

# NZX Monthly Dairy

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## Editorial

During April, all major dairy regions globally bore witness to a multitude of dynamics at play. This was comprised by a change of direction in dairy commodity prices on the Global Dairy Trade (GDT) platform, meanwhile production results varied across countries as did the international dairy trade movement.

On GDT this month we were witnesses again to the industry's volatile nature. While March saw the end to seven consecutive GDT index price increases, April bucked the downward trend with a 2.8% and 0.1% index growth in events 353 and 354 respectively. While not all products went up, whole milk powder (WMP) and skim milk powder (SMP) contributed to the growth of the index overall. But following the auction events, the latest GDT Pulse auctions have shown further softening in prices for milk powders.

New Zealand's latest milk production figures for March showed a year-on-year (YoY) -1.2% drop in milksolids basis and a drop of -3.5% on a tonnage basis with 1,752,000 tonnes produced. This was close to our own NZX milk production predictor, which anticipated a -1.6% decline. Looking ahead, the NZX predictor is anticipating declines of -1.1% and -5.3% for April and May respectively - but an 0.6% YoY increase for the full season, subject to on-the-ground conditions.

On a global production scale, some regions continue to have some challenges in their production. As the US sees further avian flu spread, lower productivity as a due result in its 24 major producing states becomes more probable. This is on top of the latest March production figures showing a -1.1% decline YoY. Argentina also continues to report YoY drops with a -14.3% YoY decrease in March. Contrastingly, Europe reported an increase in their February production of 0.5% YoY (leap year adjusted) as they approach seasonal production peak.

For trade, New Zealand has seen consecutive YoY growth in dairy trade volumes exported three months in a row, with the latest trade data for March showing an increase of 7.1%, cumulating to a 13.1% in the year-to-date (YTD). However, the softening of global dairy commodity prices in March - particularly milk powders, saw the value of these exports drop -3.4% YoY and -3.1% YTD. This is largely attributed to weaker demand for WMP by China, whose WMP imports dropped -16% in March. However, despite the drop in value, NZ WMP exports alone rose 21%, with other regions absorbing the supply. If NZ is to stay competitive in dairy on a trade front, it will need to continue diversifying both its product and destination mix to ensure ongoing resilience.



**Cristina Alvarado**  
Commercial  
Manager

# Dairy commodity markets

Both Global Dairy Trade (GDT) Trading Events in April resulted in two consecutive increases to the overall GDT index, up 2.8% at GDT 353 and a slight 0.1% at GDT 354, rounding out the month at an average index price of US\$3,590/t.

## Whole milk powder (WMP)

Whole milk powder (WMP) decreased at both Global Dairy Trade (GDT) auctions across April. At GDT 351, WMP increased 3.4% to an average price of US\$3,246/t. Although it increased again at GDT 354, momentum slowed, with the WMP index up 0.4% to US\$3,269/t. While there was a spike in C3 pricing indicating the greatest demand mid-term at GDT 354, the rest of the forward curve remains in backwardation - but prices remain marginally higher in C5 than C1.

The last April event saw C2 regular grade WMP settle at US\$3,210/t, US\$75/t lower than the implied result on the SGX-NZX Dairy Derivatives market prior to the event. Despite the flatter result compared with GDT 353, the bidding demand ratio for WMP was marginally higher, starting the auction at 3.0 and taking eight rounds to drop below <1.25. North Asia held the top buyers spot for WMP at both Trading Events for the month but is still down compared with the volume purchased at the equivalent event last year.

## Skim milk powder (SMP)

Skim milk powder (SMP) rose slightly at the first Event of the month by 1.4% to settle at US\$2,550/t. Prices remained flat at GDT 354, decreasing US\$9/t to an average price of US\$2,541/t. The gap between EU and NZ C2 medium heat SMP was virtually non-existent at GDT 353, with EU carrying a slight US\$1/t premium. At the second Event however, NZ equivalent product was pricing US\$76/t higher. C2 medium heat SMP settled at US\$2,550/t, US\$25/t lower than where the Derivatives market had expected SMP to land at the auction. North Asia was the top purchaser of SMP at both April Events, but still down compared with last year's purchases

## Milk fats

Anhydrous milk fat (AMF) saw consecutive increases at both Events, rising 2.3% at GDT 353 and a further 1.7% at GDT 354 to an average price of US\$7,062/t - its second highest price seen on GDT in five years. The C2 premium AMF contract sold at US\$7,080/t, US\$430/t higher than where the Derivatives market had anticipated.

Butter prices were mixed, rising 3.1% at the first Event before declining -1.4%

## GDT Results - 16 April

	Latest	vs previous	vs year
WMP	3270	↑ 0.7%	↑ 6%
SMP	2540	↓ -0.4%	↓ -8%
AMF	7060	↑ 1.8%	↑ 42%
Butter	6550	↓ -0.7%	↑ 36%
Avg.	3590	↑ 0.9%	↑ 7%

Based on prices for all GDT sellers for all contract periods.  
Source: GlobalDairyTrade

at GDT 354 to settle at US\$6,546/t. The C2 unsalted butter contract sold at US\$6,580/t, US\$150/t higher than where the Derivatives market had the March butter futures contract prior to the event.

## Protein

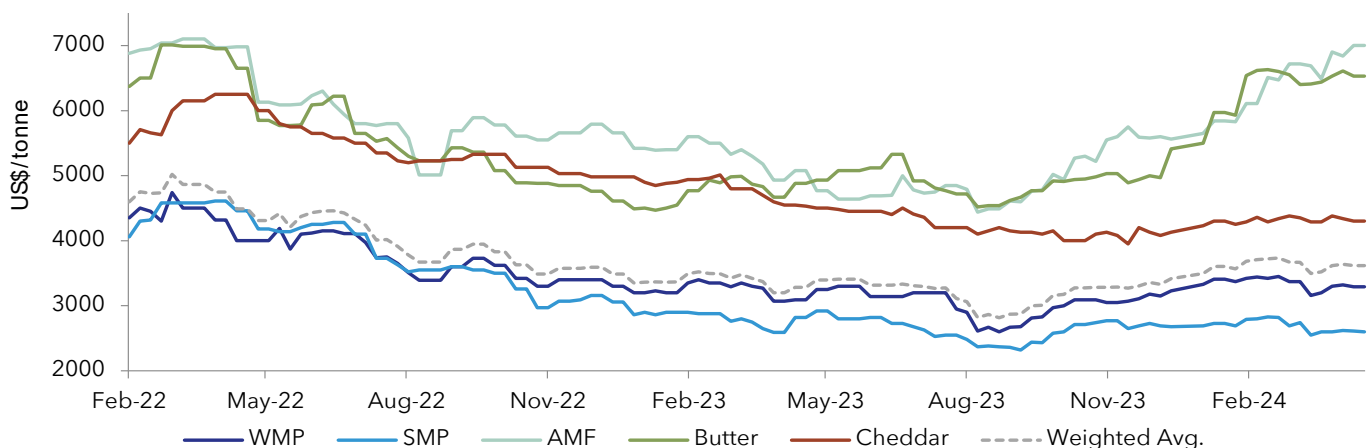
Cheddar had another volatile month, rising 4.1% to US\$4,340/t at GDT 353, before plummeting -8.5% to an average price US\$3,974/t at GDT 354.

This marks the lowest price since November last year. Southeast Asia was the top bidder for Cheddar at both Events through April.

