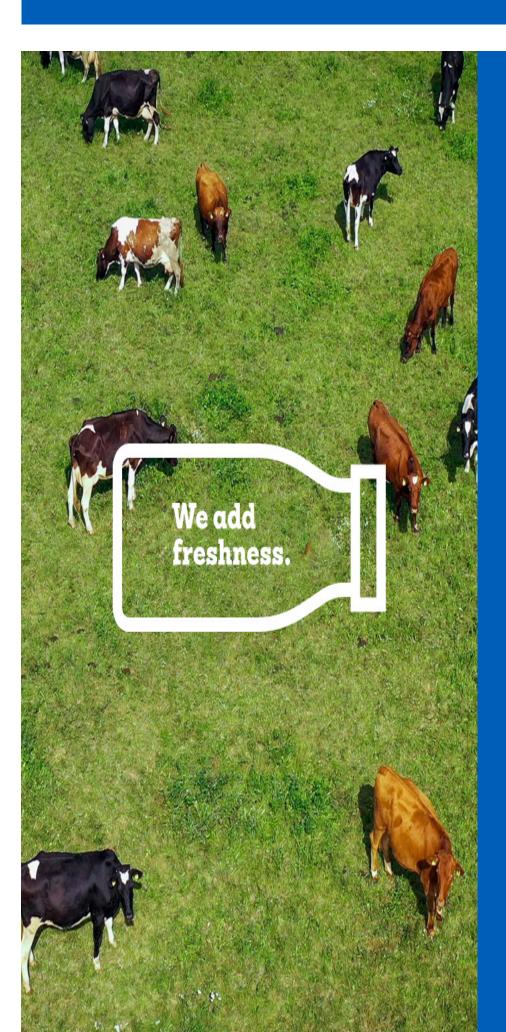


HOMIZONS.

Our insights on Today's Global Dairy Business





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Global Dairy Dynamics: Challenges and Opportunities Ahead

In this edition of *Hoogwegt Horizons*, we bring you a comprehensive view of the global dairy market as we enter a new financial year with renewed focus. This month, Rick van Bergen, our Supply Chain Planner, shares his expert insights in our *World Comment* column. We explore the ongoing challenges to global milk production, where the dairy industry finds itself at a critical crossroad. Diseases and health risks in dairy herds are posing significant threats, but strong margins are fueling a battle that could still see production growth in some regions.

Our team dives deeper into key product trends, starting with our latest outlook on skimmed milk powder. With shifts in demand and supply chains, we break down what lies ahead for this crucial commodity. We also provide updates on US whey and butter markets, where pricing and demand trends continue to evolve. In the cheese sector, we analyze how the US market is responding to changing global appetites and production levels.

Lastly, we offer a snapshot of Chinese milk production, examining the forces driving local production amidst shifting consumer trends and import patterns.

As always, Hoogwegt remains committed to keeping you informed with valuable insights to help you navigate the global dairy landscape. Enjoy the read!

As always, Hoogwegt Horizons Editorial Team

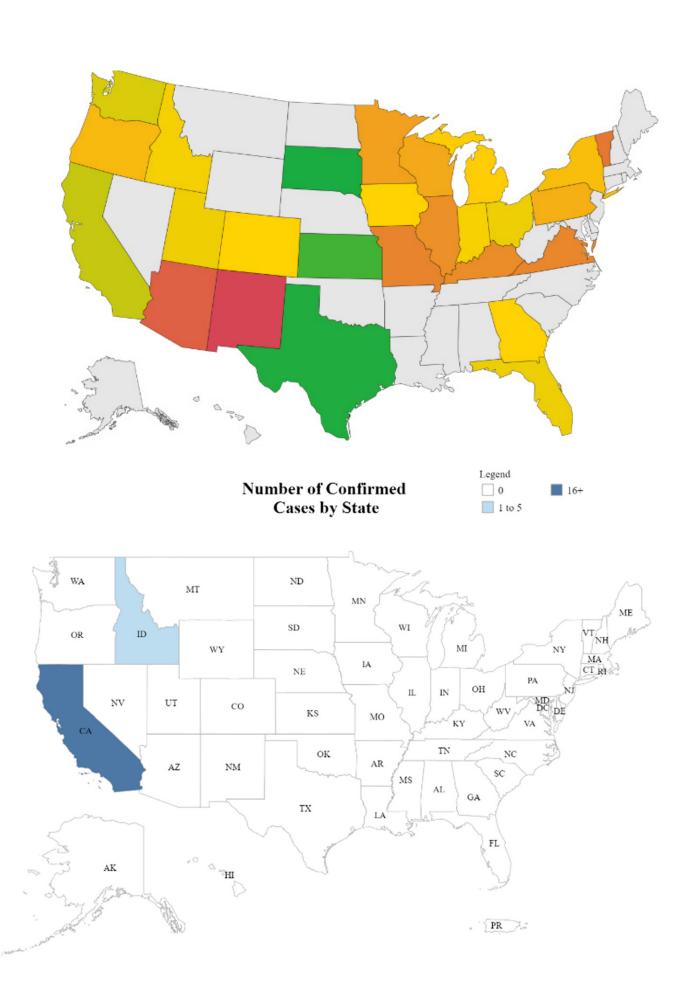
Market Direction Milk Production

Overall farmers margins are rather strong. With a pretty good milk pay out for farmers and lower feed costs, there is an incentive to increase global production. On the short term, California is facing Bird Flu worries and Europe is waiting for Blue Tongue Disease to ease. Both limiting the potential growth in milk production. In the Southern Hemisphere, New Zealand had a strong start of the season.

