



PERSPECTIVE

July 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.

Ingredients by



Dairy for life



Welcome back to Perspective!

July 2020

Recently Fonterra announced the results of an extensive study to gain an accurate understanding of our on-farm carbon footprint. Fonterra's New Zealand on-farm carbon footprint was determined to be 1/3rd the global average. As Fonterra represents the vast majority of New Zealand's dairy production, this was an impressive feat. It also posed the question; why is the New Zealand on-farm carbon footprint so much lower than the global average, and how can we share these learnings wider?

This month we have invited **Dr. Jeremy Hill** (PhD), Fonterra's Chief Science & Technology Officer, to share his expertise in this space. With his extensive history in sustainable dairying, Jeremy goes into detail regarding the importance of sustainable dairy nutrition, and why New Zealand is able to produce dairy with such a low on-farm carbon footprint.

Additionally, as the dairy industry continues to navigate COVID-19, our team are here to support you. As always, we are available to answer questions or provide guidance, and for the latest information on how Fonterra is responding to COVID-19 please refer to the webpage [here](#).

Four key movements for the month:



Production – New Zealand ends season with increased monthly production. Australia's recent production improvement continues. EU production growth slows and US declines.



Exports – New Zealand monthly exports decline, and Australia exports soften. Monthly increase from US and EU.



Imports – Latin America, Asia and Middle East and Africa imports have strong decline. China monthly imports soften.



Prices – **GDT Event 262** showed mostly uplifts, resulting in the GDT price index rising +1.9% to USD \$2,979/MT. The largest movements came from Skim Milk Powder, Whole Milk Powder and Cheddar which moved +3.1%, +2.2% & +1.4% respectively.

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,

Gillian Munnik

Director of Sales and Marketing Services

In this issue

	Feature article	4
	Global production	8
	Fonterra milk collection	9
	Global exports	10
	Global imports	11
	Tracking the global dairy market	12
	Global indicators	13
	Commodity prices	14
	GDT results	15
	Industry commentary	16
	Glossary	20

New Zealand's Low Carbon Mission



Dr. Jeremy Hill (PhD)
Chief Science & Technology Officer, Fonterra



Jeremy Hill is Fonterra's Chief Science & Technology Officer, a role he has held since 2007. He is also the Professor of Sustainable Nutrition at Massey University, and has a PhD in biochemistry. Jeremy has published over 100 papers and authored four families of patents.

He currently sits of the Board of the Pastoral Greenhouse Gas Research Consortium and the Industry Advisory Panel to the High Value Nutrition National Science Challenge. In 2020 he was appointed a Member of the New Zealand Order of Merit for services to the dairy industry and scientific research in the Queen's Birthday Honours list 2020.

Between 2012-2016 he served as President and Chairman of the Board of the International Dairy Federation (IDF), the peak body for the global dairy sector. In October 2016 on behalf of the IDF he co-signed the Dairy Declaration of Rotterdam with the Food and Agricultural Organisation of the United Nations recognising the critical role of dairy in sustainable development.

In 1979 astronomer and Pulitzer Prize-winning author of the bestseller, *Cosmos*, Carl Sagan popularised the aphorism

"extraordinary claims require extraordinary evidence"

Although not a mission to visit distant planets as envisaged by Professor Sagan, the Low Carbon Mission is much closer to home and an important part of our planet's future.

In a previous issue of NZMP Perspective¹ I discussed the importance of dairy nutrition in sustainable diets and briefly touched on how dairy contributes 2.7% of global carbon emissions. In 2016, as the President of the International Dairy Federation, I had the privilege of signing the Dairy Declaration of Rotterdam on behalf of the global dairy sector, together with the Food and Agriculture Organisation of the United Nations². In that declaration the role that dairy products play as "an essential part of balanced, nutritious and healthy diets" is highlighted.

Most dietary guidelines recommend that individuals consume 2-3 serves (500-750ml of milk equivalent) of dairy each day³. But given global average consumption is less than half this amount, there is a need to significantly increase dairy intake as part of balanced diets. However we must also reduce the carbon footprint resulting from this. As important as dairy is to nutrition and health, we can hardly afford for dairy emissions to double and contribute to over 5% of global emissions.

So, how might it be possible to increase dairy consumption and at the same time reduce its global carbon footprint?

In this issue I talk about the mission to reduce global carbon emissions from dairy, in particular referencing how Fonterra New Zealand has

measured and achieved the low on-farm carbon footprint behind their NZMP product portfolio.

So, what is a carbon footprint?

Put simply, it is the gases released into the atmosphere from anthropogenic (caused by humans) activity, in this case the production of milk, that warm the planet. The tricky bit is determining how much of these gases are released, most notably carbon dioxide, methane and nitrous oxide.

Scientists use international standards to determine how much gas is released from milk production (it's carbon footprint) by analysing the output from each activity in the process. This is everything from electricity, tanker fuel, feeds, fertiliser, land management and those released by the cows themselves.

Nearly a decade ago

we wanted to gain an accurate understanding of the Fonterra New Zealand on-farm carbon footprint, and better understand what can be done to reduce emissions from the dairy industry.

As a result, I was involved in an extensive study led by world renowned AgResearch⁴ that calculated the on-farm carbon footprint of hundreds of Fonterra farms spanning the length and breadth of New Zealand over an eight-year period. To further confirm that the footprint was representative we expanded the analysis to a whopping 7200 farms in the final year of the study.

