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A Note from the Authors

 This is the International Demand Analysis from the Dairy Economics Team at National Milk Producers Federation (NMPF) and the U.S. Dairy Export Council (USDEC). This monthly report outlines the latest global dairy trade trends and data combined with our own commentary analyzing demand in key markets for cheese, NFDM/SMP, whey (0404.10) and WPC80+, alongside shorter summaries for lactose, butterfat and WMP - all with a forwardlooking lens and US exporter viewpoint.

Data Notes

- All comparisons are year-over-year unless otherwise noted.
- 3-Year CAGR is calculated from most recent 12-months and not from calendar year.
- If you have any questions, comments or suggestions on how to improve the report, send us an email at:
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Global Dairy Demand Market Commentary

KEY TAKEAWAYS

- Keeping in step with the up-and-down nature of global dairy trade in 2023, global dairy exports fell 3% in December (-27,964 MT MSE), just one month after posting the strongest month in two years. With the December regression, global dairy trade finished 2023 right where it started - declining just 0.1% from 2022. Zero growth in 2023 comes as little surprise as continued struggles in China and economic headwinds dented dairy demand, particularly in Asia.
- Positively, a few bright spots have emerged. South America, driven by a strong import pull from Brazil, grew more than any other market in the world (+31%, +119,471 MT MSE). Additionally, the Middle East-North Africa posted its strongest year ever in 2023, growing 5% yearover-year (+90,189 MT MSE), thanks to robust improvement in SMP and butterfat demand. Yet, the most impressive market for U.S. exporters remained Mexico, which grew by 13% in 2023 (+83,615 MT MSE).
- Even with several growing markets around the world, poor demand from China+HK (-5%, -105,954 MT MSE), Southeast Asia (-5%, -95,909 MT MSE), Sub-Saharan Africa (-11%, -64,984 MT MSE), Korea (-17%, -47,701 MT MSE) and Japan (-6%, -22,901 MT MSE) dragged down global trade.

Global Milk Solids Trade

-2.9%

December YoY

-0.1%

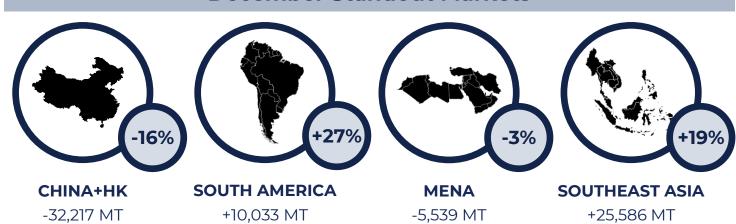
YTD, Ending December

-0.1%

Last 12-Months, **Ending December** -0.7%

3-Year CAGR

December Standout Markets



ADDITIONAL NOTES

In examining global dairy trade by product, China's influence is clear. Global trade of fluid milk declined by nearly 300,000 MT in 2023 as China's need for imports diminished on account of poor consumer demand and growing local milk supplies. At the same time, low-protein whey declined sharply (-6%, -99,807 MT) as China's hog sector struggled with profitability, and infant formula trade dropped by 15% (-106,448 MT) as China's domestic IF companies continued to take share in a country with declining birthrates. Certainly, economic struggles in other markets were a factor as well -Southeast Asia and Sub-Saharan Africa's weak demand for low-protein whey and FFMP certainly pulled down trade in those products. Gratefully, cheese and NFDM/SMP were able to post modest growth (+2% and +4%, respectively) even as most other products ran sideways.



Global Dairy Demand Market Commentary



LOOKING AHEAD

- Outside of Southeast Asia and South America, nearly every market declined in December, including MENA and Mexico, which had been reliable drivers of expansion in 2023. Overall, global dairy demand is running sideways and is expected to continue doing so through the first half of 2024.
- · Some leading indicators point to potential improvement from China (increased activity on GDT, slower domestic milk production, growing manufacturing output), but a meaningful increase China's dairy imports is unlikely to materialize until mid-year.
- Yet, even as 2023 underperformed and December disappointed, glimmers of optimism are emerging in Asia. Trade to Southeast Asia grew for the third straight month and Japan's cheese demand improved for the first time since February. Better demand from Asia will be critical to growing dairy trade in 2024, especially if ingredient demand from both MENA and Mexico continue to cool.
- Still, with weaker milk production in Europe and New Zealand, the U.S. should be relatively well placed to expand market share even in a challenging environment.

Source: NMPF/USDEC, TDM

U.S. Milk Solids Exports¹

-5.3%

December YoY YTD, Ending December **-6.8**%

Last 12-Months,

3-Year CAGR **Ending December**

ΕU Milk Solids **Exports**

-1.3%

December YoY

+3.0%

YTD, Ending December

-6.8%

+3.0%

Last 12-Months. **Ending December** 3-Year CAGR

NZ Milk Solids **Exports**

-5.2%

December YoY

+7.0%

YTD, Ending December

+7.0%

Last 12-Months. **Ending December** +2.3%

3-Year CAGR

ADDITIONAL NOTES

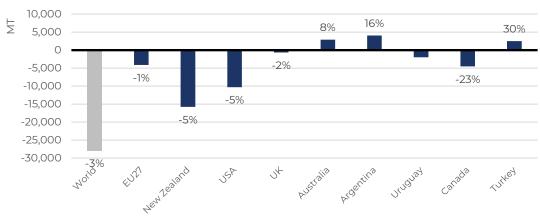
Looking back at 2023 as a full year, we see shifting trends from the United States' primary competitors. New Zealand exports varied widely by month with a particularly strong Q2 and Q4 (even as December regressed) despite its largest customer, China, remaining relatively subdued (NZ exports to China+HK grew just 4% in 2023). Instead, New Zealand tapped a wide variety of markets, with sales to MENA leading the way (+21%, +86,263 MT MSE) combined with solid expansion to Southeast Asia, South Asia and Australia. By contrast, nearly all of the EU's 2023 improvement came from expansion in sales to MENA (+17%, +151,820 MT MSE). In fact, EU trade to the rest of the world declined. Additionally, EU sales have also noticeably slowed over the course of the year suggesting the slowdown in the bloc's milk production is having a noticeable impact on its export volume.



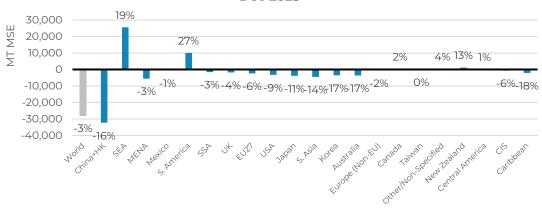
Executive Summary: December 2023

Global Total Solids Trade to World 1,000,000 950.000 900,000 850,000 800.000 750,000 700,000 **—**2022 **——**2023

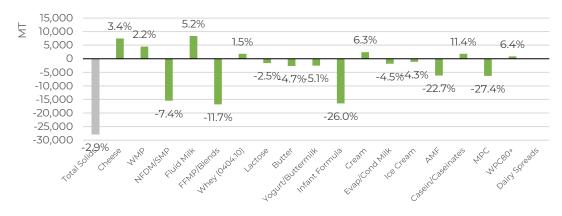
YOY Change in Global Dairy Trade to World: Month of Dec, MSE



YOY Change in Global Milk Solids Trade by Destination: Month of Dec 2023

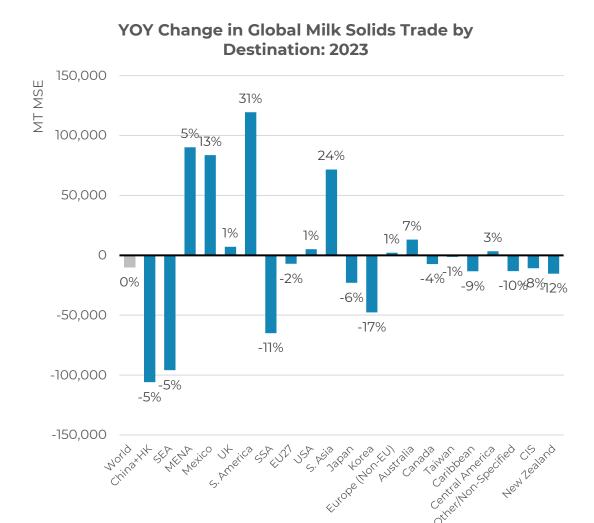


YOY Change in Global Dairy Trade to World by Product: Month of

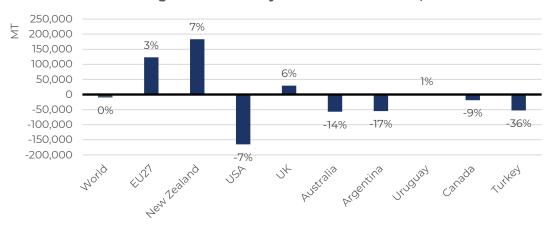




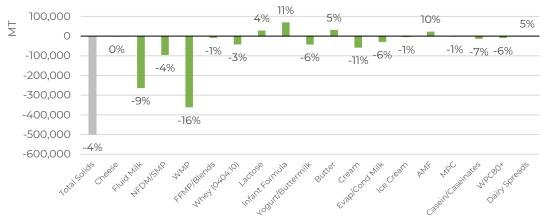
Executive Summary: 2023



YOY Change in Global Dairy Trade to World: 2023, MSE



YOY Change in Global Dairy Trade to World by Product: 2023





Global Dairy Trade

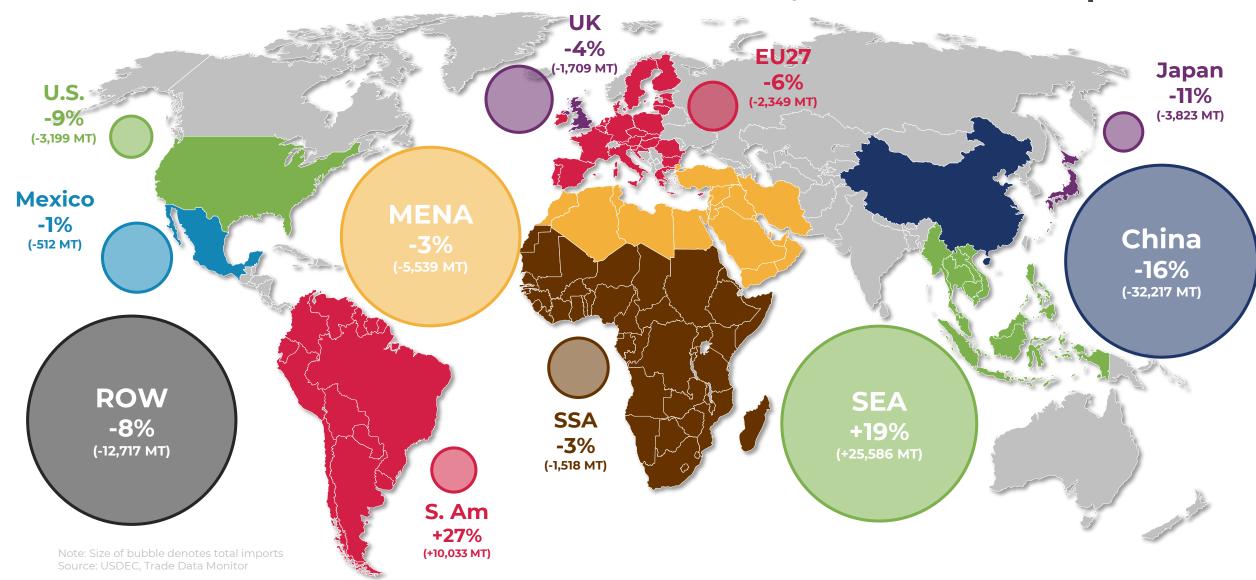
Global Dairy Trade

(Milk Solids Equivalent, Rolling 12 Months)



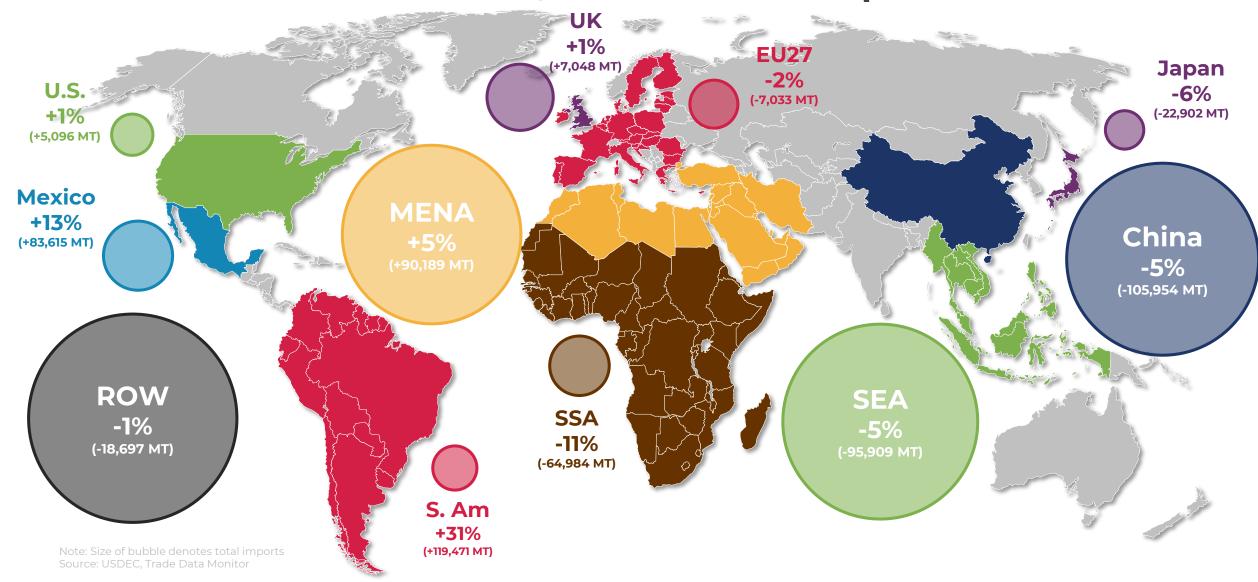


Select Markets – Month of Dec. 2023, Milk Solids Equiv.