## NZX processor survey of dairy commodity prices (US\$/t FOB)

	26-Apr-24	19-Apr-24	Change	29-Mar-24	Change	28-Apr-23	Change
Butter	6530	6530	↔ 0.0%	6440	↑ 1.4%	4880	↑ 34%
Skim Milk Powder	2600	2610	↓ -0.4%	2600	↔ 0.0%	2820	↓ -8%
Whole Milk Powder	3290	3290	↔ 0.0%	3200	↑ 2.8%	3090	↑ 6%
Cheddar Cheese	4300	4300	↔ 0.0%	4290	↑ 0.2%	4530	↓ -5%
Casein - Acid	8640	8640	↔ 0.0%	8640	↔ 0.0%	10160	↓ -15%
Anhydrous Milkfat	7000	7000	↔ 0.0%	6490	↑ 7.9%	5080	↑ 38%
Weighted Average	3616	3618	↓ -0.1%	3522	↑ 2.6%	3285	↑ 10%

## NZX dairy commodity prices



## Processor updates

At the beginning of the month, Canterbury processor Synlait published its half-year 2024 results, posting an adjusted net loss after tax of \$17.4m, in the lower range of its forecast. Revenue was up 3% to \$793.5m, with the net loss being attributable to softer demand across its business units, increased operating expenses and adverse foreign exchange and product mix. Following the announcement, Synlait has made further changes to its leadership team, with CFO Rob Stowell being moved into a newly created Chief Commercial Officer role. Here, Stowell will assume responsibility of the sale of Dairyworks, North Island strategic assets review, banking syndicate relationship, and potential equity raise.

Fonterra had another eventful month, announcing the permanent appointment of Anna Palairt as their COO, after nearly a year in the interim position. The dairy giant also announced its transition to online share broker Sharesies, where farmers can trade their NZX listed shares. Lastly, Fonterra also announced the closure of four Waikato-based plants at Te Rapa and Waitoa on the basis that they were "aging assets" affecting 41 roles that will undergo redeployment. The Waitoa plant facing closure is coal powered, and the co-operative made the decision to close it with their commitment to reducing emissions by 2030. All manufacturing facilities at the sites will remain open.

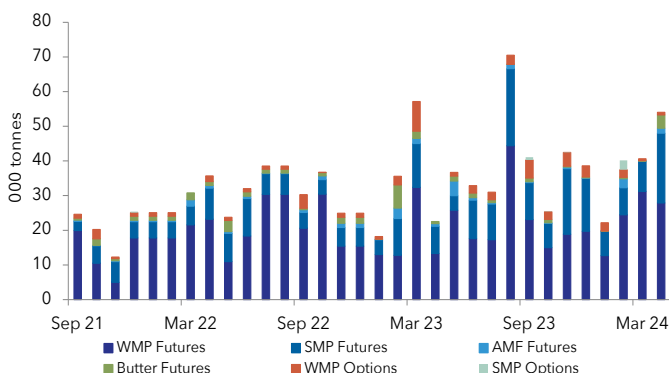
PGG Wrightson (PGW) this month released a guidance update that its forecast EBITDA for the FY24 (30 June) is approximately \$43 million. This is down from an initial \$50m forecast with the reason due to deterioration of market conditions with lower farmer confidence. The company noted that the contributing factors include the drought conditions impacted by several regions, interest rates and input costs, weakening demand for sheep meat from China and conversion cycle lag between harvest and financial returns.

	This month	Change	Last month	3 months ago	Last year
Fonterra (FCG)	2.43	↓	2.45	2.42	2.93
Fonterra Shareholders' Fund (FSF)	3.69	↑	3.62	3.50	3.33
Synlait Milk	0.50	↓	0.72	0.87	2.16
The a2 Milk Company	6.49	↓	6.70	4.64	6.17
PGG Wrightson	1.99	↓	2.11	3.30	4.33
Allied Farmers	0.75	↓	0.80	0.85	0.71
LIC	1.21	↑	1.15	0.98	1.19

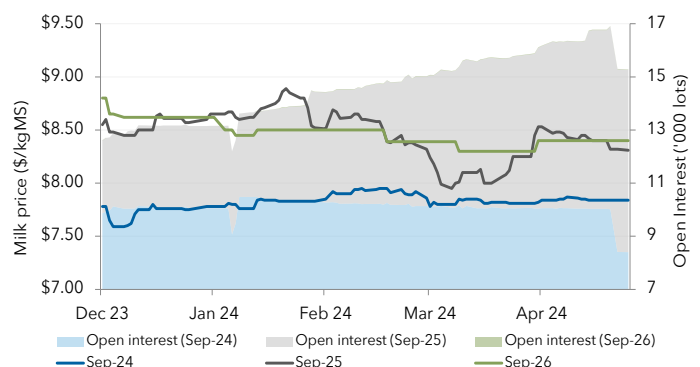
## SGX-NZX Dairy Derivatives - April 2024

Contract	WMP			SMP			AMF			Butter		
	This week	4 weeks ago	% diff	This week	4 weeks ago	% diff	This week	4 weeks ago	% diff	This week	4 weeks ago	% diff
May-24	3160	3110	1.6%	2550	2600	-1.9%	6700	6450	3.9%	6500	6150	5.7%
Jun-24	3145	3090	1.8%	2580	2640	-2.3%	6650	6350	4.7%	6150	5900	4.2%
Jul-24	3050	3100	-1.6%	2580	2670	-3.4%	6560	6250	5.0%	6000	5525	8.6%
Aug-24	3030	3110	-2.6%	2600	2685	-3.2%	6490	6150	5.5%	5575	5500	1.4%
Sep-24	3020	3105	-2.7%	2610	2730	-4.4%	6350	6050	5.0%	5525	5450	1.4%
Oct-24	3050	3105	-1.8%	2650	2830	-6.4%	6150	6000	2.5%	5475	5400	1.4%

NZX dairy derivatives monthly trading volumes



NZX milk price futures



# NZX Milk Price Calculator

The NZX Farmgate Milk Price Calculator has recorded an eight cent/kgMS improvement in forecasted milk price for the 2023-24 season over the course of April, with the current forecast sitting at \$7.80/kgMS. The range has narrowed to \$7.77 - \$7.86/kgMS, with the model delivering an estimated exchange rate for the full season at 0.6151 US cents per NZ dollar. Commodity prices rose slightly over the course of April with the milk price forecast finding support around Fonterra's current midpoint of \$7.80 as the end of the season draws near.

The SGX-NZX Derivatives market currently has the Sep-24 milk price futures contract priced at \$7.84/kgMS, with a three cent/kgMS lift over the course of the month. The Sep-25 contract is currently trading at \$8.31/kgMS and has improved 19 cents through April.

For the 2024-25 season, the NZX Farmgate Milk Price is currently sitting at \$8.35/kgMS, with a range of \$8.09 - \$8.88/kgMS. This is based on a predicted exchange rate of 0.6098 US cents per NZ dollar. The 2024-25 forecast has lifted four cents/kgMS over the course of the month, with a fair amount of volatility throughout the month.

Increases in commodity prices as well as a depreciation of the NZD:USD rate put upward pressure on the forecast, which lifted to \$8.55/kgMS following GDT 354. Since then the upward movement has been offset by declining futures prices for contracts settled later this year, especially for SMP which now has a much flatter forward curve.

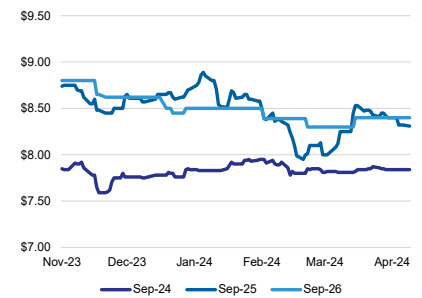
For the 2025-26 season, the predicted Farmgate Milk Price is currently sitting at \$7.15/kgMS, based on a predicted exchange rate of 0.6480 US cents per NZ dollar.