US Milk production: Bird Flu worries in California.

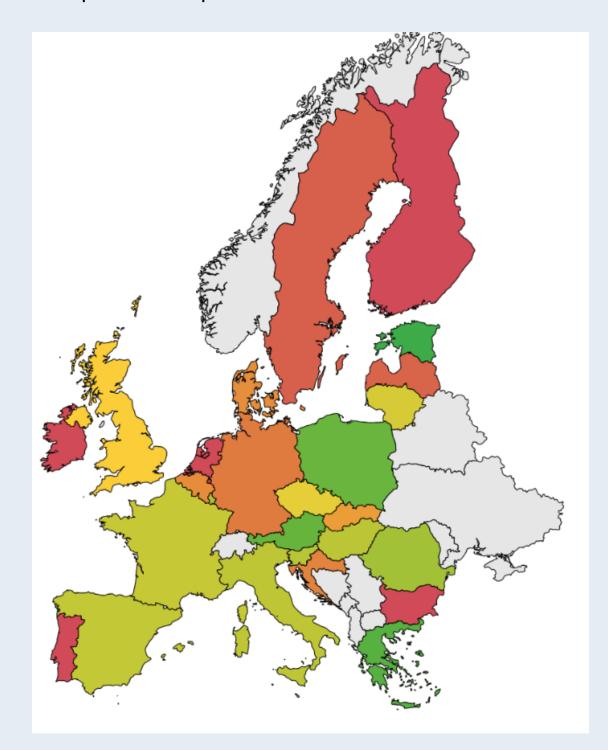
August registered a -0.07% dip in US headline milk collections but again, from the solids perspective production sees YoY growth. This marked the 14th consecutive month of year-on-year declines in US milk production. Upper Midwest states showing decreases compared to 2023 while places in the West grew.

- Milk production per cow experienced an increase of 0.36% compared to August 2023, while the herd size is still around 0.43% lower.
- Cow slaughter is still low, (YTD 324.5k less cows slaughtered) and has been low since September 2023.
- US Milk Fat: levels in August stayed above the 4% at 4.07%, which is still pretty darn good.
- US Milk Protein: levels for August registered 3.22%, above the 3.19% from August 2023.
- 2024 outperformed 2023 in every month, for both fat and protein levels.
- According to USDA's HPAI Confirmed Cases in Livestock (right) there is an
 increase on Bird Flu cases in California, having a negative impact on milk production.
 At the time of writing California's cases are up to 79 since first detection in late August.
 California's case count now represents 28% of positive tests across entire country.



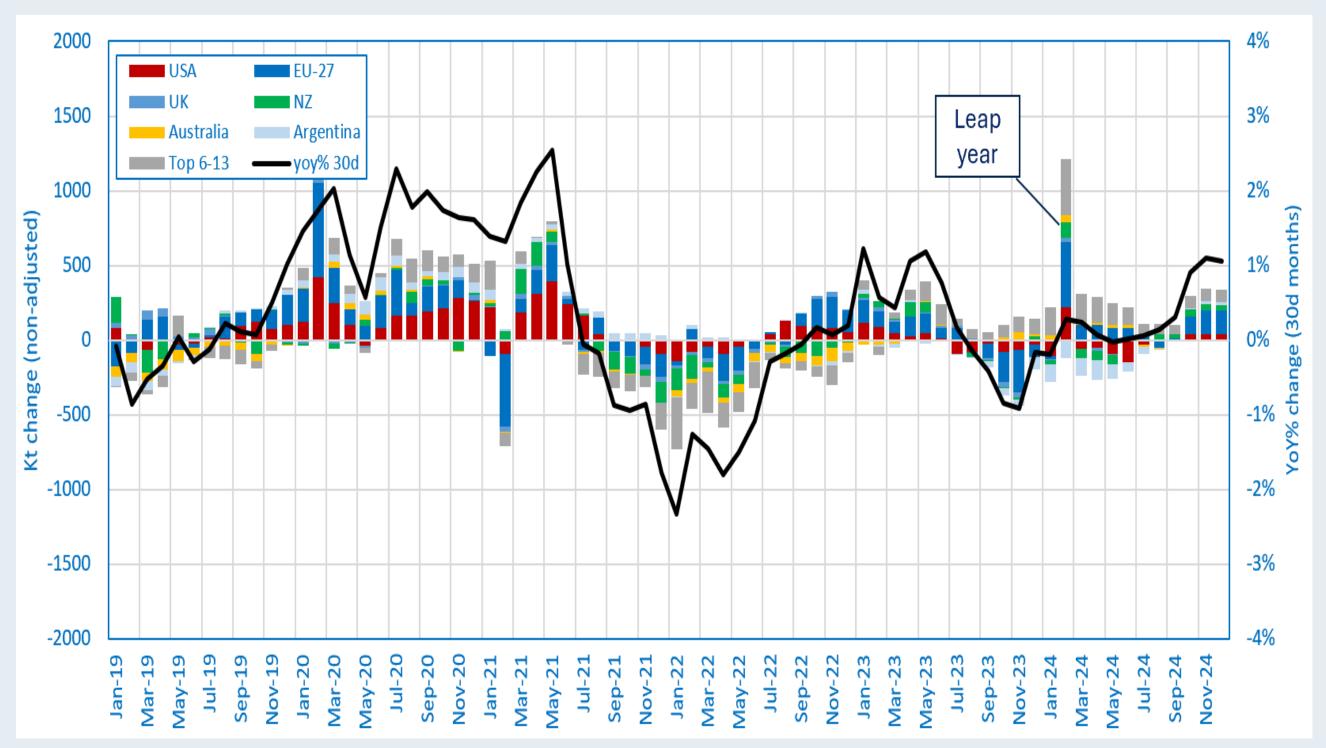
EU Milk production: a weak to neutral Q3, mild growth in Q4? NW Europe has similar concerns on the short term: a disease that has a negative impact on milk production. The mosquito that spreads Blue Tongue becomes inactive when temperatures drop. Margins for farmers are profitable, with an average 46+ cents farm gate price and the mentioned 20% lower feed costs compared to last year.

