International Demand Analysis

Data Through:
May 2023
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 forward-looking 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:
  - *wloux@usdec.org*
  - *scain@usdec.org*
Global Dairy Demand Market Commentary

KEY TAKEAWAYS

• May was arguably the strongest month for global dairy demand in over a year – admittedly a relatively low bar to clear. Global trade increased by 5% year-over-year (YoY) on a milk solids equivalent basis (MSE), and, in volume terms, May was the second-highest month in the last year and a half.

• A strong finish to New Zealand’s 2022/23 season is boosting available supplies to the international market with exports from the Oceania producer up 39% in May (+78,101 MT MSE), continuing their recent stretch of growth.

• At the same time, we are seeing some positive demand signals. Chinese demand continued its rebound, climbing 19% in aggregate (+30,437 MT MSE). MENA performed solidly again (+20%, +28,446 MT MSE). And South Asia, which had been lagging, is experiencing a resurgence (+78%, +16,620 MT MSE) as Sri Lanka returned to the global market and India increased its lactose purchases.

Global Milk Solids Trade

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>May Standout Markets</td>
<td>+5.2%</td>
<td>+0.9%</td>
<td>-1.4%</td>
<td>+0.3%</td>
</tr>
</tbody>
</table>

May Standout Markets

<table>
<thead>
<tr>
<th>Region</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH AMERICA</td>
<td>+20,020 MT</td>
<td>+69%</td>
</tr>
<tr>
<td>CHINA</td>
<td>+30,437 MT</td>
<td>+19%</td>
</tr>
<tr>
<td>SOUTHEAST ASIA</td>
<td>-23,556 MT</td>
<td>-13%</td>
</tr>
<tr>
<td>MENA</td>
<td>+28,446 MT</td>
<td>+20%</td>
</tr>
</tbody>
</table>

Despite the improved trade figures in May, it’s still fair to characterize global demand as subdued. China, while rebounding, still lags 2021 volumes by 21% through May, and Southeast Asia remains quiet (-13%, -23,556 MT MSE in May; -14% -129,749 MT YTD). Demand in Latin America and MENA remain in good shape, but with South Asia and Sub-Saharan Africa also well below trend, global dairy trade still lags the long-term trendline by 6%, or over 660,000 MT MSE, on an annualized basis. It will take several more months like May to get back to trend.

ADDITIONAL NOTES

Source: NMPF/USDEC, TDM
# Global Dairy Demand Market Commentary

## LOOKING AHEAD

- **With five months of data available in 2023, the global demand picture is becoming clearer. If 2022 was the year of contraction, 2023 is proving the year of stabilization.** Optimistically, as we near the fourth quarter (or more likely 2024), we’ll see demand accelerate as global inflation eases and economies improve.

- **Latin America’s resiliency in the face headwinds remains a bright spot for the U.S. industry, and we are optimistic that trend should continue.** The incredibly strong Mexican peso combined with limited local milk production are likely to keep demand from the U.S.’ southern neighbor running well above trend.

- **China remains the largest question mark in the global market.** Even the country’s demand improves for most products (cheese, SMP, butter), we anticipate the country’s imports of low-protein whey and lactose to trend in the other direction and WMP and fluid milk continue to run sideways. Both factors are likely to slow the global recovery and increase competition with NZ.

### U.S. Milk Solids Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>-12.0%</td>
<td>-3.1%</td>
<td>+4.3%</td>
<td>+1.4%</td>
</tr>
</tbody>
</table>

### EU Milk Solids Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>+1.4%</td>
<td>+2.2%</td>
<td>-2.9%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

### NZ Milk Solids Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZ</td>
<td>+39.2%</td>
<td>+12.6%</td>
<td>+2.2%</td>
<td>+0.7%</td>
</tr>
</tbody>
</table>

## ADDITIONAL NOTES

The long-term decline in Australia’s milk production is clearly having an impact on their place in the global market. Not only are exports from the country declining in 2023 (YTD SMP and cheese exports from Australia are down 29% and 22%, respectively), but trade to Australia is also rising. Global cheese trade to Oceania market has grown by 26% year-to-date with increased volume from New Zealand, the US and the EU as local manufacturers look abroad to satisfy growing local consumption and processing needs.

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1. U.S. Milk Solids Exports reflect trade data aggregated from 6-digit HS codes (global HS codes are harmonized at the 6-digit level). This number will differ slightly from U.S. Milk Solids Exports reported in our U.S. Trade Data Release which takes a more granular look at U.S. specific, 10-digit HS codes.