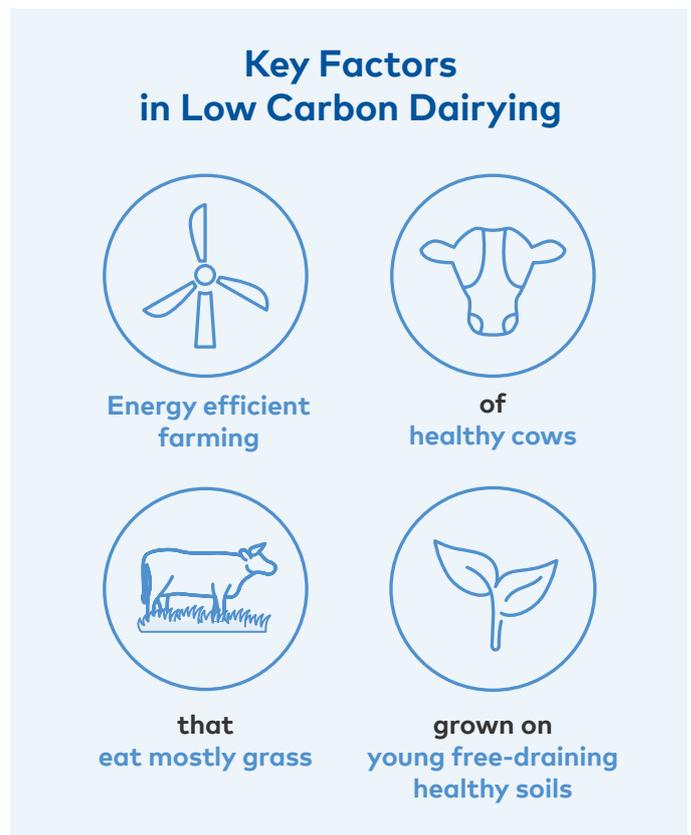
The results from this study and the extraordinary evidence used to calculate the footprint of Fonterra's milk production was recently published in the Journal of Dairy Science⁵ following peer review. Once adjusted for fat and protein content, which is the international standard method of calculating such milk footprints,

Fonterra's New Zealand on-farm carbon footprint was 0.78kg/litre or approximately 1/3rd the global average.¹²

As Fonterra represents the vast majority of New Zealand's dairy production, this was an impressive feat. It also posed the question; why is the New Zealand on-farm carbon footprint so much lower than the global average, and how can we share these learnings wider?

Why is New Zealand's dairy production footprint so low?

There are many reasons why New Zealand is able to produce dairy at scale with a low carbon footprint. However, I will share four key standouts:





So, let's have a closer look at the facts behind these features.

New Zealand farms have relatively low energy use

By harnessing significant water, geothermal and wind resources New Zealand has a high proportion of renewable electricity (approximately 85%).⁶ This has positive impact on reducing inputs into the dairy production system.

New Zealand dairy farmers have also continued to improve and adopt more efficient practices.

Over the last 25 years, New Zealand farmers have reduced on-farm emissions intensity (on-farm carbon footprint) by 20%.⁷

New Zealand has high standards of animal health and welfare

The high health and welfare of New Zealand cows mean they live longer productive lives.

New Zealand has an animal replacement rate of only 22% compared to 30-38% in many countries.⁵

New Zealand farmers believe that well cared for cows will be healthy and produce high quality milk. This also means that each New Zealand dairy cow produces more milk over its lifespan, more milk per cow means less emissions. In other words, far fewer cows in each herd that are producing GHG emissions but are not producing milk.

Our New Zealand cows spend more time on pasture than anywhere else in the world⁴

New Zealand has a climate "made for milk" and ideal for pasture-fed dairy farming allowing outdoor grazing year-round. The pasture growth is relatively high in New Zealand due to the temperate climate, adequate rainfall, and high sunshine hours.⁹ Good pasture growth results in low use of domestic or imported feed crops, which are used in many global dairy systems and add to the on-farm carbon footprint.

As a result,

our New Zealand cows are 96% grass-fed⁸ and spend over 350 days of a year on pasture¹⁰, which is more than anywhere else in the world.

High grass growth in New Zealand also results in lower fertiliser use and less nitrous oxide emissions.⁷ So in summary, this all contributes to New Zealand dairy farms relying less on external inputs, fertilisers and stock-feed.

Low nitrous oxide emissions from young, healthy New Zealand soils

New Zealand dairy farms typically have young, free-draining soils, which can result in lower greenhouse gas emissions from farmland, specifically nitrous oxide released from urine & fertiliser on-farm.^{5,11}

Having reduced nitrous oxide outputs is particularly significant as it has 300 times the climate warming potential of carbon dioxide.

Final Thoughts

As low as Fonterra New Zealand's carbon footprint is, we are looking for ways to reduce it even further and share these learnings with the global industry. As part of our Low Carbon Mission we are researching new technologies to curtail the production and promote the destruction of the GHG produced by dairy. No stone is being left unturned as we look for ways of breeding and feeding cows to produce less GHG, inhibiting methane production, methane vaccines, and high-tech methods that look more like Carl Sagan's rocket science than dairy science.



References:

1. NZMP Perspectives November 2019 www.NZMP.com
Ledgard, S.F. et al. 2020. Temporal, spatial, and management variability in the carbon footprint of New Zealand milk. *Journal of Dairy Science* Vol 3 Issue 1: 1031-1046
2. www.dairydeclaration.org
This figure excludes land-use change. The on-farm carbon footprint of Fonterra New Zealand milk production is 0.91 kg CO₂-e/kg FPCM including land-use change. Land-use change refers to the carbon footprint associated with deforestation in relation to the production of feed or conversion of agricultural land.
3. Weaver, C, Wijesinha-Bettoni, R, McMahon, D & Spence L (2013). Milk and dairy products as part of the diets. In *Milk and dairy products in human nutrition*. FAO, 2013. ISBN 978-92-5-107863-1. pp103-206. Ed. Muehlhoof, E., Bennett, A. and McMahon, D.
4. www.agresearch.co.nz
5. Ledgard, S.F. et al. 2020. Temporal, spatial, and management variability in the carbon footprint of New Zealand milk. *Journal of Dairy Science* Vol 3 Issue 1: 1031-1046
6. MBIE, 2018. *Energy in New Zealand*. Page 60. Ministry for Business, Innovation and Employment, New Zealand Government, Wellington, New Zealand.
7. Interim Climate Change Committee (2019). *Action on Agricultural Emissions*. p26.
8. Note that grass and pasture may be used interchangeably. 96% is an average calculated on an 'as consumed' basis. Average is measured over previous three seasons data and subject to minor variation. Grass is classified as grass, grass silage, hay and forage crops.
9. The National Institute of Water and Atmospheric Research (NIWA). NIWA website.
10. Based on average 97% of Fonterra's New Zealand dairy cows' time on pasture compared to information available on the top 15 dairy exporting countries based on their annual dairy product export volumes in 2017.
11. Note: As a result, a specific emissions factor for New Zealand has been established and accepted by the International Panel on Climate Change (IPCC), which is 59% lower than the IPCC default used for other regions. This results in the carbon footprint of New Zealand milk to be 18% lower than when the IPCC default is used.
12. Our New Zealand cows spend on average 97% of their non-milking time outside on pasture. Average is measured over the previous three seasons of data and subject to minor variation. Calculation excludes milking times because this only accounts for being off-pasture for on average up to 3 hours per day.
13. [Additional note; Some publicly available reports do not use the NZ specific factor, thus reporting higher emissions from NZ than Fonterra figures. The IPCC recommends use of locally specific emission factors when approved based on scientific analysis. Fonterra's methodology is in line with IPCC approach and recommendations.

New Zealand ends season with increased monthly production. Australia's recent production improvement continues. EU production growth slows and US declines.

NEW ZEALAND	AUSTRALIA	EUROPEAN UNION/UK	USA
+4.3%	+6.4%	+0.2%	-1.1%
Change for May 2020 compared to May 2019	Change for April 2020 compared to April 2019	Change for April 2020 compared to April 2019	Change for May 2020 compared to May 2019
-0.4%	-2.3%	+0.9%	+1.2%
Change for the 12 months to May 2020	Change for the 12 months to April 2020	Change for the 12 months to April 2020	Change for the 12 months to May 2020

Full season New Zealand milk production for the 12 months to May was 0.4% lower than last year.

New Zealand milk production¹ increased 4.3% on a litres basis (up 3.8% on milk solids basis) in May compared to May last year.

Following months of drought and lower milk production, May production improved on the back of more favourable weather conditions.

Production for the 12 months to April was down 2.3% on the previous 12 months.

Australia milk production increased 6.4% in April compared to April last year.

Better seasonal conditions and improved farmer confidence contributed to the continuing production recovery in the second part of the season, especially in Victoria and Tasmania.

Dairy Australia has moderated its outlook for 2019–20 production upwards, to a drop of just 1-3% on last year.

EU milk production for the 12 months to April was up by 0.9% compared to the same period last year.

EU (including UK) milk production increased by 0.2% in April compared to the same period last year.

The main production regions showed slower growth. Increases can be seen in Ireland (up 3.5%), Spain (2.3%) and the Netherlands (1.7%), but largely offset by a sharp drop in Italy (down 2.1%) and the UK (1.6%).

Milk production for the 12 months to May was 1.2% higher compared to the same period last year.

US milk production decreased by 1.1% in May, compared to the same period last year.

US milk production declined year-on-year for the month of May, as production restriction programmes were put in place. Reduced rations, lower frequency of milking and, to a lesser extent, cow culling were observed to reduce output.

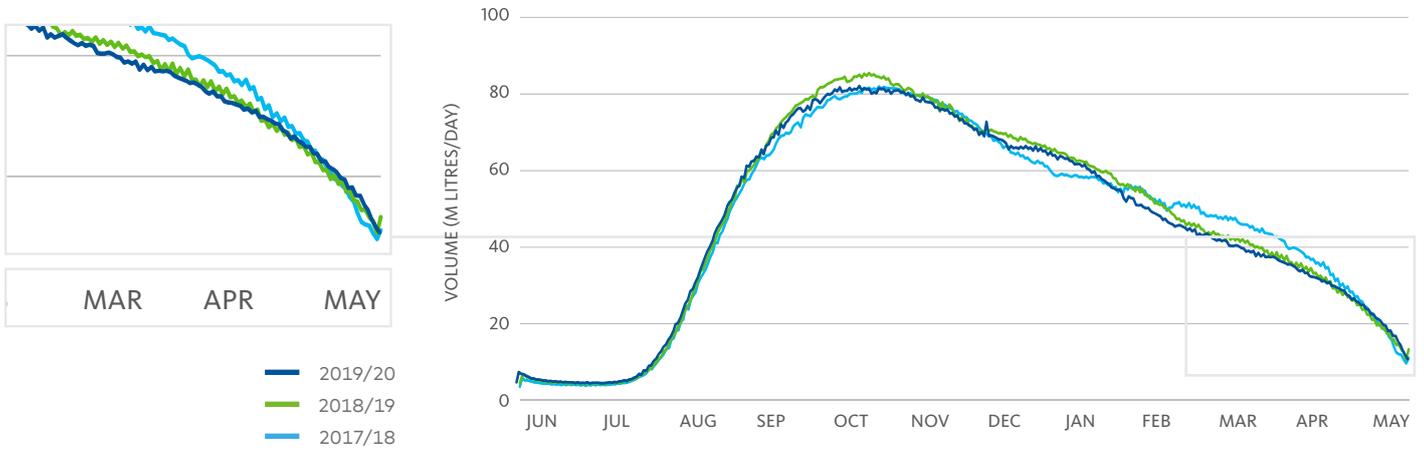
¹: New Zealand production is measured in litres.