## Milk Price Forecast (\$/kgMS)

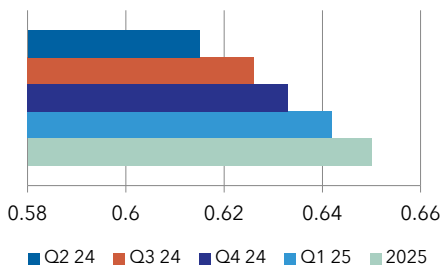
FONTERRA 2023-24	NZX 2023-24
\$7.50 - \$8.10	\$7.80

## NZX Milk Price Futures

	This week	4 weeks ago	% diff
Sep-24	7.84	7.81	↑ 0.4%
Sep-25	8.31	8.12	↑ 2.3%
Sep-26	8.40	8.3	↑ 1.2%



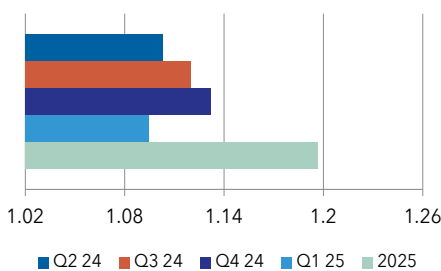
## NZD:USD



## Milk price sensitivity - 2023-24

	% change from spot price	NZD/USD EXCHANGE RATE					
		0.605	0.610	0.615	0.620	0.625	
USD per tonne FOB	3130	-10%	7.67	7.59	7.50	7.43	7.35
	3160	-10%	7.77	7.68	7.60	7.52	7.44
	3190	-9%	7.86	7.78	7.69	7.61	7.53
	3224	-8%	7.97	7.89	7.80	7.72	7.64
	3260	-7%	8.09	8.00	7.91	7.83	7.75
	3290	-6%	8.18	8.10	8.01	7.93	7.84
	3320	-5%	8.28	8.19	8.10	8.02	7.94

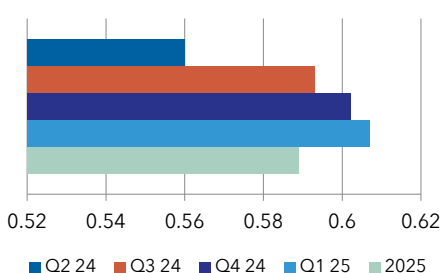
## EUR:USD



## Milk price sensitivity - 2024-25

	% change from spot price	NZD/USD EXCHANGE RATE					
		0.550	0.580	0.610	0.640	0.670	
USD per tonne FOB	2880	-18%	7.48	7.15	6.84	6.54	6.27
	3030	-13%	7.99	7.64	7.32	7.01	6.72
	3190	-9%	8.54	8.17	7.83	7.50	7.20
	3354	-4%	9.10	8.71	8.35	8.01	7.69
	3520	1%	9.66	9.26	8.88	8.52	8.19
	3700	6%	10.28	9.85	9.45	9.08	8.72
	3890	11%	10.93	10.48	10.06	9.66	9.29

## NZD:EUR



## Milk price sensitivity - 2025-26

	% change from spot price	NZD/USD EXCHANGE RATE					
		0.610	0.630	0.648	0.670	0.690	
USD per tonne FOB	2760	-21%	6.28	6.00	5.76	5.49	5.26
	2910	-17%	6.76	6.46	6.21	5.93	5.68
	3060	-12%	7.24	6.93	6.66	6.36	6.10
	3221	-8%	7.75	7.43	7.15	6.83	6.56
	3380	-3%	8.26	7.92	7.63	7.29	7.01
	3550	2%	8.81	8.44	8.14	7.79	7.49
	3730	7%	9.38	9.00	8.68	8.31	8.00

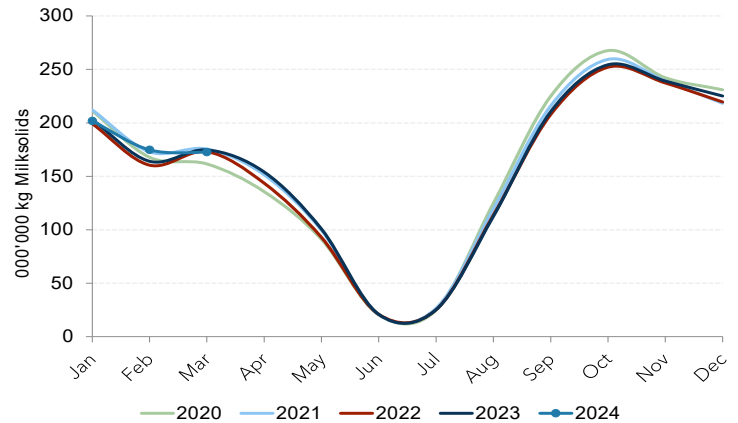
# New Zealand milk outlook

New Zealand milk production in March was down -1.2% year-on-year on a milksolids basis, to 172,573,000kgMS produced for the month. This drop now brings the season-to-date figure to a 1.1% improvement from last season on a milk solids basis. On a tonnage basis, milk production also declined -3.5% with 1,752,000 tonnes produced, bringing the season to date figure to a -0.2% decrease. Last month represents the weakest March on record for NZ milk production since 2020, on both a milksolids and tonnage basis. The revised NZX milk production predictor had anticipated the decline in milk production, predicting a -1.6% decline in March milksolids. There was a large amount of regional variation for milk production in March, with Waikato and Southland having a strong finish to the dairy season, however other regions such as Marlborough and Wairarapa experiencing a "green drought", with some farmers drying cows off on average two to three weeks earlier than normal - with some farms as much as five weeks earlier.

Looking forward to the rest of the season, the NZX milk production predictor is anticipating -1.1%, and -5.3% respective YoY declines for April and May. These declines, however, still put the 2024 figures slightly above the five-year average for April, and in-line with the average figure for May. It is important to note that April and May were both record months for milk production in 2023. NZX anticipates a total seasonal milk production increase of 0.6% from last season.

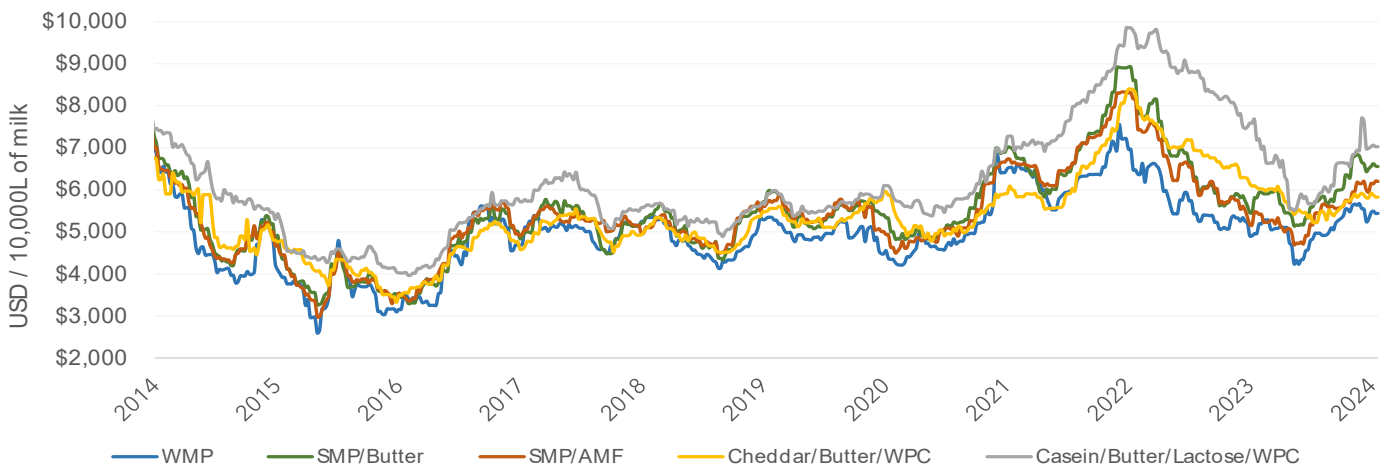
The NZX stream return forecast is showing that potential revenue from the whole milk powder stream is going to continue to track lower than the SMP/fat streams, with AMF and butter expected to converge once again around Q3 this year, with both SGX-NZX forward curves for milkfat futures in backwardation.

