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Prepared By: Robere Hall

Approved By: Levin Flake

Report Highlights:

New Zealand milk production is forecasted to fall slightly in 2023. Although milk prices are at extremely high levels and expected to remain elevated, a number of issues are limiting the production response. This includes a slowly declining national herd, and also that on-farm inflation is expected to remain high as a result of the weak NZ dollar impacting imported input prices, as well as strong global fuel prices. In addition, a threepeat of the La Niña weather pattern is already forecasted, and similar patterns during the last two seasons resulted in prolonged dry conditions in regions that represent over 60 percent of the national dairy farms. FAS/Wellington is forecasting that milk supply for processing will also be back slightly, although there are expectations that whole milk powder (WMP) production could recover somewhat with any rebound in Chinese import demand. Skim milk powder (SMP) and butter production are both forecast to ease in 2023.

Executive Summary

FAS/Wellington forecasts New Zealand milk production in 2023 to fall slightly as a result of slowly declining national herd numbers and other factors. The average NZX milk price forecast (as of 10/4/2022) for processors in New Zealand for the 2022/2023 domestic milk year (ending June 2023) was between NZ\$9.25 and NZ\$9.50 per kilogram milk solids (KgMS) (US\$5.11 and US\$5.32 per KgMS). Despite this high milk price, a number of issues are limiting the production response. On-farm inflation is expected to remain high as a result of the weak New Zealand dollar impacting imported input prices, as well as strong global fuel prices. In particular, the price of nitrogen fertilizer, supplement feed, and diesel are expected to remain high. Also, a threepeat of the La Niña weather pattern is anticipated by the National Institute of Water and Atmospheric Research (NIWA). The impacts of the last two seasons with similar patterns have resulted in prolonged dry conditions in areas that represent over 60 percent of the national dairy farming regions, and this is expected to impact pasture growth next year.

Dairy cattle numbers are expected to continue their slowly decreasing trajectory as a result of implemented and impending Government environmental regulations impacting the sector. During the first half of 2022, the NZ Government concluded negotiations for free trade agreements (FTA) with the United Kingdom (UK) and European Union (EU). These FTAs are forecasted to see future improved quota access for mainly cheese and butter, with some smaller access for other powders and products.

Forecasts for 2023 dairy products and exports are not anticipated to be much different to previous years. FAS/Wellington is forecasting that milk supply for processing will be back slightly, in line with the current decrease in national herd numbers. With recent pricing in the Global Dairy Trade (GDT) and an expected recovery in Chinese whole milk powder (WMP) import demand, WMP production is forecast to be up, with skim milk powder (SMP) and butter production down. Other products are expected to remain consistent with recent years and the national manufacturing capabilities.

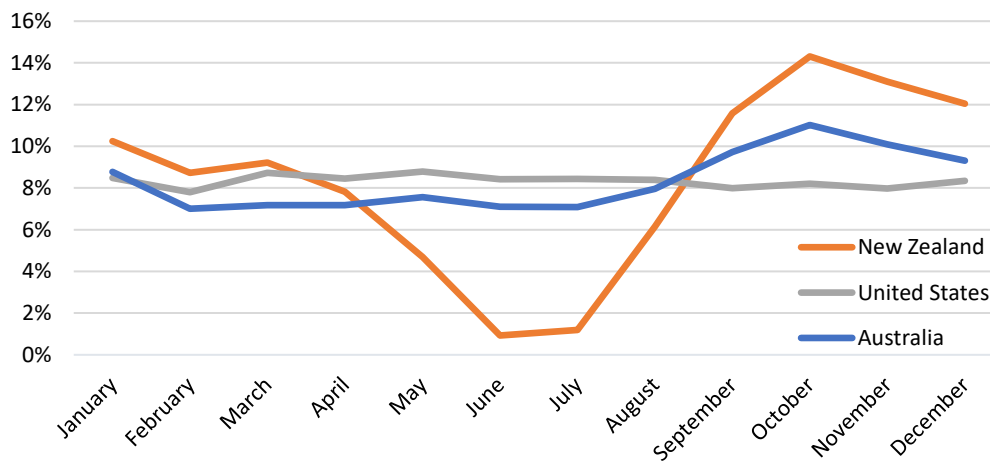
In 2022, exports to China experienced substantial disruptions. This was due to the re-instatement of COVID-19 restrictions in major cities, as well as more domestic Chinese milk going into powders. However, New Zealand has experienced growth in exports to Indonesia and Japan in 2022.

Note: The GAIN Dairy Marketing Year (MY) is the same as the calendar year (CY), January 1 to December 31. The NZ Dairy production year is July 1 to June 30. For the purpose of this report always refer to MY unless otherwise stated.

Overview of New Zealand Dairy Sector

Around 95 percent of all dairy milk produced in New Zealand is exported as milk or dairy products, with export revenues of approximately NZ\$19.1 billion a year (US\$10.6 billion). Dairy accounts for 35 percent of New Zealand's total merchandise exports and around 3.1 percent of Gross Domestic Product (GDP). The industry employs around 49,000 people. The majority of New Zealand dairy is reliant on predominately pasture-fed diets, although most herds do utilize purchased/imported feeds and other forage crops. Some supplemental feeding is done either through in-shed feeding systems or on feed pads for the purpose of improving milk yields or animal conditions. Due to the seasonality of New Zealand's pasture growth, the majority of calving takes place between late July to September. Milk production is highly seasonal, with almost 40 percent of the milk produced in the 4th quarter of each year, and this seasonality is much more pronounced than in other major suppliers (see Figure 1).

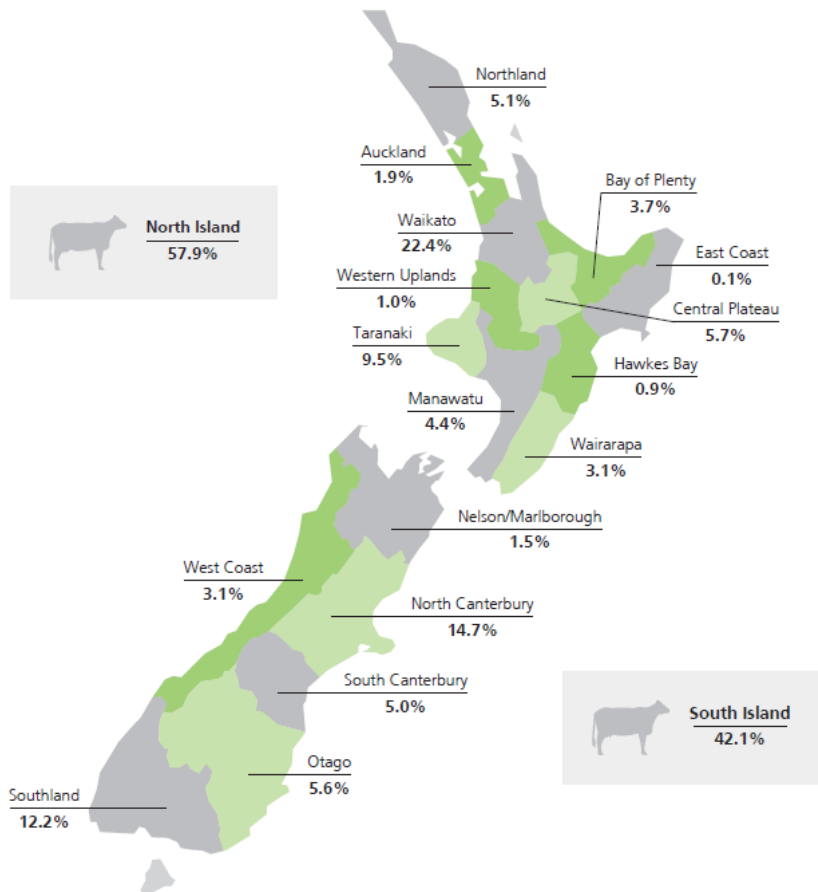
Figure 1: Indicative Milk Supply by Monthly Percentage of the Total Supply



Source: DCANZ, Dairy Australia, USDA-NASS

Figure 2 displays the regional distribution of the national dairy herd, which is situated largely on the easier topography country and higher valued agricultural land, such as Waikato, Taranaki, Canterbury and Southland.

