



Rabobank

Dairy Quarterly Q4 2019

Farmers Welcome Higher Prices. Will Consumers?

RaboResearch

Food & Agribusiness
far.rabobank.com

Lead authors

Ben Laine

Analyst Dairy
+1 314 317 8274

Saskia van Battum

Analyst Dairy

For a full list of authors,
see back page

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Summary

- Milk and dairy product prices are on the rise, but the ability to pass on these increases through the supply chain to consumers is a challenge, with much of the world either recovering from, in the midst of, or on the verge of some degree of recession.
- EU milk production is poised to grow in 2020, albeit modestly and from low year-ago levels. There are a number of hurdles to herd expansion, including environmental regulations.
- Import demand from China is expected to continue to rise, although it will likely be weaker in the first half due to higher carry-over stocks and strong comparables. The potential for weaker domestic demand in the face of economic woes could further reduce the need for imports.
- Combined milk production growth among the Big-7 milk-producing regions is expected to remain at, or slightly below, 1% through Q1 2021.
- Cheese and SMP are taking the spotlight from butter in the latest price rally. Butter prices have mostly stabilized after varying degrees of decline around the world. Whey prices are gradually improving, but still face limitations due to the reduced demand for pig feed in China.
- As market demand shifts towards protein and away from butterfat, processors will need to re-evaluate the product mix in order to capitalize on this reversal from the recent norms, which could lead to greater price volatility than experienced in the past few years.

Regional Dairy Markets

EU

Milk supply growth will be modest in the major production regions despite higher milk prices due to limited herd expansion.



China

Interests in herd expansion are rising along with elevated milk prices, with the 2020 output forecast to grow by 2%. An early Chinese New Year will drive strong demand through Q4 2019. Imports during 1H 2020 are unlikely to keep pace with 2019.



US

Improved farm margins will drive year-on-year milk production gains at a historic average level of 1.5% growth in 2020. Threat of a recession in 2H 2020 could stall domestic demand growth.



South America

Milk price improvement is being met by tepid demand from consumers feeling the impacts of high inflation (Argentina) and low employment (Argentina and Brazil), pressuring processors margins.



New Zealand

Volatile weather will tip the balance for the season between incremental growth or decline. Export demand from China has been particularly strong, supporting markets.



Australia

Rabobank is lowering its 2019/20 milk production outlook due to dry conditions and elevated feed costs.



Global Summary

Farmgate milk checks are improving in most of the world's major dairy-producing regions. Beyond that, the similarities break down quickly. In the US, the higher milk prices, combined with lower feed costs are resulting in higher on-farm margins. In the EU, low stocks of roughage will strain margins over the winter. South American dairy processors are struggling to pass higher costs along to consumers due to challenging domestic economic conditions. Oceania continues to face persistent dryness in Australia and volatile weather in New Zealand, which has negatively impacted feed costs and pasture growth.

Butter has been the shining star of the dairy commodities throughout the general lull in dairy commodities over the past few years. Recently, however, excitement has subsided, and cheese and SMP have returned to the spotlight, as both have reached price levels not realized since 2014 (see Figure 1). European SMP prices are up over 18% in November, surpassing EUR 2,400/mt and US Cheddar cheese prices topped USD 2.25/lb.

The global market has picked up for SMP now that EU intervention stocks are a thing of the past. EU exports of SMP were up 20% YOY in Q3, US exports of SMP and Nonfat Dry Milk were down by 2% YOY in Q3 but improved in September (up 8% YOY).

In South America, higher feed prices are necessitating higher milk prices, but the rest of the supply chain is struggling to capture enough margin without passing along higher prices to consumers. Brazilian consumers are beginning to show signs of recovery, and demand is picking up for cheese and yogurt, but Argentina still struggles with a worsening recession and falling domestic demand. Exports declined by 12% through September, and concerns about a return to export taxes under a newly-elected government raise the likelihood of ongoing challenges.

Trade negotiations continue to forge ahead but not without sporadic disruptions. The US has implemented tariffs across a number of products, including dairy from the EU. This has led to substantial front-loading of imports including butter in anticipation. Meanwhile, India has moved away from a Regional Comprehensive Economic Partnership deal which would have provided access to partnering countries to

export more dairy to India. China and the US seem to be making progress on trade, but the realization of a multi-phase deal will likely be a bumpy road.