Select Markets – 2023, Milk Solids Equiv.





Average Global Export Price

Average Dairy Export Value to World, MSE





Global Dairy Spot Prices

Average US, EU, & NZ Wholesale Prices for Select Dairy Products







Cheese Market Commentary



KEY TAKEAWAYS

- Like many other products in 2023, global cheese trade was slower than normal (+2%, +57,761 MT), but we may be starting to see a **resurgence**. After a respectable (in this market environment at least) growth of 0.7% in the first 9 months of the year, cheese trade surprisingly surged 7% in the fourth quarter.
- Cheese trade in December grew to nearly every market though **Korea was the obvious exception** (-35%, -5,581 MT in Dec; -19%, -32,516 MT for the fully year), continuing the country's downward trend. Japan even grew for the first time in nine months (+6%, +1,493 MT). Mexican demand remained stellar (+16%, +2,137 MT), and South America kept surging (+32%, +4,192 MT). If not for Korea, December would have been an overwhelmingly positive month for global cheese trade.
- Cheese demand has been perhaps the most resilient of any dairy product since COVID-19. While demand expansion hasn't been as robust as before COVID-19 (+1% p.a. since 2020), cheese trade never saw the sharp dip in 2022 that many other dairy products did, and it looks poised to potentially accelerate in 2023.

Global Cheese **Trade**

+3.4%

December YoY

+2.2%

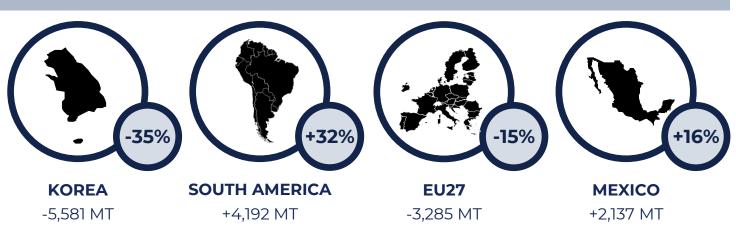
YTD, Ending December

+2.2%

Last 12-Months, Ending December +1.1%

3-Year CAGR

December Standout Markets



ADDITIONAL NOTES

Cheese trade to South America posted the strongest year ever, a welcome development after a quiet 2022. Cheese trade to the region grew by 19% for the full year (+21,612 MT) with Chile's purchases growing by a third (+33%, +15,158 MT) and sales to Brazil rapidly expanding (+29%, +9,717 MT). Unfortunately, the U.S. didn't directly benefit from the demand expansion. Chile's growth was largely supplied (and driven by) cheap gouda from Europe, while Brazil exclusively increased its purchases from Argentina. Still, demand growth - regardless of the supplier - is welcome news for cheese markets. However, it remains an open question whether this expansion can be repeated. Chile tends to be a particularly price-sensitive market, which can increase demand fluctuation, but prices are still relatively low. Positively, several South American economies are outperforming the global average, suggesting the demand expansion could have staying power.



Source: NMPF/USDEC, TDM

Cheese Market Commentary



LOOKING AHEAD

- Cheese's resilience can potentially be explained by the product being relatively insulated from a downturn in China (in fact, cheese sales to China 22% in 2023) and the price spike that occurred in 2022 was less extreme compared to other dairy products, which limited some of the demand reaction. Additionally, cheese tends to be purchased by more affluent consumers in many importing markets.
- This would suggest that as inflation cools and real incomes rebound, especially for affluent consumers, cheese demand is well-placed to accelerate - especially with cheese prices remaining affordable thanks to a relatively robust supply picture.
- A return to steady growth in cheese trade is by no means assured, but with global fundamentals improving (at least outside of China), acceleration is possible - even likely. Japan and Korea's continued struggles remain a cause for concern (notwithstanding Japan's December uptick), but expansion in a wide variety of markets helps mitigate the risk.

U.S. Cheese **Exports**

+0.6%

-3.4%

-3.4%

-1.1%

December YoY

YTD, Ending December

Last 12-Months, **Ending December** 3-Year CAGR

FU Cheese **Exports**

+8.1%

+3.6%

+3.6%

+1.2%

December YoY

YTD, Ending December

Last 12-Months. **Ending December**

3-Year CAGR

NZ Cheese **Exports**

-16.9%

December YoY

+10.3% +10.3%

YTD, Ending December

Last 12-Months.

Ending December

+3.3%

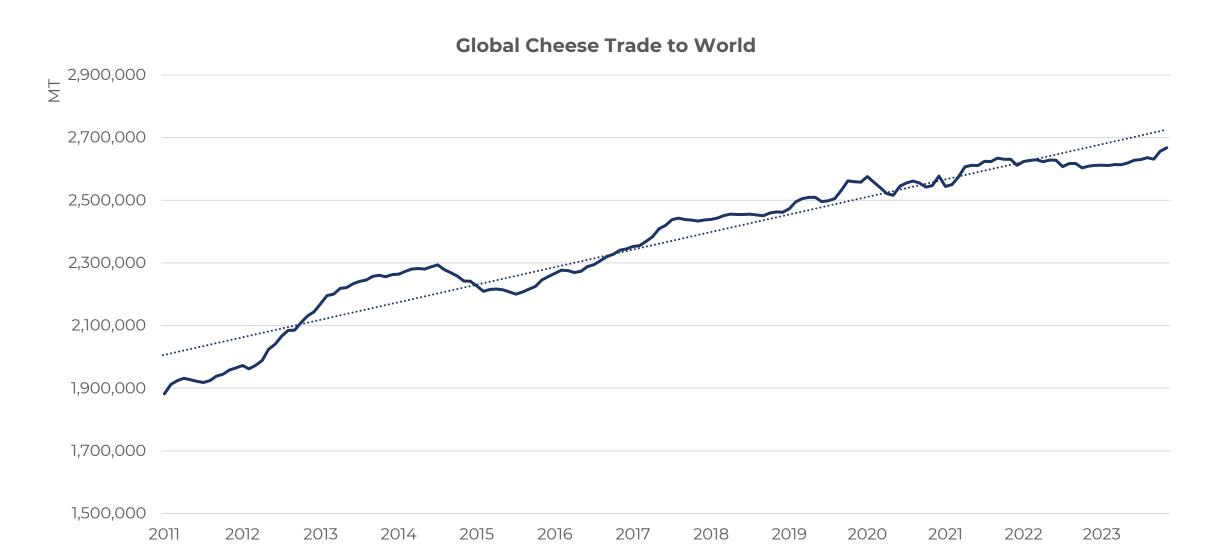
3-Year CAGR

ADDITIONAL NOTES

Digging into the cheese HS codes, we see the EU's expansion was driven primarily by low-priced commodity product as their specialty sales struggled - a trend we've mentioned throughout the year. EU exports of mozzarella, gouda, cheddar, edam, shreds, and fresh cheese (the category that includes cream cheese) grew by 10% (+74,028 MT). By contrast, the rest of the EU's cheese exports (primarily made up of specialty varieties) declined by 4% (-25,716 MT). Similarly, New Zealand's cheddar and fresh cheese exports performed the best (+14% and +23%, respectively). Overall, as consumers around the world including in the U.S. and the EU - sought to stretch their incomes in 2023, many clearly switched from specialty cheeses to staple varieties.



Global Overview: Cheese



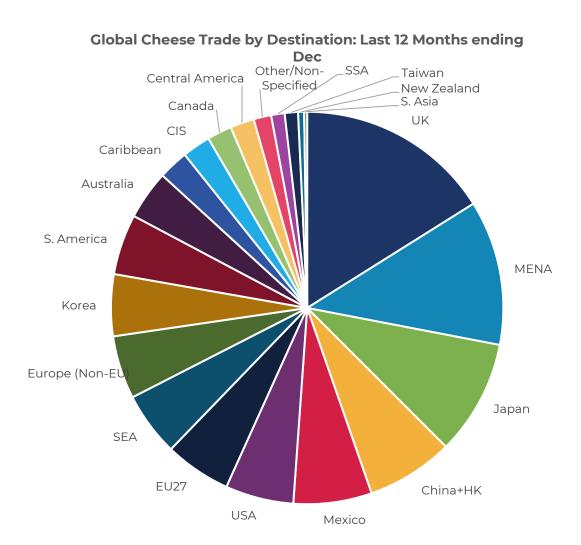


Global Overview: Cheese

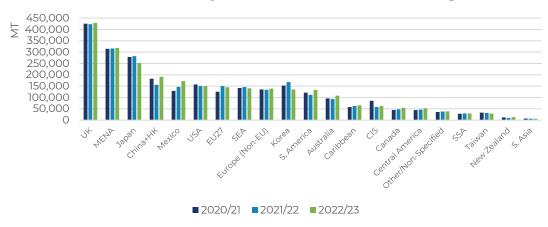




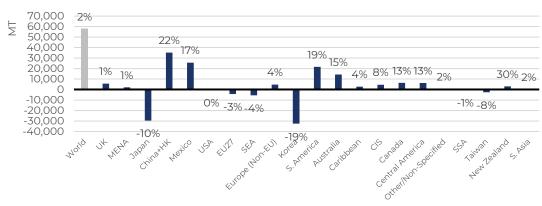
Global Overview: Cheese - Last 12 Months



Global Cheese Trade by Destination: Last 12 Months ending Dec



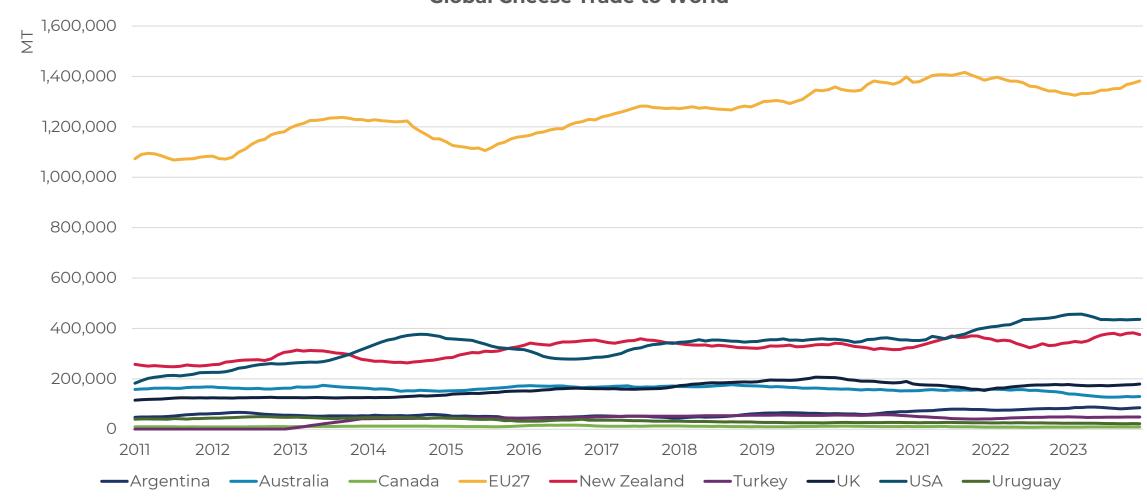
YOY Change in Global Cheese Trade by Destination: Last 12 Months ending Dec 2023