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Source: NMPF/USDEC, TDM

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Executive Summary: May 2023

Global Total Solids Trade to World

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

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

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

Source: NMPF/USDEC, TDM
Global Dairy Trade
Select Markets – Month of May 2023, Milk Solids Equiv.

- MENA: +20% (+28,446 MT)
- China: +19% (+30,437 MT)
- SEA: -13% (-23,556 MT)
- ROW: +6% (+10,073 MT)
- S. Am: +69% (+20,020 MT)
- UK: -15% (-8,429 MT)
- EU27: +1% (+313 MT)
- Japan: -3% (-1,001 MT)
- SSA: -21% (-11,921 MT)
- U.S.: -13% (-4,477 MT)
- Mexico: +19% (+9,601 MT)
- S. Am: +69% (+20,020 MT)

Note: Size of bubble denotes total imports
Source: USDEC, Trade Data Monitor

Source: NMPF/USDEC, TDM

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Average Global Export Price

Average Dairy Export Value to World, MSE

Source: NMPF/USDEC, TDM
Cheese
Cheese Market Commentary

KEY TAKEAWAYS

- Global cheese trade outperformed expectations in May, climbing 3% (+5,771 MT) off a resurgent China and the steady reliability of Latin America. Despite the questions surrounding China’s WMP and whey demand, cheese trade to China continued its ascent, climbing 57% for the month (+6,263 MT). New Zealand shipped substantially more mozzarella to China, likely supported by the foodservice demand returning.

- We continue to be surprised by the absence of a European cheese surge, growing just 2% in May (+2,318 MT). According to the data, the cheese that the EU is moving is still being sold at a relatively high price except some notable exceptions (mozz to Korea, cheddar to the UK, gouda to Chile and Japan). Growth in low-priced commodity cheeses have been countered by declining specialty cheese sales to the UK and the US, likely as consumers trade down the value chain.

Global Cheese Trade

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheese Trade</td>
<td>+2.6%</td>
<td>+0.7%</td>
<td>-0.3%</td>
<td>+1.3%</td>
</tr>
</tbody>
</table>

May Standout Markets

- **CHINA+HK**: +57% (+6,263 MT)
- **MEXICO**: +17% (+1,933 MT)
- **SOUTHEAST ASIA**: -7% (-957 MT)
- **SOUTH AMERICA**: +28% (+2,739 MT)

ADDITIONAL NOTES

We mentioned in the executive summary that Australia is becoming increasingly reliant on cheese imports. While much of the focus here in the US has understandably been on cheddar cheese (Australian cheddar imports are up 40% YOY through May with the US holding as the largest supplier), mozzarella demand has also been taking off with imports of fresh mozzarella (not grated or powdered) nearly doubling (+184%, +2,703 MT) with the additional volume supplied primarily by New Zealand and the US.

Source: NMPF/USDEC, TDM
Cheese Market Commentary

**LOOKING AHEAD**

- Unlike last year where two major markets held back demand growth (China, Ukraine), **small declines in demand spread out across multiple markets is now keeping a lid on expansion in 2023**. Some of the large processed cheese buyers are quiet (Japan, MENA, SEA – likely sitting on heavy inventories) at the same time Korea appears saturated with mozzarella and premium cheese trade between the US, UK and Europe is declining as consumers prioritize essentials.

- Still, with Latin America and China leading the way alongside Ukraine reopening and Australian milk production declining, cheese trade is holding onto slight growth in 2023. **If the global economy picks up in 2024, we are optimistic about rapid growth... next year.**

### U.S. Cheese Exports

<table>
<thead>
<tr>
<th>Metric</th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>-18.4%</strong></td>
<td>-3.9%</td>
<td>+4.5%</td>
<td>+1.5%</td>
<td></td>
</tr>
</tbody>
</table>

### EU Cheese Exports

<table>
<thead>
<tr>
<th>Metric</th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>+2.0%</strong></td>
<td>0.0%</td>
<td>-3.3%</td>
<td>-1.1%</td>
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</tr>
</tbody>
</table>

### NZ Cheese Exports

<table>
<thead>
<tr>
<th>Metric</th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>+53.7%</strong></td>
<td>+18.7%</td>
<td>+8.3%</td>
<td>+2.7%</td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL NOTES**

U.S. spot cheese prices are at a significant discount compared to EU & NZ cheese. As such, we believe that Q3 US exports will improve with more competitive prices. However, it is also true that the sharp carry in the futures curve is making Q4 orders difficult to secure. And with weaker demand dynamics in Asia as well as heavy inventories, particularly in Japan and Korea, a dramatic surge in U.S. cheese exports to East Asia is unlikely to materialize in the near future. And yet, provided Mexican consumption remains elevated and the peso’s strength holds, we expect U.S. cheese exports south of the border to reach record heights.

