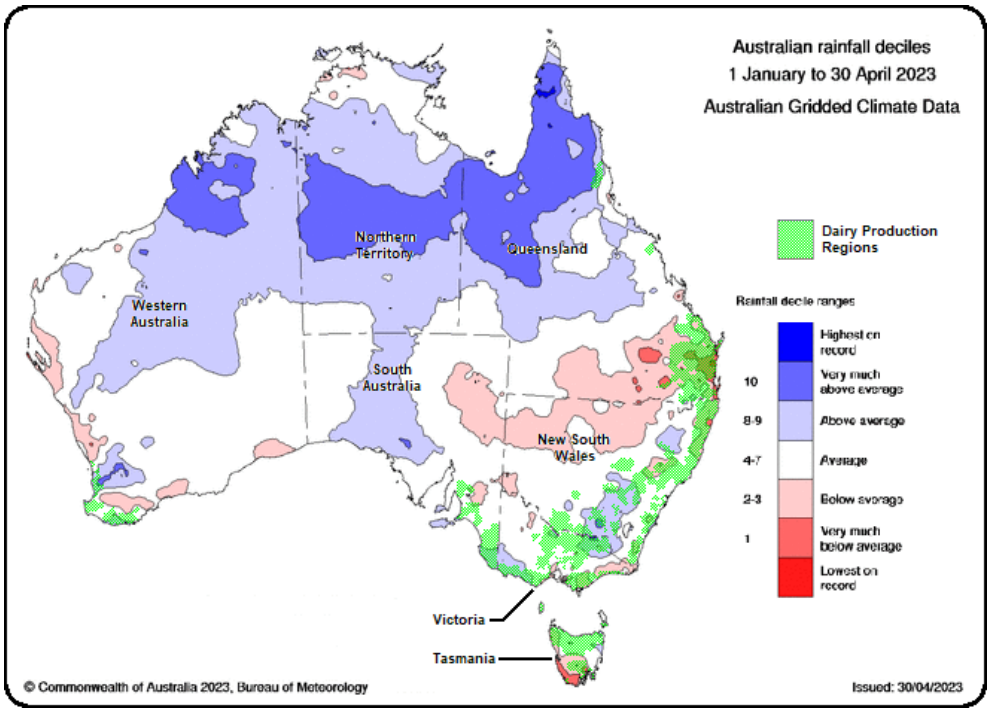


Source: Australian Bureau of Agricultural and Resource Economics and Sciences

In the first four months of 2023 dairy farming regions for the most part have received good rainfalls (see Figure 8). The only regions affected by below-average rainfalls are south-east Victoria and Queensland, which produce around one-quarter of the nation's milk.

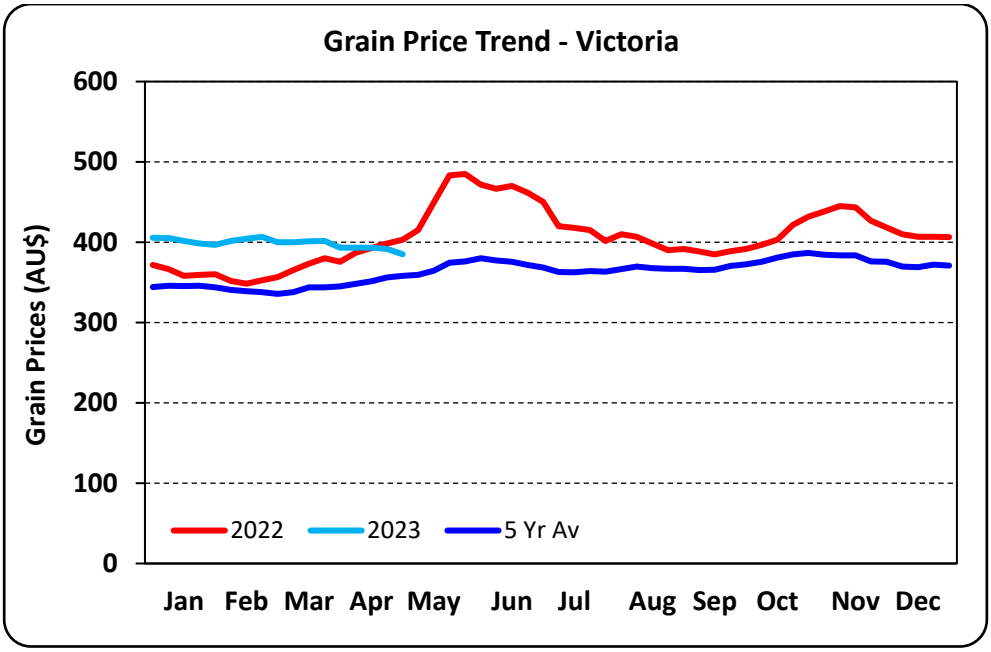
Australia recorded its third successive year of record wheat production and near record barley production last season (harvested Oct-Dec 2022) and with world export demand for cereal grains starting to ease in 2023, the price of feed grains for Australian dairy farmers has softened somewhat. For Victorian dairy farmers, who account for 64 percent of national milk production, their average price for grain has declined to AU$385 (US$260) per metric ton at the start of May 2023 from a peak of AU$485 (US327) per metric ton in the previous year. The grain price is heading down towards the previous 5-year average (see Figure 9) providing some input cost relief for dairy farmers in 2023.