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 USDA, Eurostat, High Ground Dairy, Dairy Australia and Dairy Companies Association of New Zealand



FONTERRA MILK COLLECTION 2019/20 SEASON



NEW ZEALAND COLLECTION

+2%.1

Change for May 2020 compared to May 2019

-0%.4

For the 2019/20 Season compared to the previous season

Fonterra's New Zealand collection for the 2019/20 season was 1,517 million kgMS, down 0.4% on last season.

Fonterra's collection in May, was 69.9 million kgMS, up 2.1% on the same month last season. May brought rain across the country, with some of the heavier falls across northern areas where it was very dry.

Forecast milk collection for the 2020/21 season is 1,525 million kgMS.

AUSTRALIAN COLLECTION

-5%.3

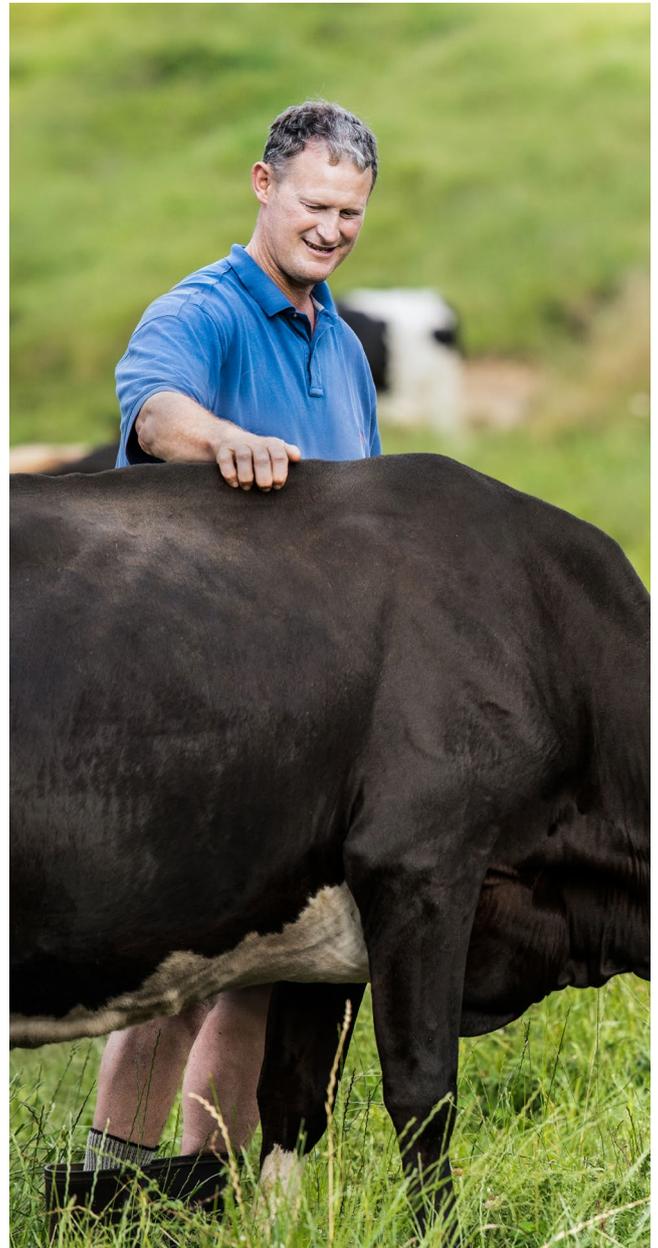
Change for May 2020 compared to May 2019

-12%.4

Season to date 1 July to 31 May

Fonterra's Australia collection in May was 7.7 million kgMS, a 5.3% decrease on May last year. For the month, farm milk collection was up on last year, while third-party milk was down.

Season-to-date collection reached 100.9 million kgMS, down 12.4% on the same period last season. Fonterra milk collections have been impacted by the highly competitive milk supply market which has seen losses primarily to milk brokers. Fonterra Australia has also made a conscious decision to purchase less third-party milk to focus on a value-add product mix.





New Zealand monthly exports decline and Australia exports soften. Monthly increase from US and EU.

NEW ZEALAND	AUSTRALIA	EUROPEAN UNION/UK	USA
-4% . ₄	+1% . ₉	+2% . ₃	+7% . ₁
Change for April 2020 compared to April 2019	Change for April 2020 compared to April 2019	Change for March 2020 compared to March 2019	Change for April 2020 compared to April 2019
-1% . ₀	-7% . ₁	+5% . ₈	+2% . ₁
Change for the 12 months to April 2020	Change for the 12 months to April 2020	Change for the 12 months to March 2020	Change for the 12 months to April 2020

Exports for the 12 months to April were down by 1.0%, or 34,427 MT, on the previous comparable period. This was primarily driven by butter and AMF.

Total New Zealand dairy exports decreased by 4.4%, or 13,444 MT, in April compared to the same period last year, albeit to a lesser extent than last month.

This was primarily driven by decreased demand for cheese (down 6,288 MT) to China and Japan, butter to Egypt and Australia (down 4,196 MT) and fluid milk products to Taiwan and the Philippines (down 2,890 MT).

Exports for the 12 months to April were down 7.1%, or 55,677 MT, on the previous comparable period.

Declines were recorded across a broad range of products with SMP, infant formula, whey, cheese, butter and WMP down 81,330 MT and partially offset by fluid milk products, up 29,922 MT.

Australia dairy exports increased by 1.9%, or 1,244 MT, in April compared to the same period last year. This was primarily driven by fluid milk products and SMP, up a combined 4,311 MT, but partially offset by lower demand for cheese, down 1,807 MT.

Exports for the 12 months to March were up 5.8%, or 317,396 MT, on the previous comparable period. Fluid milk products, butter and cheese were the main drivers of this growth, up a combined 248,922 MT.

