

PERSPECTIVE

December 2020

The latest insights into global dairy markets

Your regular global overview of the dairy industry along with trends in milk production, commodity prices and dairy trade.





Welcome back to Perspective! December 2020

Well, it goes without saying that the year that was 2020 was one of unprecedented global events. Normally I would write the feature article for December's edition of Perspective, as a way to celebrate and review the year that was. However, it is impossible to review 2020 without acknowledging the impact the Coronavirus pandemic has had on our industry and collective consciousness. It seemed like a different world when, in 2019, I reviewed the impact of Brexit, China tariffs and the rise in 'on-the-go' meal-replacements, among other things.

The pandemic has impacted all our lives, and as we are on the threshold of 2021, I want to spend this 'year in review' edition of perspective focusing on what we have learnt. Even in unprecedented times we can still educate ourselves, keep up with the insights, and try adapting to this "new-normal" to the best of our ability.

I have invited Roshena De Leon, our Global Insights Manager, to share her team's thoughts on how COVID-19 has impacted six key consumer behaviours, and what our readers can learn from this going into 2021.

Four key movements for the month:



Production – New Zealand production to end October slightly ahead for the season. Australia monthly production down. US and EU monthly production increases.



 $\ensuremath{\text{Exports}}$ – EU and US exports up, while New Zealand and Australia exports decline.



Imports – Strong growth in China imports and Middle East and Africa and Asia monthly imports increase. Latin America imports decline.



Prices – **GDT Event 273** resulted in the GDT price index increasing +4.3% to USD \$3,261/MT. The largest movements came from Lactose, WMP & Butter which moved +13.5%, +5.0% & +3.8% respectively.

This is our last Perspective Edition for 2020 and we will see you again with our first 2021 edition in February.

If you have suggestions for topics you would like to read about in Perspective, or any other general feedback, we would love to hear from you. You can contact us at **nzmpbrand@fonterra.com** or through your account manager.

Kind Regards,

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Gillian Munnik Director of Sales and Marketing Services

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The Next Normal: Adapting to Change in COVID-19 times



Roshena De Leon Global Insights Manager, Fonterra (AMENA)



Roshena joined Fonterra in early 2015, and as the Global Insights Manager she is responsible for communicating her in-depth understanding of global markets, categories and consumer trends through strategic initiatives and opportunities. Roshena has a passion for telling the story behind the data and working with NZMP and their customers on which innovations and actions can bring insights to life.

Roshena has over 20 years of experience in both qualitative and quantitative research with a strong focus on the FMCG category.

Prior to Fonterra, Roshena has held roles in various global market research and media agencies and MNCs.

The COVID-19 pandemic has changed our lives. Despite the promise of hope that a vaccine holds, one cannot deny that the way we will live, at least in the near future, will carry with it habits we have acquired in a year dominated by COVID-19.

In this article, I will aim to highlight a number of the behavioral changes and consumer trends I feel will be the most impactful going into 2021.

However it is worth noting that these are unprecedented times. It is highly likely that new trends will continue to emerge as the pandemic and its aftereffects continue to develop.

1 Accelerated Health

We know that the growing consciousness around health and wellness has been an ongoing trend for many years and has continued to evolve even before COVID-19. The pandemic appears to have accelerated this trend further. <u>Health and wellness</u> have become a priority for an even broader segment of the population, as a sense of vulnerability caused a rethink for many about immunity and the overall state of their health. To those already on the health and wellness train, the pandemic seemed to reinforce the need to stay on track despite restrictions during lockdown.

A study by app tracking company 'Adjust' has indicated health and fitness app installs increased 67% globally in late March, following gym closures.

An increase of 48% on sessions followed in May as consumers get creative with continuing (and adopting) fitness regimes, happily catered to by entrepreneurial fitness and tech companies. This can present a good opportunity for brands to connect with tech providers as a way to reach this targeted set of health and wellness consumers.

Another key talking point in health and wellness that accelerated with COVID-19, is the growing awareness of the importance of our mental wellbeing. Long periods of lockdowns and isolation, along with drastic shifts in lifestyle, a growing anxiety from the virus, and its economic impacts, has put a spotlight on the need to care for one's <u>mental health</u> and put it in the mainstream.

I've seen that, globally, governments and NGOs have taken steps to support this growing attention to mental health. I anticipate that it won't be too far off that food and drink will be accepted as one way to support this. Foods that offer comfort in stressful times will continue to be in demand. Based on this, I see opportunity in food & beverage innovations continuing to focus on formulations that support, and promote, positive mental (and emotional) wellbeing.

2 Sustainable Nutrition

It was a mixed bag for sustainability. I've seen some issues that were prominent before the pandemic take a back seat from others as consumer needs shifted.

Before COVID-19, there was vigilance against too much packaging. Now with concerns around product



safety, consumers may be more accepting of extra packaging to keep their products 'protected' from the virus.