Source: NMPF/USDEC, TDM
Global Overview: Cheese

Global Cheese Trade to World

Source: NMPF/USDEC, TDM

International Demand Analysis
Global Overview: Cheese – Last 12 Months

Source: NMPF/USDEC, TDM
Trade Flows: Cheese

Global Cheese Trade to World

Source: NMPF/USDEC, TDM
Global Cheese Trade to Mexico

Source: NMPF/USDEC, TDM
Japan

Global Cheese Trade to Japan

Source: NMPF/USDEC, TDM
Australia

Global Cheese Trade to Australia

Source: NMPF/USDEC, TDM
Global Cheese Trade to MENA

Source: NMPF/USDEC, TDM
NFDM/SMP
Global NFDM/SMP is rebounding sharply in 2023 even as market prices suggest demand, particularly in Southeast Asia, remains less than enthusiastic.

Global NFDM/SMP trade jumped another 9% in May (+17,399 MT) thanks to active buying by MENA (+42%, +15,143 MT) and Mexico (+30%, 8,942 MT). China’s recovery paused in May (-5%, -1,154 MT) but gratefully remains above the low-ebb of last year (+33%, +39,366 MT YTD). Unfortunately, Southeast Asia remains the primary NFDM/SMP market lagging in 2023 (-18%, -12,677 MT in May; -19%, -69,026 MT YTD).

Global trade still has a ways to go before returning to the long-term trend (roughly 200,000 MT), but it is moving in the right direction again. Still, plenty of questions about the NFDM/SMP’s trajectory remain.

Examining average export values we’re seeing further convergence of international prices, hovering just below $3,000/MT for each of the major exporters, close to current spot prices (as shown on page 9 which don’t account for added export costs). Why this matters is that the trade data is effectively reflecting demand near the bottom of global prices, which may help explain the sharp increase in purchasing from MENA as well as other markets looking to secure product at affordable prices.

Source: NMPF/USDEC, TDM
NFDM/SMP Market Commentary

LOOKING AHEAD

• Ultimately, for NFDM/SMP markets to sustainably rally, Southeast Asian demand must rebound (and China WMP to improve but that’s another story...). So, what’s driving the weakness in SEA SMP?

• We have two primary theories: First, demand for FFMP is reduced among lower income populations both in the region and globally (SSA, South Asia, etc.) due to economic hardship. That in turn is reducing import needs from blenders in the region, in particular Malaysia, where demand is down 28% (-33,527 MT) over the past 12 months. Second, a larger percentage of SEA consumers’ incomes are spent on food compared to other large dairy markets. According 2021 data from USDA, in the Philippines, roughly 40% of household income is spent on food consumption compared to 26% in Mexico or 7% in the US. Meaning, with higher prices across the economy, consumers have less to spend on food, particularly foodstuffs that are not integrated as essentials to the diet.

• Therefore, for demand to improve in the region, global inflation will need to cool and economies to recover across multiple markets.

U.S. NFDM/SMP Exports

-2.7%  May YoY

-1.7%  YTD, Ending May

-3.4%  Last 12-Months, Ending May

-1.1%  3-Year CAGR

EU NFDM/SMP Exports

+19.5%  May YoY

+27.0%  YTD, Ending May

+9.6%  Last 12-Months, Ending May

+3.1%  3-Year CAGR

NZ NFDM/SMP Exports

+48.6%  May YoY

+45.3%  YTD, Ending May

+27.3%  Last 12-Months, Ending May

+8.4%  3-Year CAGR

ADDITIONAL NOTES

Both the EU and New Zealand managed to grow SMP exports (+20% and +49%, respectively for May) thanks to improved milk production in both regions. The EU’s May exports concentrated on the Middle East-North Africa (+62%, +13,760 MT) with reduced volume to their other key markets: SEA (-13%, -2,064 MT), China (-23%, -1,850 MT) and Sub-Saharan Africa (-11%, -726 MT). New Zealand also focused on MENA (+207%, +5,867 MT) but managed to expand market share in SEA (+13%, +1,681 MT) and China (+43%, +2,791 MT).