Figure 8 – Australia Rainfall Decile Maps – Jan-Apr 2023



Source: *Bureau of Meteorology / Dairy Australia*

Figure 9 – Grain Price Trends in Victorian Dairying Regions

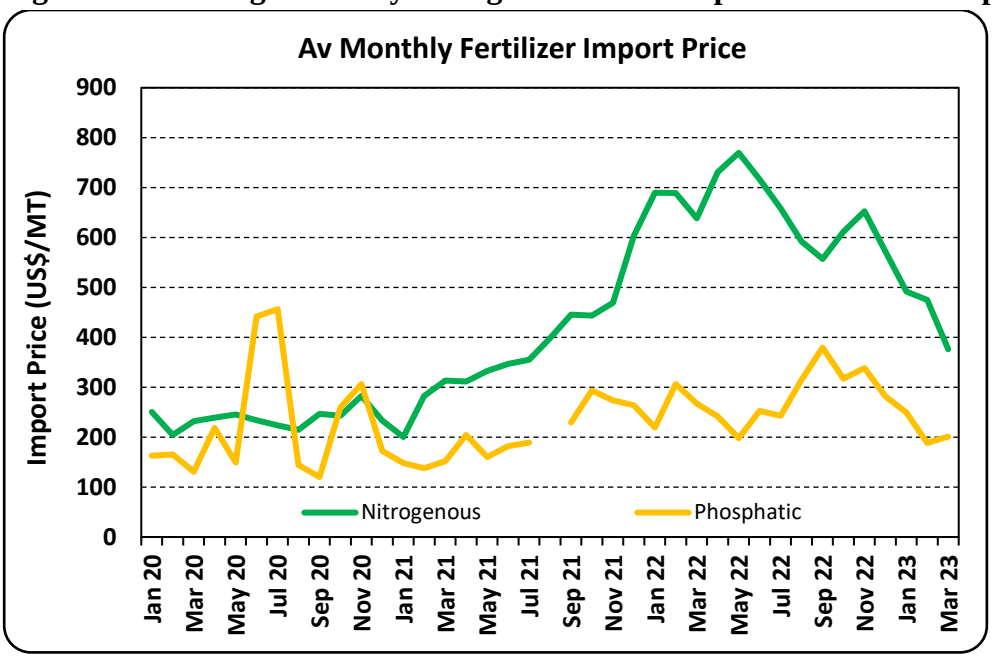


Source: *Dairy Australia*

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. After both forms of fertilizer reached big peaks in 2022, especially for nitrogenous fertilizers, prices started to come down at the end of 2022 to now be around half of the peak levels (see Figure 10). Although prices remain above the previous five-year average, these big declines have provided welcome relief and will support pasture production and subsequently milk production for 2023. The nitrogenous fertilizer import price for March 2023 is around 60 percent above the five-year average from 2016 to 2020 (prior to the start of skyrocketing prices in 2021), and phosphatic fertilizer prices are currently only 10 percent higher. With monthly nitrogenous import prices still on a downward trajectory there is scope for further price relief for dairy farmers for 2023.

Figure 10 – Average Monthly Nitrogenous and Phosphatic Fertilizer Import Price



Source: Australian Bureau of Statistics

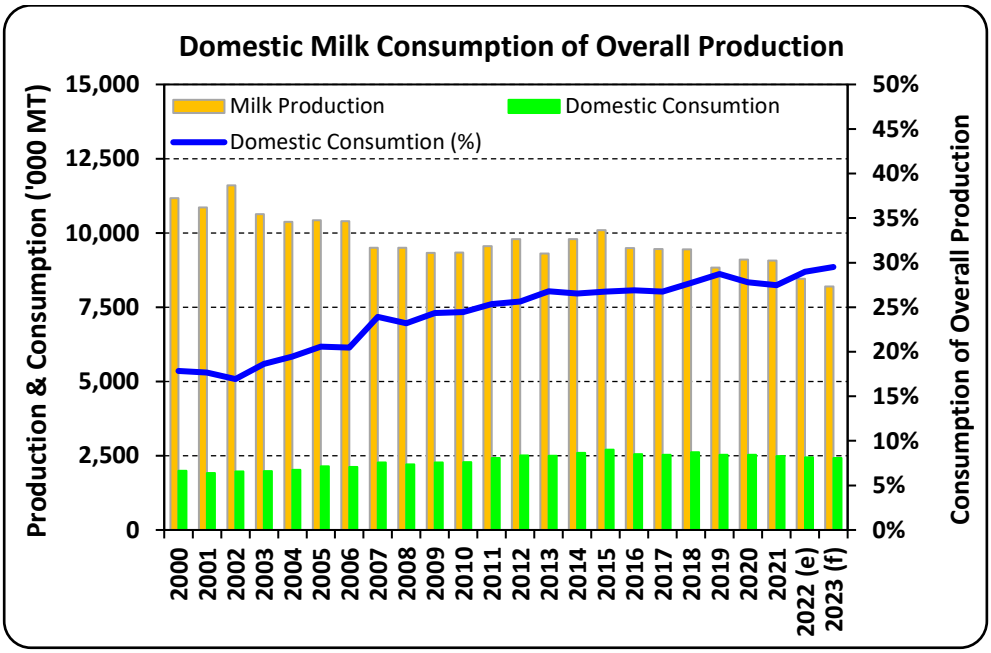
FAS/Canberra's fluid milk production for 2022 is revised down to 8.455 MMT from the official USDA estimate of 8.550 MMT. This revision is based on Dairy Australia's full year published production data. This highlights that despite the record milk price and generally very good production conditions, the effects of labor shortages leading to partial and full exits from dairy production - with particular focus towards conversions to beef production during 2021 and 2022 - have largely impacted the downturn in milk production in 2022. However, the flooding impacts in the spring period of 2022 also contributed to lower milk production.

Consumption

Fluid milk consumption is forecast by FAS/Canberra to decline by one percent in 2022 to 2.42 MMT, from the 2.45 MMT estimate for 2022. The forecast decline in consumption is in line with the trend in recent years. With a further decline in milk production forecast for 2023 and only a small reduction in domestic fluid consumption, this segment is expected to use 30 percent of the overall milk produced.

This expanding trend has occurred in Australia for over two decades (see Figure 11). With the combination of record high farmgate milk prices and the increasing demand for domestic fluid milk consumption from the national pool, the major supermarket chains have over the last year abandoned their discounted fluid milk prices. The improved margins in this sector and increasing competition for milk has recently led one of the major supermarket chains in Australia to acquire two milk fluid processing facilities.

Figure 11 – Domestic Milk Consumption of Overall Production



Source: Dairy Australia/ FAS/Canberra

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. The Australian government anticipates a substantial increase in migration across 2023 and 2024. This is likely to have the impact on slowing the decline in fluid milk consumption in 2023 and may arrest further decline in 2024.

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) and reduced fat/skim milk (23 percent), while flavored milk (10 percent) consumption is stable. The trend towards UHT milk was considered to have been related to COVID-19-related lockdowns in 2020 and 2021. However, this shift continued well into 2022 even after pandemic related restrictions ended.

FAS/Canberra forecasts factory milk consumption in 2023 to reach 5.487 MMT, a decline of three percent from the 5.677 MMT in 2022. This is also a downward revision from the official USDA forecast

of 5.610 MMT. This is due to a substantial reduction in the forecast milk production for 2023 which will cause a decline in the production of manufactured dairy products.