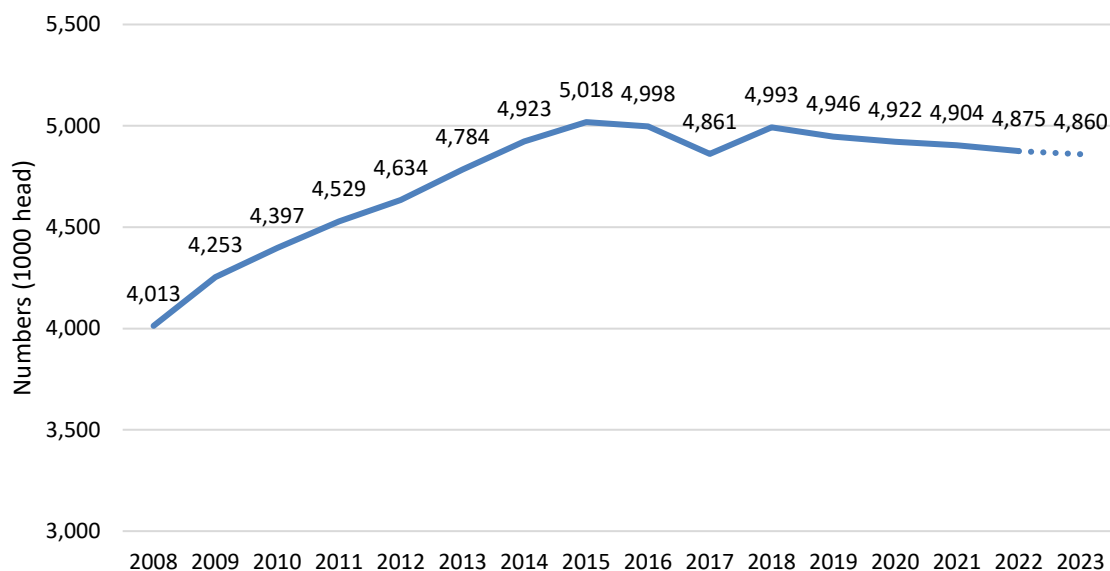
Figure 2: Regional Distribution Dairy Cows 2020/2021 Season



Source: New Zealand Dairy Statistics 2020-21, LIC and Dairy NZ

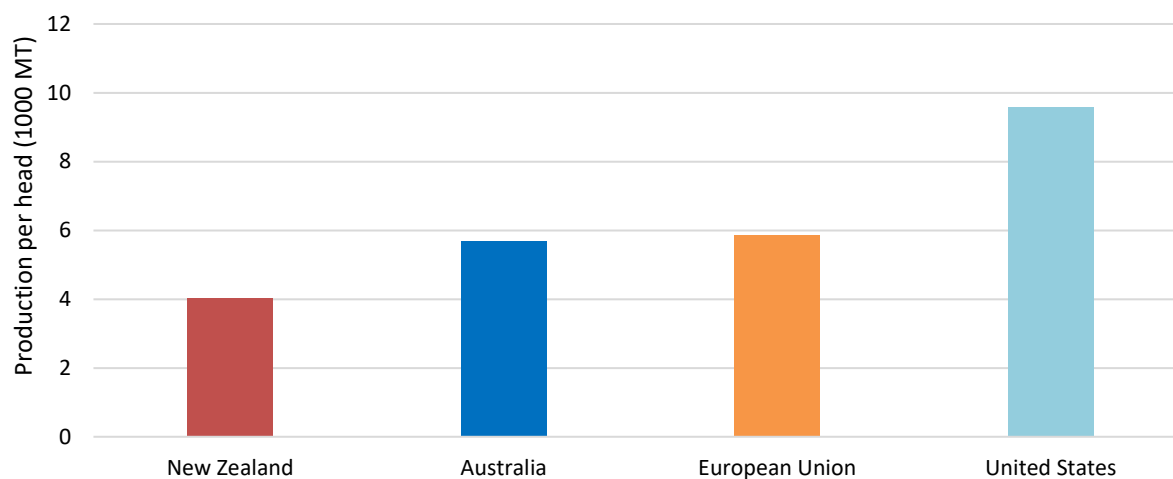
New Zealand reached “peak” dairy cattle numbers in 2015 (See Figure 3), exceeding five million head. Since then, the national herd has slowly declined. Part of this was due to an outbreak of *Mycoplasma Bovis* in 2017, where the NZ Government targeted an elimination strategy through high culling rates. Since that time, implemented and impending environmental regulations including on nitrogen use, agricultural emissions, and others are expected to continue to result in a very gradual decline in dairy cow numbers in the near to medium future. With this slow decline, increased productivity will be needed to maintain milk volumes. Currently, because New Zealand dairy production is primarily pasture-based, milk production per cow is considerably behind Australia and the European Union, and only half of that in the United States (Figure 4).

Figure 3 – New Zealand Dairy Cow Numbers



Source: New Zealand Dairy Statistics 2020-21, 2022 and 2023 are FAS/Wellington forecasts and estimates

Figure 4 – National Milk Production per Cow



Source: FAS PSD/Online

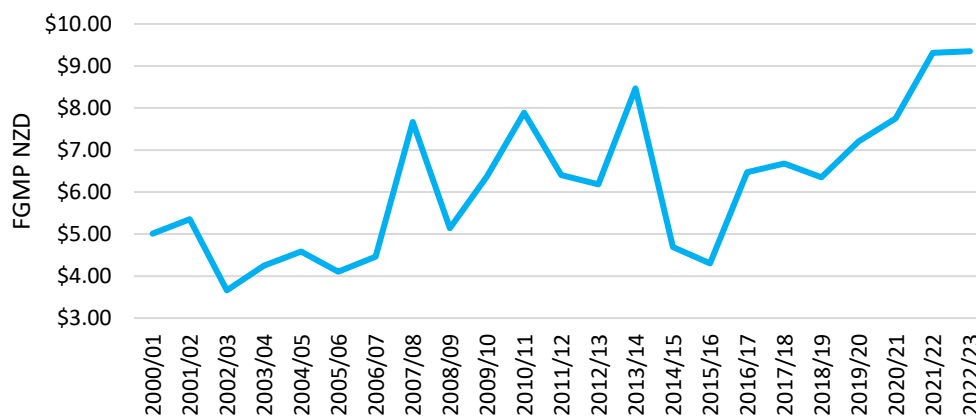
Liquid Milk Production 2023

FAS/Wellington is forecasting New Zealand 2023 fluid milk production to be 21.5 million metric tons (MMT), only marginally below the revised 2022 estimate. The major positive factor that is expected to support dairy farming is the strong anticipated farm gate milk price (FGMP) for 2023. However, production faces more negative impacts associated with a smaller national dairy herd, lower starting feed base, a third La Niña weather pattern, and very strong on-farm inflation.

Strong Farm Gate Milk Price

2023 is already forecasted to see an unprecedented FGMP, following strong export value experienced in international markets (see Figure 5). The average NZX milk price forecast (as of 10/4/2022) for processors in New Zealand for the 2022/2023 domestic milk year (ending June 2023) was between NZ\$9.25 and NZ\$9.50 per kilogram milk solids (KgMS) (US\$5.11 and US\$5.32 per KgMS). This compares to NZ\$9.30 and NZ\$7.75 for the 2021/22 and 2020/21 years respectively. These high prices are expected to remain in the latter half of 2023, as the forecasted farm-gate milk price forward contract for September 2023 is also at levels similar to the 2022/23 average milk price. In the face of rising input costs and interest rates, these record milk prices are a welcome sign for farmers and the wider industry. This should have a positive influence on production volumes of milk for 2023, especially in the second half of the year. However, several negative factors will limit the production response that would normally be expected from such high prices.

Figure 5 – Farmgate Milk Price Average Co-operative Payout



Source: LIC, NZX & DairyNZ, Note: Milking season is July 1 to June 30

Lower Cow Numbers

As mentioned, New Zealand reached “peak” dairy cow numbers in 2015 and the herd has been very slowly contracting since then. FAS/Wellington forecasts the national dairy herd to continue to decline in 2022 and 2023, albeit very marginally, even in light of record high FGMP. There is anticipation in New Zealand that before 2025 there will be the introduction of national and regional government rules, that will place limitations on land-use (stocking rates) and the amount of fertilizer that can be applied (see [National Policy Statement for Freshwater Management](#), clause 3.14). This could essentially cap national herd numbers, based on historical stocking rates. This follows on from the announcements of recent Emissions Reduction Plans ([ERP](#)) and Freshwater Farm Plans ([FFP](#)), which are also both expected to negatively impact cow numbers if and when they are implemented. The ERP introduces intentions to price agricultural emissions by 2025 and transition to lower-emissions land use. With FFP, farmers will need to provide local government information on practical steps about how they are meeting freshwater outcomes for their operation.