Source: NMPF/USDEC, TDM
Global Overview: NFDM/SMP

Global NFDM/SMP Trade to World

Source: NMPF/USDEC, TDM
Global Overview: NFDM/SMP

Source: NMPF/USDEC, TDM
Global Overview: NFDM/SMP – Last 12 Months

Source: NMPF/USDEC, TDM
Global NFDM/SMP Trade to World

Source: NMPF/USDEC, TDM
Mexico

Global NFDM/SMP Trade to Mexico

Source: NMPF/USDEC, TDM
Southeast Asia

Global NFDM/SMP Trade to SEA

Source: NMPF/USDEC, TDM
China

Global NFDM/SMP Trade to China+HK

Source: NMPF/USDEC, TDM
Source: NMPF/USDEC, TDM
Whey Products
(0404.10)
**Whey Products (0404.10) Market Commentary**

**KEY TAKEAWAYS**

- With whey for feed demand in China trending lower on the back of poor pork margins, **global whey trade under the HS code 0404.10 (primarily sweet whey and permeate) declined by 11% in May (-15,210 MT).**

- When converted into milk solids, **low-protein whey has declined more than any other dairy product so far this year.**

- **China accounted for the largest decline in May (-15%, -7,277 MT) followed by Southeast Asia (-9%, -3,725 MT).** Sub-Saharan Africa, a much smaller market by volume (importing just 38,219 MT in 2022 compared to China’s 537,445 MT or SEA’s 416,977 MT), has also struggled over the past several months. In May, the region purchased less than half the amount they did in 2022 (-64%, -2,655 MT), continuing the trend of demand weakness.

**Global Whey (0404.10) Trade**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Change</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>May YoY</td>
<td>-11.1%</td>
<td></td>
</tr>
<tr>
<td>YTD, Ending May</td>
<td>-5.9%</td>
<td></td>
</tr>
<tr>
<td>Last 12-Months, Ending May</td>
<td>-1.8%</td>
<td></td>
</tr>
<tr>
<td>3-Year CAGR</td>
<td>+2.2%</td>
<td></td>
</tr>
</tbody>
</table>

**May Standout Markets**

- **China** (-15%, -7,277 MT)
- **South Asia** (+59%, +1,509 MT)
- **EU27** (-36%, -1,559 MT)
- **Southeast Asia** (-9%, -3,725 MT)

**ADDITIONAL NOTES**

The vast majority of the low-protein whey (prices suggest it’s primarily sweet whey) exported to Sub-Saharan Africa is supplied by the EU though some US and Turkish supplies are destined for the region as well. South Africa, Nigeria, and Ghana – the three largest whey markets in SSA – have all pulled back sharply in 2023: South Africa by 53% YTD (-3,329 MT YTD), Nigeria by 70% (-2,629 MT) and Ghana by 77% (-3,213 MT). Prices today are lower than last year, and supplies are plentiful, the cause is likely demand erosion caused by economic headwinds limiting spending power.

Source: NMPF/USDEC, TDM
Whey Products (0404.10) Market Commentary

LOOKING AHEAD

• Positively, Chinese pork prices appear to be finding a floor just above 20 ¥/kg. Unfortunately, 20 ¥/kg is still well below the prices that typically foretold a pork production surge (and therefore whey import surge). For context, during African Swine Fever pork prices hovered reliably above 50 ¥/kg. Even just last year, pork prices surpassed 40 ¥/kg. If you want to look further back to 2016, when Chinese whey for feed imports first took off to support their production expansion, the pork price within China was round 30 ¥/kg.

• All this to say, pork prices, while stabilizing, will need to rally in order to see whey markets rebound. Additionally, given that the trade data lags as well, we anticipate China’s whey imports to struggle through the end of the year.

U.S. Whey Exports

-28.9% May YoY
-12.7% YTD, Ending May
+5.8% Last 12-Months, Ending May
+1.9% 3-Year CAGR

EU Whey Exports

+2.2% May YoY
+3.0% YTD, Ending May
-1.2% Last 12-Months, Ending May
-0.4% 3-Year CAGR

NZ Whey Exports

+68.2% May YoY
+8.8% YTD, Ending May
-7.9% Last 12-Months, Ending May
-2.7% 3-Year CAGR

ADDITIONAL NOTES

The U.S. has borne the brunt of China’s pullback in whey demand. The EU, while not growing in May either, was only down 2% (-386 MT) compared to US low protein whey shipments falling by a third (-34%, -8,850 MT). With Southeast Asian demand struggling as well (-9%, -3,725 MT from all suppliers in May; -32%, -4,655 MT from the U.S.), U.S. whey exports are likely to lag prior year volumes in 2023 even as Mexico and South America are performing relatively well.