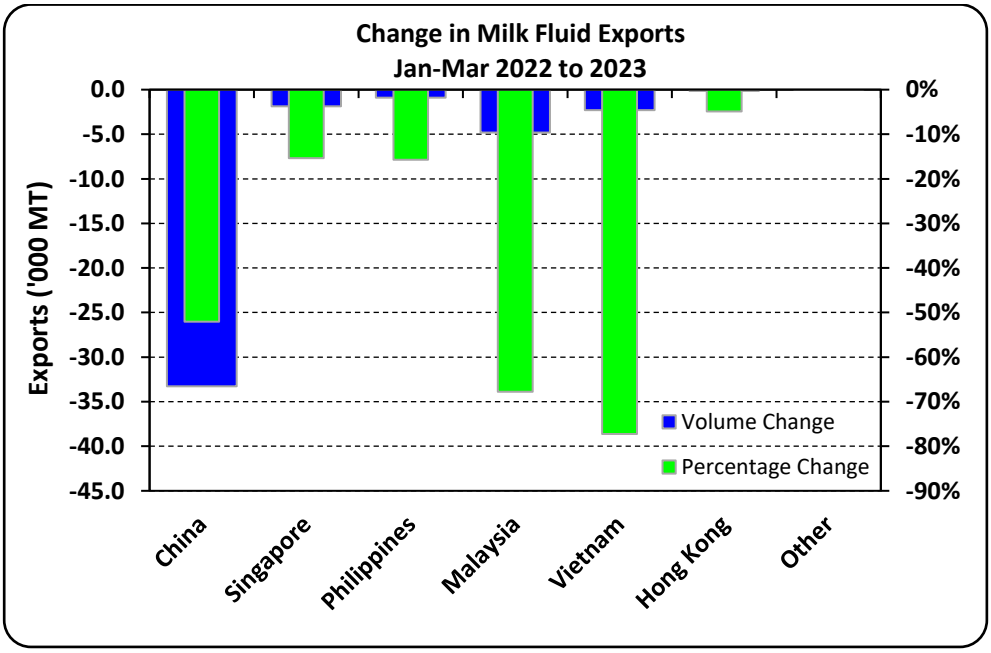
Trade

Exports

After a rapid growth period of fluid milk exports, FAS/Canberra forecasts it to fall to 300,000 MT in 2023, a 10-percent decline from the 2022 outcome of 335,000 MT. This is a reflection of the domestic competition for fluid milk and also manufacturing milk as a result of the substantial slide in overall milk production in recent years.

Exports for the first quarter of 2023 are at 59,900 MT and are a whopping 42 percent below the same period in 2022. Although Australia exports to over 40 nations, the top six countries typically account for almost 90 percent of fluid milk exports, with China being the dominant destination at around half of all exports. For the first quarter of 2023 the volume and percentage of exports to all of the major destinations has decreased substantially (see Figure 12). The broad decline in milk fluid exports to the major destinations is a reflection on the stronger domestic competition for milk.

Figure 12 – Change in Milk Fluid Exports – Jan-Mar 2022 to 2023



Source: Australian Bureau of Statistics

2022 milk exports reached 335,000 MT on finalized Australian Bureau of Statistics trade data, a 17 percent decline from the 2021 record export level of 402,000 MT. This decline relates to the onset of very strong competition for milk by domestic milk processors.

Imports

Fluid milk imports by Australia are forecast to remain relatively stable at a very low level of 7,000 MT for 2023. This is in line with the 2022 result, and for the first quarter of 2023 the volume of imports has been similar to the same period in the previous year.

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

Dairy, Milk, Fluid	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk (1000 HEAD)	1365	1365	1335	1335	1325	1325
Cows Milk Production (1000 MT)	9067	9067	8550	8455	8475	8200
Other Milk Production (1000 MT)	0	0	0	0	0	0
Total Production (1000 MT)	9067	9067	8550	8455	8475	8200
Other Imports (1000 MT)	5	5	5	7	5	7
Total Imports (1000 MT)	5	5	5	7	5	7
Total Supply (1000 MT)	9072	9072	8555	8462	8480	8207
Other Exports (1000 MT)	402	402	395	335	450	300
Total Exports (1000 MT)	402	402	395	335	450	300
Fluid Use Dom. Consum. (1000 MT)	2490	2477	2450	2450	2420	2420
Factory Use Consum. (1000 MT)	6180	6228	5710	5677	5610	5487
Feed Use Dom. Consum. (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	8670	8705	8160	8127	8030	7907
Total Distribution (1000 MT)	9072	9107	8555	8462	8480	8207
(1000 HEAD) ,(1000 MT)						

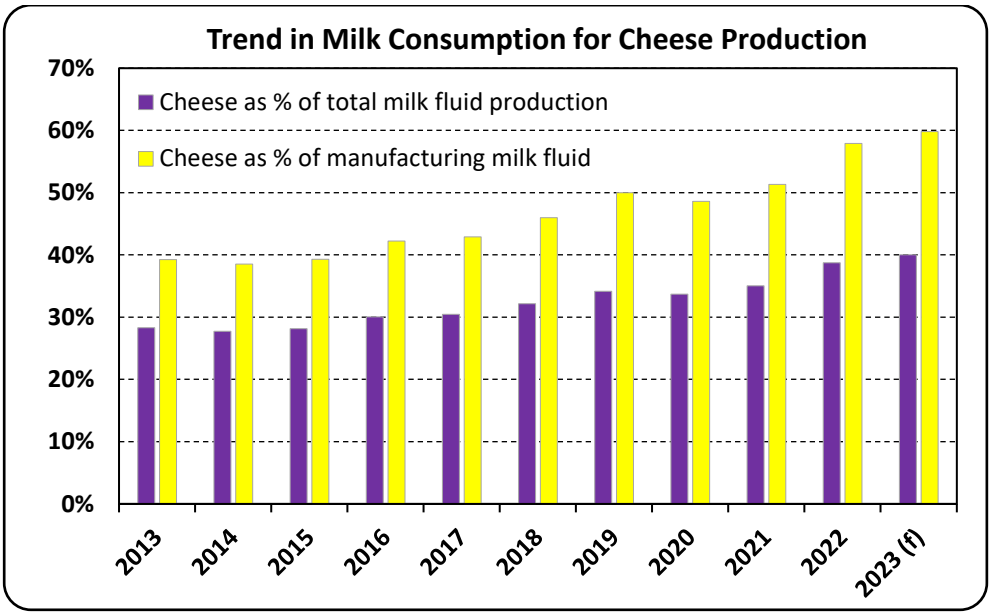
CHEESE

Production

FAS/Canberra has marginally revised upward the 2023 cheese production forecast to 400,000 MT from the official USDA forecast of 395,000 MT, after a stronger than expected result of 400,000 MT for 2022. Not unlike domestic fluid milk consumption, the proportion of the national milk pool being channelled towards cheese production has been increasing over the last decade. Cheese production for 2023 is set to consume 40 percent of the national milk pool and 60 percent of the manufacturing milk pool. This is from 28 percent and 39 percent, respectively, in 2013 (see Figure 13).