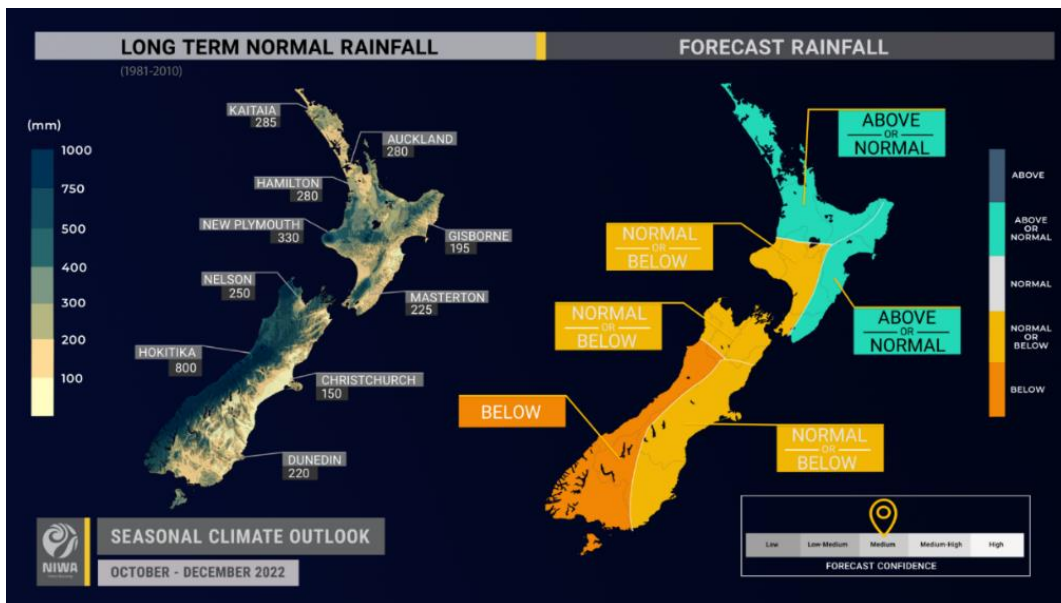
Lower Starting Feed Base

In addition to fewer cows, weather and feed issues are also limiting the ability of New Zealand dairy to boost production in light of the high milk prices. New Zealand dairy farms are expected to start from a lower feed base in the 2023 season. This will be brought on by the weather events experienced six months prior. A cold and wetter June to September 2022 has resulted in a slower spring (September to October) pasture growth in most dairy regions already. This is coupled with smaller winter forage crop yields, which were impacted by the prolonged dry in the first half of 2022. These events will have a carryover effect on production in the first half of 2023.

La Niña

The National Institute of Water and Atmospheric Research (NIWA) has officially announced an expected third consecutive La Niña weather pattern for New Zealand. The forecast is to take place until June of 2023. This pattern impacts the country's regions differently, where Northland, Canterbury, and Hawkes Bay (21 percent of the national herd) would experience a wetter summer and autumn (December to May). However, the remaining regions would experience prolonged dry and decreased pasture growth. This will have a significant impact on national milk production as this follows the pasture growth curve. Climatic impacts of feed production in New Zealand pastoral systems can take three to six months to recover. As a result, there is industry expectation that some herds may potentially shift to once-a-day milking in January or February to recover feed reserves for calving in July to September, thereby reducing milk yields. The NIWA forecast for October to December weather (which will impact pasture growth in early 2023) is for below average rainfall throughout the South Island, as well as part of the North Island (see Figure 6).

Figure 6 - Long Term Rainfall Forecast



Source: NIWA

On-Farm Inflation

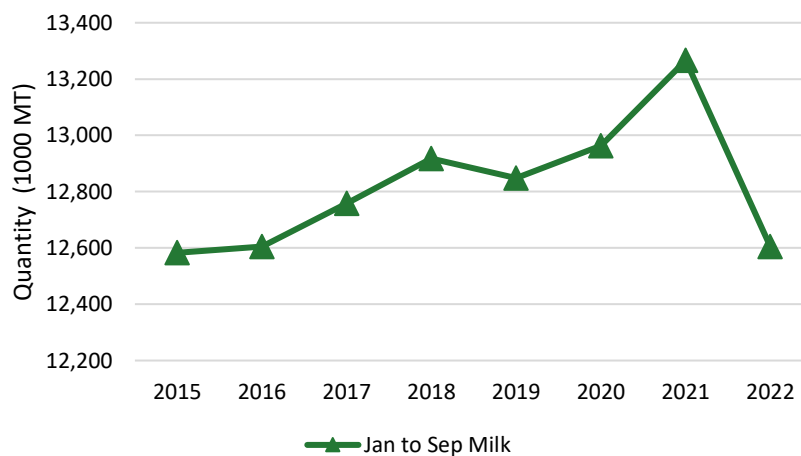
Although milk prices are high, New Zealand farmers have been hit by very elevated on-farm inflation. This is due to global supply chain challenges, tight grain and feed markets, and the weak NZ dollar making imported inputs more expensive. This is expected to continue to be a factor in 2023. This will be felt directly on inputs and purchased feeds. With diesel over NZ\$2.68 per liter (US\$5.80 per gallon) and urea fertilizer at NZ\$1,330 (US\$740) per metric ton, the price of feed and cost of production is estimated to stay elevated in 2023. Farmers are already signing contracts for 2023 of feed grade wheat and barley at upwards of NZ\$640 (US\$365) per metric ton, compared to below NZ\$450 per metric ton (US\$250) in 2021. With the favorable FGMP, farmers will look to use additional supplement feed for more conversion to milk. However, they will be constrained to fully maximize milk production due to these high input costs.

Although all these factors are expected to impact milk production in 2023, climatic conditions in late 2023 are still unknown. Because so much of the year's production will come during the latter part of 2023, any swings in spring (October-December 2023) pasture production will have a huge impact on the full year results.

2022

FAS/Wellington has revised down the national milk production for 2022 to 21.6 million metric tons (MMT) as a result of sluggish milk production so far this year. This is down from 22 MMT in 2021. Production through to September is 12.6 MMT, down 5 percent compared to the same period in 2021, and the lowest level of milk production in New Zealand during the first nine months of the year since 2016 (see Figure 7).

Figure 7 – January to September Milk Production

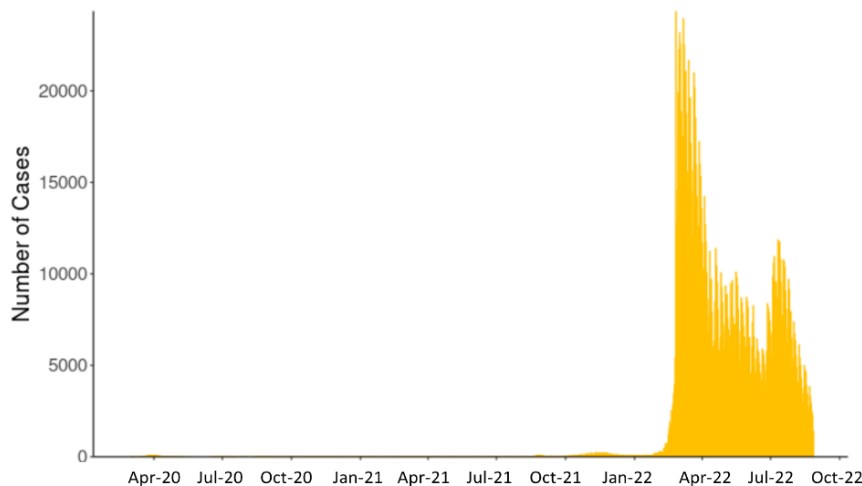


Source: Dairy Companies Association of New Zealand

This lower production pace is as a result of four main factors:

- **Dry Conditions:** At the start of the 2022 year, most of New Zealand dairy regions encountered a prolonged dry period, symptomatic of the forecasted La Niña weather pattern. This was particularly felt in Waikato, Taranaki, Central Plateau, Manawatu, Otago, and Southland (accounting for 60 percent of national herd). This dry weather impacted not only pasture growth, but other feed production such as silage.
- **COVID-19:** The prolonged dry in the first half of 2022 coincided with an upsurge in COVID-19 cases (see figure 8). This upsurge has since subsided, and for the remainder of the year it is not expected to have any direct impact on fluid milk production. However, the upsurges initially had a major impact at farm level as the slow down at slaughter facilities due to lack of workers resulted in many cull dairy cows being delayed and held on farm. These cows then utilized feed that would have typically been prioritized for the milking herd.