- Protein levels improved to neutral in July. Fat levels remain weak.
- Spreading of cases of Blue-tongue disease in NW Europe has a negative effect on milk production.
- We estimate a rough -2 percent point for the BeNeLux, Germany, Denmark and France. Given that those countries provide for more than 50%, a Blue Tongue reduction of 1 percent point for Europe as a whole for August, September (still to be reported) seems a ballpark assumption.



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Top Exporters Milk Production



30 Days Average Pasture Growth Index in New Zealand



→ continuation

New Zealand milk production

In the last Horizons we already turned more positive on New Zealand and while NZ still is a weather dependent casino for milk production, they indeed had a positive start of the season. It was more positive than expected though.

New Zealand milk production for July 2024 was up 8.4% year-on-year (up 9.2% on a milksolids basis), August added to the positivity with a 9.1% increase compared to last year, while solids continued to be even stronger.

- Margin: Pay-out for farmers has improved compared to a year ago.
- Slaughter: June slaughter was low (-15% YoY), erasing the somewhat stronger slaughter in months prior. July and August were even lower; with respectively -29% YoY and -37% YoY.

Dairy Deep Dive What's Happening To SMP?

SMP/NFDM - Market review:

- In the past months we witnessed a range bound SMP market with strong competition between US, EU and NZ and a price range between \$2600 and \$2800 per ton.
- This market was painted by low availability of product in the US and EU, and strong market shares from NZ on weak to mediocre global demand in Q2 and struggling domestic consumption.
- Milk fat saw strong price increases, but the protein levels were better and demand was weaker compared to the fat side of milk. Farmers see a higher milk price but production and stocks in the Northern Hemisphere remained low.

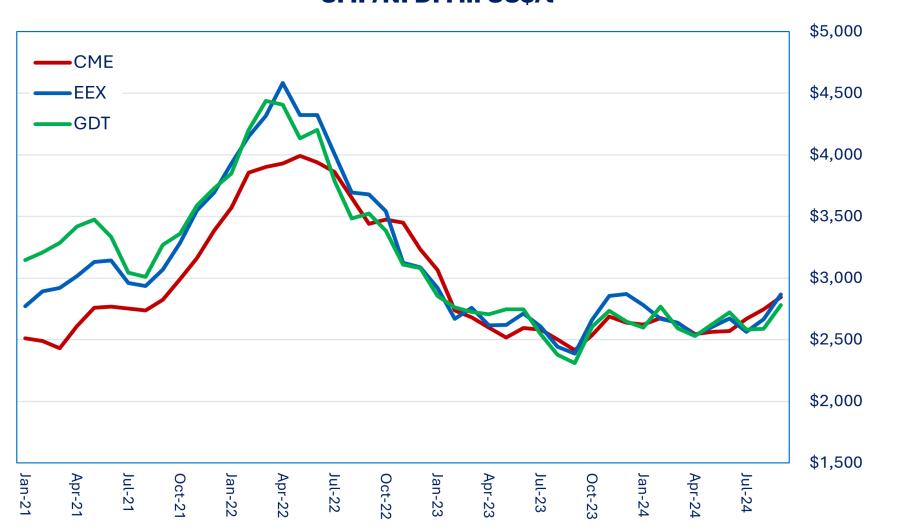
SMP Supply summary:

- We're past the H1 SMP production struggle in the Northern Hemisphere.

 Better milk production and valorization in Q4 and Q1 might lead to closer to YoY-neutral production, also because of the weak comparable months last year. Stocks, both in Europe and in the US are reported to be low.
- US: Note that most investments are in cheese plants, some replace older cheese plants but some increase the amount of milk to cheese from 2025 onwards. California struggles with Bird Flu.
- → EU: SMP+Butter valorisation is close to cheese (Gouda). Mozzarella still has a better valorisation, Cheddar worse.
- NZ's capacity to produce SMP is capped due to limitations in butter and AMF production, but we are expecting them to continue the strong production compared to two seasons ago.
- → Valorisation is favourable for SMP+Butter/AMF in NZ.