That said, I expect sustainable packaging to continue to be a key talking point moving forward. It is likely that any demotion of sustainable packagings importance will be short term. I see this more as a pause than the end of the campaign towards sustainable packaging.

The good news is that we've seen the pandemic highlighting a wider definition of sustainability into consumer consciousness. Consumers are now seeking <u>more transparency from their food and</u> <u>beverages</u>. They want to know how sustainability contributes to healthier and better-quality products, as well as how they help sustain communities and protect the environment.

Seeing empty shelves in stores has created greater awareness towards conserving existing resources and reducing wastage.

Curbing the spread of COVID-19 has been promoted as a community effort which in turn drove attention back to wider community support. We are likely to see digital at the forefront in enabling this trend, from consumers using technology to track the 'true cost' of their consumption, to holding companies accountable by seeking transparent information about the environmental impacts of production.

3 Return to Value

We are likely to see consumers seek enduring value as changes in their discretionary income and larger economic concerns continue to dent consumer confidence. Going forward we may see consumers forgo frills and fads for 'value' products which meet their core needs of quality, health and safety – at a low price.

> Consumers are refocusing on the essentials and tangible benefits like simplicity, safety, efficacy, affordability.



It is possible affordable premiumization might see a resurgence as consumers seek to satisfy simple indulgences to elevate the everyday. Private label could do well if they are able to offer grocery shoppers more affordable ways of maintaining quality or of trading up. At a time of economic uncertainty, brands that can clearly communicate their value and benefit to the consumers' everyday life will continue to thrive.

It is important to communicate how products are a part of an everyday essential that enables consumers not only to cope with current challenges posed by the pandemic, but to help them regain a sense of control and normalcy back into prepandemic life.

4 Rediscovered Demand Spaces

Acceleration of future trends has been a key talking point as a result of the pandemic. However, a key impact of COVID-19 to our daily lives is also the rediscovery of habits that we had, before life was always on 'on the go' and our ever-busy lifestyles took over everything. Lockdowns and isolations have prompted us to revisit old habits and forced us to slowdown.

The home became the focus of life once again, we are taking our time eating breakfast (or have started eating breakfast again), we are spending more time preparing our food or (re) learning how to make meals.

These have meant that consumption occasions (or so-called demand spaces) that have been replaced by faster, convenient consumption, are <u>making a</u> <u>comeback</u>.

5 Sign Posted for Safety

We've observed consumers are seeking tangible signals of safety which apply both to the physical store and the products that they buy. We anticipate visible evidence to be increasingly important in helping alleviate consumer fears over their health and safety. They want to know that appropriate actions have been made to meet their needs especially on safety and efficacy. It is all part of taking precautions in the new norm.



If there was a time to tell consumers the story of what a brand does to get to the quality that it delivers, it will be now.

Companies can consider communicating supply chain stories that showcase quality control standards and care taken to ensure products are manufactured and processed safely. Clearly emphasise on pack the benefit claims that support immunity and long-term health. Highlight ingredients that boost confidence in the delivery of those benefit claims. Show certifications on how the company is sustainably sourcing products to protect the environment and the community.

The Tetra Pak Index (13th edition) showed that more than 50% of consumers not only believe that improving food safety is the responsibility of manufacturers. They see it as the number one issue that companies need to tackle now and in the future. Meanwhile 60% of consumers globally say they worry about the food they buy being hygienic and safe. The key is to take away doubt and reassure consumers that they are making the right choices that will keep them and their loved ones safe and protected from illness in the future.



We can all see that shopping behaviours are changing, and they are here to stay. As we continue to be wary of public places, we continue to adjust the way we shop.

Instead of leisurely browsing the aisles and taking in the shopping experience, more shoppers today are trying to be more efficient in the way they shop.

They are more planned, more purposive, and less spontaneous. Getting in and out quicker and shifting to shopping online where possible. This suggests that now, more than ever, the effectiveness and impact of in store displays in catching consumer attention is critical.

Another key change in shopping dynamics, especially in places where coronavirus cases remain high, is the change in the usual household shoppers.

In the US for example, Nielsen reported that 1 in every 10 shoppers today was not the core shopper before COVID-19.

This means a change in the shopper audience that companies have to cater to and a need to understand who these 'new shopper audiences' are to better cater to their requirements.

E-commerce has been on a steady rise even before COVID-19, but we have witnessed the pandemic accelerate its growth. COVID-19 likely forced nonusers to try it for the first time, and experiencing the advantages likely reinforced adoption. Online shopping also appeared to have provided a refuge to avid shoppers who no longer can visit physical stores for retail therapy. These changes should prompt a re-think of ecommerce strategies. We've seen that having an ecommerce platform is crucial if a company doesn't already have one. In the future, I see a need to be more purposive in the way they are designed to deliver a positive customer experience. A seamless integration of online and offline buying channels will be a must have.

Conclusion

COVID-19 is a worldwide health and economic crisis that has the potential to permanently change consumer behavior. Trends were accelerated, some in a matter of weeks. Habits were changed, as we got pushed beyond our comfort zones to accept a new way of doing things. As COVID-19 is unprecedented in modern times, there is no historic data to learn from or model future demand. We are starting a new baseline and it's one that is still moving.