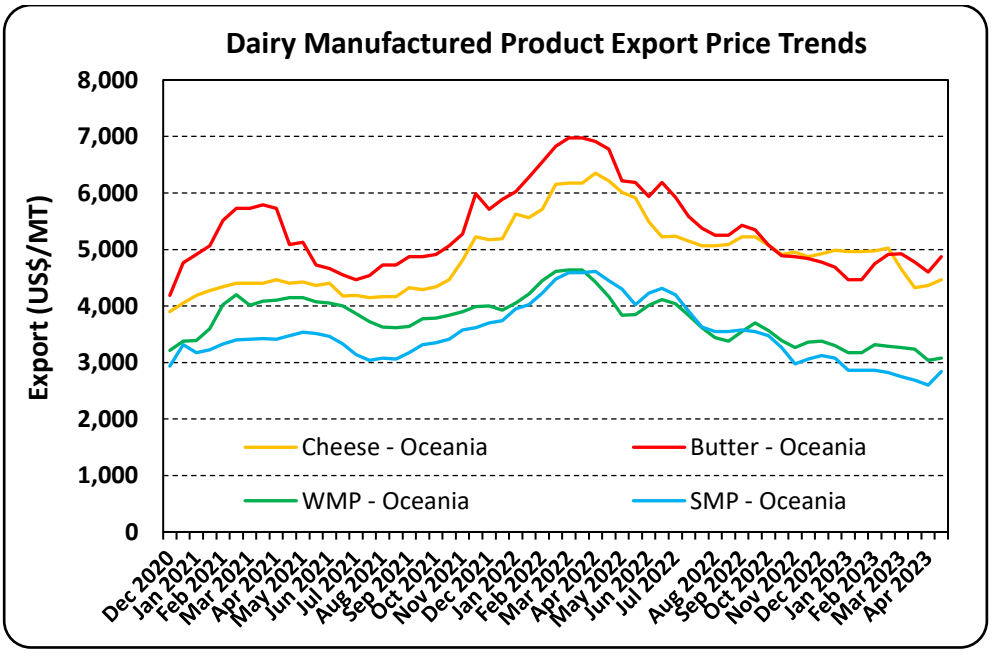
For many years changes in cheese production was broadly reflective of the variation in milk production from year to year. The price gap between cheese and the other major manufactured dairy commodities of butter, SMP, and WMP (see Figure 14) has in general widened over the last year further supporting the industry focus on cheese production.

Figure 13 – Trend in Milk Consumption for Cheese Production



Source: *Dairy Australia / FAS/Canberra*

Figure 14 – Dairy Manufactured Product Export Price Trends



Source: *USDA Agricultural Marketing Service*

Over recent years Australian cheese manufacturers had gradually been placing more emphasis on producing higher value non-cheddar varieties. However, Dairy Australia data indicates that there was a two percent reduction in the production of non-cheddar varieties and a five percent increase in cheddar cheeses in 2022 compared to 2021. Industry sources report that this change is due to world inflationary pressures shifting consumer demand away from the likes of higher value soft cheeses often associated

with entertaining. With inflationary pressures expected to continue impacting consumers this small shift in the types of cheeses produced is expected to continue in 2023.

FAS/Canberra's cheese production estimate for 2023 is revised up to 400,000 MT from the official USDA estimate of 390,000 MT as a result of industry data indicating a larger production volume was achieved than previously estimated.

Consumption

FAS/Canberra forecasts a marginal decrease in cheese consumption in 2023 to 325,000 MT, from the 2022 estimate of 330,000 MT, primarily due to the expectation of continued inflationary pressures impacting consumers household and take out expenditure capacity.

FAS/Canberra estimates consumption of cheese in 2022 at 330,000 MT which is 10,000 MT higher than the official USDA estimate and in line with 2021. This is the highest level of cheese consumption recorded in Australia.

Trade

Exports

Cheese exports in 2023 are forecast by FAS/Canberra at 150,000 MT, a small increase over the 145,000 MT achieved in 2022, but this is 15,000 MT below the 2023 official USDA forecast.

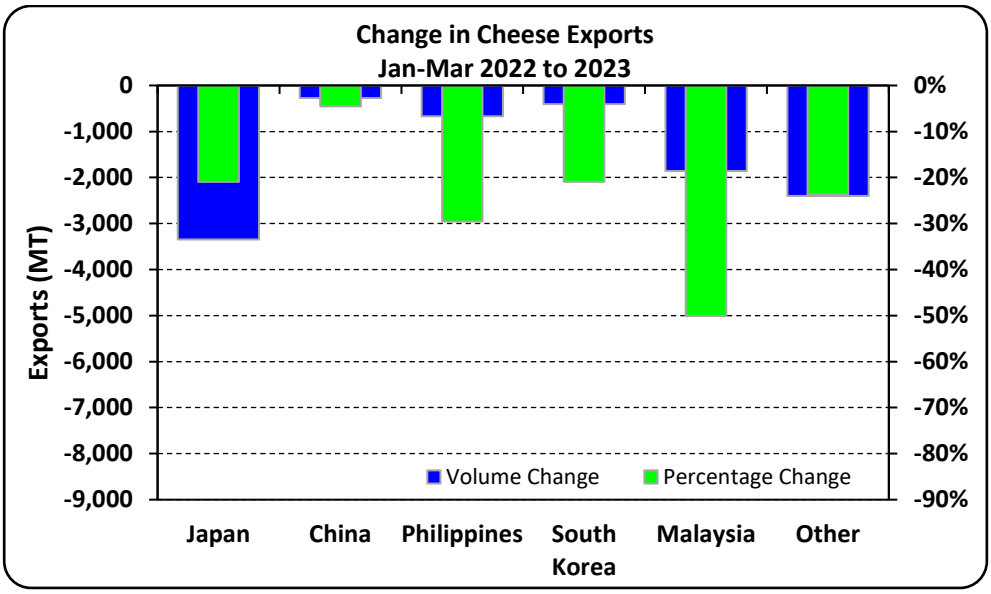
Cheese exports for the first quarter of 2023 were weak at 31,168 MT compared to 40,126 MT for the same period in 2022. Despite this, FAS/Canberra forecasts that exports will rise to exceed the final result for 2022. The weaker early export results for 2023 are a continuation of softer volume of trade since September 2022. Industry sources indicate that the softening world dairy commodity prices had changed global dairy traders buying behaviors. Buyers had shifted to purchases on an 'as needs basis' while the commodity prices have been declining. However, there are signs that the world dairy commodity prices have started to flatten during 2023. There is an expectation that prices will stabilize, and with this global dairy buyers are likely to shift towards purchasing larger consignments as the year progresses, supporting the forecast export trade volume.

Australia is a net exporter of cheese, and it is the largest dairy product exported. Australia exports almost 40 percent of all the cheese that it produces. As previously mentioned, Australian manufacturers are anticipated to continue to favor cheese production, and with limited scope to increase domestic consumption of cheese any increase in production is likely to be focused on the export market.

Japan has consistently, and by far, been the largest market for Australian cheese over the last decade, and until recently accounted for around half of all cheese exports. But since 2021 exports to Japan have come down to around 40 percent of overall exports, and much of the decline has been supported by increases to China over the last two years, which is now nearing 20 percent of overall cheese exports.