Figure 8 – New Zealand COVID-19 Cases



Source: Ministry of Health

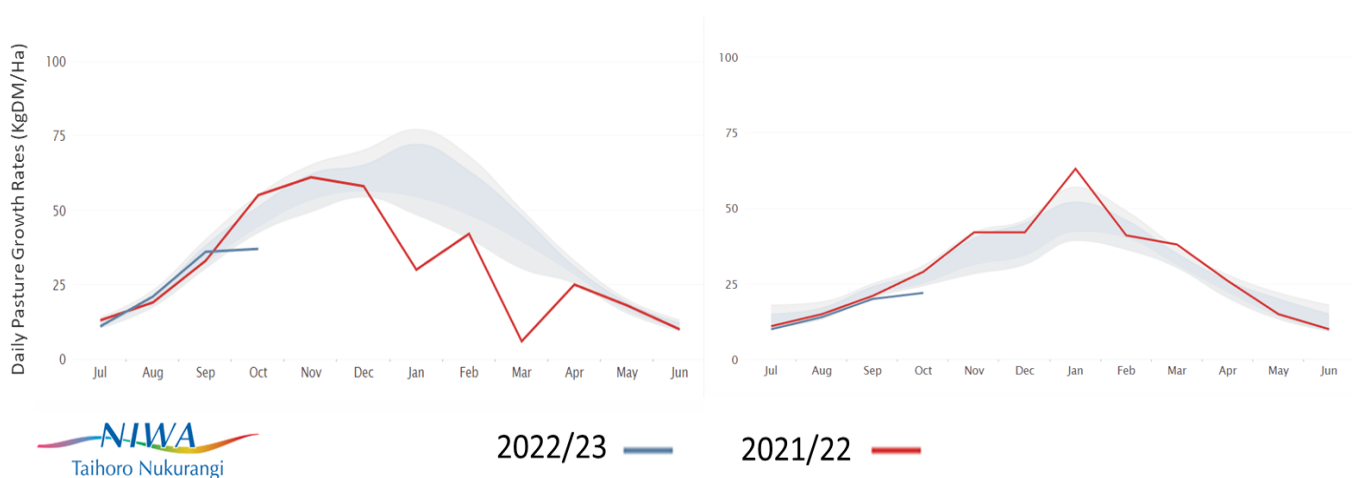
- **Elevated Feed Prices:** Inflationary pressures, supply chain challenges, and global feed tightness have all driven prices of New Zealand’s imported feed higher. For example, prices for Palm Kernel Expeller (PKE) are now at NZ\$450 per metric ton (about US\$260), compared to less than NZ\$300 in 2021. Despite these high prices, demand for imported feed has still been expanding to make up for poorer pastures and lack of on-farm feed because of the year-to-date climatic challenges. Domestic grain and corn silage production has this year reported to be substantially smaller because of the dry conditions in key producing regions, seeing increases on domestic feed wheat and barley prices from NZ\$450 (US\$250) per metric ton in 2021 to NZ\$640 (US\$365) currently.

- **Supply Chain and Inflationary Issues:** In addition to feed costs, other prices have also been rising for dairy farms, including fuel and electricity. A range of industry estimates put on-farm inflation for dairy farms at 16-17 percent as of mid-2022. In addition, New Zealand ports have been heavily impacted by the global supply chain disruptions caused by the COVID-19 pandemic. Normality to pre-pandemic frequency of shipping is not anticipated until 2023. Imports and exports in 2022 were continually disrupted, especially with the lockdowns experienced in China. The impacts felt for the dairy industry has been on imports for farm inputs such as agrichemicals and nitrogen fertilizer from China, as well as new farm machinery.

Outlook for Spring Production

Historically, 40 percent of the national milk production comes from the final quarter of the calendar year. As a result, industry remains somewhat optimistic that a good spring in 2023 could lift the total milk yield, as well as strong FGMP adding to the optimism. As discussed earlier in the report, NZ fluid milk production is heavily impacted by pasture growth. As a result, the national fluid milk production curve has as strong correlation to the pasture production curve. Figure 9 from two NIWA monitor farms (located in Taranaki in the North Island and in Southland on the South Island) shows pasture growth from the 2021/22 season compared to the now started 2022/23 farming season. Noticeably, pasture growth rates for October are lagging on both last year’s level and what is typical for October (show in gray in the below chart). As a result, the boost in milk production this spring may be less than previously anticipated.

Figure 9 – Daily Pasture Growth Forecast for Monitor Farms – kilograms of dry matter per hectare (kg DM/ha)



Source: NIWA Monitor Farms (Left: Southland, right: Taranaki)

Liquid Milk Exports

FAS/Wellington's forecast for New Zealand's fluid milk exports in 2023 is 290,000 metric tons (MT), the same of the previous year. The FAS/Wellington estimate for 2022 liquid milk exports was raised to 290,000 metric tons because of the strong pace of exports so far this year, which in the first nine months is up six percent on the same period in 2021. Of total liquid milk exports, about three-quarters is typically delivered to China.

Liquid Milk Domestic Consumption

FAS/Wellington forecasts domestic fluid milk consumption in 2023 at 535,000 MT, consistent with previous years. Just two percent of the milk produced in New Zealand is consumed domestically as liquid milk. By comparison with other key exporters, about 28 percent of Australia's milk production is consumed domestically as liquid milk, 20 percent of U.S. production, and 16 percent of EU production. The lion's share of the milk produced in New Zealand is exported as processed dairy products.

Production, Supply, and Distribution – Fluid Milk

Dairy, Milk, Fluid Market Year Begins New Zealand	2021		2022		2023	
	Jan 2021		Jan 2022		Jan 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk (1000 HEAD)	4904	4904	4875	4875	0	4860
Cows Milk Production (1000 MT)	21995	21995	21875	21600	0	21500
Other Milk Production (1000 MT)	0	0	0	0	0	0
Total Production (1000 MT)	21995	21995	21875	21600	0	21500
Other Imports (1000 MT)	2	2	5	5	0	5
Total Imports (1000 MT)	2	2	5	5	0	5
Total Supply (1000 MT)	21997	21997	21880	21605	0	21505
Other Exports (1000 MT)	277	277	275	290	0	290
Total Exports (1000 MT)	277	277	275	290	0	290
Fluid Use Dom. Consum. (1000 MT)	530	530	535	535	0	535
Factory Use Consum. (1000 MT)	21080	21080	20960	20670	0	20570
Feed Use Dom. Consum. (1000 MT)	110	110	110	110	0	110
Total Dom. Consumption (1000 MT)	21720	21720	21605	21315	0	21215
Total Distribution (1000 MT)	21997	21997	21880	21605	0	21505

(1000 HEAD) ,(1000 MT)

Industry and Policy

Calves: Currently, non-replacement dairy calves are typically either euthanized on-farm or killed for veal in early spring (August-October). However, New Zealand's largest dairy processor has reportedly added key clauses into their Terms of Supply, where calves of farmers that supply milk to this processor can only be euthanized on-farm when there are humane reasons for doing so. In addition, starting in June 2023, all these farms must ensure all non-replacement calves enter a value stream - either to be grown out for beef, or slaughtered for calf-veal or petfood. As a result, there are currently large investments and programs being carried out to develop opportunities and partnerships for dairy-beef

animals. This reduction in slaughter of very young dairy calves means that there will be even more dairy-breed cattle as a proportion of the national beef herd.

--Mycoplasma Bovis: In early May, the New Zealand Agricultural Minister announced that only one farm in New Zealand still had Mycoplasma Bovis, and 271 farms had been cleared of it. However, following a recent outbreak this increased and as of September 30th the number of active confirmed properties is four. Expectations still are that the disease will be able to be completely eradicated in New Zealand. According to the Ministry of Primary Industries website, as of May 5th, 2022, over NZ\$220 million (US\$140 million) in compensation has been provided to farmers from the Government as part of this eradication effort.