This makes future consumer behaviors harder to pin down with certainty. We can only look into general guidelines on the possible trajectory of these behaviors moving forward.

It has, however, taught us a valuable lesson on responding to consumer needs. It has taught us the need to be agile, flexible, and ready to respond to uncertainty and unpredictability. We beileve that companies who have made the investment to truly understand their consumers pre-pandemic and have aligned their brands to empathize with their consumers will be a step ahead as we enter this 'new-normal'.





New Zealand production to end October slightly ahead for the season. Australia monthly production down. US and EU monthly production increases.

NEW ZEALAND AUSTRALIA EUROPEAN UNION/UK USA Change for October 2020 Change for October 2020 Change for September 2020 Change for October 2020 compared to October 2019 compared to October 2019 compared to September 2019 compared to October 2019 Change for the 12 months to October 2020 to October 2020 to October 2020 to September 2020 New Zealand milk production Australia milk production for the EU milk production for the 12 Milk production for the 12 for the 12 months to October 12 months to October was 2.5% months to September was up months to October was 1.8% was 0.6% higher than last year. higher than last year. by 0.2% compared to the same higher compared to the same period last year. period last year. New Zealand milk production¹ Australia milk production decreased 0.3% in October increased 0.8% on a litres EU (including UK) milk US milk production increased by compared to October last year. basis (up 0.3% on a milk solids 2.3% in October compared to production increased by 1.2% basis) in October compared to in September compared to the same period last year. Milk production growth slowed October last year. the same period last year, the in October as challenging wetter Higher production volumes strongest production growth Milk production growth slowed than usual spring conditions in October were the result of since February this year. in October as dry conditions affected regions such as stronger milk yields and rapidly affected soil moisture levels, Victoria and Tasmania. The increase in production was growing herd sizes combined

especially in the North Island. Ongoing challenging conditions during November are having an impact on grass quality.

Dairy Australia has forecast a 1% to 3% increase in production for the 2020/21 season.

observed across most countries and notably

led by Poland (up 2.6%), Spain (2.2%), Italy and France (1.1% each).

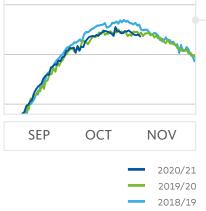
1: New Zealand production is measured in litres.

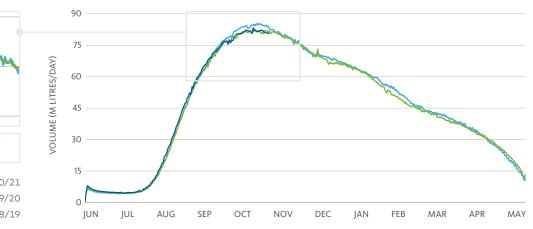
with lower culling rates.

Note: 2020 production numbers include one extra day of production in February as 2020 is a leap year

Source: Data from Global Trade Information Services and from government and industry websites, including

FONTERRA MILK COLLECTION 2020/21 SEASON





NEW ZEALAND COLLECTION

-1%

Change for October 2020 compared to October 2019



Season to date 1 June to 31 October

Fonterra's New Zealand collection for October was 213.1 million kgMS, down 1.0% on October last season. Seasonto-date collection to the end of October was 527.5 million kgMS, 0.5% ahead of last season. Poor grass condition from late October to early November impacted collections across much of the North Island and parts of the South Island. Farmer response has since seen production begin to recover, which has been assisted by recent rain.

AUSTRALIAN COLLECTION



Change for October 2020 compared to October 2019



Season to date 1 June to 31 October

Fonterra's Australia collection was 12.4 million kgMS, a 7.7% decrease on October last season. Widespread rainfall has laid the foundation for a very good season, but a La Niña weather system delivering wetter and cooler conditions, impacted pasture availability. This resulted in off-farm milk supply reducing across Victoria and Tasmania. Thirdparty volumes were also lower compared to October 2019 due to reduced availability and an active choice not to purchase, given the focus on higher-value products.



EU and US exports up, while New Zealand and Australia exports decline.

NEW ZEALAND



Change for September 2020 compared to September 2019



Change for the 12 months to September 2020

Exports for the 12 months to September were down by 2.0%, or 68,493 MT, on the previous comparable period. This was primarily driven by SMP, fluid milk products, infant formula and cheese but offset by increases in WMP.

Total New Zealand dairy exports decreased by 0.4%, or 815 MT, in September compared to the same period last year.

Fluid milk products, WMP and SMP demand from China remained strong, increasing 5,587 MT year-on-year, however this was offset by decreases in infant formula and cheese, down a combined 6,953 MT.

AUSTRALIA



Change for September 2020 compared to September 2019



Change for the 12 months to September 2020

Exports for the 12 months to September were down 4.5%, or 34,884 MT, on the previous comparable period.