Trade Flows: Cheese

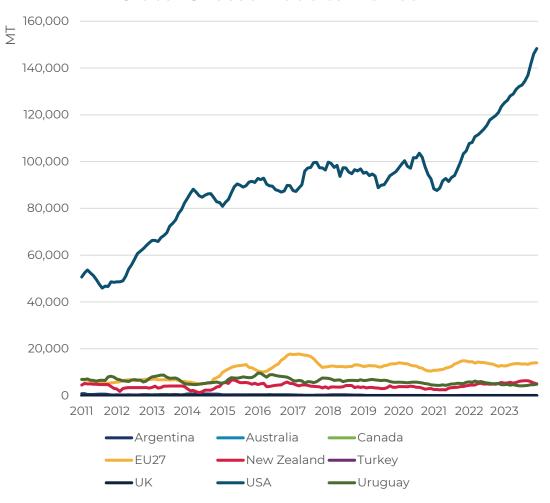




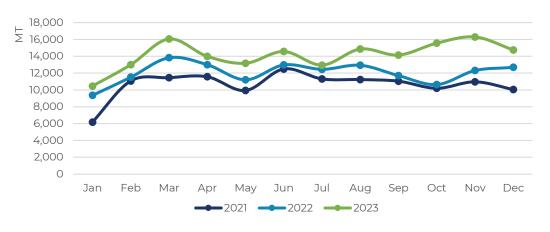


Mexico

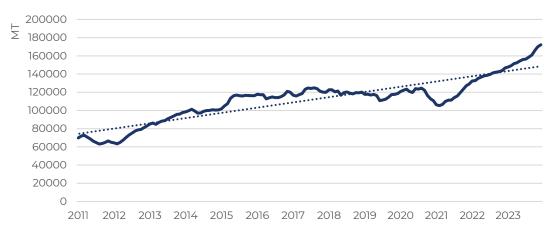
Global Cheese Trade to Mexico



Global Cheese Trade to Mexico



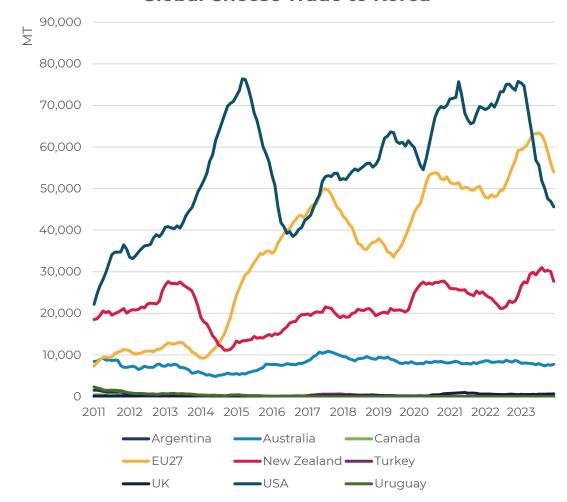
Global Cheese Trade to Mexico



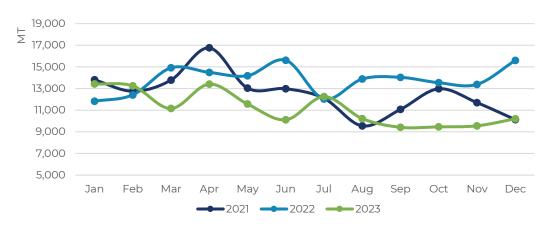


Korea

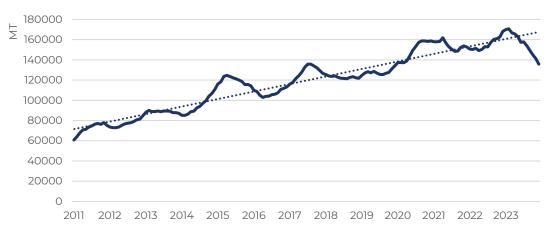




Global Cheese Trade to Korea



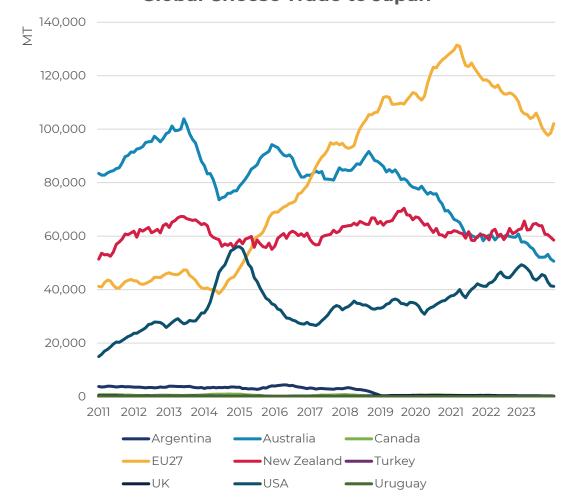
Global Cheese Trade to Korea



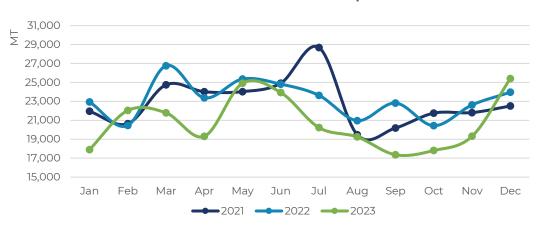


Japan

Global Cheese Trade to Japan



Global Cheese Trade to Japan



Global Cheese Trade to Japan



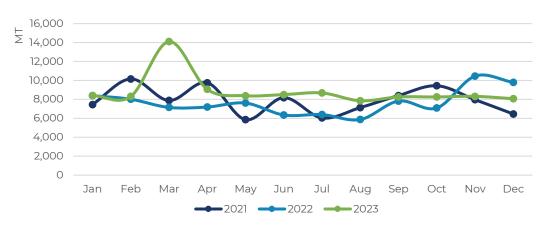


Australia

Global Cheese Trade to Australia



Global Cheese Trade to Australia



Global Cheese Trade to Australia

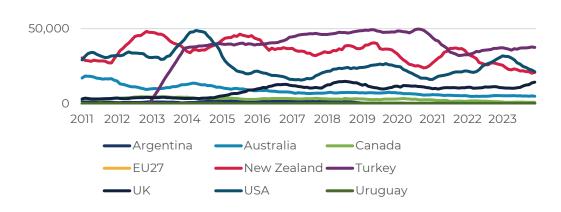




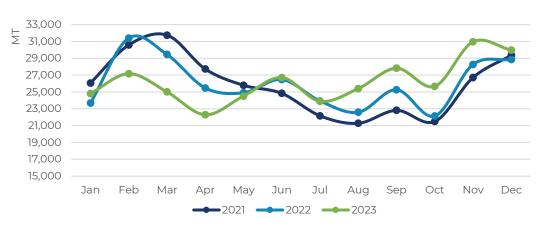
MENA

Global Cheese Trade to MENA

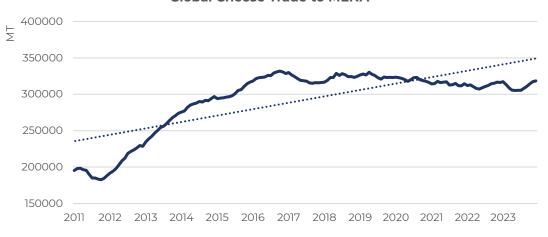




Global Cheese Trade to MENA

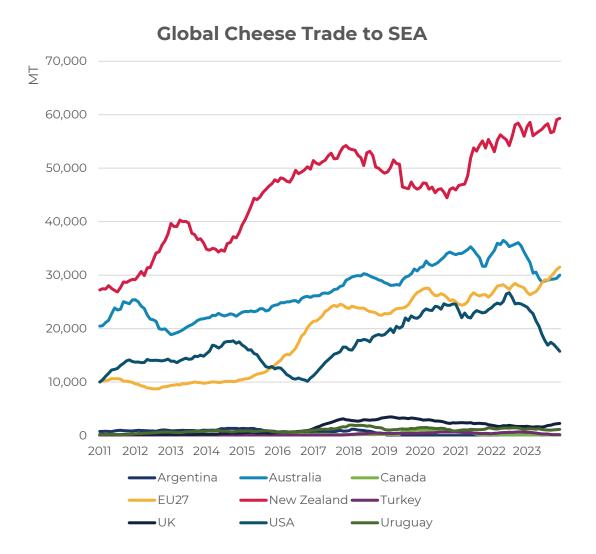


Global Cheese Trade to MENA





Southeast Asia



Global Cheese Trade to SEA



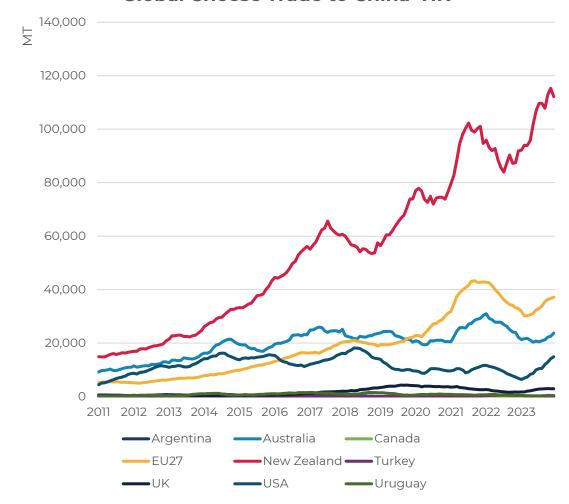
Global Cheese Trade to SEA



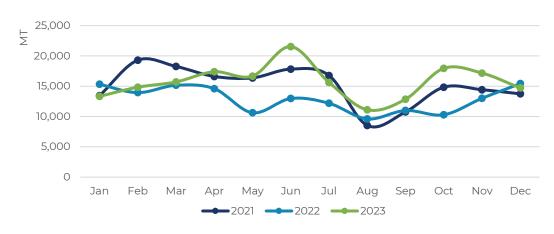


China

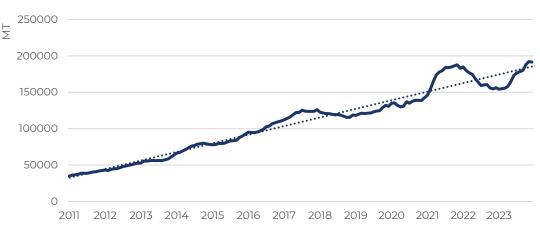
Global Cheese Trade to China+HK



Global Cheese Trade to China+HK



Global Cheese Trade to China+HK







NFDM/SMP Market Commentary



KEY TAKEAWAYS

- Global NFDM/SMP trade in December trailed prior-year levels for the fourth month in a row (-7%, -15,462 MT). The year-over-year loss was the largest seen since June 2023, though volumes for the month remained 12,510 MT larger than December 2021.
- Dramatically weaker demand from China continued to be the primary factor that weighed on global NFDM/SMP trade. December shipments to China fell 16,415 MT (-40%) compared to the same month last year as persistent economic malaise undermined demand for dairy solids in the country. Other key destinations such as Mexico (-7%, -2,223 MT), South Asia (-39%, -2,197 MT), and the EU (-58%, -3,144 MT) also suffered losses that pulled the total figure down.
- Not all the news was gloomy, however, as Southeast Asia posted a second consecutive strong month of growth (+18%, +8,710 MT), as NDM demand in the Philippines (+17%, +2,003 MT), Indonesia (+11%, +1,429 MT), and especially Malaysia (+61%, +4,219 MT) rose on the back of improved economic activity.

Global NFDM/SMP Trade

-7.4%

December YoY

+3.8%

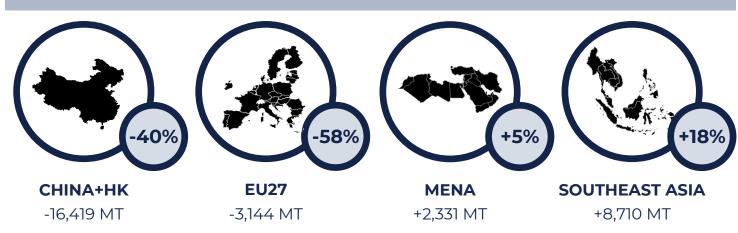
YTD, Ending December

+3.8%

Last 12-Months, **Ending December** +0.1%

3-Year CAGR

December Standout Markets



ADDITIONAL NOTES

A weaker result for global NFDM/SMP trade in December further chipped away at, but was unable to completely erase, full-year gains for the commodity. With a complete year of data in the books, global NFDM/SMP trade in 2023 rose 4%, equal to a gain of 83,825 MT. The largest full-year gains came from MENA (+16%, +71,795 MT) and Mexico (+16%, +57,459 MT) where an overperforming domestic economy and a historically strong peso encouraged imports. More modest full-year gains were also seen in South Asia (+46%, +19,913 MT), the EU and the UK (+46%, +17,367 MT), and Central and South America (+10%, +10,485 MT). On the other hand, Asian demand struggled as industrial activity and private consumption slowed. Full-year NFDM/SMP shipments to SEA slid 8% (-53,847 MT) while China was down 3% (-10,842 MT). Notably, demand from SEA began to improve in the final months of the year while Chinese demand continued to languish.