-- Agricultural Emissions Pricing: Over the last three years, the NZ Government has been working with industry to reduce and price agricultural emissions. 2022 saw the release of several pieces of work including the NZ First Emissions Reduction Plan, response from the NZ Primary Sector Climate Action Partnership and recently a government released proposal to reduce agricultural emissions. Outside of pricing emissions, focus is being narrowed on controlling nitrogen fertilizer application rates and stock numbers. The NZ Government are targeting an implementation date of January 1st, 2025, for beginning to price agricultural emissions. This is expected to have the greatest impact on the beef and sheep sector, but also impact the dairy sector as well.

--Live Export: New Zealand's Ministry for Primary Industries (MPI) announced in July 2021 that all exports of livestock by sea would cease on April 30, 2023. This decision followed the sinking of the vessel Gulf Livestock 1 in August 2020 after departing Napier destined for China. Live exported cattle from New Zealand have been dairy cows and heifers for breeding and milking, almost entirely to China. The absence of this export markets will likely impact returns from some farms that supplied these heifers and cows.

--Free Trade Agreements – European Union and United Kingdom

During the first half of 2022, New Zealand concluded negotiations on two separate Free Trade Agreements (FTA), one with the United Kingdom (UK) and one with the European Union (EU). The purpose of these FTAs is to provide tariff relief and/or expanded quotas for a number of New Zealand agricultural products including horticulture, seafood, dairy, and meat products. It is expected that signatures of these FTAs will take place in 2023, and domestic formal approval of the agreements to likely occur in 2024.

The proposed quotas are:

➤ **UK:**

- Butter: Will receive quota volumes of 7,000 MT on entry, growing to 15,000 MT in equal annual installments over five years. After five years there will be free access.
- Cheese: Will receive quota volumes of 24,000 MT on entry, growing to 48,000 MT in equal annual installments over five years. After five years there will be free access.

➤ **EU:**

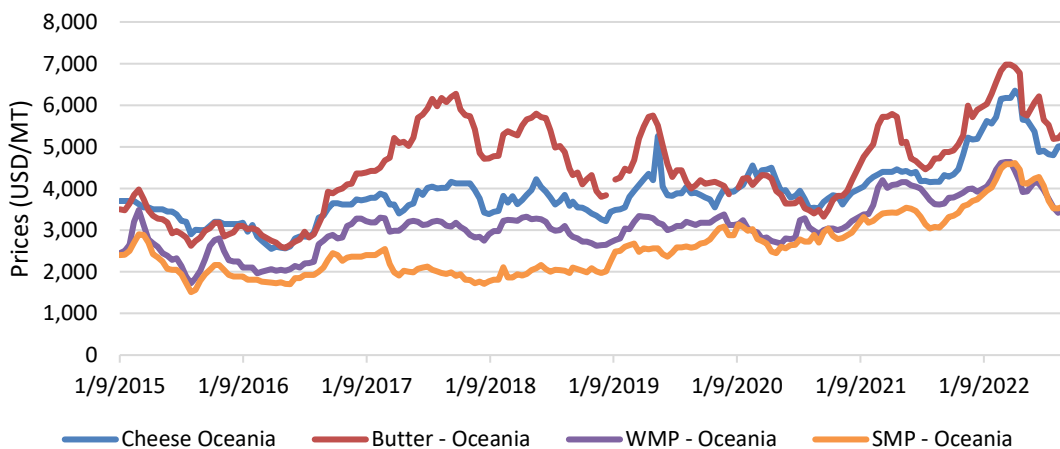
- **Milk Powders:** Will receive quota access into the EU, with volumes phasing from 5,000 MT to 15,000 MT over seven years after entry into force.
- **Butter:** Will receive improved access into the EU, with quota access for 36,000 MT, through a combination of phased tariff reductions for 21,000 MT of the existing WTO quota and for new FTA access growing to 15,000 MT seven years after entry into force.
- **Cheese:** Will receive both new and improved quota access into the EU for 3,103 MT, through a combination of tariff elimination for New Zealand’s existing 6,031 MT WTO access and new FTA access growing to 25,000 MT seven years after entry into force.
- **High protein whey products:** Will have duty-free quota access reaching 3,500 MT over seven years after entry into force.
- **Other dairy products:** including caseins, peptones, lactose, liquid cream, ice cream and retail infant formula will have tariffs eliminated.

The protection of geographical indications (GI) was an essential outcome for the EU in the NZ-EU FTA. The EU presented New Zealand with a list of names which are protected in the EU as GIs for dairy products, wine, spirits, and other products. The EU asked for New Zealand to recognize and protect these names as Geographic Indicators in New Zealand under the EU-NZ free trade agreement. This list includes varieties of butter and cheese, such as: Roquefort, Feta, Gorgonzola, Beaufort, and various others.

DAIRY PRODUCT EXPORTS

As explained, the majority of NZ milk produced is exported as products. Overall dairy product prices have been very high this past year (see Figure 10).

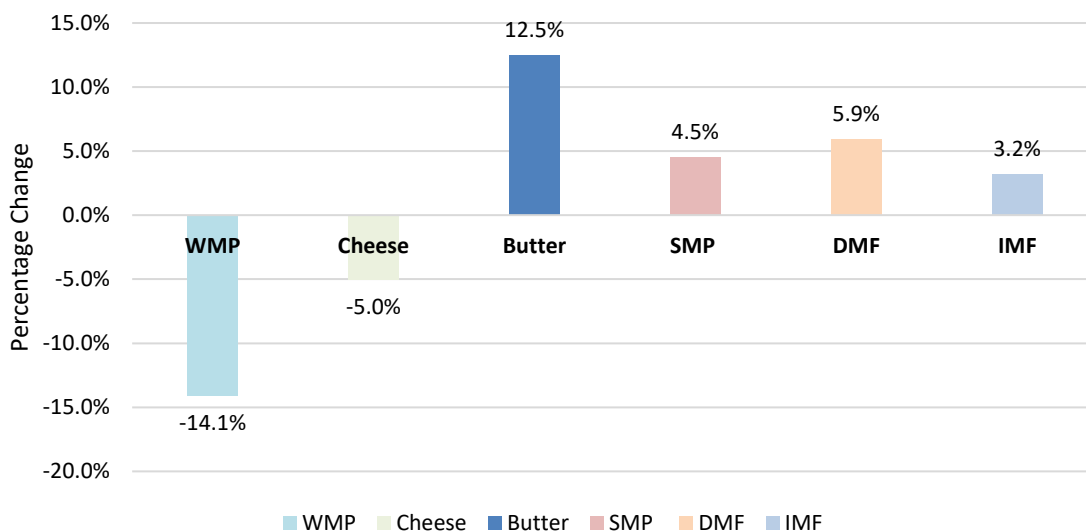
Figure 10 – Oceania Export Pricing



Source: GDT

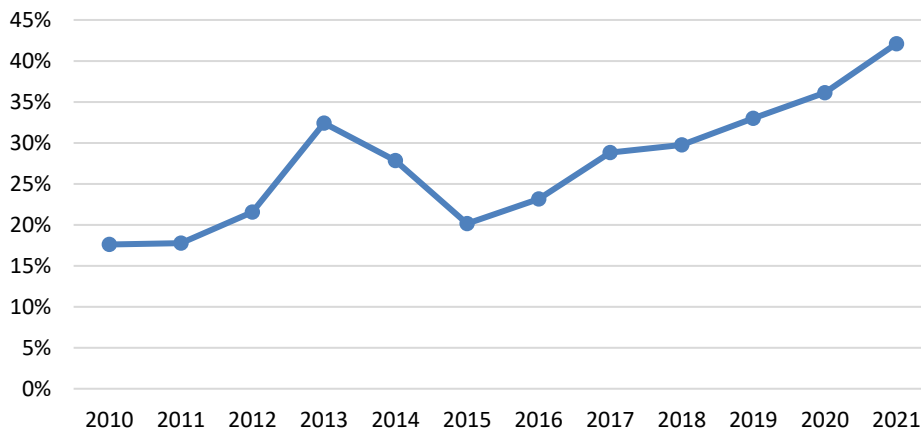
Overall New Zealand dairy exports have been mixed so far this year, with WMP and cheese exports down, but fluid milk, butter and SMP up (see Figure 11). China is by far the largest market for NZ dairy products, accounting for a record 42 percent of NZ dairy exports (by value) in 2021 (see Figure 12). However, exports to China have been sluggish this year (see Figure 13), in part due to reduced demand as a result of COVID-19 lockdowns. Because of this, so far this year China has only accounted for 33 percent of exports.