Declines were recorded across a broad range of products with infant formula, SMP, cheese, WMP, and whey, down 42,857 MT and partially offset by fluid milk products, up 8,691 MT.

Australia dairy exports increased by 13.5%, or 7,660 MT, in September compared to the same period last year.

This was primarily driven by increased demand for SMP and fluid milk products, up a combined 8,509 MT and partially offset by decreases in cheese and infant formula, down a combined 3,530 MT.

EUROPEAN UNION/UK



Change for August 2020 compared to August 2019



Change for the 12 months to August 2020

Exports for the 12 months to August were up 4.6%, or 257,880 MT, on the previous comparable period. Butter, cheese, fluid milk products and whey were the main drivers of this growth, up a combined 293,913 MT, partially offset by a decline in SMP.

EU (including UK) dairy exports decreased by 3.7%, or 17,724 MT, in August compared to the same period last year.

This was driven by decreases across most product categories and more specifically SMP and WMP to Algeria and Nigeria but partially offset by increases in fluid milk products to China and lactose to China and New Zealand.

USA



Change for September 2020 compared to September 2019



Change for the 12 months to September 2020

Exports for the 12 months to September 2020 were up 12.3%, or 273,366 MT on the previous comparable period, driven by SMP, WPC, whey and lactose up a combined 258,474 MT.

US dairy exports increased 4.4%, or 8,322 MT, in September compared to the same period last year.

Year-on-year exports continued to grow for the 13th consecutive month, primarily driven by increased whey demand from China attributable to recovering hog herds, and cheese to the Asia Pacific region. Although SMP export volumes declined to Mexico, they increased to South East Asia.

Strong growth in China imports and Middle East and Africa and Asia monthly imports increase. Latin America imports decline.

LATIN AMERICA



Change for August 2020 compared to August 2019



Change for the 12 months to August 2020

Imports for the 12 months to August 2020 were down 4.0% or 70,071 MT, compared to the same period the previous year.

Decreases were driven primarily by SMP infant formula, WMP, and butter down a combined 67,522 MT.

Latin America dairy import volumes¹ decreased 12.7%, or 18,901 MT, in August compared to the same period last year. This was driven by lower volumes of SMP to Mexico.

ASIA



Change for August 2020 compared to August 2019



Change for the 12 months to August 2020

Imports for the 12 months to August were down 3.5%, or 171,274 MT, compared to the same period the previous year.

Decreases were recorded across WMP, SMP, fluid products, down a combined 207,018 MT and offset partially by increased volumes in lactose, up 39,633 MT.

Asia (excluding China) dairy import volumes¹ increased 2.1% or 8,041 MT, in August compared to the same period last year. Increases were recorded for whey and WMP to Vietnam and Thailand, infant formula and fluid milk products to Philippines and partially offset by declines in butter and SMP.

MIDDLE EAST & AFRICA



Change for August 2020 compared to August 2019



Change for the 12 months to August 2020

Imports for the 12 months to August 2020 were down 5.6%, or 222,447 MT, compared to August last year, driven by decreases in fluid milk products, infant formula and butter down a combined 356,235 MT and offset by increases in SMP.

Middle East and Africa dairy import volumes¹ increased 15.6% or 46,750 MT in August 2020 compared to the same period last year. Increases were driven principally by higher volumes of SMP to Ethiopia and WMP to Algeria, up a combined 42,613 MT, and partially offset by lower volumes of infant formula to Nigeria.

CHINA



Change for September 2020 compared to September 2019



Change for the 12 months to September 2020

Imports for the 12 months to September were up 9.0% or 276,736 MT, driven by whey, fluid milk products and WMP.

China dairy import volumes increased by 24% or 54,847 MT, in September compared to the same period last year.

Import volumes of fluid milk products continued to increase as milk drinks consumption rose during the pandemic (up 17,429 MT). Germany, New Zealand, Australia, Poland and France were the top suppliers.

Whey was also up 15,663 MT as China rebuilds its hog herd and uses whey as feed. SMP imports also increased 7,931 MT year-on-year.

RUSSIA



Change for September 2020 compared to September 2019

+**2**[%]

Import change for the 12 months to September 2020

Imports for the 12 months to September 2020 have increased +2.2% or +23,508 MT compared to the same period the previous year. This was mainly driven by AMF, Butter, Casein, Cheese, Cultured Products, Dairy Spreads, Fresh, Caseinate, Ice cream, Lactose, MPC, and Whey being up a combined +84,372 MT. Offset by Infant Formula, SMP, WMP and WPC being down a combined -43,214 MT.

Russia import volumes were down -30.4% or -27,310 MT for September 2020 compared to the same month the previous year.

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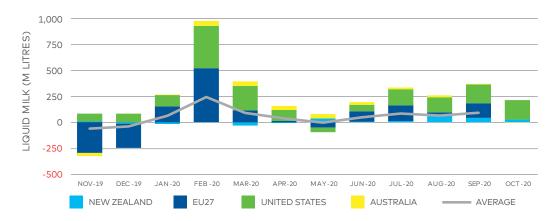
Global Dairy Market

The charts on the right illustrate the year-on-year changes in imports, exports and production for a range of countries that are important players in global dairy trade.