New Zealand milk production (000'000 kgMS)



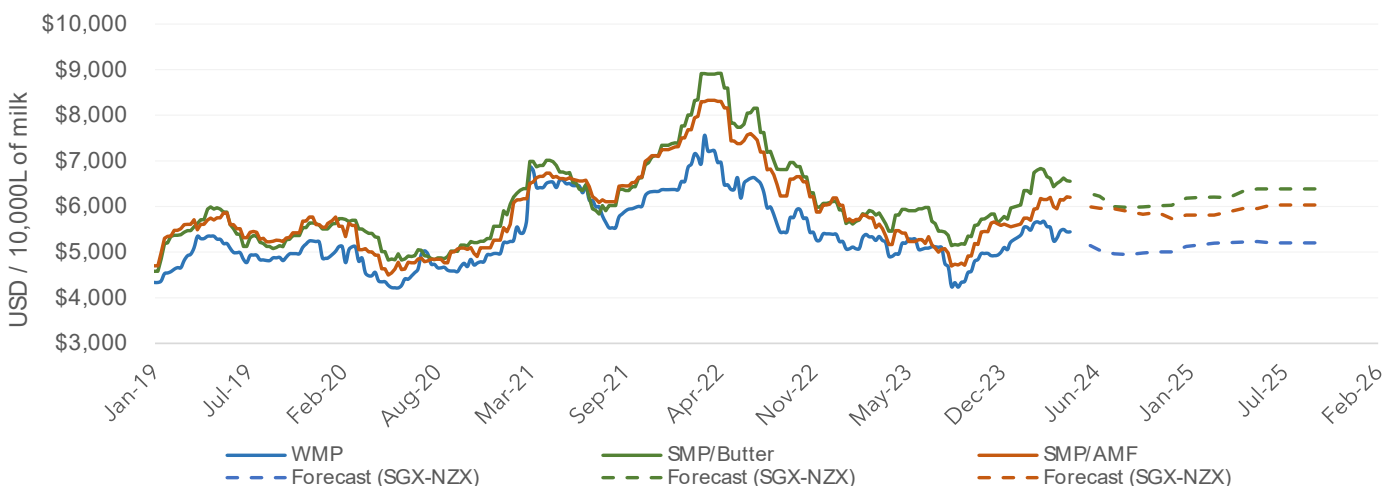
Sources: NZX, DCANZ

## NZX stream return analysis



Source: NZX

## NZX stream return forecast, (SGX-NZX Futures)



Source: NZX

# Global milk outlook

US milk production figures for March declined -1.1% YoY on a tonnage basis, and is down -0.1% for the YTD. Cow numbers decreased by 7,000 head from February, and the total US herd is down 98,000 head compared to this time last year.

European Union milk production data was released for February, with total milk production tonnage ticking up 4.1% YoY, however it was up just 0.5% when adjusted for the leap day. Of the major producers, Germany saw a 3.4% YoY increase, France was up 4.3%, and Italy saw a 4.1% increase. Despite the extra leap day, Irish milk production continued on a trend of decline, down -8.6% YoY.

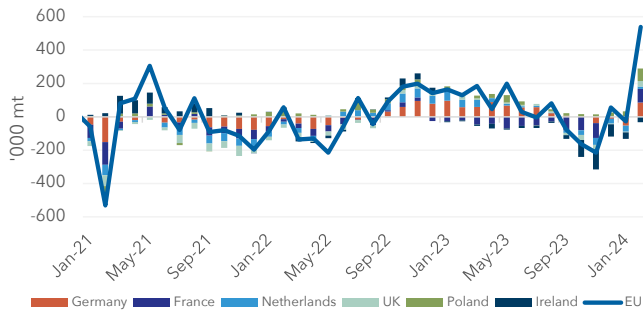
For major non-EU members, UK milk production was flat for March against 2023, and Turkish collections were up 13.1% for February.

Chinese milk production increased 0.3% in February in absolute terms, however it was down -3.1% when adjusted for leap day. Domestic raw milk prices continued to decline, for the 15th month in a row. The Chinese milk price is currently down -11.1% YoY, at 3.56 yuan/kg

In Australia, milk production in February was up 8.7% to 601.8m litres in absolute terms, and was up 5.0% when adjusting for leap day. Overall, the season to date production was up 3.1% from the 2022-23 season, with every month this season recording a YoY increase in milk production so far.

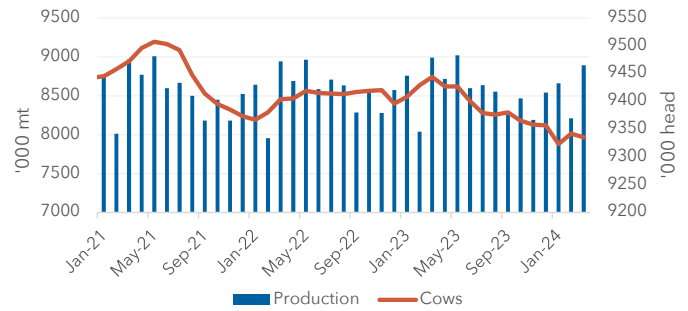
Argentinian milk production in March continued to decline due to drought, down -14.4% YoY. Argentinian milk production is currently down 13.9% for the YTD. Uruguayan milk production was down -0.4% YoY in March.

European milk production (YoY change, 000t)



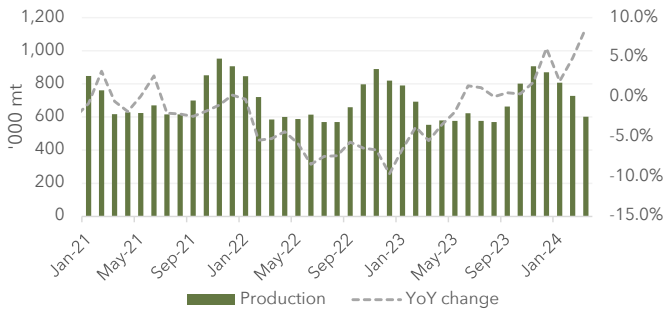
Source: Eurostat

US milk production vs milk cows (000t)



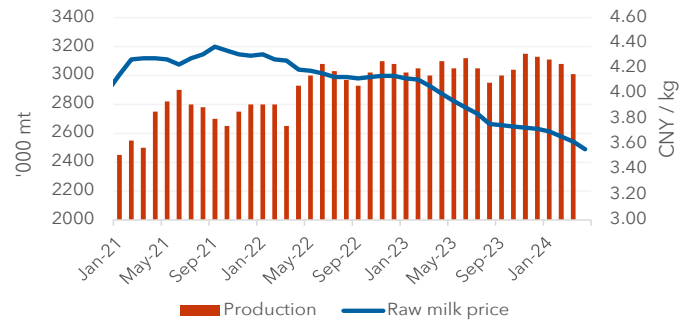
Source: USDA

Australian milk production (000t)