EU (including UK) dairy exports increased by 2.3%, or 11,667 MT, in March compared to the same period last year. This was mainly driven by increased whey to China, butter and cheese to the US, up a combined 29,317 MT, and partially offset by a decrease in SMP exports to China, Egypt and Asia of 24,496 MT.

Exports for the 12 months to April 2020 were up 2.1%, or 48,569 MT on the previous comparable period driven by SMP, WPC and lactose, up a combined 95,297 MT and partially offset by decreases in whey, down 40,451 MT.

US dairy exports increased 7.1%, or 13,584 MT, in April compared to the same period last year, bouncing back from the past two months.

Exports increased to South East Asia and China offsetting a drop in exports to Mexico on the back of a lower peso and weaker Mexican economy. The increase was driven by SMP, WPC and lactose, up a combined 17,410 MT, partially offset by lower exports of cheese, down 6,157 MT.

Sources: Data from Global Trade Information Services, US Dairy Export Council, EU Milk Market Observatory, Dairy Australia, High Ground Dairy and Eucolait



Latin America, Asia and Middle East and Africa imports have strong decline. China monthly imports soften.

LATIN AMERICA

-10%
.₉

Change for March 2020 compared to March 2019

-2%
.₈

Change for the 12 months to March 2020

Imports for the 12 months to March 2020 were down 2.8%, or 54,407 MT, compared to the same period the previous year.

Decreases were driven primarily by WMP, infant formula, whey and SMP, down a combined 81,415 MT but largely offset by increases in WPC, up 18,957 MT.

Latin America dairy import volumes¹ decreased 10.9%, or 18,209 MT, in March compared to the same period last year. This was driven by continued lower demand for SMP from Mexico, and for WMP from Cuba, Brazil and El Salvador, down a combined 17,287 MT.

ASIA

-11%
.₂

Change for March 2020 compared to March 2019

-2%
.₉

Change for the 12 months to March 2020

Imports for the 12 months to March were down 2.9%, or 139,989 MT, compared to the same period the previous year.

Decreases were recorded across SMP, WMP, fluid products and whey, down a combined 149,494 MT, offset by increased cheese and lactose, up 29,155 MT.

Asia (excluding China) dairy import volumes¹ decreased 11.2% or 51,626 MT, in March compared to March last year. Decreases were recorded primarily in SMP to the Philippines, Pakistan and Bangladesh, fluid milk products to the Philippines and WMP to Sri Lanka and Hong Kong, down a combined 48,031 MT.

MIDDLE EAST & AFRICA

-11%
.₇

Change for March 2020 compared to March 2019

-3%
.₅

Change for the 12 months to March 2020

Imports for the 12 months to March 2020 were down 3.5%, or 143,989 MT, compared to the same period last year. This was driven by large decreases in fluid milk products and WMP, down a combined 154,634 MT.

Middle East and Africa dairy import volumes¹ decreased 11.7%, or 46,431 MT, in March 2020 compared to the same period last year. Decreases were recorded principally in fluid milk product to Libya, infant formula to Nigeria and butter to Turkey, down a combined 44,422 MT.

CHINA

+2%
.₁

Change for April 2020 compared to April 2019

+5%
.₆

Change for the 12 months to April 2020

Imports for the 12 months to April were up 5.6%, driven by fluid milk products and WMP.

China dairy import volumes increased by 2.1%, or 5,584 MT, in April compared to the same period last year. The sharp increase in year-on-year imports seen in March has eased.

The increase was the result of higher volumes of WMP, whey, and infant formula, up a combined 20,060 MT, and partially offset by a decrease in fluid milk products of 11,307 MT.

RUSSIA²

+7%
.₉₂

Change for March 2020 compared to March 2019

+4%
.₄

Change for the 12 months to March 2020

Imports for the 12 months to March 2020 were up +4.4% or +45,310 MT compared to the same period the previous year. This was mainly driven by AMF, Butter, Casein, Cheese, Dairy Spreads, Fluid & Fresh, Ice cream, Whey and WMP being up a combined +83,682 MT. Offset by Infant Formula, Cultured Products, Lactose, SMP, MPC and WPC being down a combined -37,853 MT.

Russia import volumes were up +7.92% or +7,346 MT for March 2020 compared to the same month the previous year.

1. Estimates are included for those countries that have not reported data.

2. Russia import data for April has not been released prior to publication.

Sources: Data from Global Trade Information Services; EU Milk Market Observatory; FAO; Highground Trading Group

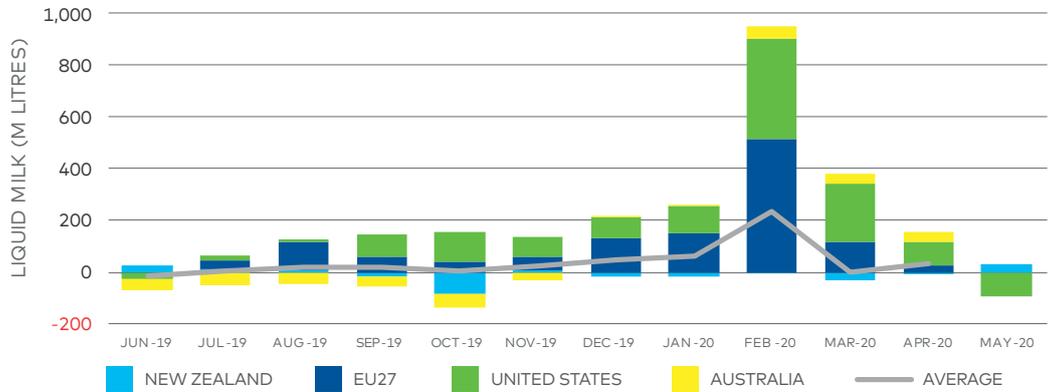
Global Dairy Market

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.