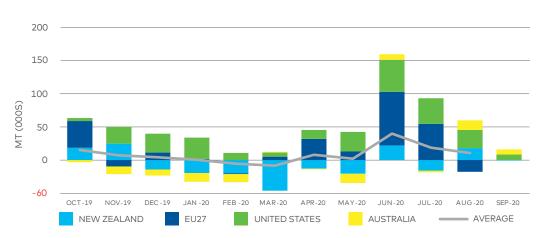
The absolute size of the bars represent the change in imports, exports or production, relative to the same period the previous year.

Averages are shown where data is complete for the regions presented.

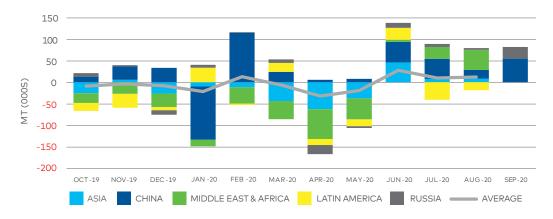
PRODUCTION



EXPORTS







Food Price

The FAO Food Price Index* (FFPI) registered a sharp rise in November 2020 to its highest level in nearly six years, and also the biggest month-on-month rise since July 2012. It climbed up 4.0 points (3.9 percent) from last month and 6.4 points (6.5 percent) higher than its value a year ago, to average 105.0 points. All sub-indices of the FFPI registered gains in November, with vegetable oil rising the most, followed by sugar, cereals, dairy and meat.

The FAO Dairy Price Index continued the upward trend registered in recent months, nearing an 18-month record high. It averaged 105.3 points in November, up 0.9 points (0.9 percent) month-on-month. This rise was largely driven by firmer butter and cheese prices, with steady increases in global import demand and a surge in retail sales in Europe coinciding with the region's milk production reaching seasonal lows. By contrast, after six months of consecutive increases, skim milk powder prices dropped, due to slowed purchasing in Asia, especially China, coupled with increased global export availabilities, including India's powder surpluses. Smaller purchases by China weighed on whole milk powder price quotations, despite a rise in demand for spot supplies from the Middle East and North Africa, especially Algeria.

Source: FAO



CLIs point to a continued moderation in growth prior to the recent tightening of COVID-19 restrictions.

Pre recent COVID-19 containment measures, CLIs for October in the United States, Japan, Canada, Germany, Italy and the euro area continued to increase but at a slower pace. In France, the CLI stabilised, while in the United Kingdom, contraction for the second straight month was possibly a result of heightened uncertainty over the prospect of no trade deal with the EU, at the end of the transition period. In all major OECD economies, the CLIs continued to point to below trend GDP.

Among major emerging economies, India and Brazil increased but at a slower pace. China's manufacturing sector continued to increase steadily, while in Russia the CLI stabilised.

Source: OECD



The Economist Intelligence Unit believes global output will contract by 4.7% this year, an adjustment from its previous forecast of 5% and the second upward revision since the Covid-19 pandemic started. This is mostly due to an upgrade of the US forecast; with GDP likely to contract by 3.8% in 2020 as opposed to an earlier predicted 4.6%.

Recent announcements that two coronavirus vaccines, developed by Pfizer (US) and Moderna (US), are highly effective have not altered forecasts. Although positive, these represent only first, limited steps towards the development of safe and effective global immunisation. Difficulties around expense, shipping and quantities available, plus global access to the vaccine in coming months reinforce this view. Normality will not resume until a safe and effective vaccine is rolled out. As a result, sporadic local outbreaks and lockdowns are to be expected in 2021.

Source: Economist Intelligence Unit



New Zealand's weather remains consistent with moderate La Niña conditions, associated with north-easterly air flow. Moist, sub-tropical disturbances are expected to reach the country occasionally, particularly the North Island and northern South Island, which may bring areas of heavy rainfall and flooding. Marine heatwave conditions formed near the northern North Island and northern Tasman Sea during November. Warm seas in other coastal regions may develop into a marine heatwave over summer. Air temperatures are very likely to be above average in all regions of the country with rainfall at near normal levels. NIWA indicates during the tropical cyclone season (November 2020-April 2021), the risk for New Zealand is elevated.

In Australia, it remained hot and dry with some showers in the south-east. Colder, dryer weather across Europe was offset by showers on the continent's perimeter, boosting moisture for winter grains, while much needed rain eased long term drought in parts of north western Africa.