SMP/NFDM In US\$/t





SMP Demand summary:

After a weaker Q2, import demand is to develop overall neutral in our expectations, with increases in Asia (China passed the bottom in milk growth and tightening supplies, Indonesian School milk programme, etc.) but some other regions might see fair demand but not break their record strong demand from last year. Ramadan (End of Feb.) might give stronger early Q4 demand. Domestic consumption in the US struggles and is at a YTD loss. Domestic consumption in Europe is neutral at best.

Say Cheese!

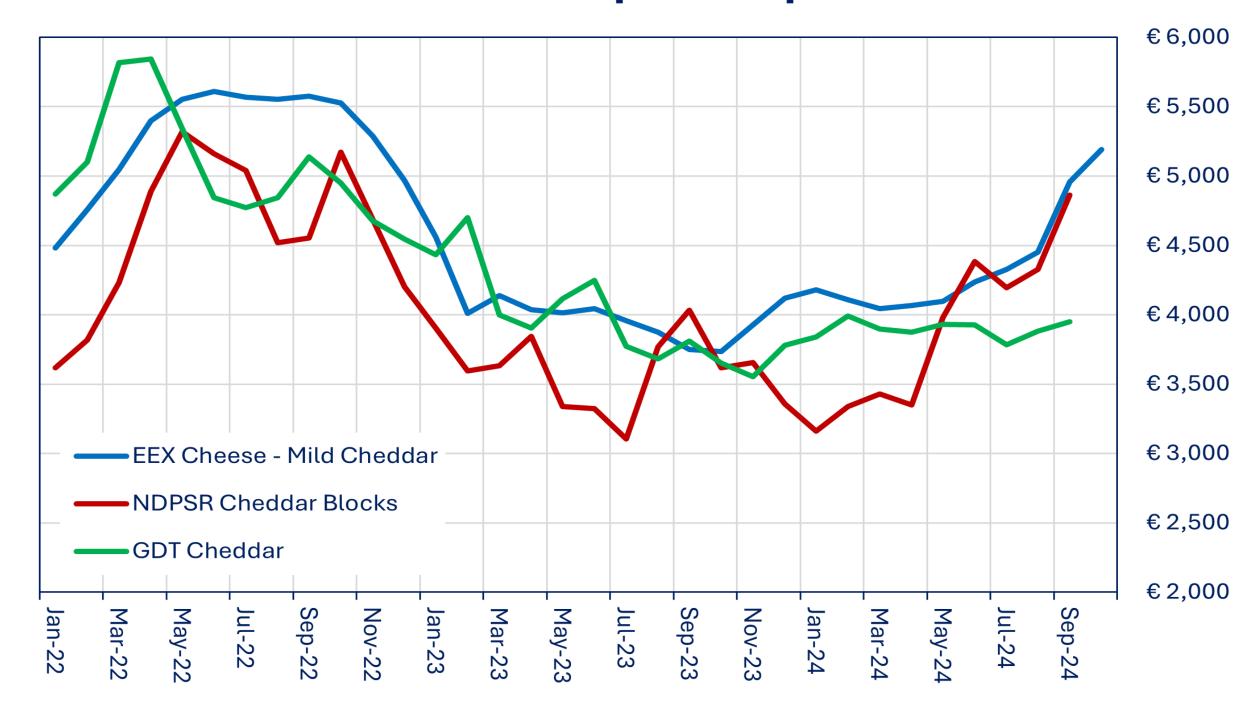
Cheese production:

In Europe cheese production is still going strong. While milk production was struggling, cheese output saw growth.

French milk production saw growth, and a strong increase in July Cheese production (+8.5Kt or 6.3% YoY). Germany saw a struggling milk production but still managed to increase it's cheese production with almost 5Kt or 2.3% Poland had some growth in milk production but also produced almost 5Kt more, +6% YoY. The Netherlands saw less milk but cheese production was even worse, writing off 4.4Kt or 5.5% YoY. Ireland was neutral (on less milk) and Denmark increased production. All in all production has been strong for months now, and while demand was fair, it wasn't enough to eat all the produced cheese so stocks have grown in the EU-27. In the US cheese production was stronger as well, in both July and August. Stocks are lower there though; American cheese stocks remain 6.2% below prior year levels (YoY). However, monthly inventories increased by 8.5 million pounds from July to August (+1.1% MoM). In contrast, "Other than American" cheese stocks declined year-over-year for the tenth consecutive month.

International Cheddar price comparison in EU/t

International Cheddar price comparison in EU/t



Bulls vs Bears...

Summary

Some uncertainties on the short term. (Blue tongue/Bird Flu) but overall rangebound with possible weakness in Q4 due to mild increase of milk production on strong margins. Butter (and the value of milk fat) reached very high levels, usually that comes with some demand destruction and since we're well past the summer the demand for cream, a milk fat product as well, should ease. SMP is a bit undervalued from the historical fundamental perspective given the very low stocks but we're assuming NZ's competitiveness is here to stay for now, adding competitivity. NZ is more of a black box than EU and US, and their significance has increased for SMP.

- Milk production is a mixed bag: the US still is negative in their June report with a smaller herd than last year.
- EU-27 was running positive, but Germany is showing weakness in their latest weekly reports and Blue Tongue has a negative impact on milk in NL, BELG, GER and perhaps FR.
- SMP production is still relatively low in both regions.
- Demand for SMP has been weaker than last year in most regions, SE Asia excepted.
- US NFDM+SMP Stock level is still below previous years.
- EC reported EU SMP stocks to be lower than previous years as well, due to low production and ok exports.