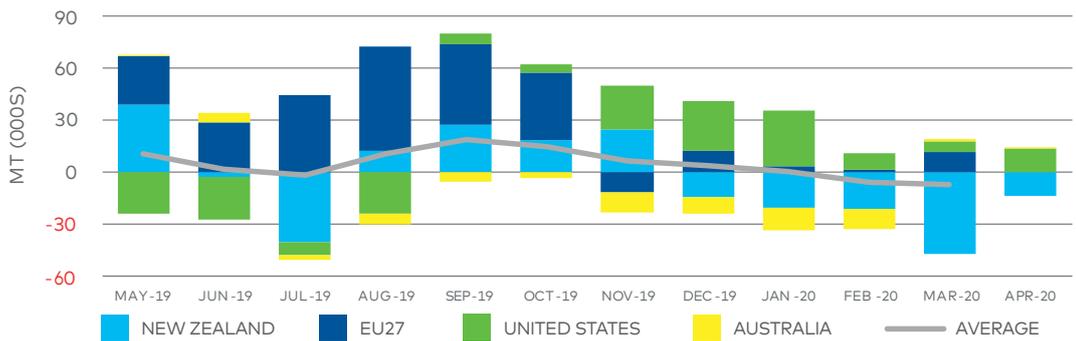
The absolute size of the bars represent the change in imports, exports or production, relative to the same period the previous year.

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

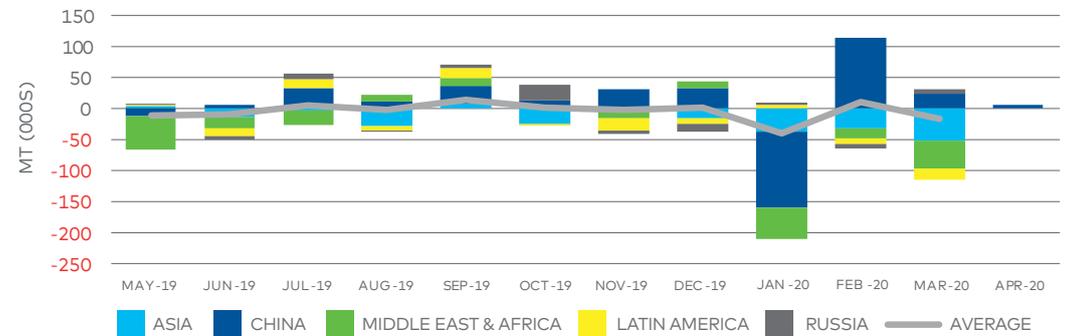
PRODUCTION



EXPORTS



IMPORTS





Food Price

The FAO Food Price Index (FFPI) rebounded in June, averaging 93.2 points for the month, up 2.4% on May. It represents the first month-on-month increase since the beginning of the year.

Meanwhile, the FAO Dairy Price Index was also up in June, averaging 98.2 points. That represents a 4% increase on May and is the first increase after four months of consecutive declines. Renewed import demand for spot supplies coupled with declining supplies in Europe and limited availability of uncommitted supplies in Oceania pushed prices up. However, the Index is still 4.6% below its level from June last year. While price quotations for all the dairy products in the Index rose last month, they are still not at pre-pandemic levels.

Source: FAO



Economic

The latest composite leading indicators (CLIs) point to a sharp slowdown across most of the major economies as the effects of the Covid-19 pandemic roll on. However, there are some tentative signs of positive change in momentum in China. In the current circumstances, the CLIs should still be interpreted with care, given the continued uncertainty around current lockdown impacts around the world.

Source: OECD



Consumer

The Economist Intelligence Unit (EIU) has further revised its forecasts for 2020 with global output now expected to contract by 4.8%. The EIU believes GDP will contract in all regions around the world, but particularly so in OECD countries. All G7 countries and all G20 countries (except China and Indonesia) are expected to experience a full-year recession in 2020. The EIU predicts the US' output will contract by 4.8% this year, while China's real GDP growth is expected to drop to 1.4%.

Source: Economist Intelligence Unit



Weather

Following months of drought in New Zealand and a resulting lower milk production, May's production improved off the back of more favourable weather conditions.

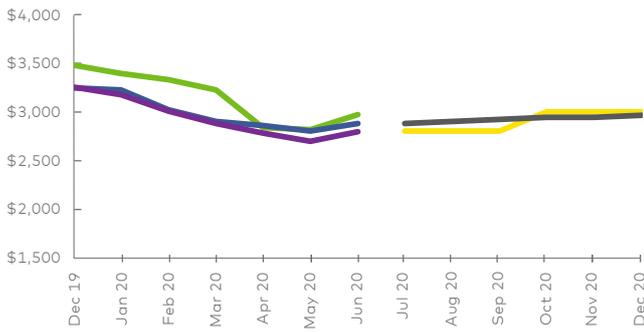
Meanwhile, across the Tasman, late May saw rain arrive in Australia's west, while periodic showers in the south-east maintained adequate moisture levels there. However, more rain was needed in the north-east, where there was increasingly dry weather during May.

Eastern Europe had a wet May, however dryness lingered in Hungary. Showers also improved crop conditions in central and southern parts of France and Germany but drought continued to affect crops in England.

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



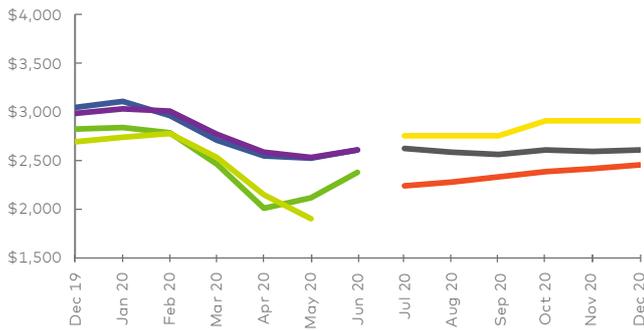
WMP



WMP prices increased for the first time in 5 months across the board for June. The largest increase coming from Dutch Dairy Board up +5.4% to USD \$2,970/MT. USDA Oceania & GDT rose +3.7% and +3% respectively.