Source: NIWA, World Agricultural Weather Highlights USDA oCOE, Fonterra Ingredients Australia

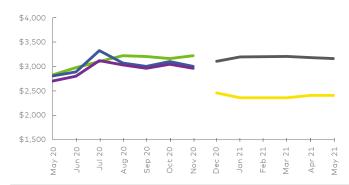








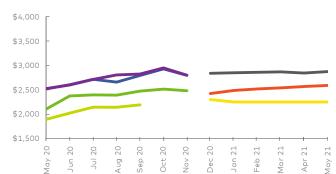
WMP



November WMP prices were mixed. Dutch Dairy Board increased +1.9% to USD \$3,215/MT. USDA Oceania & GDT both dropped to USD \$2,956/MT and USD \$2,994/MT respectively.

Futures and forecasts for the next six-months have reflected those mixed results. Rabobank Oceania has stayed flat at an average of USD \$2,383/MT. NZX Futures has increased theirs a further +3.7% from last perspective to an average USD \$3,169/MT.

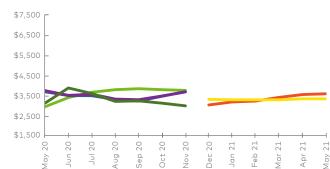
SMP



SMP prices have decreased across the board for November, with the last two months of USDA NASS results not available at time of publication. Dutch Dairy Board dropped -1.4% to USD \$2,481/MT. USDA Oceania dropped -5.1% to USD \$2,800/MT. GDT was down -4.5% to USD \$2,797/MT.

The Forecast and futures have however all revised up or stayed flat. Rabobank Oceania has stayed consistent with previous projections. CME Futures has increased its 6-month average 4.7% to USD \$2,521/MT. NZX Futures has lifted 2.4% to USD \$2,857/MT.

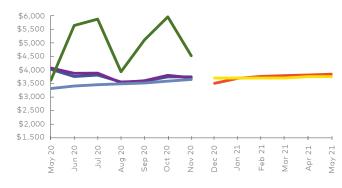
BUTTER



There were mixed movements again this month in the Butter prices. USDA Oceania showed a further +6.1% increase to USD \$3,825/MT and GDT also increased +6.8% to USD \$3,836/ MT. CME Spot dropped a further -4.5% to USD \$3,073/ MT. Dutch Dairy Board dipped -1% to USD \$3,907/MT

As a result, we see CME Futures drop -0.9% to USD \$3,445/MT and Rabobank Oceania average prices hold steady at USD \$3,421MT.

CHEESE



November brings continued volatility from CME Spot with them bouncing back down -24.7% to USD \$4,524/MT. GDT stays flat at USD \$3,746/MT and USDA Oceania drops -2.3% to USD \$3,713/MT. EU commission increased a further +1.7% to USD \$3,647/MT

CME Futures tries to keep pace with the market by revising its 6-month average down -12.5% to USD \$4,268/MT and Rabobank Oceania's stays flat.







Take control of price and supply.

Risk and Commercial Solutions



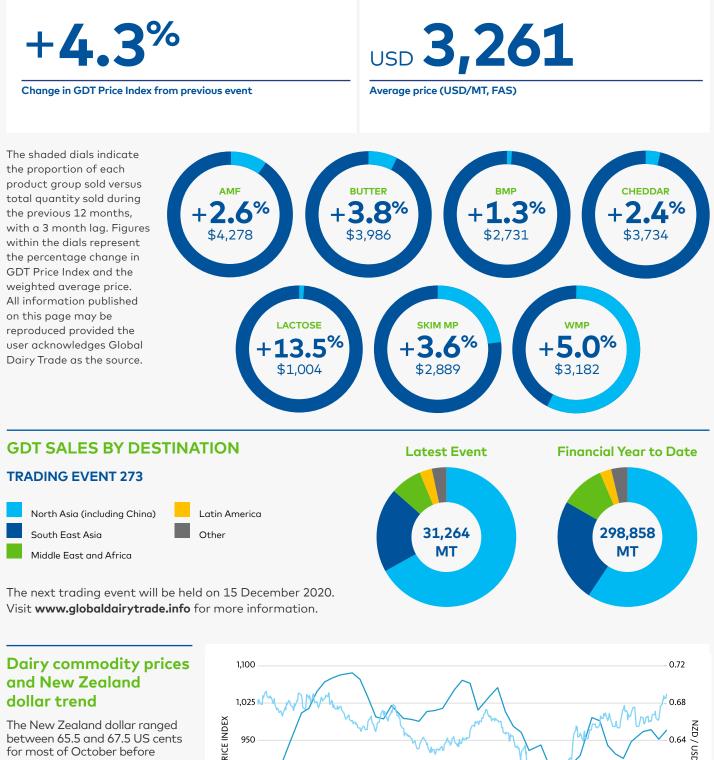
CME Futures



out more

GDT Results

TRADING EVENT 273



between 65.5 and 67.5 US cents for most of October before climbing above 69 US cents in November as uncertainty regarding the US elections was all but removed, and positive announcements of COVID-19 vaccine developments were released.