Source: NMPF/USDEC, TDM
Global Overview: Whey (0404.10)

Global Whey (0404.10) Trade to World

Source: NMPF/USDEC, TDM
Global Overview: Whey (0404.10) – Last 12 Months

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

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

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

Source: NMPF/USDEC, TDM
Trade Flows: Whey Products

Global Whey (0404.10) Trade to World

Source: NMPF/USDEC, TDM
China

Global Whey (0404.10) Trade to China+HK

Source: NMPF/USDEC, TDM
Southeast Asia

Global Whey (0404.10) Trade to SEA

Source: NMPF/USDEC, TDM
WPC80+ (3502.20) Market Commentary

KEY TAKEAWAYS

- Global WPC80+ trade recorded its strongest month of growth in over a year, climbing 9% (+1,137 MT) with an expansion in U.S. and New Zealand exports (+17%, +945 MT and +38%, +628 MT, respectively).
- Demand improvement was relatively widespread in May. South America (namely Brazil) led the way (+112%, +572 MT) followed by China (+18%, +476 MT), Canada (+44%, +330 MT) and the EU (+20%, +291 MT).
- On the other side of the ledger, WPC80+ trade to the U.S. fell sharply (-71%, -689 MT), likely driven by pricing, as did purchases by Korea (-44%, 223 MT), likely as many of the new products launched in 2021 have left shelves following the price spike last year.

Global WPC80+ Trade

<table>
<thead>
<tr>
<th>Metric</th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>+8.6%</td>
<td>-2.5%</td>
<td>-7.4%</td>
<td>+5.3%</td>
<td></td>
</tr>
</tbody>
</table>

May Standout Markets

- China: +476 MT (+18%)
- EU27: +291 MT (+20%)
- South America: +572 MT (+112%)
- South Asia: +156 MT (+17%)

ADDITIONAL NOTES

Despite the run of weaker exports in 2022, the U.S. still accounts for 44% of global WPC80+ exports with the EU27 in a distant second (29% of global trade over the last 12 months). Looking ahead, we anticipate the U.S. will only further grow its lead. We estimate the new cheese capacity currently announced will add enough liquid whey to produce about 37,000 MT of WPC80 by 2026 (though not all of the production will be 80 as several plants can flex between 80 and WPI).

Source: NMPF/USDEC, TDM
## WPC80+ (3502.20) Market Commentary

### LOOKING AHEAD

- **Global WPC80 and WPI prices remain relatively affordable to international buyers** with current spot prices reportedly sitting at around $6,000/MT for WPC80 and $8,000/MT for WPI. With new 80 & WPI capacity in Texas starting up later this year, we anticipate prices to remain attractive and supplies to be available for international buyers.

- The larger question for demand is whether we see new product launches featuring dairy proteins or if end users prefer to wait until the economy improves given that consumers typically cut back on trial purchases when purchasing power is limited. We anticipate it is likely to be more the latter. As such, 2023 will likely consist of end users with existing products on the market and infant formula manufacturers refilling depleted inventories, potentially limiting global trade growth even as we still anticipate a rebound.

### U.S. WPC80+ Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
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<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
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<tbody>
<tr>
<td><strong>+17.1%</strong></td>
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<td></td>
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<tr>
<td><strong>+14.1%</strong></td>
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<tr>
<td><strong>+8.5%</strong></td>
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<tr>
<td><strong>+2.8%</strong></td>
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### EU WPC80+ Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
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<th>3-Year CAGR</th>
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<tbody>
<tr>
<td><strong>-4.7%</strong></td>
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<tr>
<td><strong>-14.7%</strong></td>
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<tr>
<td><strong>-16.4%</strong></td>
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<tr>
<td><strong>-5.8%</strong></td>
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### NZ WPC80+ Exports

<table>
<thead>
<tr>
<th></th>
<th>May YoY</th>
<th>YTD, Ending May</th>
<th>Last 12-Months, Ending May</th>
<th>3-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>+38.4%</strong></td>
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<tr>
<td><strong>+1.7%</strong></td>
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<tr>
<td><strong>-12.3%</strong></td>
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</tr>
<tr>
<td><strong>-4.3%</strong></td>
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### ADDITIONAL NOTES