On the bullish side:

- On the very short term the EU struggles with Blue Tongue. US herd size is still below last year and California struggles with Bird Flu..
- SMP (and NFDM) production and stocks in the US and EU are still low, and NFDM/SMP is a little undervalued from their stocks/use perspective.
- Expected global Import demand turned lower for Q2 and could be YoY-neutral in H2.
- Of all new dairy plants that are coming online in the coming year, cheese plants take a chunk of the milk, so that could and should affect the milk available for SMP in a negative way, unless we're seeing a flood of milk.
- Cheese demand isn't bad.

On the bearish side:

- → Domestic use feels weak.
- Global import demand for H2 is expected to be a little bit better than last year.
- Assuming slightly better milk production for H2 and in particular Q4 in US and EU. But the expectation is milder due to Blue tongue.
- European SMP exports are dependent on N-Africa, will their demand stay strong?
- Cheese production is popular, and the EC reported a higher stock level compared to last year.
- Expensive milk fat affecting the value of milk. But butter might ease if you're a believer in the seasonality of the cream-drivingbutter prices book.

A Quick Note on... US Whey.

US Dry Whey Production

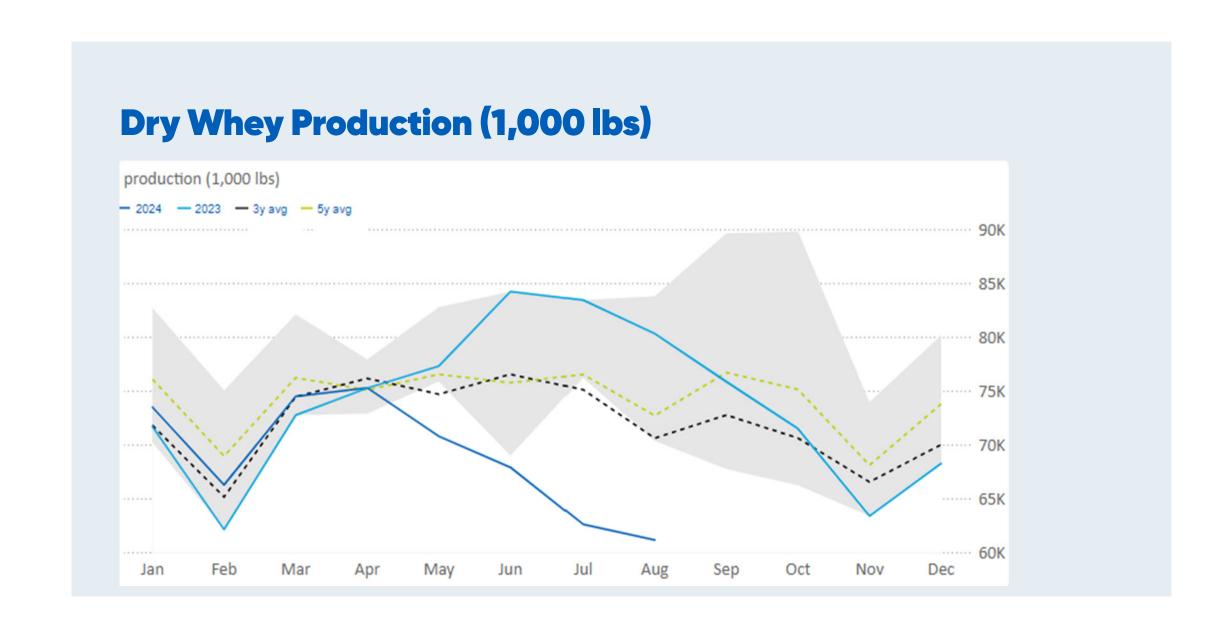
Dry whey production dropped to its lowest monthly level since December 1984, mainly because a plant was out of operation.

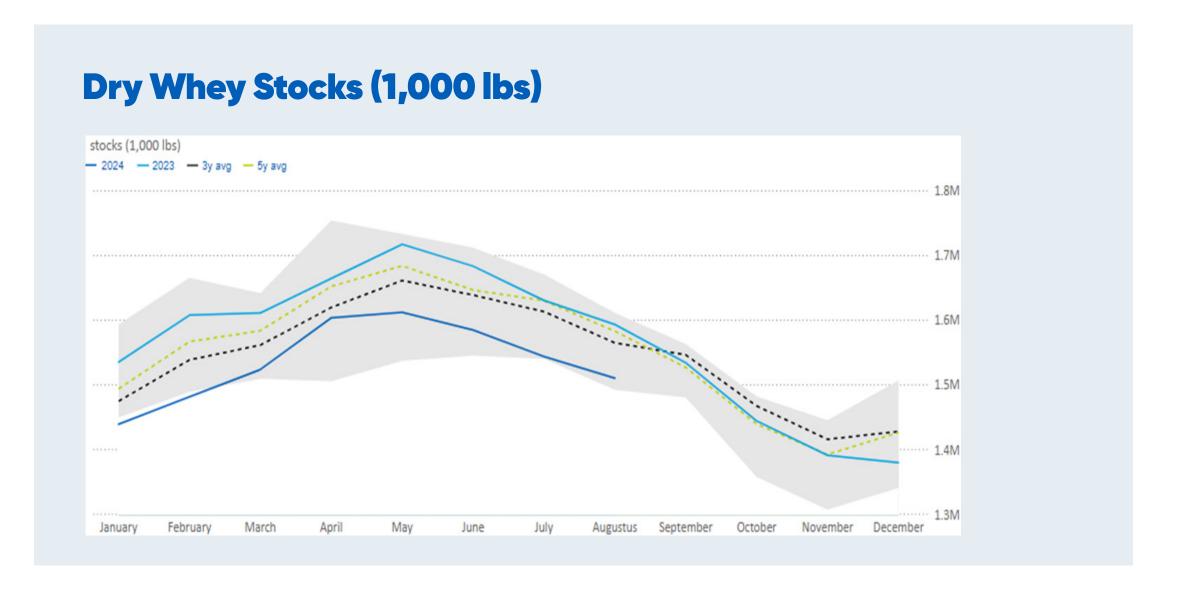
Strong demand for high-protein products had processors focusing on those instead, leading to a big decrease in dry whey output.