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USDA, Dairy Outlook

Published November 17, 2020



Recent Development

Major dairy product wholesale prices from the week ending October 3 to the week ending November 7 increased significantly, with only butter prices declining. Chicago Mercantile Exchange (CME) spot prices for 40-pound blocks and 500-pound barrels of Cheddar cheese increased through the trading week ending October 30, with barrels reaching a record high before declining the following 2 weeks. The all-milk price forecast for the fourth quarter of 2020 has been raised by \$0.85 to \$19.75 per cwt. The all-milk price forecast for the year has been raised \$0.25 to \$18.25 per cwt. The allmilk price forecast for 2021 has been raised by \$0.10 to \$17.70 per cwt. The price of 40-pound blocks of Cheddar cheese rose 40.1 cents to \$2.7649 per pound, and the price for 500-pound barrels (adjusted to 38-percent moisture) rose 68.9 cents to \$2.4087 per pound. The prices of non-fat dry milk (NDM) and dry whey rose to \$1.0945 per pound (+5.8 cents) and \$0.3686 per pound (+3.1cents), respectively. Butter was the exception, falling by 12.3 cents to \$1.4566 per pound.

Recent movements of wholesale spot market prices for cheese and butter on the CME have been remarkable. Average prices for 40-pound blocks and 500-pound barrels of Cheddar cheese rose to a record high of \$2.7745 and \$2.4755 per pound, respectively, for the week ending October 30. Both fell substantially the following 2 weeks, with average prices for blocks and barrels \$2.1505 and \$2.0030 per pound, respectively. The block-barrel spread declined from its high of 93.8 cents at week ending September 25 to 14.75 cents at week ending November 6th. The CME weekly average butter price declined to \$1.4100 per pound for the week ending October 30, the lowest price since May. It then rose the following 2 weeks, and for the week ending November 6, butter was \$1.4330 per pound.

Milk production growth was substantial in September, 2.3 percent higher than the previous year at 18.008 billion pounds. Milk per cow averaged 1,923 pounds per head, 38 pounds higher than September 2019. The milking herd averaged 9.366 million head in September, an increase of 5,000 from August. Relatively low slaughter rates have contributed to the increase in milk cows.

On a milk-fat milk-equivalent basis, dairy exports totaled 747 million pounds in September, 46 million lower than August but 7 million higher than September last year. On a skim-solids milk-equivalent basis, September exports totaled 3.723 billion pounds, 317 million lower than August but 167 million higher than September 2019. Exports of cheese continued to be substantial in September, totaling 62.7 million pounds, 5.7 lower than August but 2.5 million higher than the previous corresponding year. Exports of dry skim milk products weakened to 135.6 million pounds in September, 16.1 million less than August and 8.6 million less than September 2019. U.S. exports of dry skim milk products to Mexico declined in September at 50.2 million pounds, 25.0 million less than September 2019. Increased exports of dry skim milk products to Southeast Asian countries have made up for some of this loss.

U.S. dairy imports on a milk-fat basis were 627 million pounds in September, 54 million higher than August but 71 million lower than September last year. On a skim-solids basis, September imports totaled 422 million pounds, 13 million higher than August but 2 million lower than September 2019.





Dairy forecasts for the remainder of 2020

Milk cows for the fourth quarter of 2020 are expected to number 5,000 more than last month's forecast. For the year, the rounded forecast for the average number of milk cows is 9.365 million head, unchanged from last month's forecast. The milk per cow forecast for the year is 23,755 pounds, 20 pounds higher than last month's forecast. The milk production forecast for 2020 is 222.5 billion pounds, 0.2 billion higher than last month's forecast.

The forecasts for 2020's fourth quarter dairy exports have been raised, with higher exports of cheese, butterfat products and dry skim milk products expected, due to U.S. price competitiveness. The forecast for exports on a milkfat basis is 9.4 billion pounds, 0.1 billion higher than last month's forecast. On a skim solids basis, the forecast is 47.3 billion pounds, 0.2 billion higher than the previous forecast. Import forecasts for 2020 are raised to 7.0 billion pounds on a milk-fat basis and lowered on a skim-solids basis to 5.6 billion pounds.

Based on recent price strength, forecasts for 2020's fourth quarter have been raised for Cheddar cheese, non-fat dry milk, and dry whey to \$2.295 per pound (+21.5 cents), \$1.080 per pound (+1.5 cents), and \$0.360 per pound (+2.0 cents), respectively. The forecast for the fourth-quarter butter price has been lowered to \$1.500 per pound (-3.5 cents). For the year, price forecasts for Cheddar cheese, non-fat dry milk, and dry whey have been raised to \$1.965 (+5.5 cents), \$1.040 (+0.5 cents), and \$0.355 (+0.5 cents), respectively. The forecast for the 2020 butter price has been lowered to \$1.585 per pound (-1.0 cent). With higher price forecasts for Cheddar cheese and dry whey, the Class III price forecast has been raised \$0.55 to \$18.55 per cwt for the year, but the rounded Class IV price annual forecast is unchanged at \$13.50 per cwt. The all-milk price forecast for 2020 is \$18.25 per cwt, \$0.25 higher than the previous forecast.