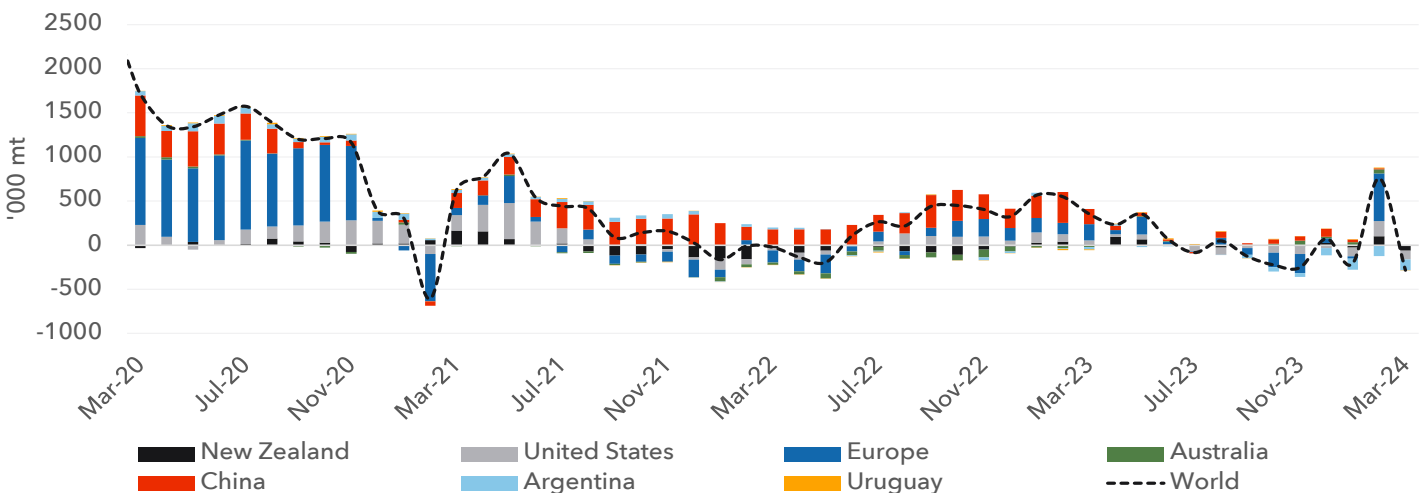
Source: Dairy Australia

Chinese milk production vs raw milk price (000t)



Source: BOABC

Global milk production summary (YoY change, 000t)



# International trade movements

New Zealand dairy export data for March recorded a 7% YoY (13% YTD) lift in total dairy exports on a volume basis, however a -3% YoY decrease on a value basis. 324,638mt of dairy products were exported. The increase in export volumes was driven by WMP, AMF and MPC which were up 21%, 21% and 80% YoY respectively. WMP exports to the Middle East were up 121% YoY, and WMP volumes to China were up 6% YoY.

Internationally, Australia's total dairy exports increased 39% on a volumes basis for February, with SMP export volumes up 74%. For Argentina, total March dairy exports decreased -1% YoY.

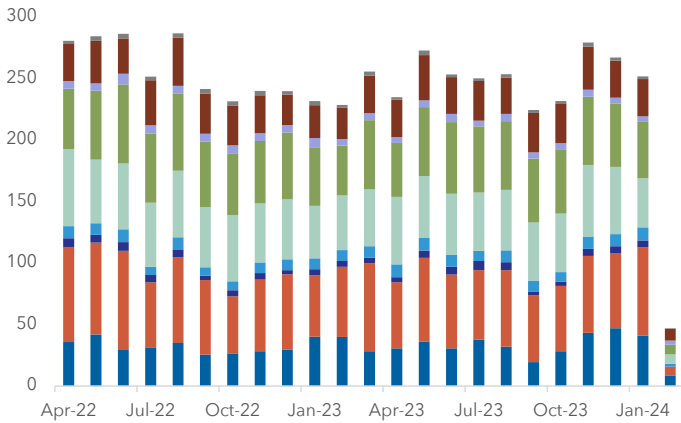
Dairy export volumes out of the EU continued to decline in February, down -4% YoY and down -1% YTD. European SMP exports were down -13% for the month. On the other hand, US dairy exports were up 9% for February, with cheese export volumes up 32% YoY.

China's total dairy imports declined -21% in March compared to the previous year, bringing the YTD figure to an overall drop of 15%. WMP, SMP, butter, cheese and infant formula imports were down -16%, -32%, -31%, -7% and -62% YoY respectively.

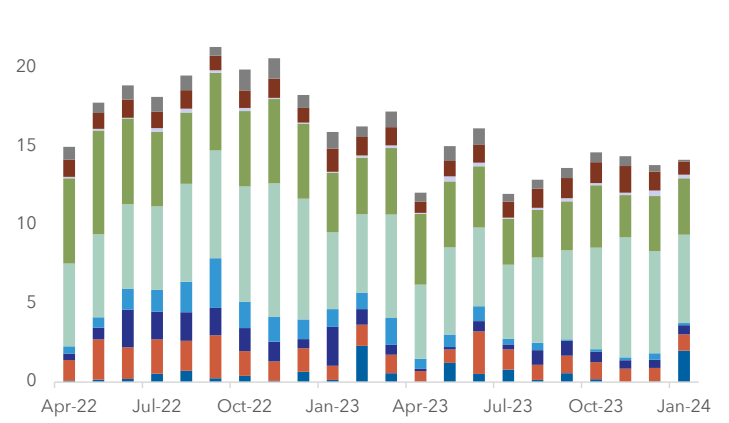
- WMP
- Infant Formula
- Butter
- AMF
- Cheese
- SMP
- Whey
- Liquid Milk & Cream
- MPC

## Imports

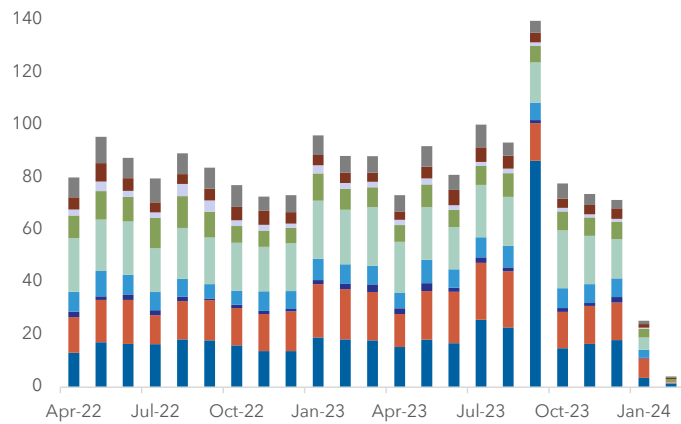
Asia (excl China) imports (000' mt)



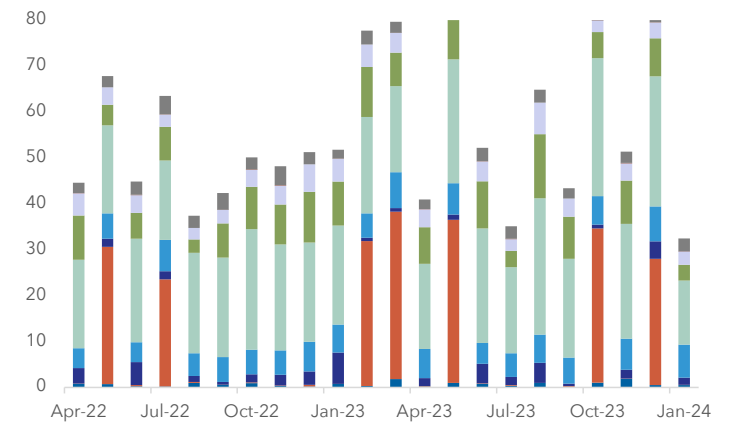
EU27 + UK imports (000' mt)



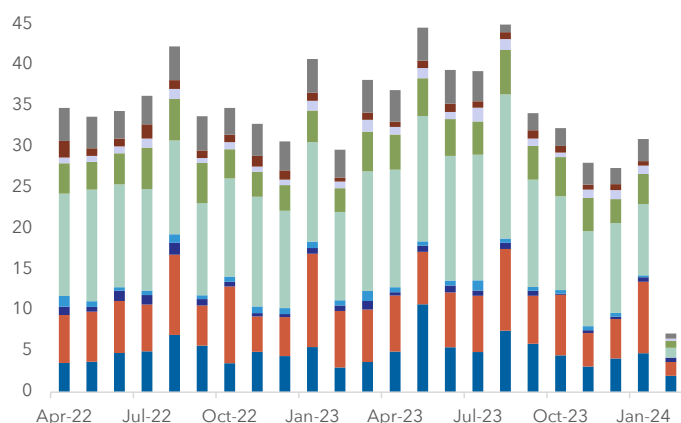
Middle East/Africa imports (000' mt)