As mentioned earlier, exports for the first quarter of 2023 are substantially lower than for the same period in 2022. This is across all of the major export destinations (see Figure 15) and a reflection of industry reports indicating that traders have reverted to purchases on an 'as needs basis' while the global prices have been declining.

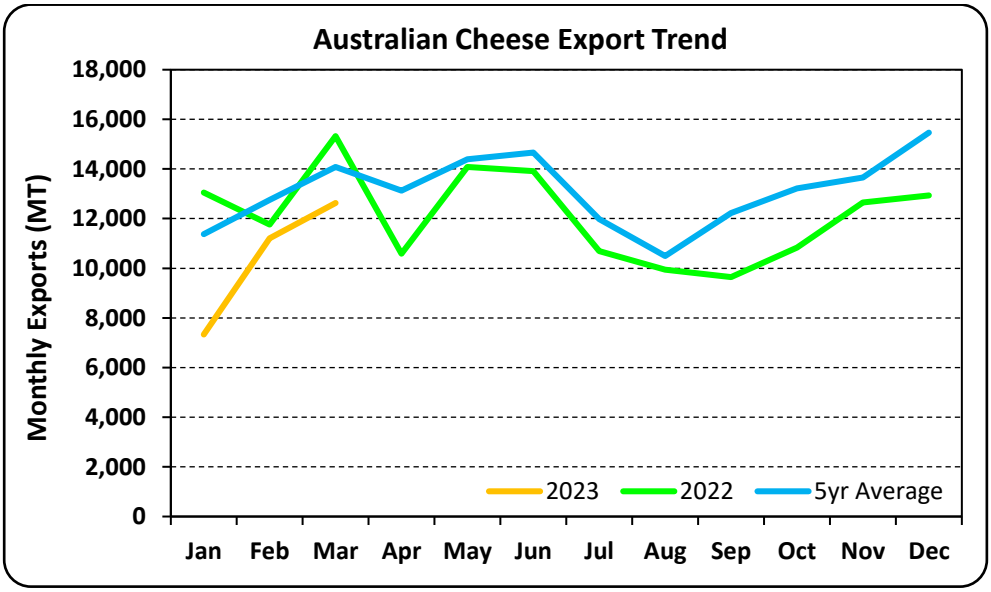
Figure 15 – Change in Cheese Exports – Jan-Mar 2022 to 2023



Source: *Australian Bureau of Statistics*

Based on updated trade data, cheese exports reached 145,000 MT in 2022. This is a little lower than previously estimated and was the result of slowing demand since September 2022 (see Figure 16).

Figure 16 – Australian Cheese Export Trend



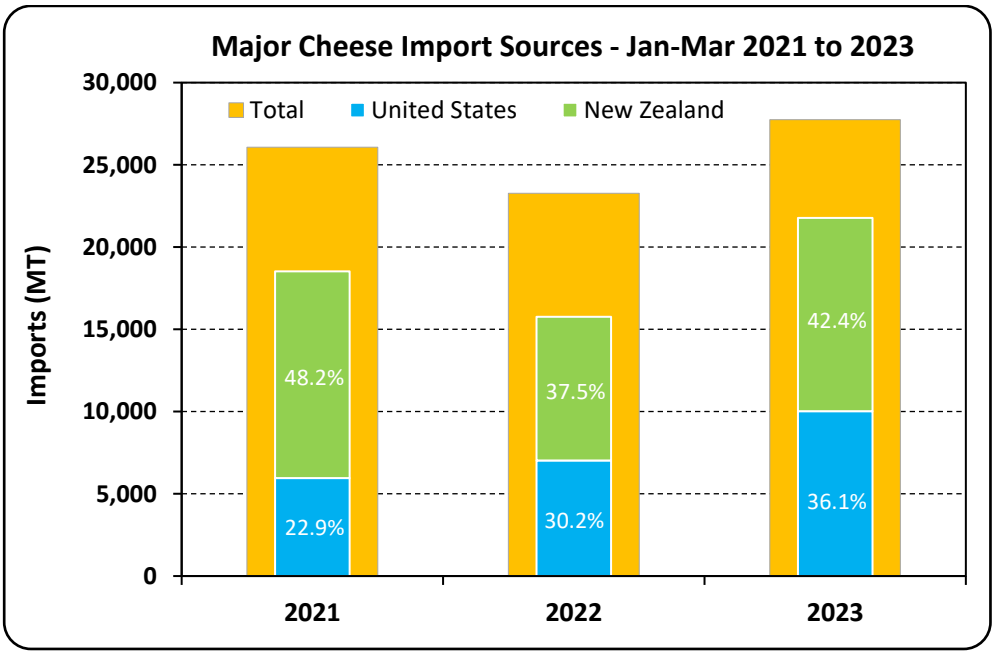
Source: *Australian Bureau of Statistics*

Imports

FAS/Canberra forecasts for cheese imports in Australia is revised upward to 95,000 MT in 2023 from the official USDA forecast of 90,000 MT and is only 1,000 MT lower than the 2022 outcome. Although cheese production has been increasing in recent years, imports have remained strong. This trend is set to continue in 2023 with first quarter imports being 27,743 MT and 19 percent higher than for the same period in 2022. At this rate the forecast imports would be even higher, but the pace of imports is anticipated to fall in the coming months as some industry analysts indicate that domestic suppliers will focus on meeting the domestic market prices rather than allow too much build-up of stocks.

Typically, almost one-half of all cheese imports have for many years come from New Zealand and around one-quarter from the United States. Imports from the United States have been growing and for the first quarter of 2023 reached 36 percent of overall imports, but are yet to surpass New Zealand's share of 42 percent (see Figure 17). Cheese supply from both of these nations has driven up the pace of imports so far in 2023.

Figure 17 – Major Cheese Import Sources – Jan-Mar 2021 to 2023



Source: Australian Bureau of Statistics

Imports for 2022 were at 96,000 MT, nearly unchanged from the previous year.

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

Dairy, Cheese	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	73	73	88	76	93	97
Production (1000 MT)	385	393	390	400	395	400
Other Imports (1000 MT)	97	97	90	96	90	95
Total Imports (1000 MT)	97	97	90	96	90	95
Total Supply (1000 MT)	555	563	568	572	578	592
Other Exports (1000 MT)	157	157	155	145	165	150
Total Exports (1000 MT)	157	157	155	145	165	150
Human Dom. Consumption (1000 MT)	310	330	320	330	320	325
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	310	330	320	330	320	325
Total Use (1000 MT)	467	487	475	475	485	475
Ending Stocks (1000 MT)	88	76	93	97	93	117
Total Distribution (1000 MT)	555	563	568	572	578	592
(1000 MT)						

BUTTER

Production

FAS/Canberra forecasts butter production in 2023 to decline to 50,000 MT, which is in line with the official USDA forecast. This forecast is 5,000 MT lower than the 2022 estimate and a continuation of the trend over numerous years of declining butter production in Australia. This is despite high world butter prices, compared to powder prices in particular, which would typically encourage increased production. The large downward revision in forecast milk production is expected to result in a general decline in all major manufactured dairy products other than cheese.