Futures and forecasts for the next six-months have also revised up. Rabobank Oceania has increased +1.2%, predicting a slight upturn towards October. NZX Futures has increased theirs a further +8.9% from last perspective to an average USD \$2,923/MT.

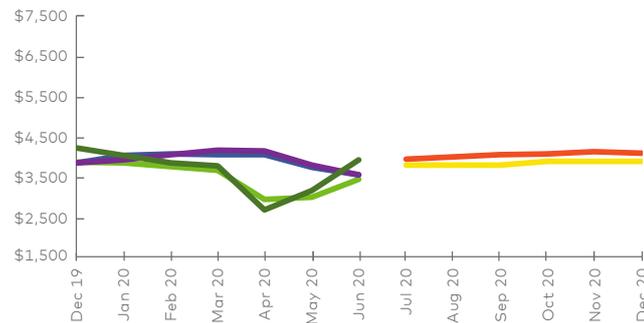
SMP



USDA NASS had not released its June results at time of publication, however SMP prices have increased across the board for the remaining indexes. Dutch Dairy Board is up +12.8% to USD \$2,374/MT. USDA Oceania increased +3% to USD \$2,600/MT and GDT showed an uplift of +3.3% to USD \$2,604/MT.

However, the Forecast and futures have showed some mixed results. Rabobank Oceania has stayed true to previous projections at USD \$2,825/MT. CME Futures has decreased its 6-month average -1.9% to USD \$2,344/MT. NZX Futures has increased +1.7% to USD \$2,591/MT.

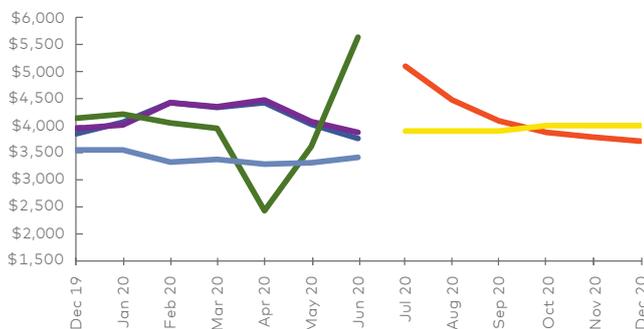
BUTTER



There were mixed movements this month in the Butter prices. USDA Oceania and GDT both dropped again to USD \$3,638/MT and USD \$3,629/MT respectively. CME Spot increased a further +25.4% to USD \$4,039/MT and Dutch Dairy Board showed a +16.3% uptake to USD \$3,519/MT

As a result, we see CME Futures revise their average up a further +13.9% to USD \$4,169/MT and Rabobank Oceania average prices remain flat at USD \$3,950/MT.

CHEESE



June brings a significant price changes for cheddar cheese with CME Spot showing a second substantial increase of +55.9% to USD \$5,640/MT. GDT declined -6.6% to USD \$3,756/MT and USDA Oceania dropped -4.8% to USD \$3,875/MT. EU commission rose +2.9% to USD \$3,406/MT.

CME Futures 6-month average has also risen +6.5% to USD \$4,175/MT and Rabobank Oceania's average holds at USD \$3,950/MT.

Actuals

- GDT Fonterra
- Dutch Dairy Board
- USDA Oceania
- USDA NASS
- CME Spot
- EU Commission

Forecasts

- NZX Futures
- CME Futures
- Rabobank Oceania



Risk and Commercial Solutions

Take control of price and supply.

Find out more



GDT Results

TRADING EVENT 262

+1.9%

Change in GDT Price Index from previous event

USD 2,979

Average price (USD/MT, FAS)

WMP

+2.2%

\$2,829

AMF

+0.8%

\$3,993

SMP

+3.1%

\$2,609

BUTTER

-1.0%

\$3,597

CHEDDAR

+1.4%

\$3,631

LACTOSE

+0.4%

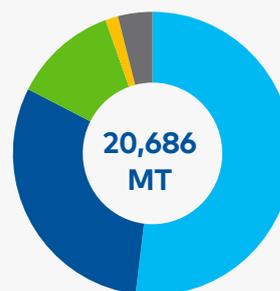
\$1,290

GDT SALES BY DESTINATION

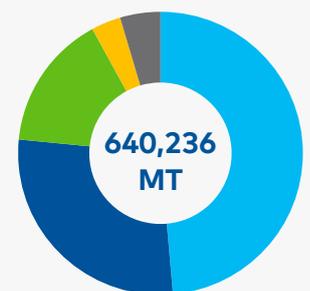
TRADING EVENT 262



Trade Event 262



Financial Year to Date

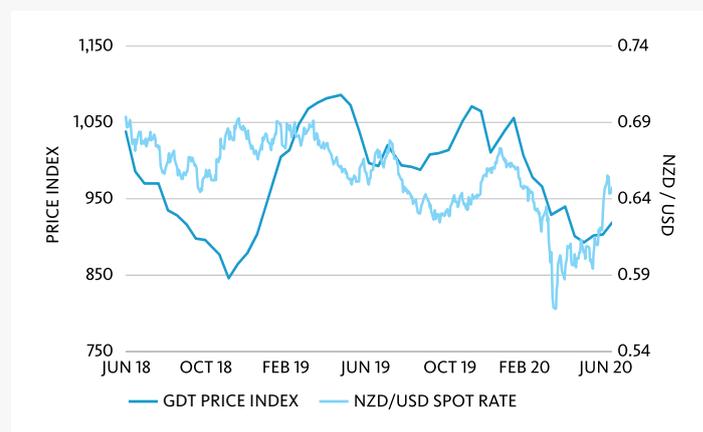


The next trading event will be held on 7 July 2020. Visit www.globaldairytrade.info for more information.