Source: NMPF/USDEC, TDM

NFDM/SMP Market Commentary



LOOKING AHEAD

- Global milk powder markets are still showing little conviction, moving laterally while market participants wait for signals that could push prices decisively either up or down. A second strong month of demand in SEA gives credence to the idea that economic improvement is starting to take root, which would bode well for NFDM/SMP demand through early 2024.
- · However, significant questions remain about China and, in turn, its appetite for milk powder through the coming months. As negative economic news compounds with unfavorable demographic shifts, it seems unlikely that demand will return in a major way in the immediate future.
- A continuation of interest from Mexico will also be crucial for NFDM/SMP demand in 2024. However, a slower rate of buying in recent months combined with market commentary that domestic milk supplies exceed the local industry's needs suggests that demand for imported powders could be more muted during the first half of the year.

U.S. NFDM/SMP **Exports**

+0.9%

-2.9%

-2.9%

-1.0%

December YoY

YTD, Ending December

Last 12-Months, **Ending December** 3-Year CAGR

EU NFDM/SMP **Exports**

-19.2%

+10.3%

+10.3%

+3.3%

December YoY

YTD, Ending December

Last 12-Months. **Ending December** 3-Year CAGR

NZ NFDM/SMP **Exports**

+2.7%

December YoY

+26.7% +26.7%

YTD, Ending December

Ending December

+8.2% Last 12-Months.

3-Year CAGR

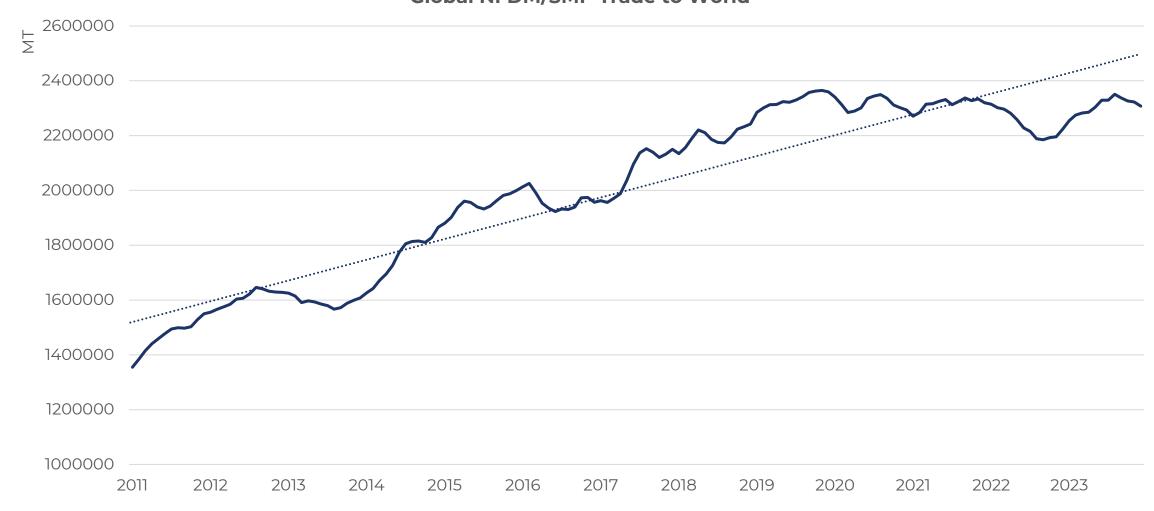
ADDITIONAL NOTES

Global NFDM/SMP suppliers jockeyed for position in December as the U.S. and New Zealand sought to compensate for some of the shortfall left by Europe. Combined, the EU and the UK shipped 17,202 MT (-23%) less NFDM/SMP in December 2023 than in the same month last year. The lower figures are indicative of slower global demand and likely reflect a movement by European dairy manufacturers to route raw milk supplies to the production of cheese at the expense of butter and powder. For the full year, shipments by the EU and UK rose 13% (+97,053 MT). New Zealand increased powder shipments in December (+3%, +1,305 MT), stretching full-year shipments up by 27% (+95,198 MT). Meanwhile the U.S. modestly expanded exports in December by 582 MT (+1%), though full-year shipments remained 24,570 MT (-3%) lighter than in 2022.



Global Overview: NFDM/SMP

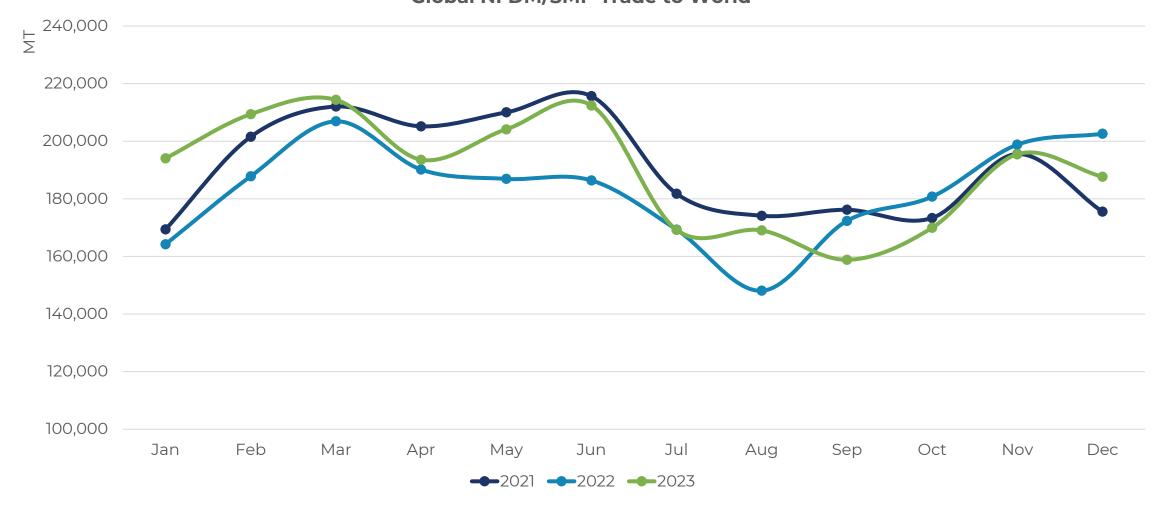
Global NFDM/SMP Trade to World





Global Overview: NFDM/SMP

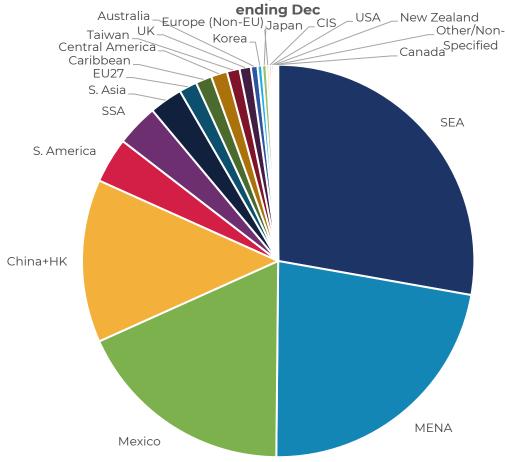




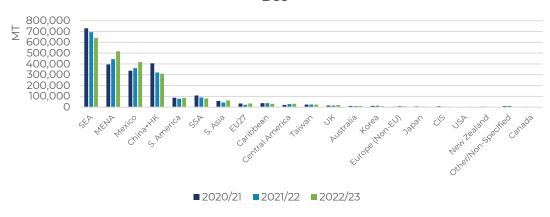


Global Overview: NFDM/SMP – Last 12 Months

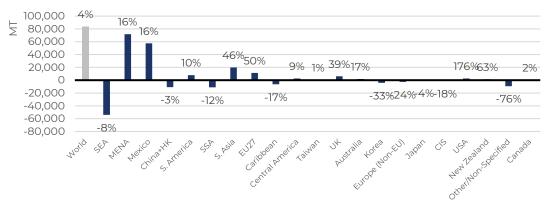




Global NFDM/SMP Trade by Destination: Last 12 Months ending Dec



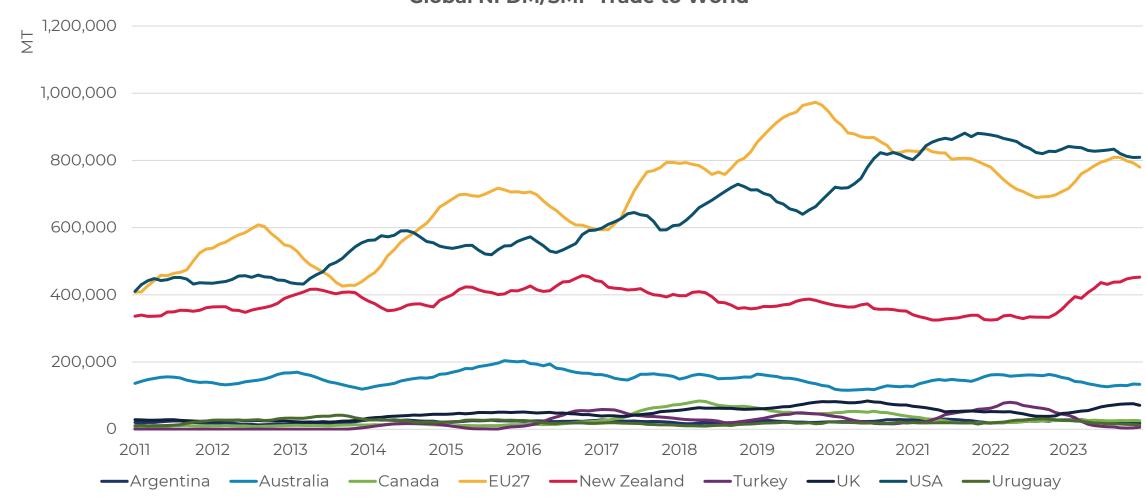
YOY Change in Global NFDM/SMP Trade by Destination: Last 12 Months ending Dec 2023