Forecast butter production remains well below past levels which for almost three decades prior to 2018 was 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, particularly given the large capital costs needed to reinvest in butter production equipment in an environment of a declining national milk pool.

FAS/Canberra estimates butter production in 2022 to have reached 55,000 MT, a downward revision of 5,000 MT from the official USDA estimate. This estimate is based on Dairy Australia reported production data, and the downward revision also reflects the lower than previously estimated milk production for 2022.

Consumption

FAS/Canberra forecasts butter consumption to remain stable in 2023 at 90,000 MT, from an estimated 91,000 MT in 2022. The 2023 forecast consumption is moderately lower (2,000 MT) than the official

USDA estimate of 92,000 MT. The lower forecast is in line with the general trend of declining per capita consumption in Australia, which has been the trend for more than the last five years.

With the Australian government forecasting a significant increase in migration during 2023 and 2024 there is the prospect of a further flattening of overall butter consumption in 2024, despite the declining per capita consumption trend.

Butter volumes 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 2022 of 91,000 MT is in line with the official USDA estimate but 4,000 MT lower than for 2021, which is reflective of the general downward trend of butter consumption over recent years.

Trade

Exports

Butter exports in 2023 are forecast at 15,000 MT, unchanged from the USDA official forecast. This forecast is also the same as the result for 2022. 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 2023 are significantly lower than for the same period in 2022. But with such a small overall trade volume, exports over the first quarter of past years have been inconsistent and not a good guide to of the full year result.

Australia exports butter to over 30 countries but over the last five years the major destinations have consistently been to Thailand, China, Singapore, Malaysia and Hong Kong. These five nations have accounted for around 60 percent of Australia's butter experts in each of the last five years.

Butter exports for 2022 were 15,000 MT based on Australian trade data.

Imports

FAS/Canberra forecasts import of butter to Australia to increase to 50,000 MT in 2023, 10,000 MT higher than the official USDA forecast. The FAS/Canberra forecast is also 9,000 MT above the 2022 result. The upward revised forecast is supported by the very strong first quarter imports in 2023 which are up by 80 percent at 16,000 MT from the same period in 2022. At this rate, overall imports for the year would surpass the forecast but the pace of imports is expected to slow in the coming months.

Australia is a net import of butter and by far the dominant source of imports is from New Zealand, representing around 85 percent of overall imports from 2018 to 2022. With Australia in close proximity

to New Zealand, importers can readily adjust trade volumes to changes in Australia's production and exports to ensure domestic consumption demands are met.

The import result for 2022 was 41,000 MT based on final trade data which was 6,000 MT higher than the previous estimate, but this was balanced by exports being 5,000 MT lower than the earlier estimate.

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

Dairy, Butter	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	77	77	67	67	51	57
Production (1000 MT)	70	70	60	55	50	50
Other Imports (1000 MT)	37	37	35	41	40	50
Total Imports (1000 MT)	37	37	35	41	40	50
Total Supply (1000 MT)	184	184	162	163	141	157
Other Exports (1000 MT)	22	22	20	15	15	15
Total Exports (1000 MT)	22	22	20	15	15	15
Domestic Consumption (1000 MT)	95	95	91	91	92	90
Total Use (1000 MT)	117	117	111	106	107	105
Ending Stocks (1000 MT)	67	67	51	57	34	52
Total Distribution (1000 MT)	184	184	162	163	141	157
(1000 MT)						

SKIM MILK POWDER

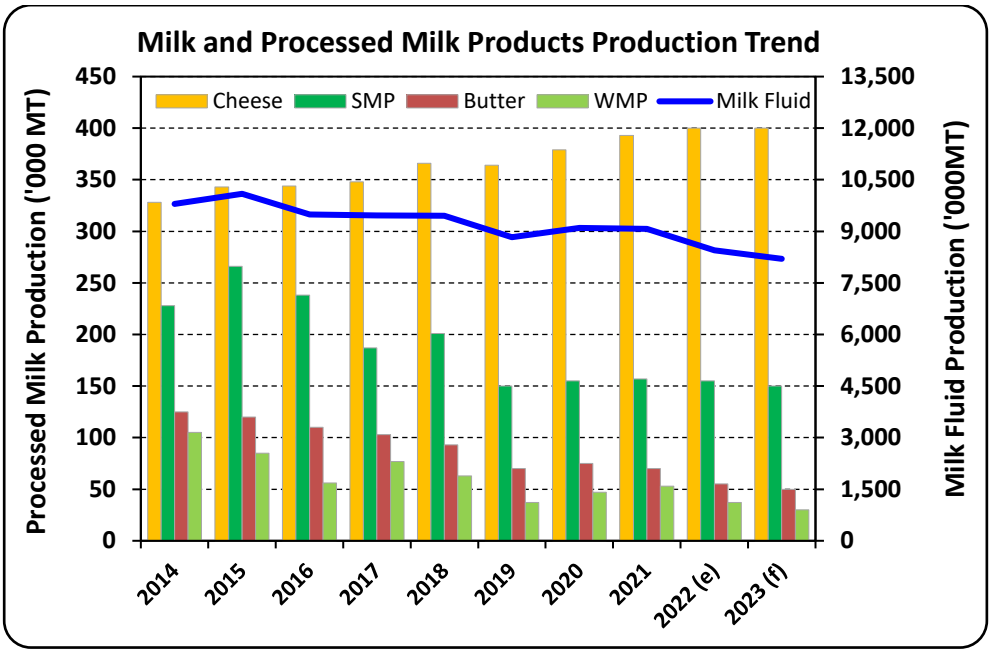
Production

FAS/Canberra forecasts SMP production in 2023 at 150,000 MT, which is 5,000 MT higher than the official USDA forecast. The FAS/Canberra forecast for 2023 is 5,000 MT lower than the estimate for 2022 of 155,000 MT. The forecast decline in SMP production is mainly due to the forecast three percent reduction in milk available for manufacturing.

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 by nine percent, despite SMP production forecast to decline by only three percent, processors can 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 (see Figure 18). The industry has in recent years had a focus on channelling milk towards cheese production. With a reduction in milk available for manufacturing, a reduction in SMP (along with WMP and butter) is expected as the industry continues to focus on cheese production.

Figure 18 – Milk and Processed Milk Products Production Trend



Source: *Dairy Australia / PSD*

FAS/Canberra's estimate of SMP production in 2022 of 155,000 MT is 5,000 MT higher than the official USDA estimate. This revised estimate is based on Dairy Australia reported SMP production data for 2022.