Dairy commodity prices and New Zealand dollar trend

Indicators of global and domestic economic activity started to show improvement by late May, and into June, as many nations moved to relax their COVID-19 lock-down measures.

Financial markets were encouraged that the worst of the economic shock may be behind us – the New Zealand dollar peaked above 65 US cents on this more sanguine outlook.





USDA, Dairy Outlook

Published June 17, 2020



Wholesale prices for cheddar cheese have seen unprecedented volatility this year. The prices of 40-pound blocks and 500-pound barrels (adjusted to 38% moisture) tumbled again in April and early May, but have risen each week since. The block price reached \$1.905 per pound for the week ending June 6, while the price for barrels was at \$1.8442 per pound.

Wholesale butter prices have also been extremely volatile in 2020. After a plunge in price in April, it has risen every week since and was sitting at \$1.5983 per pound for the week ending June 6. Meanwhile, the nonfat dry milk (NDM) price has trended downward through the year. For the week ending June 6, the price was \$0.8815.

The Chicago Mercantile Exchange (CME) butter price was \$1.8100 for the trading week ending June 5. Meanwhile, the CME prices for 40-pound blocks and 500-pound barrels of cheddar cheese skyrocketed, reaching \$2.5450 and \$2.3685 per pound, respectively, for the week ending June 12.

According to USDA National Agricultural Statistics Service (NASS), milk production in the US during April totalled 18.700 billion pounds, up 1.4% on April last year. Milk cows in April numbered 9.381 million head, a decrease from the 9.385 million head in March. Milk per cow was 1,993 pounds in April, up 18 pounds on April 2019.

US exports on a milk-fat milk-equivalent basis totalled 696 million pounds in April, down 128 million on March and 80 million on April 2019. On a skim-solids milk-equivalent

basis, April exports totalled 3.865 billion pounds, down 23 million on March but up 438 million on the same time last year. April exports of cheese were relatively weak at 58.9 million pounds, down 12.6 million on April 2019. Exports of dry skim milk products (NDM and SMP) were relatively strong at 179.7 million pounds, up 12.3 million on March and 24.8 million on April last year.

US dairy imports on a milk-fat basis were 532 million pounds in April, up 45 million on March but 29 million less than April 2019. On a skim-solids basis, April imports totalled 469 million pounds, down 32 million on March and 31 million on April 2019. However, imports of butter were relatively strong in April, coming in at 7.5 million pounds, up 1.1 million on April 2019.





Dairy forecasts for 2020

Published June 17, 2020

The milk cow average for 2020 is now forecast at 9.375 million head, up 20,000 on last month's prediction. This is due to higher-than-expected milk cow numbers in April, higher expected milk prices, and a decline in dairy cow slaughter numbers. However, the milk per cow forecast has been lowered for the second quarter of 2020 as some dairy farmers have likely taken steps to reduce output in response to actions taken by cooperatives and milk handlers to limit milk production growth. Average milk per cow in 2020 is now forecast at 23,740 pounds, 30 pounds less than last month's prediction. Milk production is now forecast at 222.5 billion pounds, up 0.1 billion pounds.

The forecast for 2020 exports on a milk-fat basis is 8.9 billion pounds, down 0.3 billion on last month's forecast, as higher US cheese prices are expected to dampen cheese exports. On a skim-solids basis, exports are forecast at 45.1 billion pounds, up 0.7 billion on last month's prediction, due to higher expected exports of dry skim milk products and lactose.

Meanwhile, the forecast for imports on a milk-fat basis is now 6.8 billion pounds, up 0.1 billion, due to higher expected butter imports. The forecast for 2020 imports on a skim-solids basis has been raised 0.1 billion pounds to 5.8 billion

pounds, due to higher expected imports of low-fat milk powder in the second quarter.

The forecast for 2020 ending stocks on a milk-fat basis is 14.2 billion pounds, down 1.1 billion. On a skim-solids basis, the 2020 forecast for ending stocks is 10.6 billion pounds, which is 0.7 billion lower than the previous forecast.

Based on recent price strength and higher expected domestic demand, the cheese price forecast for 2020 has been raised to \$1.660 per pound, 24 cents more than last month's prediction. The butter price forecast has also been raised 27 cents to \$1.680 per pound. With higher expected exports, the NDM price forecast has been raised to \$1.000 per pound, up 6 cents on last month's forecast. The dry whey price forecast has been lowered by 2 cents to \$0.360 per pound.

With the higher expected cheese price, the Class III price forecast for 2020 has been raised to \$15.65 per hundredweight (cwt), up \$2.30 on last month's forecast. Higher expected butter and NDM prices mean the Class IV price is up \$1.65 to \$13.55 per cwt. The all-milk price forecast for 2020 is \$16.65 per cwt, up on May's forecast of \$14.55 per cwt.

Blimling, Forecast Update

Published June 3, 2020

Blimling says the cheese market is close to its top, with demand unlikely to grow at current record high price levels. They expect an upcoming pattern of swift declines followed by buy-side support, followed by further declines.

Meanwhile, they're predicting butter prices will stay choppy in the near-to-medium term. Sizeable bulk butter inventories from the first four months of the year should help curb market up-side over the next few months. However, Blimling says holdings may not be enough to head off higher prices later in the year.

NDP/SMP prices have begun to stabilise after a 25% rally in early May. They expect prices to be choppy above a dollar in the near-to-medium term. If demand stays hot and supply fails to bounce back, upside risk is on the table.

Finally, Blimling predicts whey prices will remain under pressure due to the recent revival in cheese and dry whey production. Strong carbohydrate values could limit the downside there. They expect prices to remain in the mid-30-cent range for the rest of the year.



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.



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 trading 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.