Figure 11 - New Zealand Global Dairy Products Exports Jan to Sept



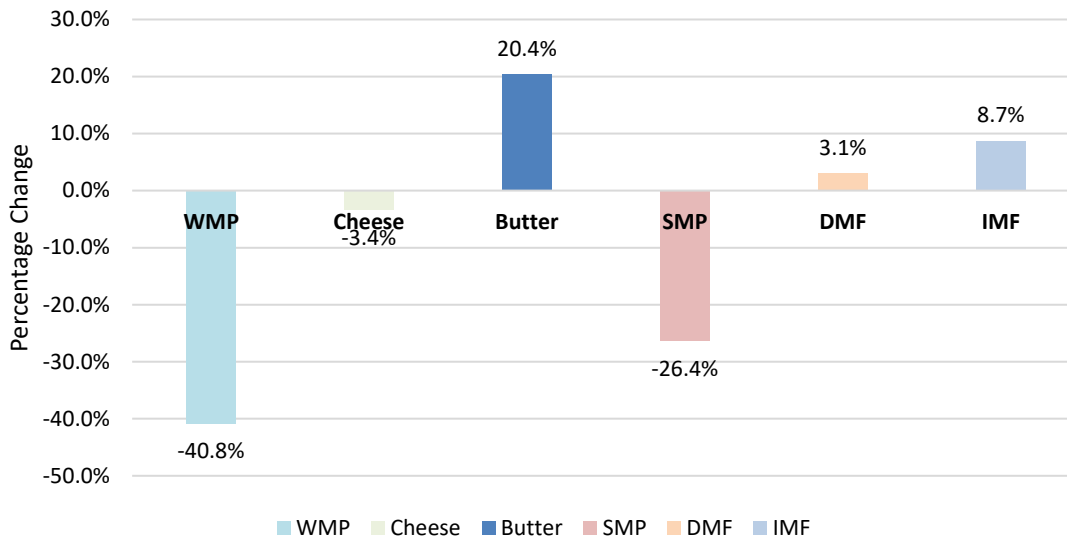
Source: TDM, DMF is Fluid dairy milk and IMF is Infant milk formula

Figure 12 – China as a Percentage of Total NZ Dairy Product Exports



Source: TDM

Figure 13 - New Zealand Dairy Products Exports to China Jan to Sept



Source: TDM

Whole Milk Powder (WMP)

2023

FAS/Wellington forecasts 2023 WMP production to recover somewhat and reach 1.53 MMT, up from 1.485 MMT in 2022 but still below the high level reached in 2021. Although there is expected to be slightly lower total milk production, demand from key importers such as China is expected to recover, which will likely shift some milk back into WMP production. Exports are forecast to also rise to 1.525 MMT, up from 1.465 estimated in 2022, but down from the record exported in 2021 (1.617 MMT). This is based on an expectation of fewer COVID-19 lockdowns in China next year boosting demand for imported WMP.

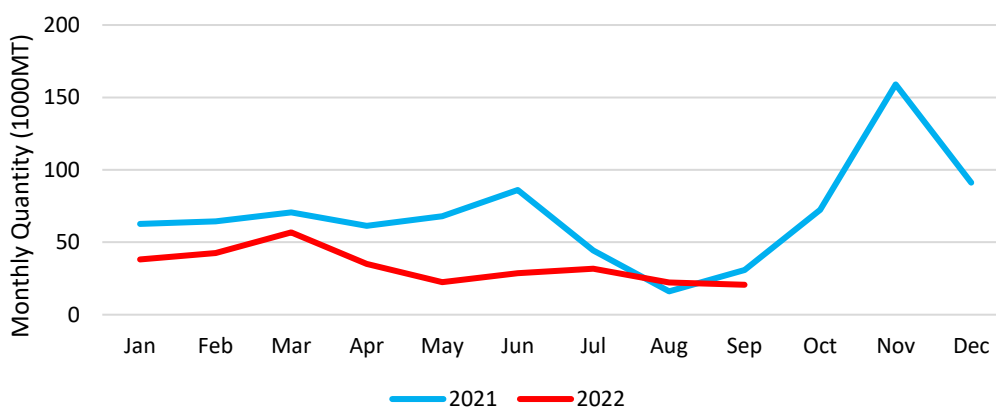
WMP is by far the largest dairy product produced in New Zealand and accounts for over 40 percent of total dairy exports (by value). Because of the seasonality of milk production in New Zealand, and the massive spring peak in production, processors are able to deal with these huge volumes by being able to dry large quantities of milk into powders.

2022

The 2022 WMP production estimate is revised down to 1.485 MMT, compared to the 2021 production of 1.6 MMT. This is a result of the downward revision in overall milk production, as well as indications from strong exports of other products (such as butter and skim milk powder) that more milk is flowing into their production and away from WMP. The export estimate is unchanged at 1.465 MMT, down nine percent from the record amounts in 2021.

January to September overall New Zealand WMP exports were down 14 percent, with shipments to China down 41 percent (see Figure 14), and up eight percent to other markets. Reduced demand from China is reportedly a result of large carrying stocks of imported WMP into 2022, as well as the impact of COVID-19 lockdowns which resulted in more domestic Chinese milk going into powders and reducing demand for imports. It is expected that the impact of reduced shipments to China will continue for the next few months, and even with a recovery later this year, overall export volumes are not expected to reach last year's record levels.

Figure 14 - New Zealand Monthly WMP Exports to China



Source: TDM

Around two-thirds of WMP are used for direct recombining for the drinking milk sector, cultured and blended products, or for the bakery trade. The balance remains as powder and is repacked into low-volume sachets for consumer use. Predominantly, WMP is exported to countries who are domestically in deficit of milk supplies.

Production, Supply, and Distribution – WMP

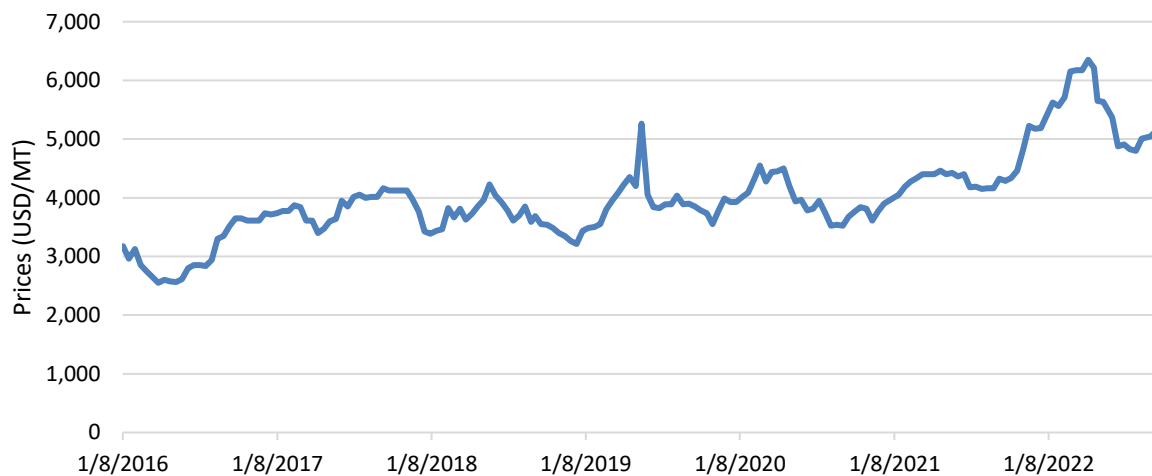
Dairy, Dry Whole Milk Powder Market Year Begins New Zealand	2021		2022		2023	
	Jan 2021		Jan 2022		Jan 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	171	171	138	138	0	142
Production (1000 MT)	1600	1600	1530	1485	0	1530
Other Imports (1000 MT)	2	2	2	2	0	2
Total Imports (1000 MT)	2	2	2	2	0	2
Total Supply (1000 MT)	1773	1773	1670	1625	0	1674
Other Exports (1000 MT)	1617	1617	1465	1465	0	1525
Total Exports (1000 MT)	1617	1617	1465	1465	0	1525
Human Dom. Consumption (1000 MT)	2	2	2	2	0	2
Other Use, Losses (1000 MT)	16	16	16	16	0	16
Total Dom. Consumption (1000 MT)	18	18	18	18	0	18
Total Use (1000 MT)	1635	1635	1483	1483	0	1543
Ending Stocks (1000 MT)	138	138	187	142	0	131
Total Distribution (1000 MT)	1773	1773	1670	1625	0	1674
(1000 MT)						

Cheese

2023

FAS/Wellington’s forecast for New Zealand cheese production for 2023 is consistent with 2022 at 375,000 MT. Despite lower milk supply, it is expected that processors will likely prioritize cheese because of strong prices. At the Global Dairy Trade Auction, cheddar cheese prices have increased nearly 40 percent over the last year (Figure 15). Mozzarella production is likely to continue to increase as its profitability competes well with the powders and fat production. In addition, market demand continues to grow in Asia for New Zealand’s mozzarella products. The demand for soft cheeses, such as cream cheese, in Asia continues to grow but there are constraints to supply from New Zealand as the manufacturing plants are already nearing full capacity. Highlighted earlier in this report, following recent Free Trade negotiations by the NZ Government with the United Kingdom and European Union, cheese exports for New Zealand look to benefit over the next seven years as quota volumes are to increase. The forecast for cheese exports is also to remain the same as 2022 at 340,000 MT.