Consumption

FAS/Canberra's SMP consumption forecast for 2023 is forecast to remain stable at 30,000 MT and is in line with the official USDA forecast. Australia produces far more SMP than it consumes and the forecast decline in production will have no impact on influencing domestic consumption.

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. Due to the wide range of uses for SMP significant variations in consumption from year to year are not anticipated.

FAS/Canberra's SMP consumption estimate for 2022 of 30,000 MT is slightly above the official USDA estimate of 28,000 MT.

Trade

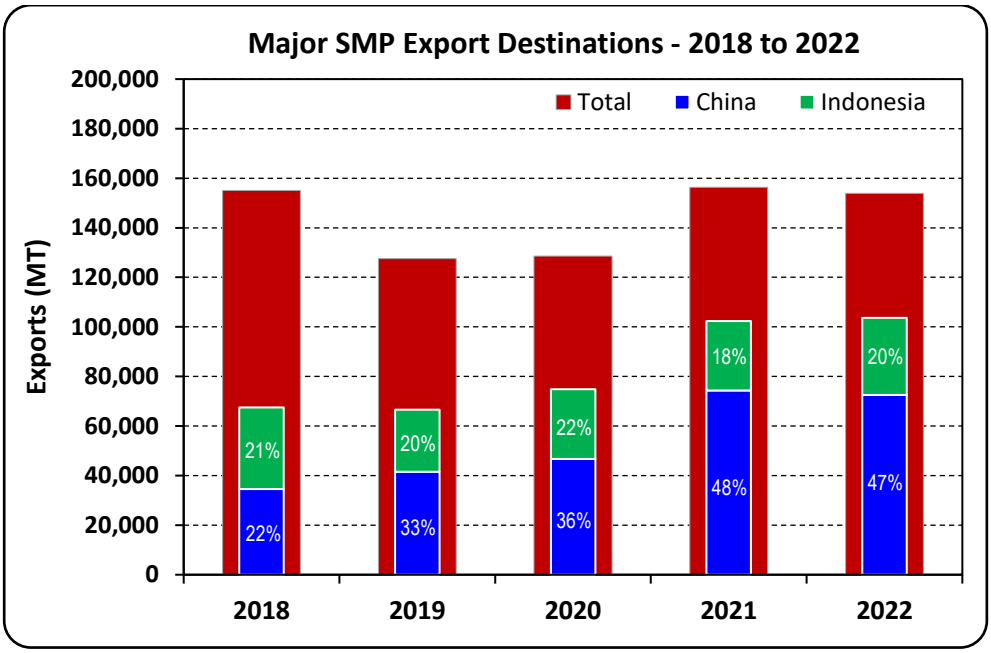
Exports

FAS/Canberra forecasts exports of SMP in 2023 at 130,000 MT, which is the same as the official USDA forecast. However, this is a substantial 24,000 MT (16 percent) drop from the 2022 result of 154,000 MT and a 26,000 MT decline from 2021. The forecast decline in exports is despite SMP production in 2023 forecast to be only 5,000 MT lower than for 2022. The spike in exports for 2021 and 2022 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. The combination of lower production and low opening stocks is restricting the industries capacity to export SMP for 2023. Exports for the first quarter of 2023 have slowed significantly compared to the same period in 2022.

Exports spiked in 2021 and continued in 2022 despite similar production to the previous two years (2019 and 2020) and this is likely to have substantially depleted domestic stocks. With a small drop in production and lower beginning stocks in 2023, exports are forecast to be curtailed to levels similar to 2019 and 2020.

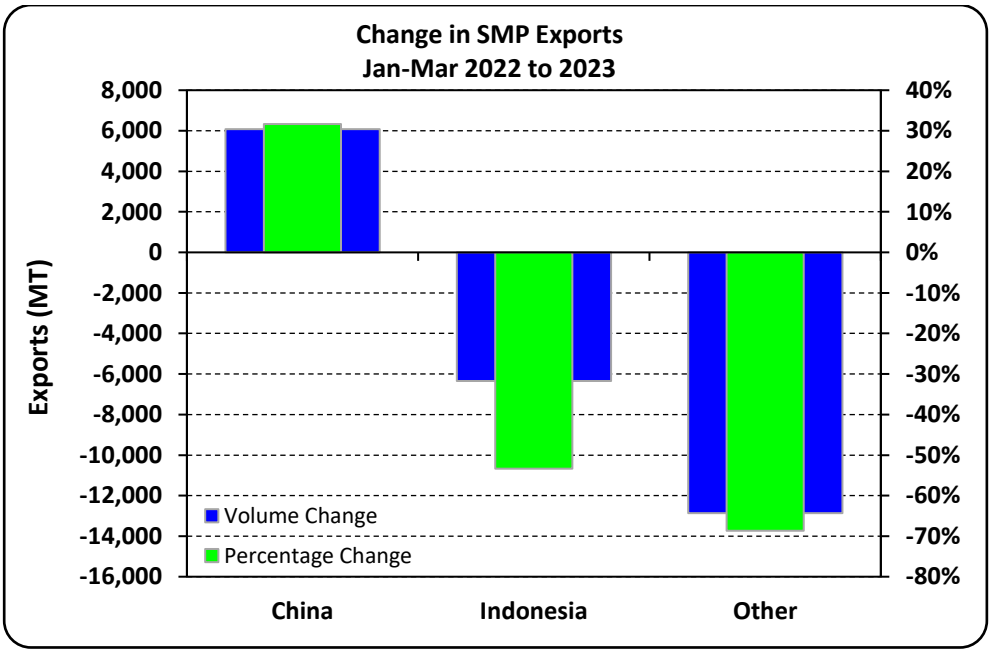
Australia exports SMP to over 20 countries but over the last five years China and Indonesia have been the major destinations with China's importance over the last two years growing to almost half of overall exports (see Figure 19). However, in the first quarter of 2023 with overall exports dropping by 13,000 MT (26 percent), China substantially increased its volume by 6,000 MT while Indonesia has decreased by a similar amount (see Figure 20). Trade with the rest of the world is where the major drop in trade has occurred so far in 2023.

Figure 19 – Major SMP Export Destinations – 2018 to 2022



Source: *Australian Bureau of Statistics*

Figure 20 – Change in SMP Exports – Jan-Mar 2022 to 2023



Source: *Australian Bureau of Statistics*

SMP exports for 2022 were 154,000 MT, based on trade data. This higher than previously expected outcome was driven by strong world demand, more so in the first half of the year.

Imports

FAS/Canberra forecasts SMP imports to remain stable at 15,000 MT in 2023, the same as the 2022 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 2023 are a little over 3,000 MT. 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 has been from New Zealand, with lower volumes from Germany, Austria, and in 2022 the United States. This trend has broadly continued in the first quarter of 2022.

The import result for 2022 was 15,000 MT and slightly higher than the 2021 result of 14,000 MT. This volume of trade has been very stable over the last five years.