Successful investment in the mainstreaming protein claims in Japan by local companies – with support from USDEC and the U.S. dairy industry, it must be said – has helped the market maintain strong demand even as economic headwinds have dented most other imports. Even after prices spiked in 2022, Japan’s WPC80+ purchases still climbed by 7% in 2022 and have only retreated slightly in 2023 (even returning to growth in May). Additionally, the U.S. is the primary supplier benefitting, accounting for the majority WPC80+ shipments to the country.
Global Overview: WPC80+

Global WPC80+ Trade to World

Source: NMPF/USDEC, TDM
Global Overview: WPC80+

Global WPC80+ Trade to World

Source: NMPF/USDEC, TDM
Global Overview: WPC80+ – Last 12 Months

Global WPC80+ Trade by Destination: Last 12 Months ending May 2023

Source: NMPF/USDEC, TDM

International Demand Analysis

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

Global WPC80+ Trade to World

Source: NMPF/USDEC, TDM
China

Global WPC80+ Trade to China+HK

Source: NMPF/USDEC, TDM
Korea

Global WPC80+ Trade to Korea

Source: NMPF/USDEC, TDM
Other Dairy Products
Global Overview: Lactose

Key Takeaways

- Lactose trade fell slightly in May, as exports to key markets such as Southeast Asia (-28%, -3,942 MT) and New Zealand (-47%, -4,571 MT) dropped significantly. Decreased lactose trade to these areas was enough to offset the significant jump in exports to China (+41%, +5,553 MT) and South Asia (+46%, +2,421 MT) in May. Positively, lactose exports to Latin America remains elevated. Mexico (+45%, +1,105 MT) and South America (+32%, +780 MT) both grew year-over-year.

- Lactose prices are nearing historic lows, which should support global trade volumes even as demand clearly faces headwinds.

Source: NMPF/USDEC, TDM
Lactose – Southeast Asia

Global Lactose Trade to SEA

Source: NMPF/USDEC, TDM
Global Overview: Butter

**KEY TAKEAWAYS**

Global Butter Trade

<table>
<thead>
<tr>
<th>+11.3%</th>
<th>+2%</th>
<th>+4.8%</th>
<th>+1.3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>May YoY</td>
<td>YTD, Ending May</td>
<td>Last 12-Months, Ending May</td>
<td>3-Year CAGR</td>
</tr>
</tbody>
</table>

- Butter trade grew in May, with exports up almost across the board. China’s demand remains volatile but is still growing (+61%, +3,605 MT in May). Additionally, exports to Australia (+70%, +1,422 MT) and the Middle East/North Africa (+10%, +924 MT) helped support markets as well. Exports to the EU were also surprisingly strong (+42%, +1,012 MT).

- On the flip side, the UK (-38%, -1,828 MT) and the US (-26%, -1,237 MT) saw butter exports decline. Even after a decline in May, U.S. butter imports from Europe and New Zealand are still running well above.

Source: NMPF/USDEC, TDM
Butter – MENA

Global Butter Trade to MENA

Source: NMPF/USDEC, TDM

International Demand Analysis
Butter – China

Global Butter Trade to China+HK

Source: NMPF/USDEC, TDM

International Demand Analysis | 61
Global Overview: Whole Milk Powder

KEY TAKEAWAYS

Global WMP Trade

+37.2%  +3.1%  -7.9%  -3.1%
May YoY  YTD, Ending May  Last 12-Months, Ending May  3-Year CAGR

- Whole milk powder rebounded dramatically in May with trade to China finally growing (+82%, +23,543 MT for the month). Given the lack of GDT activity from North Asia recently, we are skeptical that China’s road to recovery will be smooth sailing. But regardless, growth in China’s WMP demand, while still well below trend, is welcome news for markets.

- Outside of China, WMP trade to MENA (+13%, +6,553 MT) and South America (+221%, +16,450 MT) also excelled. Lower trade volumes to Southeast Asia (-9%, -2,479 MT) and Sub-Saharan Africa (-11%, -1,618 MT) failed to dent global figures.

Source: NMPF/USDEC, TDM
Whole Milk Powder – China

Global WMP Trade to China+HK

Source: NMPF/USDEC, TDM
Reach Out for Questions or Comments

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