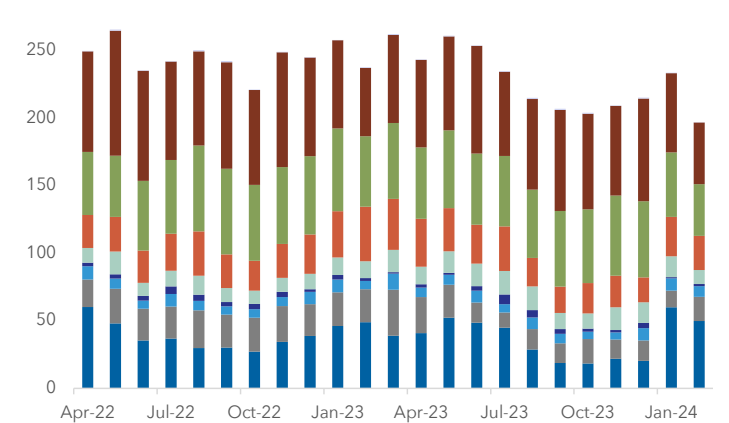
North America imports (000' mt)



South/Central America imports (000' mt)

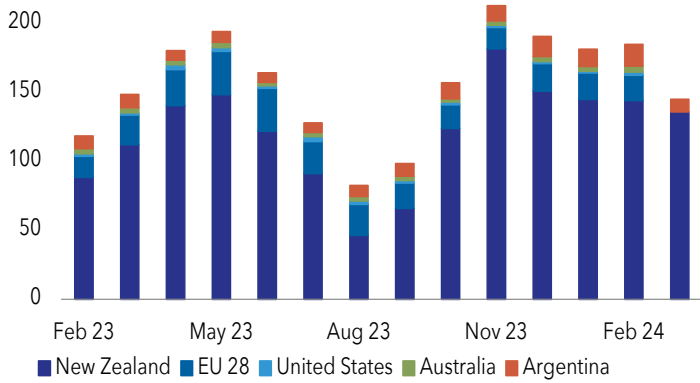


China imports (000' mt)

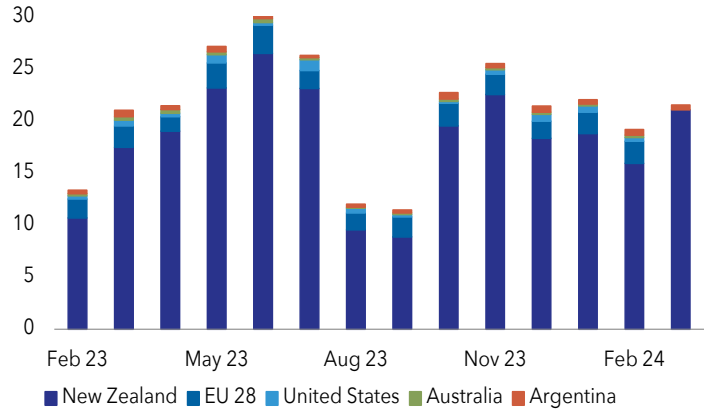


# Exports

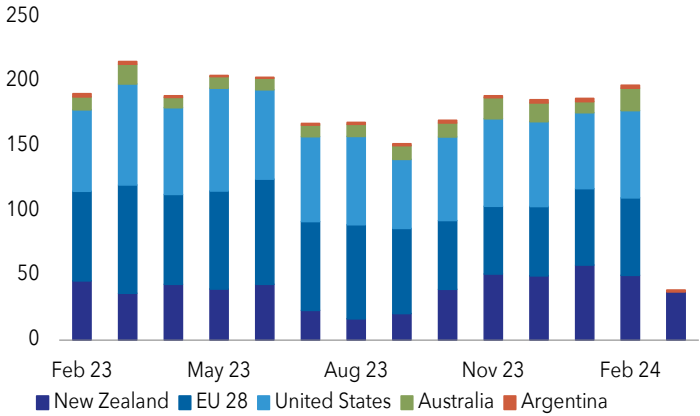
Exports of WMP by region (000' mt)



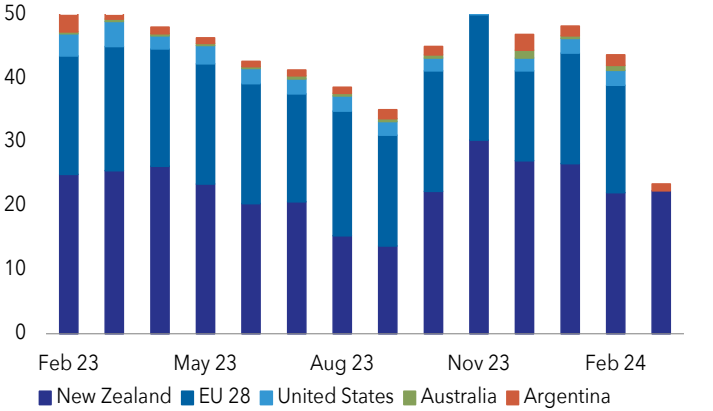
Exports of AMF by region (000' mt)



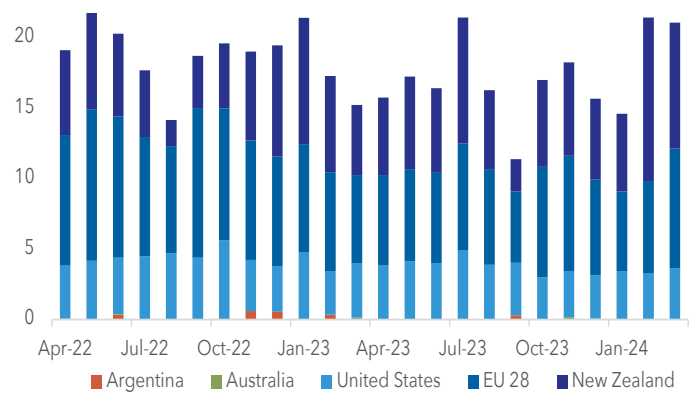
Exports of SMP by region (000' mt)



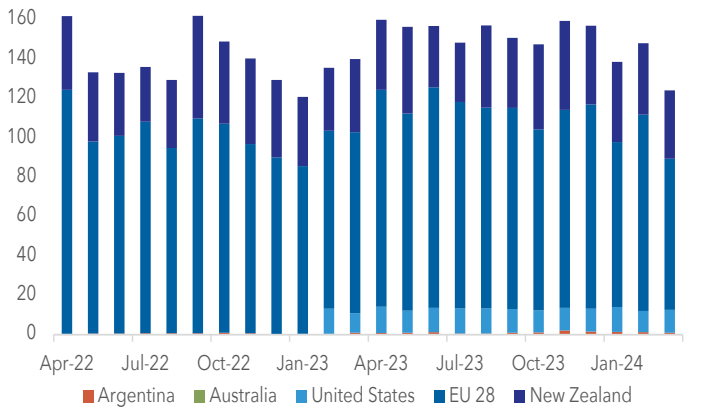
Exports of Butter by region (000' mt)



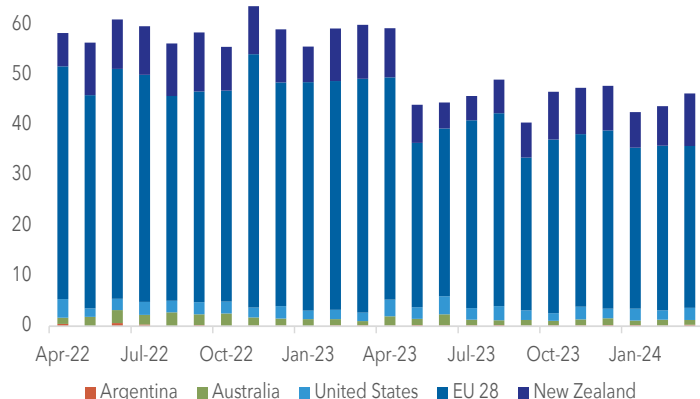
Exports of MPC by region (000' mt)