Figure 15 –Oceania Cheese Pricing



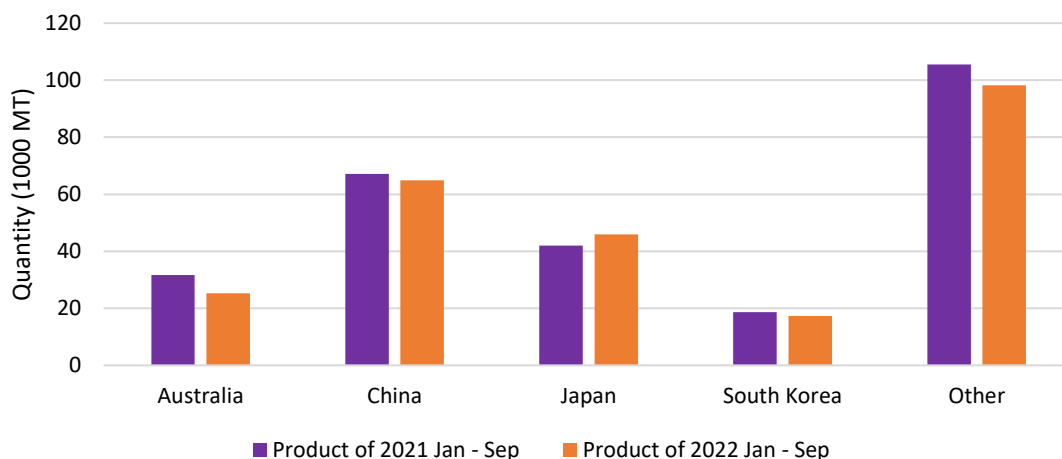
Source: GDT

2022

The FAS/Wellington estimate for 2022 cheese production is unchanged at 375,000 MT, only slightly below last year (380,000 MT). Cheese exports are also unchanged at 340,000 MT in 2022, five percent less than 2021. Between January and September 2022, cheese exports are down 5 percent compared to 2021. Exports have been lagging this year to China, South Korea, Australia, and other global markets exports, but have remained stronger to Japan (see Figure 16). FAS/Wellington expects that with the current export volumes, New Zealand remains on the right trajectory to reach its forecast volumes in the remainder of the year.

Both domestic cheese demand and ending stocks are forecast to be up marginally, in line with growing population.

Figure 16– New Zealand Cheese Exports January to September



Source: TDM

Production, Supply, and Distribution – Cheese

Dairy, Cheese Market Year Begins New Zealand	2021 Jan 2021		2022 Jan 2022		2023 Jan 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	68	68	63	63	0	70
Production (1000 MT)	380	380	375	375	0	375
Other Imports (1000 MT)	11	11	10	12	0	12
Total Imports (1000 MT)	11	11	10	12	0	12
Total Supply (1000 MT)	459	459	448	450	0	457
Other Exports (1000 MT)	358	358	340	340	0	340
Total Exports (1000 MT)	358	358	340	340	0	340
Human Dom. Consumption (1000 MT)	38	38	39	40	0	40
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	38	38	39	40	0	40
Total Use (1000 MT)	396	396	379	380	0	380
Ending Stocks (1000 MT)	63	63	69	70	0	77
Total Distribution (1000 MT)	459	459	448	450	0	457

(1000 MT)

Skim Milk Powder (SMP)

2023

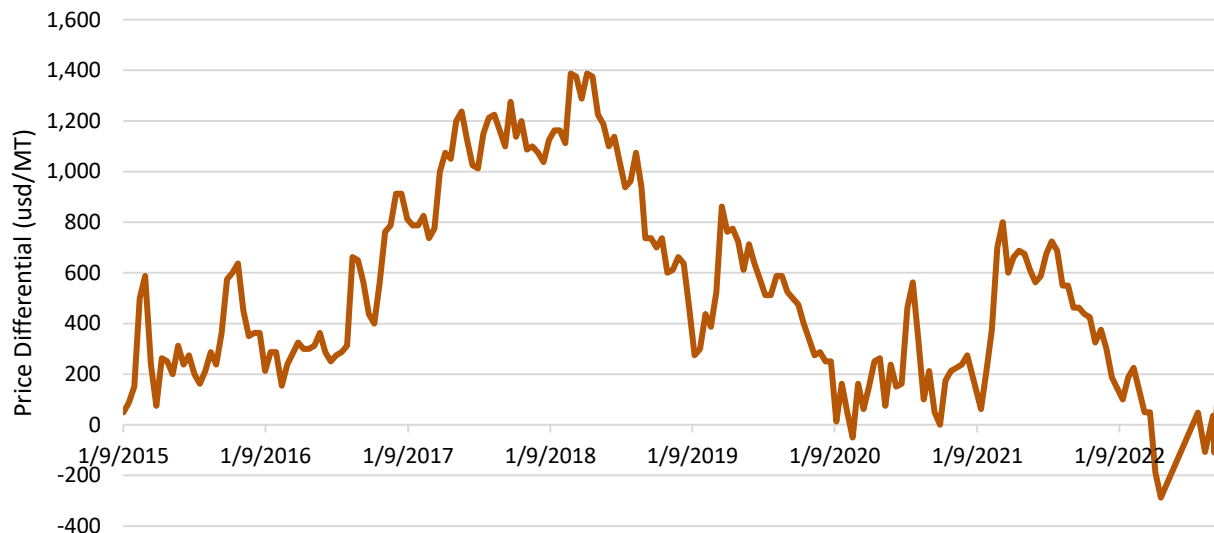
The FAS/Wellington forecast for New Zealand’s 2023 SMP production is 330,000 MT and exports at 335,000 MT, both down from last year’s levels. GDT pricing in 2023 of SMP is anticipated to drop below the value of WMP, and as a result some production is projected to shift from butter and SMP back into WMP.

2022

The 2022 SMP production and export estimates are unchanged at 350,000 MT and 355,000 MT, respectively. If realized this export figure will be up eight percent from 2021. In the first half of the year

SMP prices experienced strength and was valued above WMP at GDT auctions (see Figure 17). This was because of strong global demand in the first quarter of 2022 and despite lower shipments to China, as sharply higher sales to Southeast Asia (Indonesia, Thailand, and Malaysia) more than offset reduced Chinese shipments. In recent years, New Zealand has regularly experienced higher premiums over EU or U.S. for SMP exports. This is a result, in part, of the supply chain from New Zealand to Asian markets being quicker due to the shorter distance.