Trade Flows: NFDM/SMP

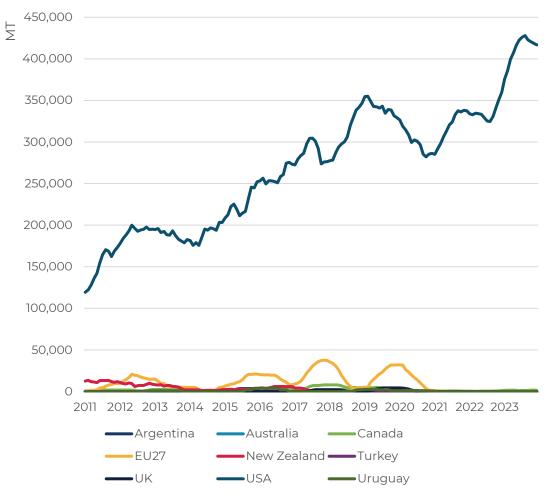
Global NFDM/SMP Trade to World



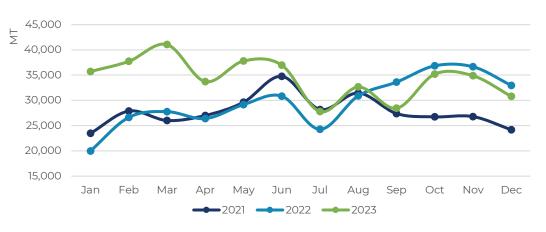


Mexico

Global NFDM/SMP Trade to Mexico



Global NFDM/SMP Trade to Mexico



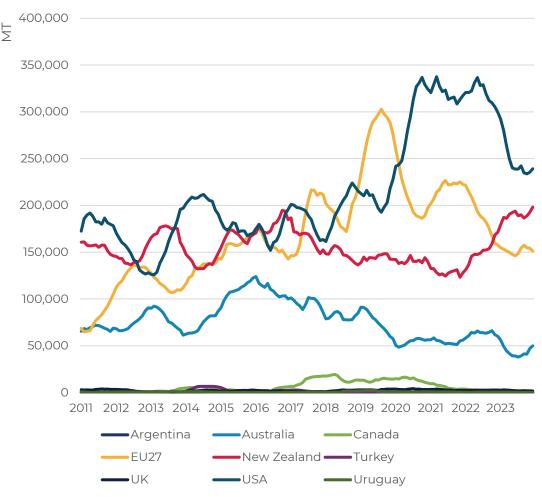
Global NFDM/SMP Trade to Mexico



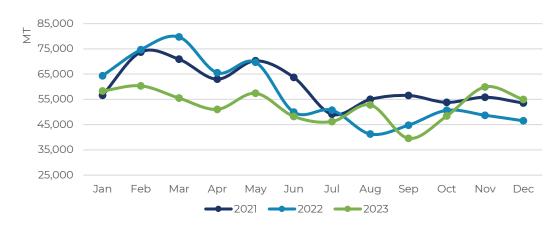


Southeast Asia

Global NFDM/SMP Trade to SEA



Global NFDM/SMP Trade to SEA



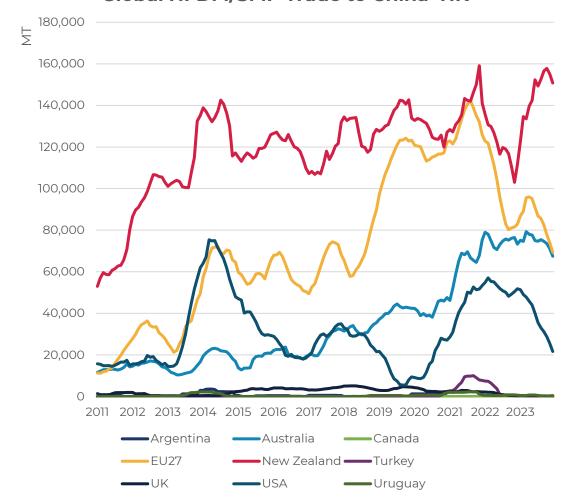
Global NFDM/SMP Trade to SEA



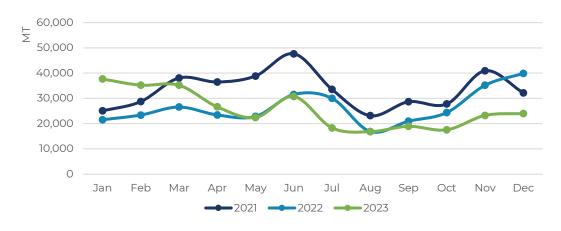


China

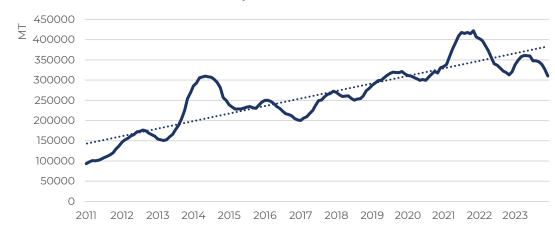
Global NFDM/SMP Trade to China+HK



Global NFDM/SMP Trade to China+HK



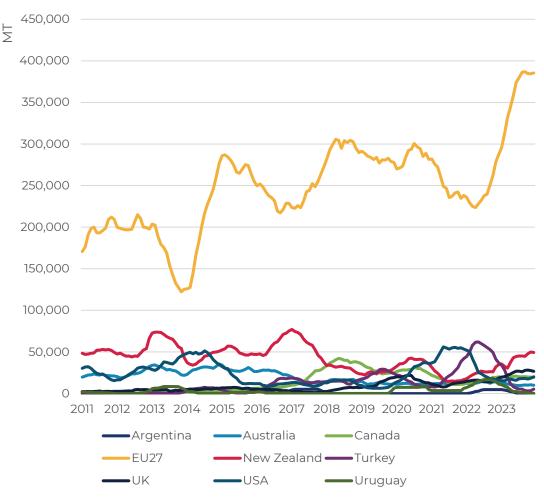
Global NFDM/SMP Trade to China+HK



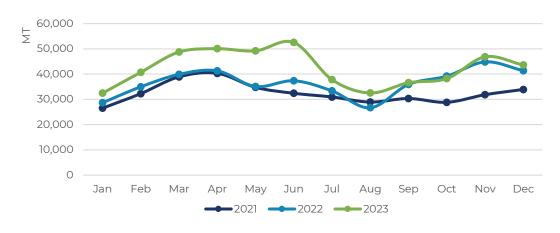


MENA

Global NFDM/SMP Trade to MENA



Global NFDM/SMP Trade to MENA



Global NFDM/SMP Trade to MENA







Whey Products (0404.10)

Whey Products (0404.10) Market Commentary

KEY TAKEAWAYS

- Whey exports (HS code 0404.10, which is primarily sweet whey and permeate) improved in December (+2%, +1,814 MT) for the first month in nearly a year. The positive month was due to increased demand in Southeast Asia (+35%, +9,617 MT), even as China's demand continued to struggle (-19%, -8,517 MT).
- December, while positive, capped off what was an overall weak year of lowprotein whey exports in 2023. Total trade fell 6% (-99,807 MT) for the year and was primarily driven by extremely weak demand from China accounting for roughly three-quarters of the overall trade decline (-14%, -74,417 MT) in 2023.
- Excluding China, low-protein whey trade in 2023 was not overly exciting either – down 3% (-25,391 MT) for the year. While far less negative than with China's inclusion, the decline stemmed from the challenging economic environment and higher prices in the front half of the year. As global economies continue to recover this year, expect demand to recover as well (although that may not be the case for China - more on the next page).

Global Whey (0404.10)**Trade**

+1.5%

December YoY

-6.5%

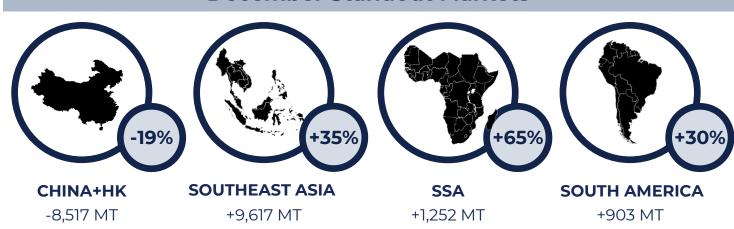
YTD, Ending December

-6.5%

Last 12-Months, **Ending December** -1.5%

3-Year CAGR

December Standout Markets



ADDITIONAL NOTES

The U.S. and the European Union are the primary suppliers of low protein whey to the world, with the U.S. accounting for 34% of global trade and the EU accounting for roughly 48%. The U.S., however, took the brunt of the global decline in low-protein whey trade last year - falling 20% (-124,455 MT). The primary reason is the U.S. is the main supplier of low protein whey to China, which faced extremely weak demand in 2023. EU destinations for low-protein whey saw less of a demand pullback last year, which enabled EU exports to grow 4% (+28,868 MT). With limited expectations for a strong rebound in Chinese low-protein whey demand next year, U.S. exports are likely facing another challenging year.



Whey Products (0404.10) Market Commentary



LOOKING AHEAD

- Positively, we are starting to see low-protein whey demand recovery in key markets. Notably, Southeast Asian demand has clearly improved with December marking the fourth month in a row of increased import volumes. In fact, low-protein whey trade to Southeast Asia increased 25% (+22,335 MT) in Q4. Affordable prices and lower inventory levels combined to incentivize a demand rebound after roughly 14 months straight of weaker year-over-year import volumes. As global prices rally, we may see some pushback at the higher prices, but the tighter stocks should support demand growth especially as regional economies continue to show more broad economic recovery.
- Unfortunately, weak Chinese demand remains the norm and expectations for growth this year are limited. As mentioned repeatedly throughout this report, China's economy remains under pressure, providing little expectations for strong consumer demand recovery in the near term. In addition, the pork industry is still struggling with low margins, increasing debt and weak demand from broader economic challenges. All of these factors suggest low-protein whey demand in China is liable to struggle in 2024.

U.S. Whey (0404.10) **Exports**

-13.5%

-20.3%

-20.3%

-7.3%

December YoY

YTD, Ending December

Last 12-Months, **Ending December** 3-Year CAGR

EU Whey (0404.10)**Exports**

+5.3% +4.4%

+4.4%

+1.4%

December YoY

YTD, Ending December

Last 12-Months. **Ending December**

3-Year CAGR

NZ Whey (0404.10)**Exports**

+62.5% +12.7% +12.7%

December YoY

YTD, Ending December

Ending December

+4.1% Last 12-Months.

3-Year CAGR

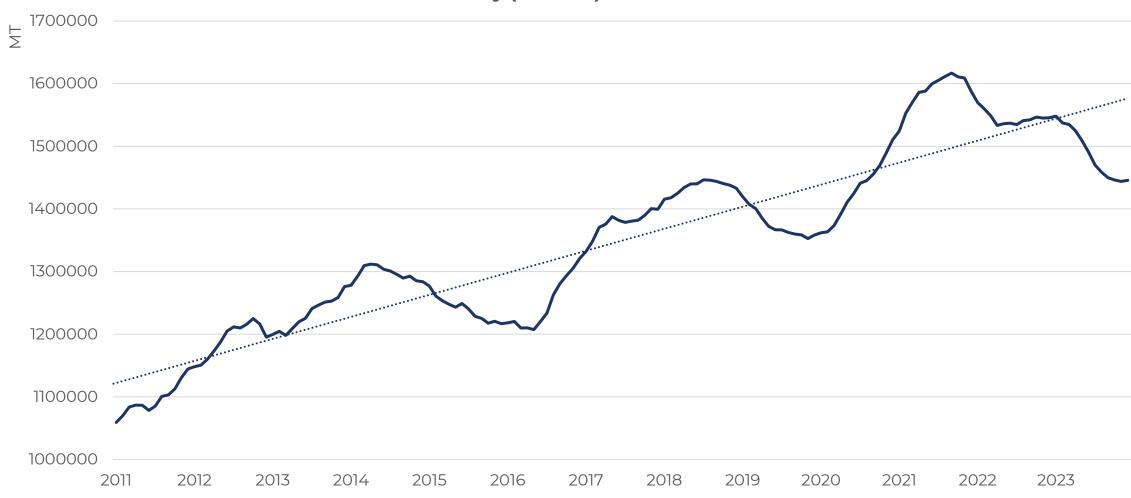
ADDITIONAL NOTES

As inflation eases and economies globally continue to recover, one potential hurdle to demand recovery is rising prices. Sweet whey prices have consistently risen over the last 6 months, supported by gradually rising demand, but also by global milk production concerns, which have buyers worried about product availability. Additionally supporting the price rally in low-protein whey is the strength in the WPC80+ market where prices have doubled over the last six months off strong demand, which is limiting production of sweet whey. If sweet whey prices stay high, there may be a demand reaction. But after a year of weaker trade and rising demand out of Southeast Asia, near-term demand looks on track for continued strength.



Global Overview: Whey (0404.10)







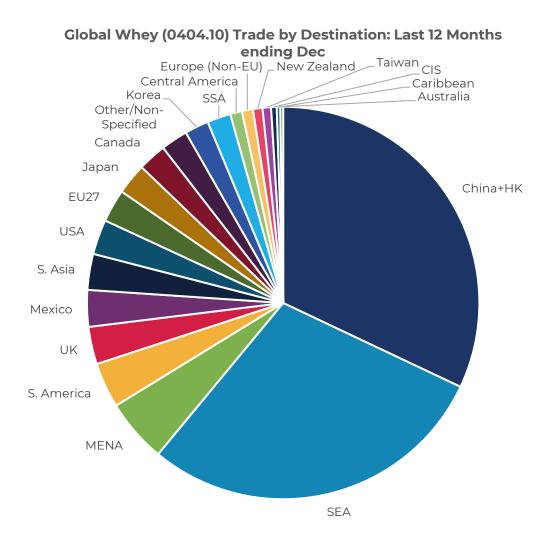
Global Overview: Whey (0404.10)



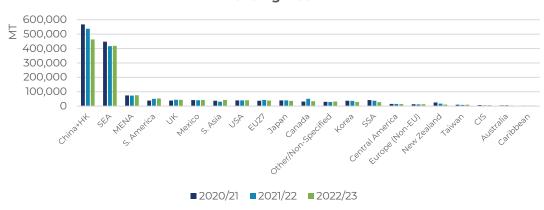




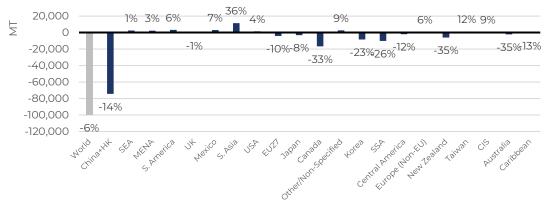
Global Overview: Whey (0404.10) – Last 12 Months