Stocks dropped to 55.9 million pounds, the lowest they've been since January 2022. The supply and usage data show that demand for dry whey, both in the U.S. and globally, isn't super strong right now. But with production hitting 40-year lows, consumers are relying on existing stockpiles to meet their needs.

Demand side

U.S. whey exports to China, its biggest market, fell by 12.8% in August 2023 (down 777 metric tons). But that didn't stop total export volumes from increasing compared to last year. Strong sales to other places like Canada, Indonesia, and Japan more than made up for the drop in China.

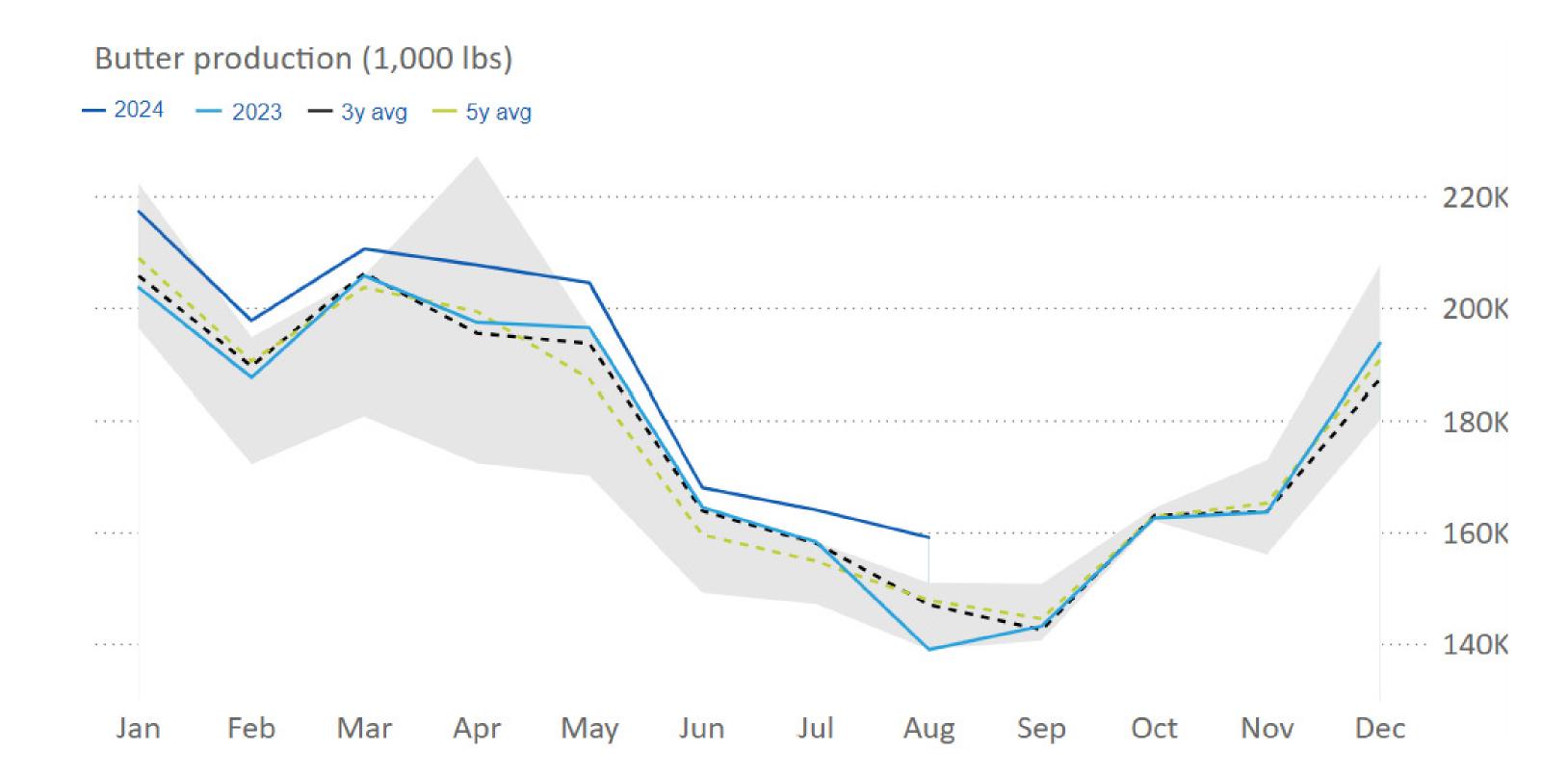




US Butter

Butter production

U.S. butter production reached a record 159 million pounds in August, surpassing the previous monthly high by nearly 8 million pounds. The month-to-month increase was 3%, smaller than the typical 5.1% decline seen over the past five years. Midwest cream supplies were better compared to previous years, supporting butter production. July's butter totals were also revised upward by 2.3 million pounds. Western butter output rose 17.4% year-over-year, with 85.1 million pounds produced, and a minor month-over-month decline despite seasonally lower milk production. Most of the gains in the West came from states like