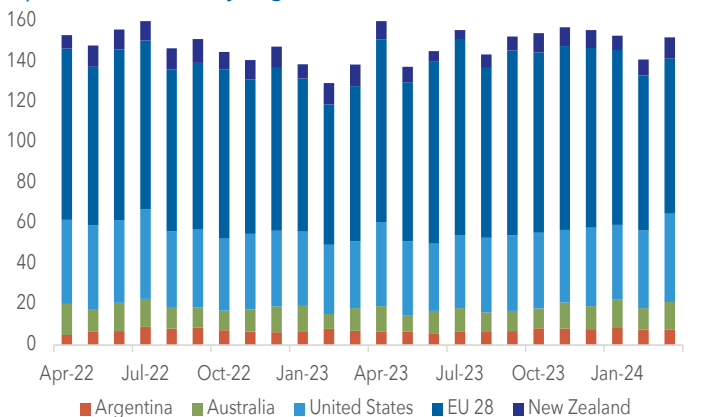
Exports of Liquid milk & cream by region (000' mt)



Exports of infant formula by region (000' mt)

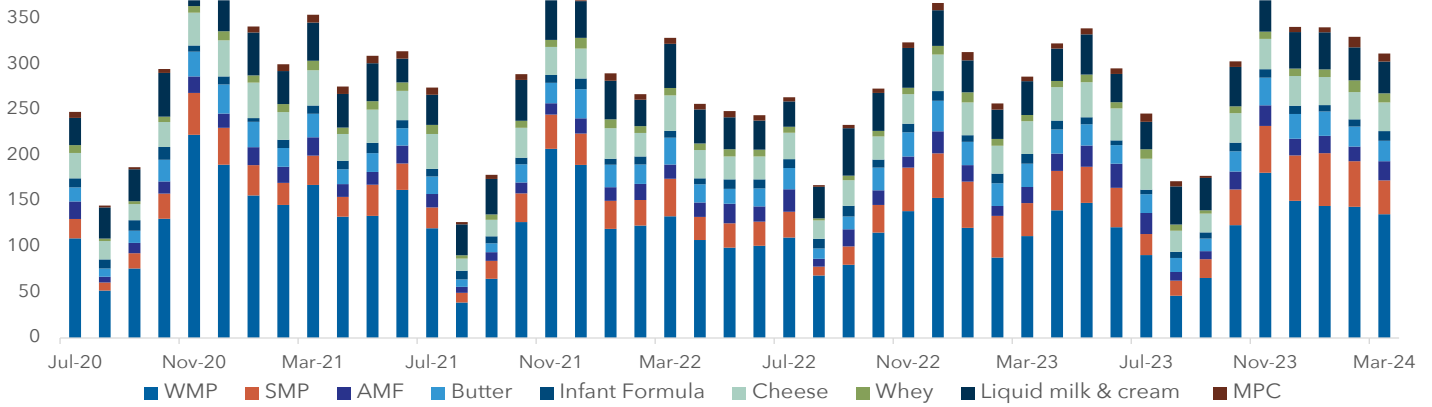


Exports of cheese by region (000' mt)

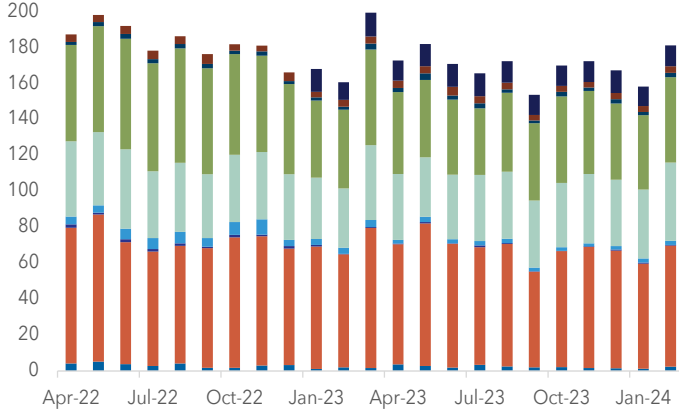




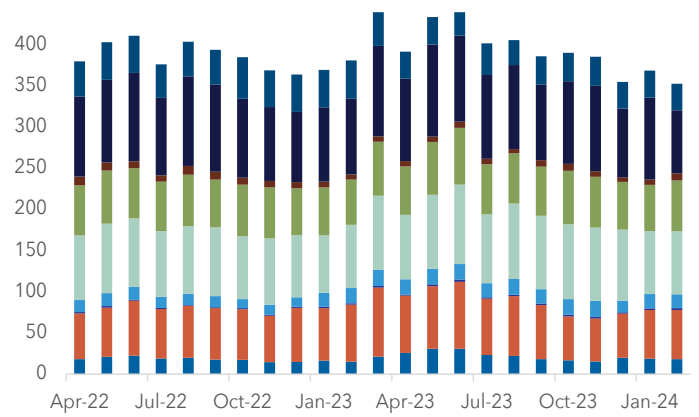
New Zealand exports (000' mt)



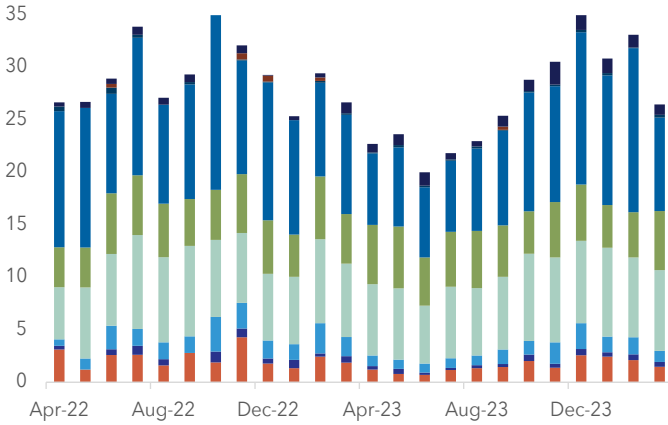
United States exports (000' mt)



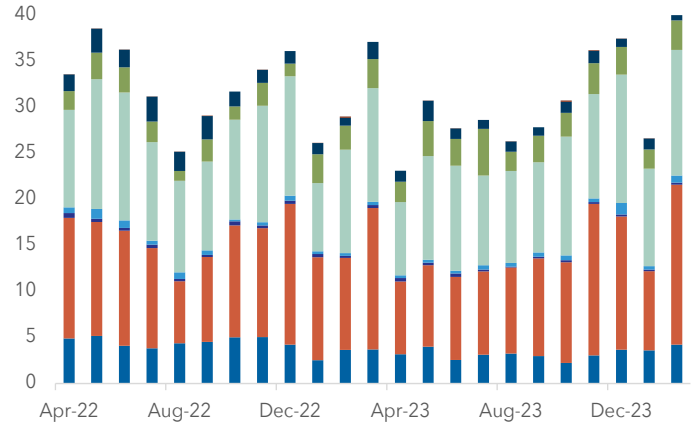
European exports (000' mt)



Argentina exports (000' mt)



Australian exports (000' mt)



	Europe		USA		Arg		Australia		NZ	
	YOY	YTD	YOY	YTD	YOY	YTD	YOY	YTD	YOY	YTD
WMP	19%	17%	21%	16%	-6%	26%	15%	27%	21%	32%
SMP	-13%	-11%	7%	-4%	-22%	7%	74%	23%	3%	10%
AMF	17%	13%	14%	-17%	-25%	-17%	3%	-31%	21%	21%
Butter	-9%	-4%	-33%	-33%	-42%	-32%	148%	91%	-12%	-7%
Cheese	0%	5%	32%	22%	10%	11%	22%	30%	-12%	-10%
Whey	12%	4%	9%	3%	19%	-5%	23%	-8%	49%	23%
Total dairy	-4%	-1%	9%	1%	-1%	11%	39%	27%	7%	13%

# Alternative proteins

## Protein future scenarios - quantifying the risk to New Zealand

A recent Protein Future Scenarios report by Our Land and Water has assessed the impact of three plausible future food scenarios on New Zealand's economy, employment and environmental credentials to quantify the risk that novel food technologies may pose to the agricultural sector.