Global Whey (0404.10) Trade by Destination: Last 12 Months ending Dec



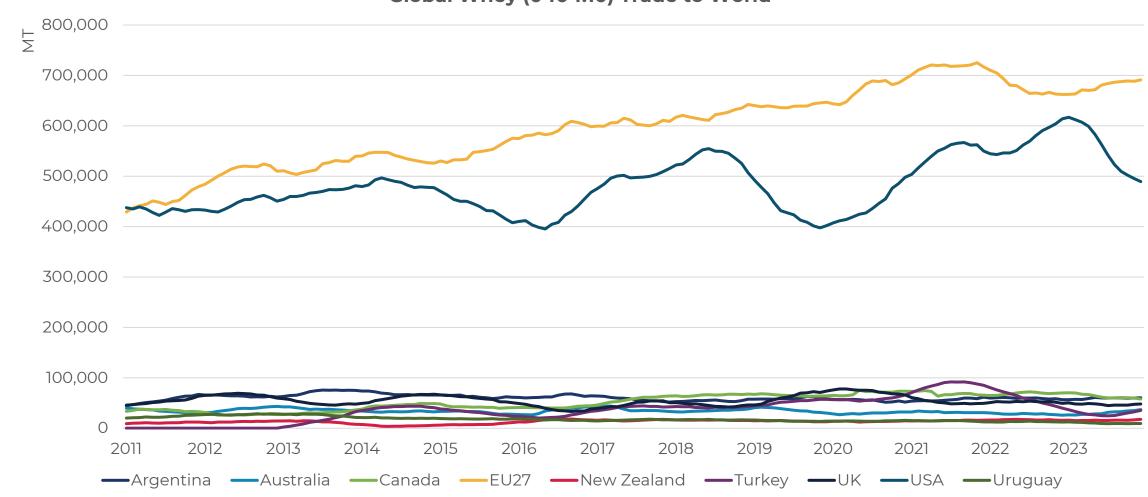
YOY Change in Global Whey (0404.10) Trade by Destination: Last 12 Months ending Dec 2023





Trade Flows: Whey Products

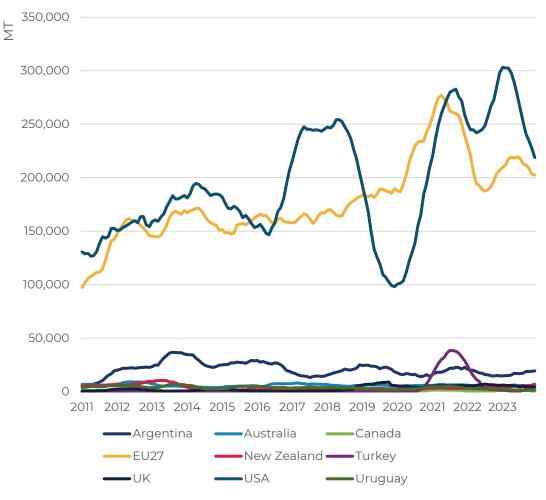




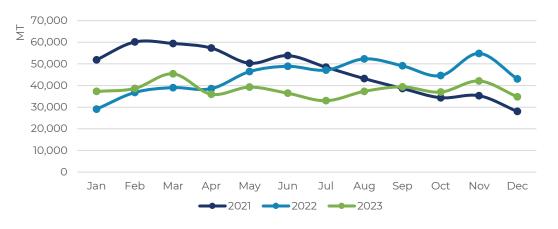


China

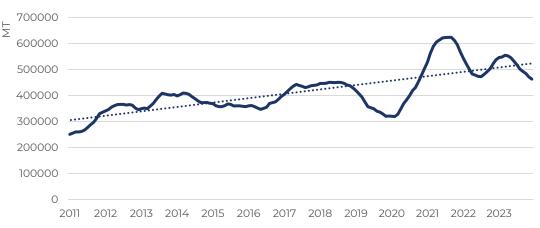
Global Whey (0404.10) Trade to China+HK



Global Whey (0404.10) Trade to China+HK



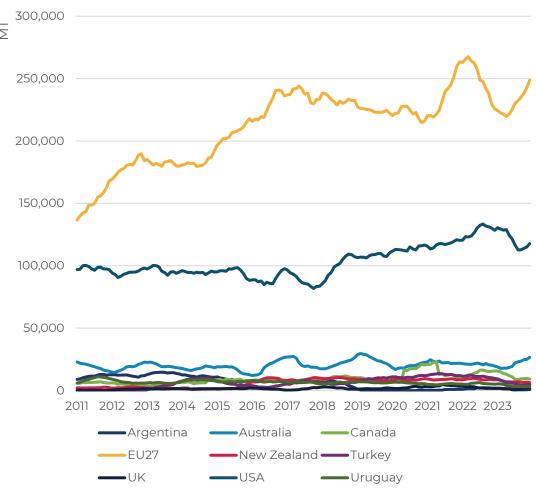
Global Whey (0404.10) Trade to China+HK



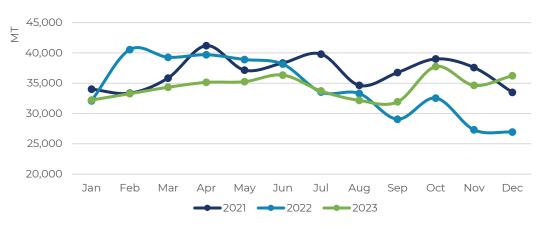


Southeast Asia

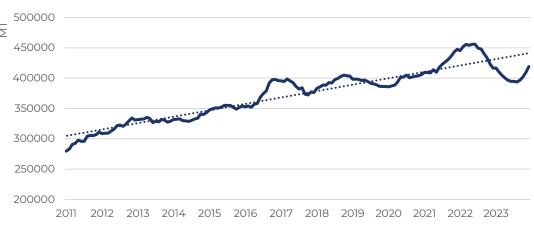




Global Whey (0404.10) Trade to SEA



Global Whey (0404.10) Trade to SEA







WPC80+ (3502.20)

WPC80+ (3502.20) Market Commentary

KEY TAKEAWAYS

- While other dairy products floundered, high-protein whey products finished 2023 with a flourish, capping off the year with yet another month of growth in December. Global trade of WPC80+ rose 6.4% year over year for the month, as an additional 871 MT of product circulated the globe.
- Even as prices began to rebound, European demand for WPC80+ surged in December (+43%, +557 MT). Brazil's insatiable appetite for high-protein whey products also continued to drive a disproportionate share of the category's increase. South America's largest country consumed an additional 379 MT (+112%) in December compared to the same month in the prior year. Stronger Brazilian demand was complimented by increased activity in Colombia (+440%, +83 MT), although volumes slipped in other South American destinations, namely Chile (-71%, -64 MT) and Peru (-35%, -19 MT).
- On the other hand, demand from key Asian destinations such as China (-9%, -224 MT) and Japan (-9%, -233 MT) fell during the month.

Global **WPC80+** Trade

+6.4% +8.3%

December YoY

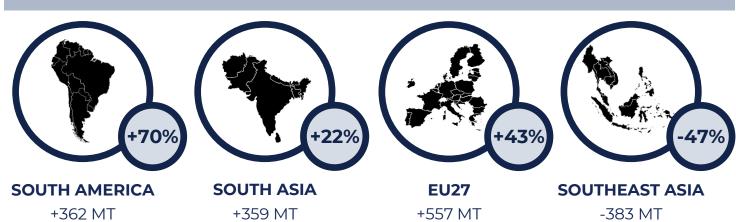
YTD, Ending December

+8.3%

Last 12-Months, **Ending December** +4.7%

3-Year CAGR

December Standout Markets



ADDITIONAL NOTES

Despite starting 2023 on a weaker note, demand for high-protein whey products exceeded the same month prior year during the final two thirds of the year. In the end, global trade of WPC80+ increased by 12,860 MT (+8%) during 2023 as more accessible prices and the entrenchment of health and wellness trends encouraged additional consumption worldwide. More than any other country, increased demand from India (+63%, +7,150 MT) underpinned the growth. However, stronger demand was also seen in South America (+8%, +5,305 MT) and especially MENA (+158%, 2,537 MT). Meanwhile, demand was stunted across key markets in Asia. South Korean demand for WPC80+ was halved in 2023 (-3,144 MT) while Southeast Asia saw activity fall by 33% (-3,045 MT) due to especially slow demand from Thailand and Vietnam. WPC80+ trade with China fell by a more modest 3%, representing a slowdown equal to a loss of 871 MT.



Source: NMPF/USDEC, TDM

WPC80+ (3502.20) Market Commentary



LOOKING AHEAD

- Increased demand for WPC80+ has been a beacon of positivity in a sea of otherwise lackluster dairy trade activity, especially during the back half of 2023. Given that the uptick in activity was driven by both lower prices and underlying consumer trends, the question becomes, to what extent will these factors persist in 2024?
- The incremental demand for WPC80+ as part of the consumer shift to adopt more habits related to health and wellness appears poised to persist. In the Brazilian market, where this has been the key driver of demand, outlets marketing protein-based nutritional powders continue to proliferate while interest in the exercise and fitness industry remains elevated.
- It seems less certain, however, that prices will remain low enough to continue encouraging demand in other markets. After reaching a trough in September, the average export value for WPC80+ has increased nearly 16% to \$8,274/MT in December. While this price remains well below the highs seen in 2021 and 2022 it is elevated by historical standards.

U.S. **WPC80+ Exports**

+14.0%

December YoY

+18.1%

YTD, Ending December

+18.1% Last 12-Months,

+5.7%

Ending December

3-Year CAGR

EU WPC80+ **Exports**

+3.2%

+2.5%

+2.5%

+0.8%

December YoY YTD, Ending December

Last 12-Months, **Ending December** 3-Year CAGR

NZ WPC80+ **Exports**

-10.4%

December YoY

+6.0%

YTD, Ending December

+6.0%

Last 12-Months. **Ending December** +2.0%

3-Year CAGR

ADDITIONAL NOTES

The U.S. has been the major benefactor of increased global demand for WPC80+. In December, the U.S. accounted for 94% (+815 MT) of the increase in trade, with the EU, UK and Australia picking up more modest volumes. Share was taken principally from New Zealand, which saw volumes fall 10% (-307 MT), and to a lesser extent Canada (-96 MT). Over the full year, the U.S. also expanded production considerably, adding 11,619 MT to the global trade of WPC80+. This is 18% more than during the prior year and represents 90% of the total volume added during the year. Nearly every supplier saw volumes grow during 2023 except for Australia which, despite a strong showing in December, saw WPC80+ trade in 2023 slip by 1,727 MT (-38%). The U.S. will be uniquely positioned to continue contributing to global high-protein product trade in the future as additional cheese capacity will create a plentiful whey



Global Overview: WPC80+







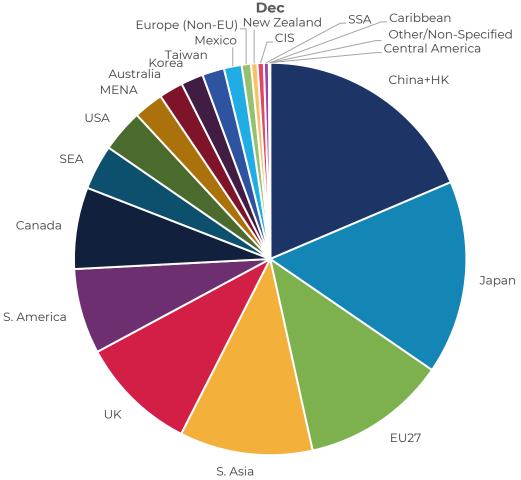
Global Overview: WPC80+



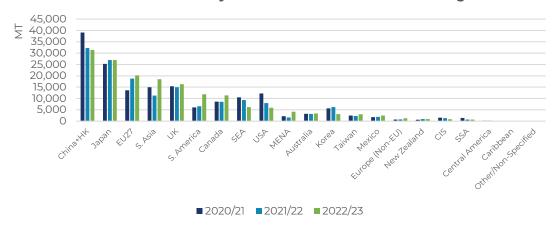


Global Overview: WPC80+ - Last 12 Months

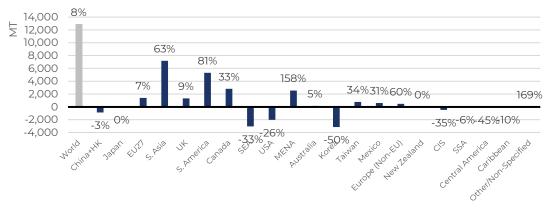
Global WPC80+ Trade by Destination: Last 12 Months ending