Figure 17 – Oceania WMP price Differential to SMP



Source: GDT

Production, Supply, and Distribution – SMP

Dairy, Milk, Nonfat Dry Market Year Begins New Zealand	2021 Jan 2021		2022 Jan 2022		2023 Jan 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	116	116	113	113	0	98
Production (1000 MT)	330	330	350	350	0	330
Other Imports (1000 MT)	8	8	5	5	0	5
Total Imports (1000 MT)	8	8	5	5	0	5
Total Supply (1000 MT)	454	454	468	468	0	433
Other Exports (1000 MT)	326	326	355	355	0	335
Total Exports (1000 MT)	326	326	355	355	0	335
Human Dom. Consumption (1000 MT)	15	15	15	15	0	15
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	15	15	15	15	0	15
Total Use (1000 MT)	341	341	370	370	0	350
Ending Stocks (1000 MT)	113	113	98	98	0	83
Total Distribution (1000 MT)	454	454	468	468	0	433
(1000 MT)						

Butter and Anhydrous Milk Fat (AMF)

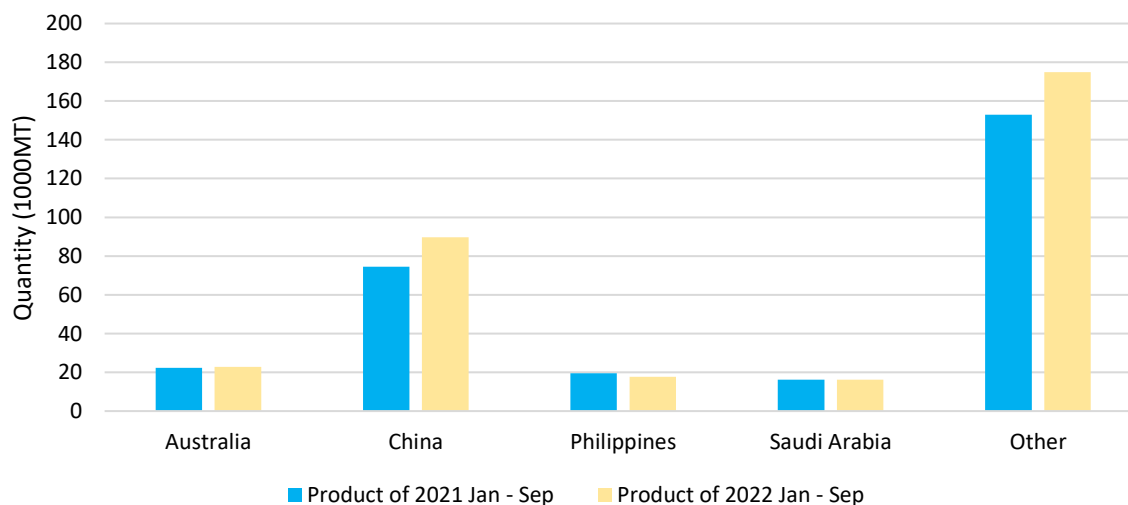
2023

Butter production is forecast at 475,000 MT, down from 2022 (500,000 MT), and exports are forecast at 440,000 MT (down from the upward revised 2022 estimate of 475,000 MT). The decrease is primarily due to the lower milk supply, and an expected shift of milk back towards WMP. Butter price forecasts remain consistent to previous years, following a peak earlier in pricing in 2022 (see Figure 10). Like much of New Zealand dairy manufacturing, lots of specialty products are constrained by processing capacity, as most plants are set up for primarily drying purposes.

2022

Because of very strong export shipments so far this year, the cheese production estimate and export estimate are both raised to 500,000 MT and 475,000 MT, respectively. New Zealand's 2022 butter exports have been strong, at 13 percent ahead of 2021 year-to-date (see Figure 11). China remained the largest market (see Figure 17), accounting for 25 percent of shipments, followed by Australia (seven percent), Philippines (seven percent) and Saudi Arabia (six percent). Increased exports to other global partners such as Egypt and Mexico have also been seen this year. With strong butter prices and demand, and weaker WMP demand from China, processors have shifted more of the milk into the SMP/butter stream.

Figure 18 – New Zealand Butter Exports January to September



Source: TDM

Production, Supply, and Distribution – Butter

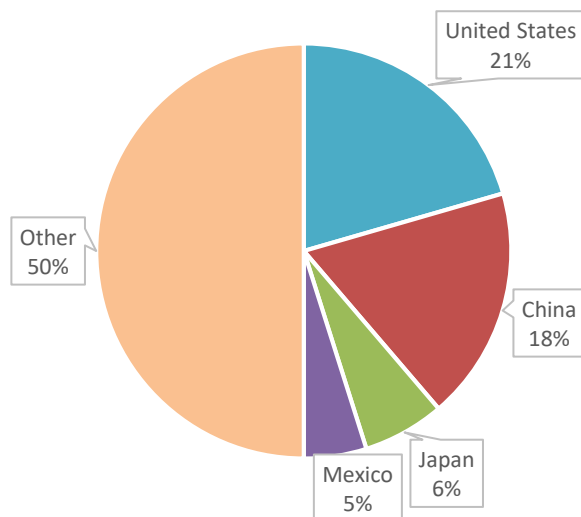
Dairy, Butter Market Year Begins New Zealand	2021		2022		2023	
	Jan 2021		Jan 2022		Jan 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	93	93	97	97	0	90
Production (1000 MT)	470	470	480	500	0	475
Other Imports (1000 MT)	1	1	2	2	0	1
Total Imports (1000 MT)	1	1	2	2	0	1
Total Supply (1000 MT)	564	564	579	599	0	566
Other Exports (1000 MT)	436	436	445	475	0	440
Total Exports (1000 MT)	436	436	445	475	0	440
Domestic Consumption (1000 MT)	31	31	34	34	0	32
Total Use (1000 MT)	467	467	479	509	0	472
Ending Stocks (1000 MT)	97	97	100	90	0	94
Total Distribution (1000 MT)	564	564	579	599	0	566
(1000 MT)						

Other Products

Protein Products – Whey and Casein

Casein and Whey protein concentrates/isolates (WPC, WPI) continue to be a very steady export market for New Zealand. For the last five years these shipments have averaged 104,000 MT, with very marginal variance year on year. New Zealand's largest importer remains the United States, followed by China (Figure 19). Generally, the volume of whey protein manufacture is driven by how much cheese is produced rather than by the price of the whey proteins. As a result, there is not an expectation of any growth in these exports.

Figure 19 – Whey and Casein Export Countries



Source: TDM

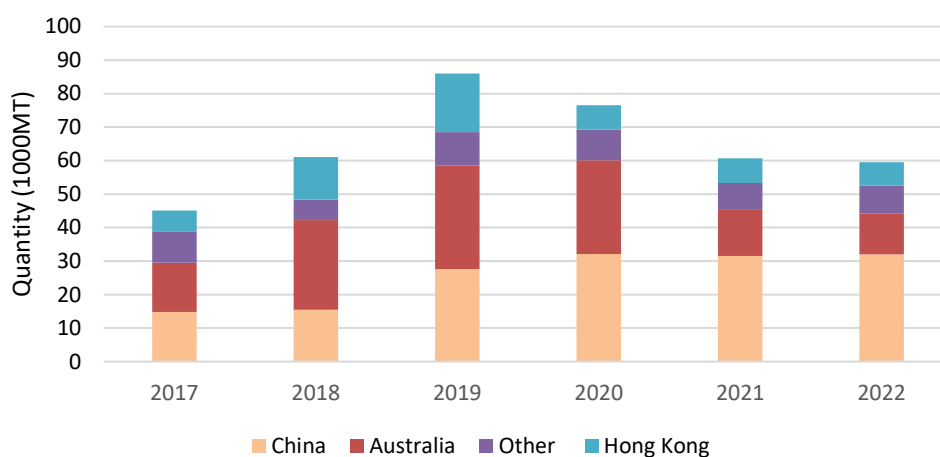
Infant Milk Formula (IMF)

Year to date IMF exports are three percent ahead 2021 volumes (Figure 11). China is its most consistent and largest market, with exports to China this year up slightly compared to last year. Exports to New Zealand's second largest customer – Australia - are currently over 10 percent behind last year's levels (see Figure 20).

There are now eight processors involved in manufacturing IMF and exporting it. Only manufacturers with complete supply chain control and ingredient traceability can be approved for IMF manufacture and export into China. New Zealand processors now have a large capacity for IMF production, far more than current levels of production.

New Zealand IMF producers have built up extensive knowledge and capability with IMF manufacture and one producer has been developing alternative products aimed at sports and aged care nutrition.

Figure 20 – New Zealand Infant Milk Formula Exports January to September (by destination)



Source: TDM

Imports

New Zealand imported a total of US\$380 million worth of dairy products in 2021, approximately 16 percent less than 2020. The leading import was again lactose used in the manufacture of WMP.

For January-September 2022 the value of dairy imports are down five percent compared with 2021. However, lactose imports are up by value and remain similar to volumes to the previous year. The leading import partner remains to be the United States (nearly 60 percent of the total), followed by Germany (34 percent).

Attachments:

No Attachments