Oregon, Washington, and Idaho, as California's output grew only slightly. The Central Region set an August record with 59.2 million pounds, up 13.2% YoY. East Coast production, though down 0.4% YoY, saw a rare 1% MoM increase. Overall, U.S. butterfat production grew 2.2% from the previous year, driven by higher fat content in the milk supply. Butter exports grew for the third consecutive month, with the majority heading to Canada, up by 213 metric tons (+13% YoY). Shipments to South Korea surged by 149 metric tons (+488% YoY), and exports to the Philippines increased by 155 metric tons from none last year. Exports to China rose by 48 metric tons but were offset by an 84 metric ton decline in shipments to Mexico compared to the previous year. Domestic consumption has been pretty good for the entire year, with the Jan-Aug number around 2% growth compared to Jan-Aug last year.



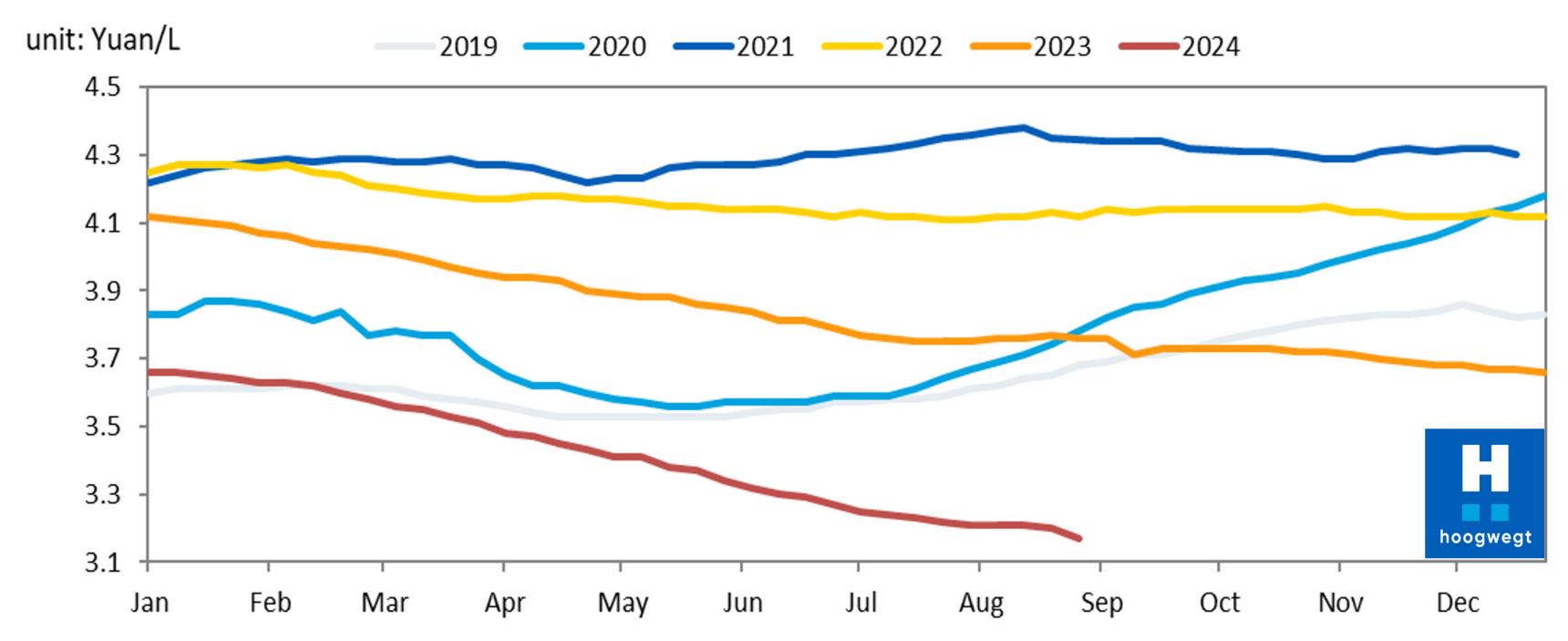
A Quick note on... China

The country's average farmgate raw milk prices in top ten producing provinces slid to 3.17 Yuan/kg in late Aug (-15.7% YOY), hitting the lowest since 2012. Milk price without contract recovered to 4 Yuan/kg recently due to seasonal low supply.

Q3 milk production would be released in mid-Oct. Forecast 2H milk production growth would slow to around +1% YOY.