Global WPC80+ Trade by Destination: Last 12 Months ending Dec



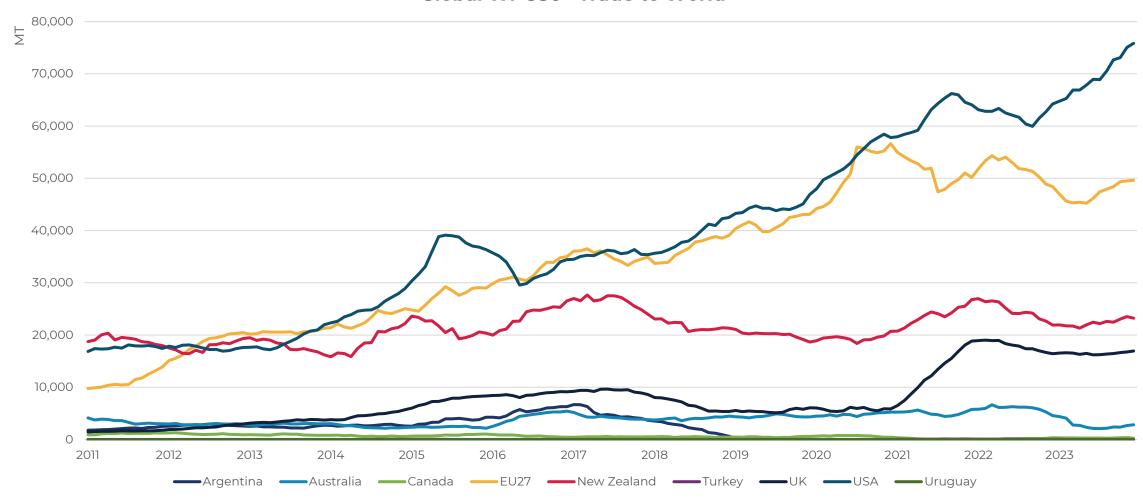
YOY Change in Global WPC80+ Trade by Destination: Last 12 Months ending Dec 2023





Trade Flows: WPC80+

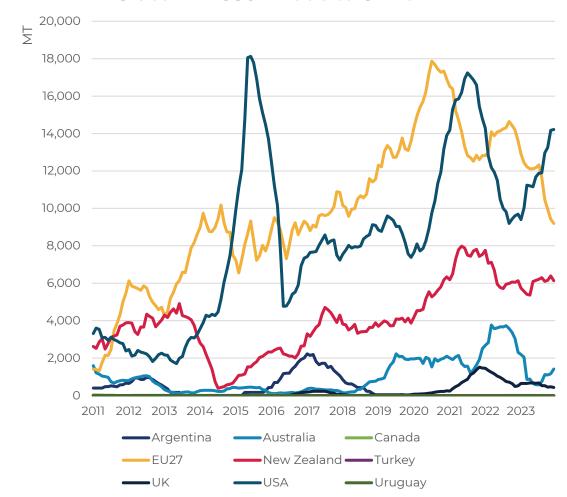
Global WPC80+ Trade to World



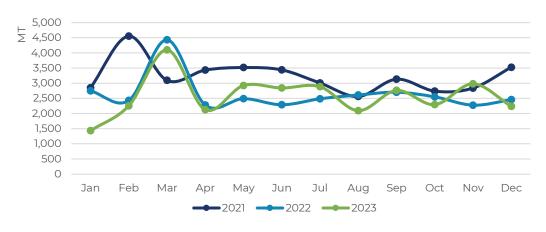


China

Global WPC80+ Trade to China+HK



Global WPC80+ Trade to China+HK



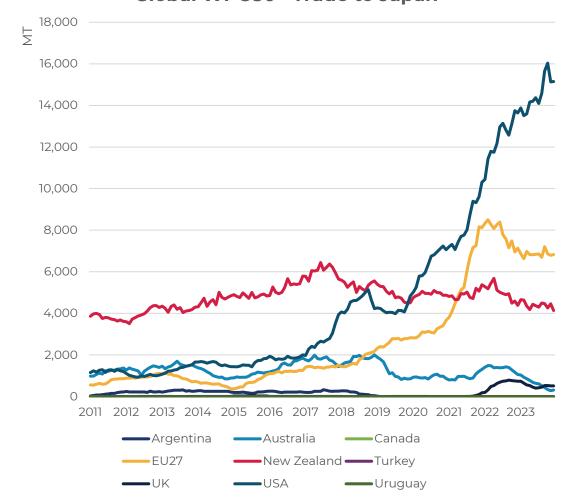
Global WPC80+ Trade to China+HK



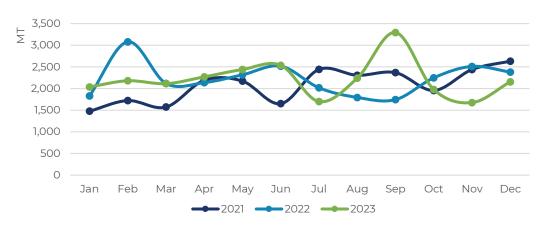


Japan

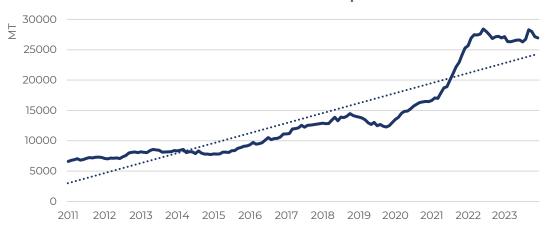




Global WPC80+ Trade to Japan



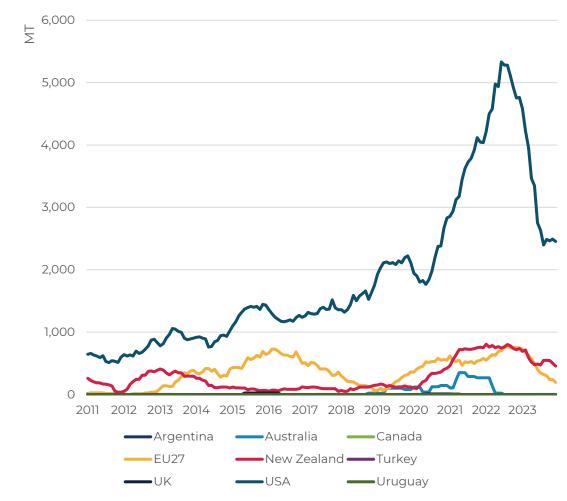
Global WPC80+ Trade to Japan



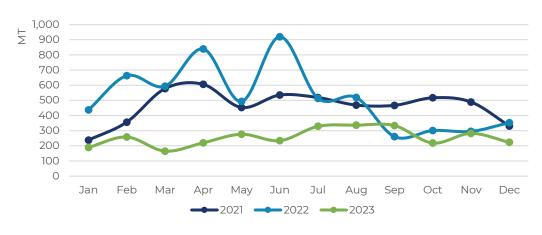


Korea





Global WPC80+ Trade to Korea



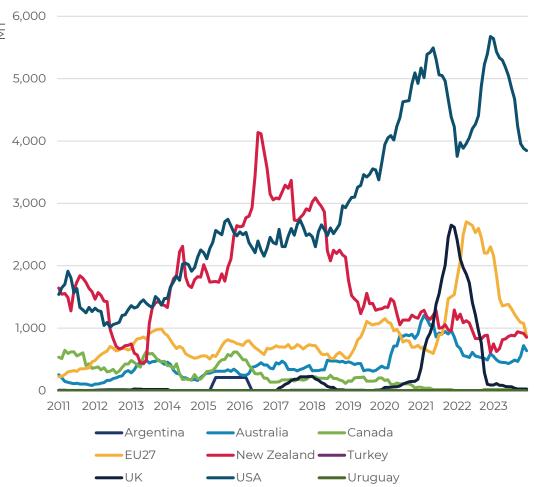
Global WPC80+ Trade to Korea



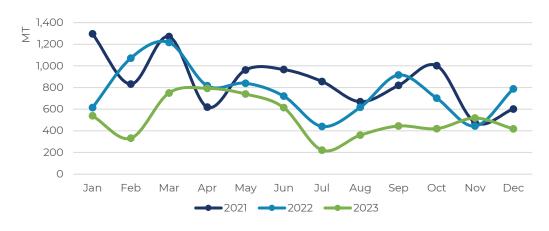


Southeast Asia





Global WPC80+ Trade to SEA

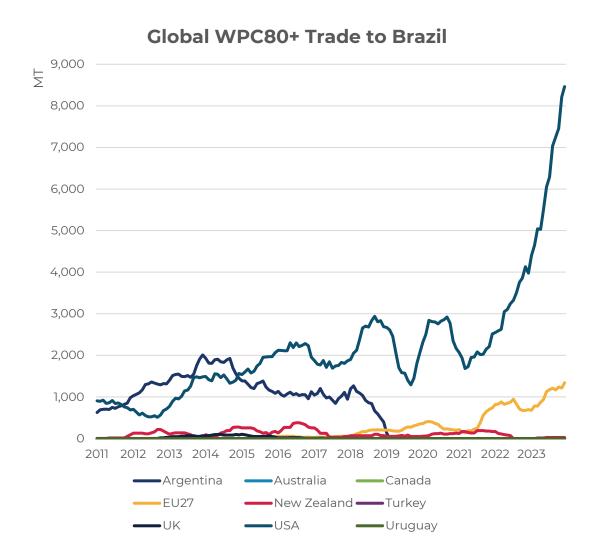


Global WPC80+ Trade to SEA

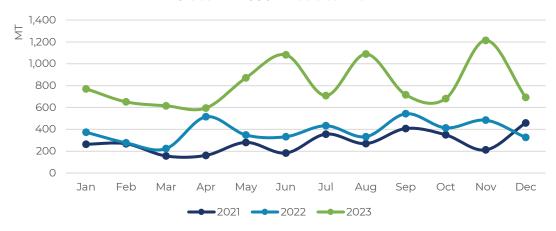




Brazil



Global WPC80+ Trade to Brazil



Global WPC80+ Trade to Brazil







Global Overview: Lactose

KEY TAKEAWAYS

Global Lactose Trade

-2.5%

+4.1%

+4.1%

+2.7%

December YoY

YTD, Ending

Last 12-Months, **Ending December** 3-Year CAGR

- Global economic headwinds continued to depress lactose trade in December. Japan's lackluster demand (-38%, -3,817 MT) was particularly noticeable in the data, but China's decline is perhaps the most impactful after providing substantial support to lactose trade in 2023. If China's inventories are full and importers are looking to draw down stocks, global lactose trade could be in store for a sharp regression.
- Overall, lactose trade grew in 4% in 2023 thanks to the China's robust demand (+30%, +42,720 MT) and surprisingly good sales to South Asia (+36%, +22,937 MT) even as other markets (namely, Southeast Asia and Japan) struggled.