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

Dairy, Milk, Nonfat Dry	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	54	54	19	29	8	15
Production (1000 MT)	147	157	150	155	145	150
Other Imports (1000 MT)	14	14	12	15	15	15
Total Imports (1000 MT)	14	14	12	15	15	15
Total Supply (1000 MT)	215	225	181	199	168	180
Other Exports (1000 MT)	156	156	145	154	130	130
Total Exports (1000 MT)	156	156	145	154	130	130
Human Dom. Consumption (1000 MT)	40	40	28	30	30	30
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	40	40	28	30	30	30
Total Use (1000 MT)	196	196	173	184	160	160
Ending Stocks (1000 MT)	19	29	8	15	8	20
Total Distribution (1000 MT)	215	225	181	199	168	180
(1000 MT)						

WHOLE MILK POWDER

Production

FAS/Canberra forecasts WMP production in 2023 to decline to 30,000 MT from the 2022 outcome of 37,000 MT. This is directly related to the forecast fall in milk production for 2023 and the world price of WMP being only marginally higher than SMP (see Figure 14). As a result, processors will continue to 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 85 percent to 37,000 MT in 2022, and is expected to fall further in 2023. 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 outcome for 2022 is 37,000 MT based on Dairy Australia data from manufacturers voluntary reporting. This 30 percent drop in production from the 2021 result of 53,000 MT was driven by the disparity in world prices, where at times in 2022 SMP prices were higher than that for WMP.

Consumption

FAS/Canberra's forecast for WMP domestic consumption in 2023 is for it to remain stable at 35,000 MT and in line with the official USDA forecast. Due to the nature of the use of WMP in manufactured products, and generally no growth in the population due to low migration associated with border closures from the COVID-19 pandemic, consumption is expected to remain flat. However, with a big increase in migration anticipated by the Australian government during 2023 and 2024 there is expected to be an increase in population particularly in 2024 which may result in a small increase in domestic demand for WMP.

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

Exports

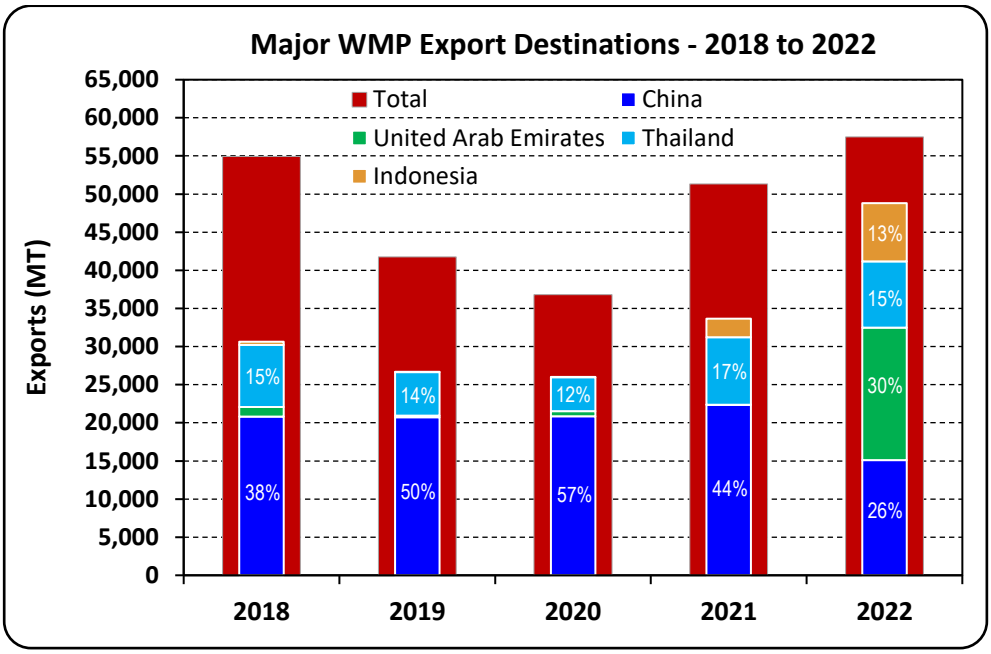
Exports of WMP in 2023 are forecast by FAS/Canberra at 40,000 MT, a downward revision of 5,000 MT from the official USDA forecast. This revision is mainly due to the lower than anticipated first quarter export outcome for 2023.

Exports in the first quarter of 2023 are well down on the same time the previous year. So far Australia has exported 9,900 MT of WMP in comparison to 16,300 MT for the same period in 2022. As previously mentioned, world dairy product buyers are purchasing on an 'as needs basis' while world prices have been declining which has impacted the first quarter result for 2023. It is anticipated that the pace of trade will improve in the second half of the year bringing overall WMP exports towards the forecast 40,000 MT.

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, while in 2022 WMP exports to China diminished, the United Arab Emirates and Indonesia emerged as major export destinations (see Figure 21). Their importance to the export market has continued into the first quarter of 2023 but with lower volumes.

Figure 21 – Major WMP Export Destinations 2018 to 2022



Source: Australian Bureau of Statistics

The WMP export result for 2022 was 58,000 MT based on Australia's trade data. The result is far higher than Australia's production, indicating that some of the imports are further processed before being exported.

Imports

FAS/Canberra forecasts WMP imports of 45,000 MT in 2023, in line with the official USDA forecast, but higher than the 40,000 MT for 2022. This forecast import if realized would be a record level for Australia, with the previous peak achieved in 2020 of 43,000 MT. The decrease in forecast WMP production in 2023 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. Imports for the first quarter of 2023 are at almost 12,000 MT and are 26 percent higher than for the same period in 2022. This pace of imports would result in a higher than forecast level of imports. But the rate of imports is anticipated to slow due to the lower export demand for WMP from Australia.

WMP import's for Australia in 2022 were 40,000 MT based on Australia's trade data.

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

Dairy, Dry Whole Milk Powder	2021		2022		2023	
Market Year Begins	Jan 2021		Jan 2022		Jan 2023	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	37	37	38	36	23	20
Production (1000 MT)	55	53	35	37	30	30
Other Imports (1000 MT)	37	37	40	40	45	45
Total Imports (1000 MT)	37	37	40	40	45	45
Total Supply (1000 MT)	129	127	113	113	98	95
Other Exports (1000 MT)	51	51	55	58	45	40
Total Exports (1000 MT)	51	51	55	58	45	40
Human Dom. Consumption (1000 MT)	40	40	35	35	35	35
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	40	40	35	35	35	35
Total Use (1000 MT)	91	91	90	93	80	75
Ending Stocks (1000 MT)	38	36	23	20	18	20
Total Distribution (1000 MT)	129	127	113	113	98	95
(1000 MT)						

Attachments:

No Attachments