China's Average Farmgate Milk Prices

—— milk price -0.05 \pm /L MOM to 3.17 \pm /L in late Aug, -15.7% YOY, hitting a new low since 2012



^{*}Average prices in China's 10 major milk-producing provinces (including Hebei, Shanxi, Inner Mongolia, Liaoning, Heilongjiang, Shandong, Henan, Shaanxi, Ningxia and Xinjiang).

data source: China's Ministry of Agriculture

A Quick note on... Futures

By: Neil Hunt, Derivative Trader, HTM/AM

CME Butter

The below chart shows CME Spot Butter with weekly bars spanning the past 3 years. Since our last update on the CME in the Apr24 Issue of Horizons, we have formed a sustained uptrend channel beginning with the breakout above \$2.75 per lb. observed in late January 2024.

This orderly uptrend has tested and held the 10 week simple moving average a few times taking prices to \$3.125 currently. Butter has caught a wave up upward momentum, and it continues to surf! The trend higher has bucked Q2 seasonality where even as we have seen Butter stocks build, supply of bulk Butter remains limited. The forward futures curve tells a similar story, with a sustained uptrend currently projecting Q3 Butter prices at \$3.15 per lb. Peak pricing is expected in October as Cream tightens seasonally in the Summer, and the futures



CME Non-Fat Dried Milk

The below chart shows CME Spot Non-fat Dried Milk with weekly bars spanning the past 3 years. The Non-Fat market has continued to consolidate in the \$1.10-1.20 per lb. range the past few months with low volatility and very limited activity overall. Despite lower overall Non-Fat supply in the US and lower inventories being maintained by both manufacturers and suppliers, demand overall and particularly export demand has remained extremely weak. A sustained push above \$1.25 per lb. would signal an end to this now nearly 18-month consolidation. The forward curve is currently predicting average prices of \$1.23 per lb. in Q4 2024, and \$1.27 per lb. in Q1 2025.

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Class III Milk

The below chart shows CME Class III Milk Futures on the 3rd continuation contract in weekly bars spanning the past 3 years. Since our last update in the Apr24 Horizons issue, Class III Milk held the lows of \$15.50 per cwt., broke out above longer term trendline resistance at \$18.00 per cwt., and now sits at \$20.00 per cwt. We are currently having our first test of the 10 week simple moving average since the breakout in mid April.

Short-term fundamentals support the move higher, with concerns of H5N1 Bird Flu spreading throughout the US Dairy herd, Summer heat limiting Milk supply, and Cheese and Dried Whey demand steady. However, the forward futures curve shows an inversion, with lower prices projected by the end of the year. With new Class III production facilities expected to come online in 2025, steadily increasing supply may ultimately limit further upside potential, forming a future price ceiling for Class III Milk.



World Comment.

Rick van Bergen Supply Chain Planner Hoogwegt Ingredients (Havero)



At the time of writing, we are celebrating the New Year's Eve of our fiscal year. This is always an exciting time! We find out how we have performed in the past year and we are all set to make the coming year even more successful. We start a new chapter in the Hoogwegt story.

For me personally, this also applies on a smaller scale. I started working at Hoogwegt International in 2012 at the EU desk in the Logistics Department. Here, I learnt the fine art of logistics under the guidance of some very experienced colleagues, including the late Peter de Kort who unfortunately passed away much too soon.

After having enjoyed working in this department for about 10 years, I was given the opportunity to take on a new challenge at the Allocation Managers Team. Here, I gained more insight into tactical planning and position management. In this role, I also started to work with colleagues from all over the world. This period was a very valuable extension of my knowledge within the company.

During my years at Hoogwegt International, I have seen the logistics department change significantly. Where we used to have written inventory overviews and a planning in Excel, we now have a reasonably working system. With the introduction of Power BI, we are able to get better insights into our data. And with Salesforce, we have gained a new place to capture our customers' requirements. Not all progress comes without challenges, but overall, we are becoming an increasingly efficient department.

A few months ago, I transferred to Hoogwegt
Ingredients, a very ambitious team within the
company. I have already experienced that it is a very
driven team, eager to set themselves challenging
goals in order to achieve great results. But even in a
well-performing team, there is room for improvement.
I hope to be able to contribute to this progress with
the knowledge and experience I have gained from my
previous roles.

We have recently started an interesting project to prepare the department for the desired growth in the future. Here, we are reviewing the processes, the systems and the best way of working. For me as a new member of the team, it's a great opportunity to look at it with fresh eyes and perspective.

I still really enjoy working at Hoogwegt. Not only because of the work, but mainly because of the great colleagues.

As most of you know, I am actually a man of few words. So I'll quickly pass the pen to the next writer ;-)



Hoogwegt Happenings.

We're thrilled to announce that Hoogwegt kicked off the new financial year on October 1st with the launch of our exciting new strategy! This marks the beginning of a fresh chapter filled with opportunities and growth.

We're also proud to unveil the revamped *Hoogwegt Dairy Spew* podcast, brought to you by our team in Singapore. Stay tuned for engaging new content! Plus, next week, Sanne and Jurgen will release the latest episode of *Hoogwegt Market Moo*, offering expert insights into the dairy market.

To top it off, we're connecting with customers and industry leaders at events around the globe, including stops in Colorado, USA, and Vietnam. Stay connected for more updates!