Global Lactose Trade to World



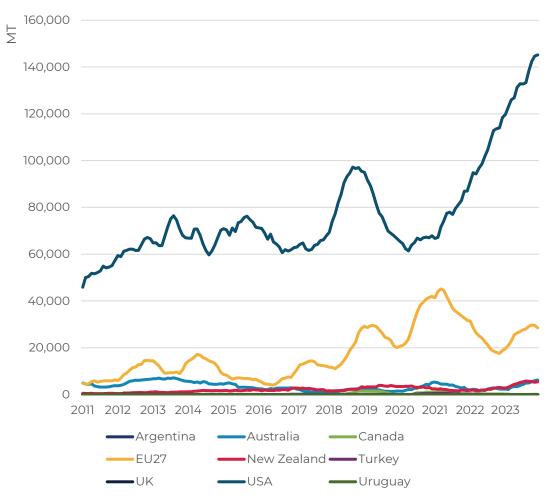
Global Lactose Trade to World



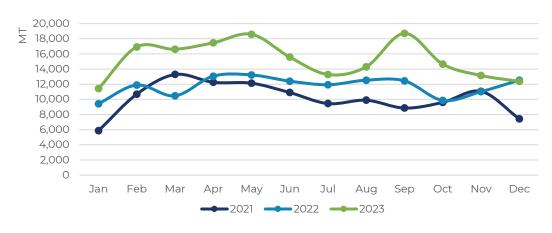


Lactose - China

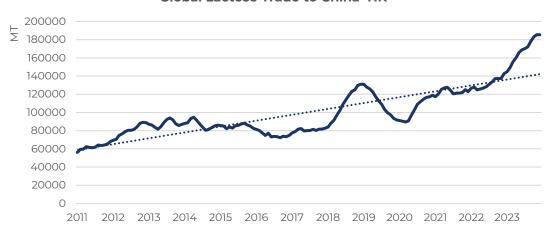
Global Lactose Trade to China+HK



Global Lactose Trade to China+HK

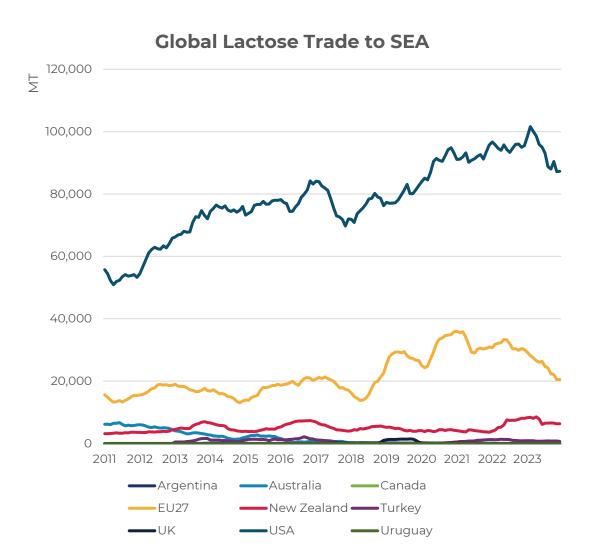


Global Lactose Trade to China+HK

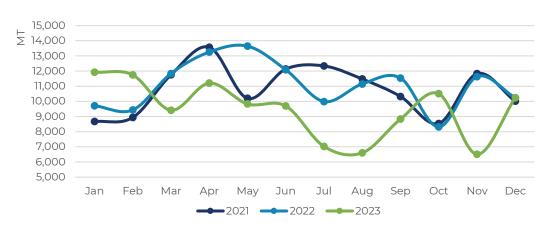




Lactose - Southeast Asia



Global Lactose Trade to SEA



Global Lactose Trade to SEA





Global Overview: Butter

KEY TAKEAWAYS

Global Butter Trade

-4.7%

-0.1%

-0.1%

+1.1%

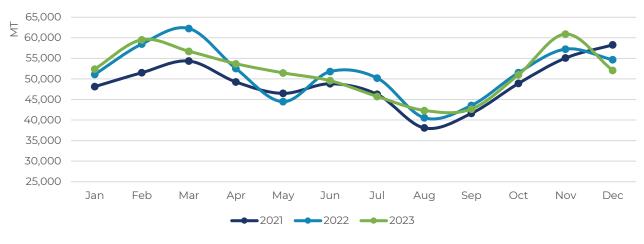
December YoY

YTD, Ending

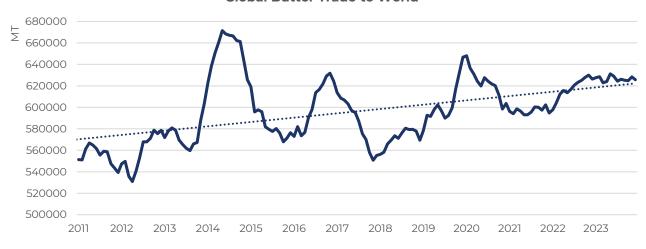
Last 12-Months, **Ending December** 3-Year CAGR

- Global butter demand dropped sharply in December after a robust November, suggesting some of the regression was simply due to shipping times. Though shipments to MENA were robust in the final month of 2023 (+32%, +2,528 MT), depressed sales to China (-17%, -2,123 MT) and the EU27 (-64%, -2,847 MT) pushed global butter trade numbers down.
- Overall, butter demand moved laterally in 2023, as MENA and the U.S. grew significantly (up 9% and 24%, respectively), but that growth was countered by China and the EU (down 4% and 21%, respectively), resulting in sideways movement for the full year.

Global Butter Trade to World



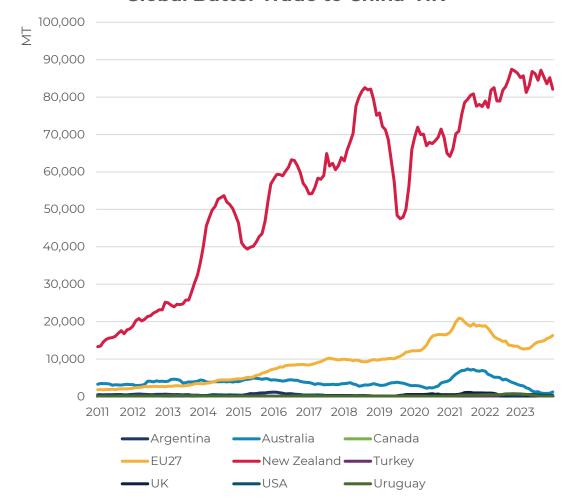
Global Butter Trade to World



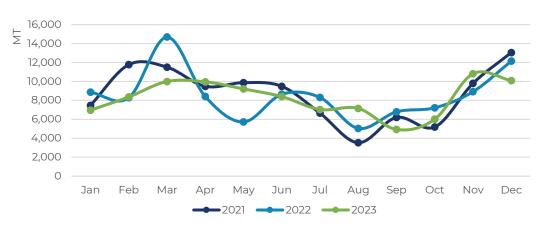


Butter - China

Global Butter Trade to China+HK



Global Butter Trade to China+HK



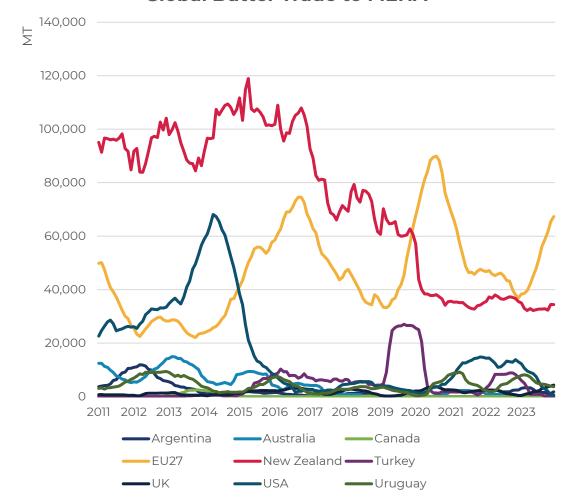
Global Butter Trade to China+HK



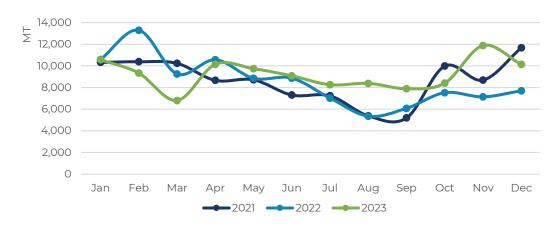


Butter - MENA

Global Butter Trade to MENA



Global Butter Trade to MENA



Global Butter Trade to MENA





Global Overview: Whole Milk Powder

0

1,800,000 1,700,000

1,600,000

1.500.000

2011

Jan

Feb

2012

2013

Mar

KEY TAKEAWAYS

Global WMP Trade

+2.2%

+1.4%

+1.4%

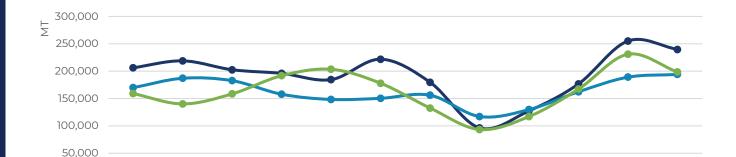
-4.2%

December YoY

YTD, Ending

Last 12-Months, **Ending December** 3-Year CAGR

- WMP trade grew in the last month of 2023 as demand in several key markets increased. Southeast Asia (+23%, +6,418 MT) and Sub-Saharan Africa (+63%, +7,720 MT) bolstered global WMP numbers. Unfortunately, MENA fell (-13%, -7,260 MT in Dec) to close out what was an otherwise positive year. More surprisingly, China's demand improved in December (+6%, +3,156 MT), though full-year shipments still lagged 2022 by 10%.
- China's absence in the global WMP market tempered 2023 exports, though strong demand from South America and South Asia bolstered trade numbers just enough to have a small bump in growth in 2023 (+1.4%). New Zealand's strong milk production numbers also gave strength to global WMP trade.

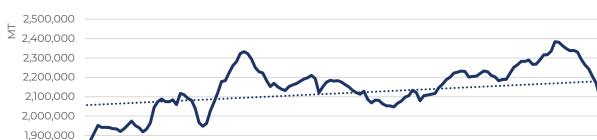


Global WMP Trade to World

-2022 **---**2023

2019

Global WMP Trade to World



2016

2022

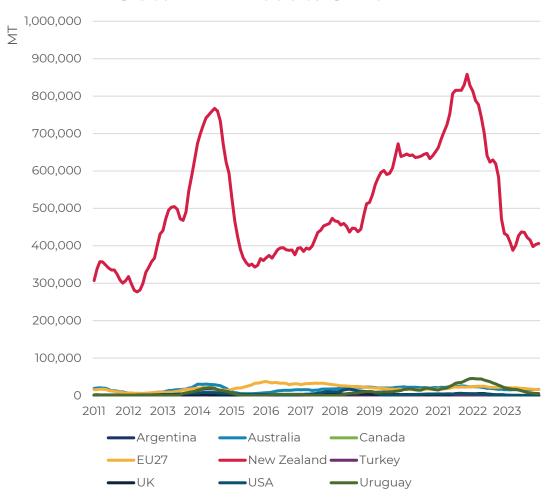
2023

Nov

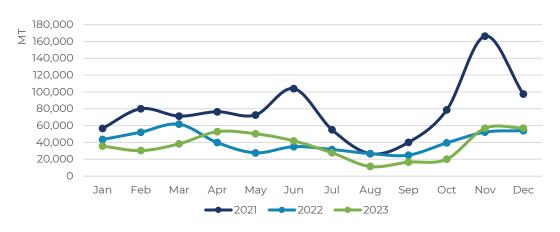
Dec

Whole Milk Powder - China

Global WMP Trade to China+HK



Global WMP Trade to China+HK

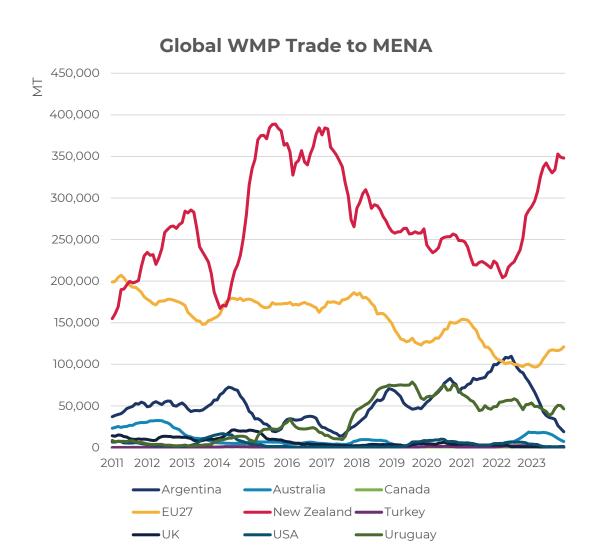


Global WMP Trade to China+HK

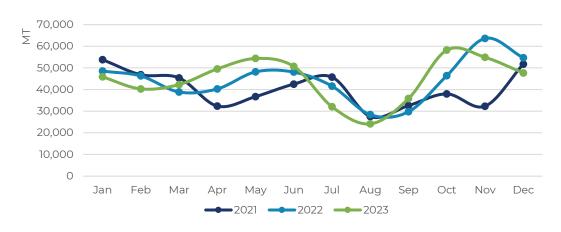




Whole Milk Powder – MENA



Global WMP Trade to MENA

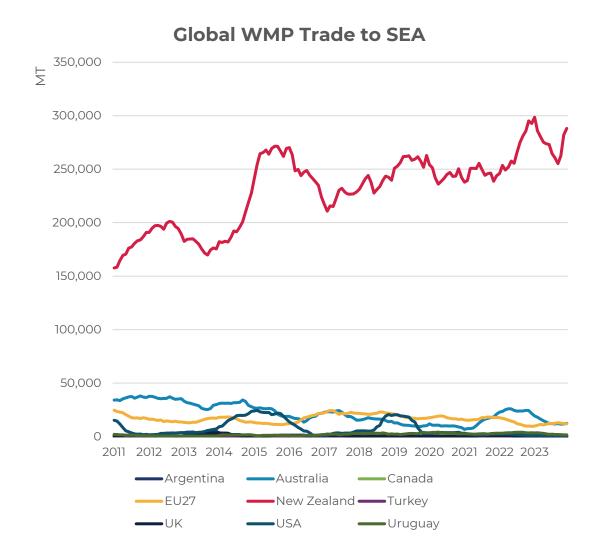


Global WMP Trade to MENA





Whole Milk Powder - Southeast Asia



Global WMP Trade to SEA



Global WMP Trade to SEA







Reach Out for Questions or Comments

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