Blimling, Forecast Update

Published November 4, 2020

Blimling expects cheese prices to falter as the year closes, with increasing supply, softer post-holiday demand and less government buying contributing to a possible decline. Weaker prices into early 2021 seem likely, due to continued uncertainty in these areas. Meanwhile export opportunities in the new year could be impacted by sustained high U.S prices.

Butter prices are likely to remain weak, with heavy bulk supply a factor heading into the build season. Blimling notes there may be stronger-than-anticipated retail demand over the holiday season. Rising milk production from farms could help boost butterfat production, with a new cheese plant in Michigan altering cream supply into Midwest butter plants in early 2021. The NDP/SMP market seems balanced, with prices likely to fluctuate within a narrow range in the short to medium term. Increased U.S and global production is likely to keep buyers satisfied, although demand out of Mexico will remain inconsistent, pushing exporters to look elsewhere for sales.

Finally, Blimling reports a lift in dry whey prices, as strong demand - particularly from China - together with whittled down inventories, builds optimism in the near term. It highlights that seasonally stronger cheese output and new assets in Michigan could pressure the whey complex into 2021.





Fonterra draws the information in this update from a variety of principally external sources listed below. Also included are defined acronyms for better understanding.

AMF Anhydrous Milk Fat

BMP Butter Milk Powder

CME Chicago Mercantile Exchange

DDB Dutch Dairy Board

EIU Economist Intelligence Unit

FAO United Nations Food and Agriculture Organisation

Farmgate Milk Price The price for milk supplied in New Zealand to Fonterra by farmer shareholders

Fluid and Fresh Dairy The Fonterra grouping of fluid milk products (skim milk, whole milk and cream pasteurised or UHT processed), concentrated milk products (evaporated milk and sweetened condensed milk) and yoghurt

FTA Free Trade Agreement

GDI Global Dairy Intelligence group, Fonterra Cooperative Group Limited. GDI provides insights to Fonterra management based on a model of the global dairy market developed by GDI and populated with publicly available data. The model outputs referenced in this report do not reflect Fonterra's non-public production or sales data

GDP Gross Domestic Product

GDT Global Dairy Trade auction platform

GDT Price Index is an index that provides a measure of the weighted average percentage change in the movement in price of all products sold on GDT. This provides a simple measure of changes in dairy price between trading events IMF International Monetary Fund

Informa Informa Economics Inc., Dairy Group, Global Dairy Market Report

LME Liquid Milk Equivalent

MAT Moving Annual Total (this is data averaged across the 12 month period)

MEA Middle East and Africa

NDM Non-fat Dry Milk

NZX NZ Stock Exchange

OECD Organisation for Economic Co-operation and Development

Q[1] [First] Quarter

Reference Products The dairy products used in the calculation of the Farmgate Milk Price, which are currently WMP, SMP, BMP, butter and AMF

SEA South East Asia

Season New Zealand: A period of 12 months to 31 May in each year. Australia: A period of 12 months to 30 June in each year

SMP Skim Milk Powder

TE GDT Trading Event

USDA NASS US Department of Agriculture National Agricultural Statistics Service

USDA Oceania US Department of Agriculture Agricultural marketing service price series for specific products in the Oceania region

WMP Whole Milk Powder

YOY Year-on-year

YTD Year to date





Tracking the global dairy market Production, Export and Import charts

The production, export and import charts illustrate year-on-year changes in production, exports and imports for a range of countries that are important players in global dairy trade.

The absolute size of the bars represents the change in production, exports or imports compared to the same month the previous year. The portion of the bar below zero represents a year-on-year decrease and the portion above the line shows the year increase for that country. Where countries are not shown this is likely due to the data not yet being available.

Weather Source (Page reference - 13)

Comments on weather are obtained from various government weather sites as well as independent reports including Martell Crop Projections. Global milk production data is sourced from government and industry websites including US Department of Agriculture (USDA), EuroStat, Dairy Australia, Dairy Companies Association of New Zealand (DCANZ) and others.





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Important note: The information and commentary contained in this 'Perspective from NZMP' is based on publicly available official government statistics; industry association reports; other published industry reports together with data and insights developed by Fonterra's Global Dairy Intelligence group ('GDI'). These sources are identified as appropriate in this 'Perspective from NZMP'. GDI insights and data are derived from a global dairy market model populated by publicly available data. The model inputs and outputs do not reflect Fonterra's non-public production, pricing or sales data. Fonterra Co-operative Group Limited and its group members involved in the manufacture or sale of NZMP branded products ('Fonterra') has provided this 'Perspective from NZMP' for informational purposes only. It does not constitute recommendations or advice for the purposes of making financial decisions regarding in dairy products or commodities, or dealing in financial instruments relating to dairy commodities. Although every effort is made to ensure the accuracy of reproducing and interpreting such information, no warranty or representation of such is made and Fonterra shall have no liability in respect of any reliance placed on such information in the formulation of any business decision.