The report summarises that New Zealand needs to prepare for significant changes to our key food export markets, especially over the long term. "Alternative proteins may have a relatively minimal impact on New Zealand agriculture when projected until the year 2035, but significantly greater impacts were identified when the modelling horizon was extended to 2050"

Scenario 2 investigates the impact of precision fermentation reaching price parity with traditional dairy by 2025, impacting demand for dairy products. This scenario results in a \$8 billion loss to the economy along with a large reduction in employment (-22,584 FTE roles). Environmental outcomes such as GHG emissions and nutrient loss improve.

The theoretical scenario 2 also assumes vast swathes of land use change, with dairy farms converting to beef and arable production. The difference in land value between dairy and beef/arable land is not accounted for in the economic analysis but is likely to be considerable based on current land values of around \$40k/hectare for dairy land and \$10k/hectare for sheep and beef.

While the report's summary acknowledges the dairy sector's reliance on bulk commodity exports makes Aotearoa particularly vulnerable to the development of precision fermentation, this factor is seemingly not considered in the development of the scenarios and calculation of the economic impacts. Precision fermentation and plant-based technologies will not easily be able to replicate liquid milk and will face additional barriers such as consumer acceptance when trying to create a full replacement product. However, New Zealand's global scale in producing commodity powders often used as ingredients puts the industry in a position of risk as powders will be a much easier product for fermentation and other technologies to replicate successfully. Dairy powders will also be simpler to disrupt than meat: "The dairy sector in New Zealand is more threatened by the development of new proteins than our meat producers. Fonterra's response of engaging with the sector is sensible."

The report also looks at the role alternative protein can play in boosting global food security, reducing requirements for exported protein products. "Countries that are dependent on importing food from countries such as Aotearoa, like China and the UK, will increasingly be able to produce more of their own alternatives to animal protein as technology advances," warns research lead Jon Manhire, director of The AgriBusiness Group. Increased demand for protein due to population growth is likely to be met by alternative proteins rather than driving increased production from New Zealand.

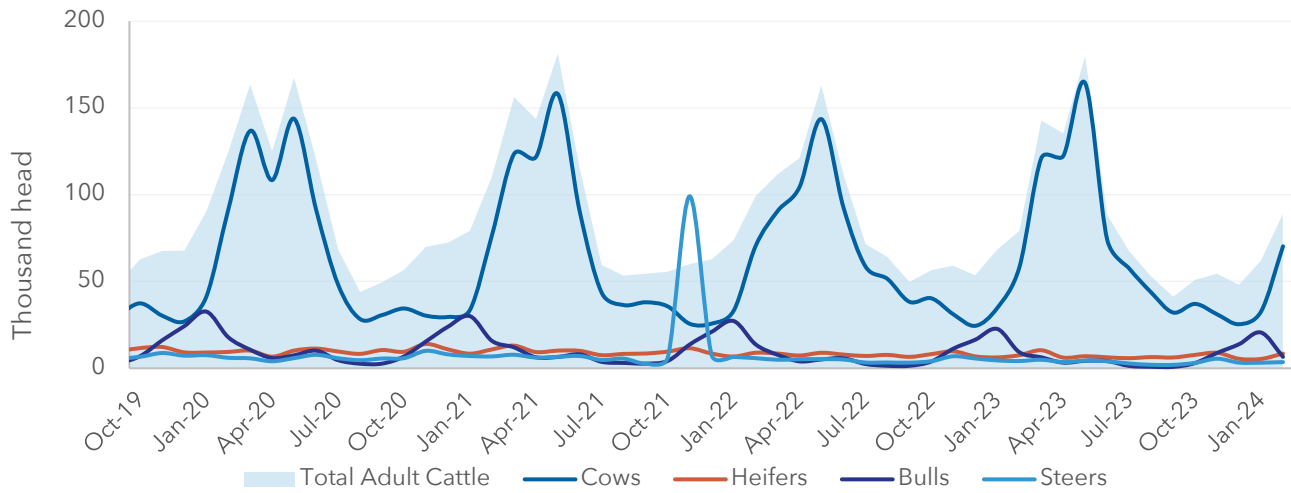
Researchers included experts from Lincoln University, University of Otago and University of Canterbury. They have called for a national policy or strategy to help New Zealand prepare for the risks and potential opportunities of new proteins.

**Author: Anna Benny**  
Navigate founder, food technologist, dairy farmer



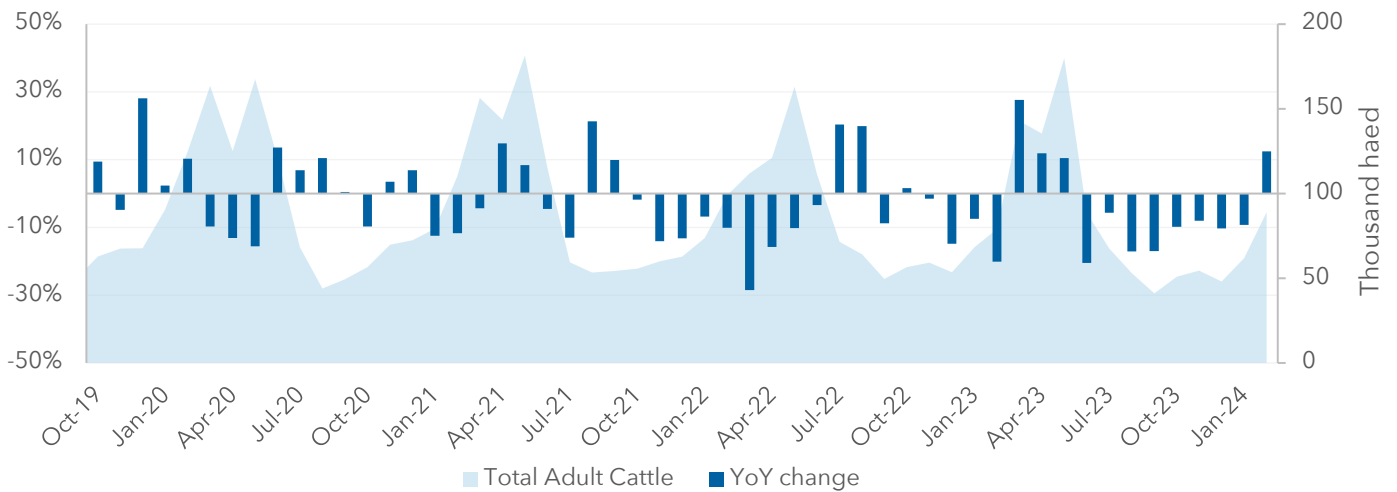
# Dairy stock data

## NZ cattle slaughter numbers



Sources: NZX, Stats NZ

## NZ total adult cattle slaughter, YoY change



Sources: NZX, Stats NZ

## Dairy stock prices (NZD)

	Northern N. Island	Southern N. Island	Northern S. Island	Southern S. Island	NZ Range	NZ Average
BW>150	1700-1900	1500-2215	1750-2050	1650-1900	1650-2000	1850
BW<150	1350-1450	1000-1400	1650-1850	1450-1650	1350-1600	1500
Budget cows	900-1250	900-1050	1300-1600	1000-1100	1050-1250	1150
In milk cows	850-1200	800-1000	500-800	900-1100	750-1050	900
Carry over cows	1350-1650	1500-1600	1500-1700	850-1050	1300-1500	1400
R2 yr hfrs	1450-1550	1000-1650	1300-1750	1550-1750	1350-1700	1500
R1 yr hfrs	650-800	300-550	650-850	650-750	550-750	650



**Rosalind Crickett**  
Dairy Analyst



**Lewis Hoggard**  
Junior Dairy Analyst