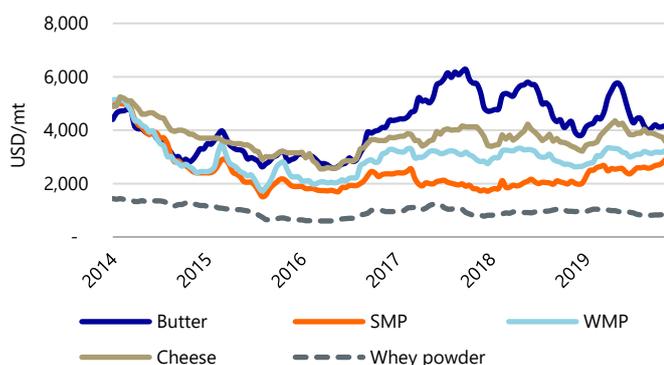
Dairy producers around the world have spent the last several years waiting for a return to price levels reminiscent of those seen in 2014. Now that we are approaching that territory there is anxiety over consumers' ability to withstand price increases. Our outlook is for improved milk prices at the farmgate, but hesitation on either end of the supply chain. Producers are hesitant, or unable, to expand despite the positive price signals, and perhaps rightly so. If these higher prices can't be absorbed by consumers feeling some economic pressure, then the upside potential could be limited.

With rising SMP prices, the processing sector will need to revisit product mixes. This will inevitably lead to shifts in production and inventories, which will mean volatility in commodity prices. For the most part, we see this volatility favoring higher milk prices in the coming quarters.

Rabobank's outlook for milk production is still muted – remaining at, or slightly below 1% YOY among the combined major milk-producing regions through Q1 2021 (see Figure 2). Higher milk prices will be welcomed by farmers, but those farmers will continue to face constraints which will hold them back from rapidly expanding their herds. In some regions, those will be regulatory, in others they will be economic.

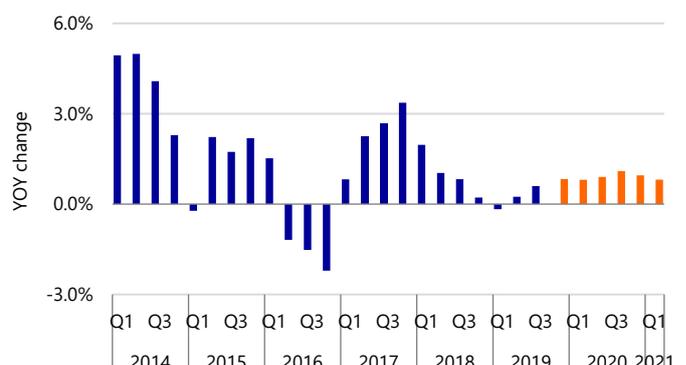
Given the modest milk production growth outlook, and the reduced SMP stocks worldwide, Rabobank expects tighter availability of exportable surplus among the major dairy exporters of the world. This will generally have a positive impact on price. SMP prices are expected to see the most improvement, in the range of EUR 2,525 to 2,600/mt through Q1 2021. Butter is expected to remain generally range-bound between EUR 3,600 and 3,700/mt, though the US may see prices rise if imports from the EU are hampered by tariffs in 2020. Elevated cheese prices in the US during Q4 will likely retreat from their near-term peaks, but still remain above USD 1.75/lb. Elsewhere, cheese prices should remain fairly stable. While the forecasts reflect quarterly averages, heightened volatility during shorter periods should be expected as product mixes are adjusted to take advantage of higher values of skim relative to fat.

Figure 1: Dairy commodity prices, FOB Oceania, 2014-2019*



* Whey is FOB in Western Europe. Source: USDA, Rabobank 2019

Figure 2: Milk production growth, Big-7 exporters (actual and Rabobank forecast), Q1 2014-Q1 2021*



* Big-7 includes EU, US, NZ, Australia, Brazil, Argentina, and Uruguay. Source: Big-7 government trade agencies, Rabobank 2019

What to Watch in Q1 and Q2

Price-Sensitive Consumers

Higher commodity prices are a welcome change for dairy producers, but as those prices work through to consumers, their willingness to pay higher prices at restaurants and grocery stores remains to be seen. Slower growth has already been seen in restaurant traffic in the US, and strained consumers are decreasing demand in Argentina. With the lingering threat of a broader recession in other parts of the world, consumer demand could be at risk.

Reversal of Commodity Values

Over the past few years, milk fat, mostly in the form of butter, has been the bright spot in dairy markets, while a global surplus of skim solids (left over from a rush to make as much high-value butter as possible) were weighing down prices for SMP and nonfat dry milk. That relationship has changed. Butter prices have cooled and SMP availability is limited, driving up global prices. The processing sector will need to adjust product mixes to take advantage of this reversal, but volatility is likely as the markets adjust.

More Trade Disruption

Trade disruptions and battles will continue into the first half of 2020. US imports were frontloaded from the EU ahead of tariffs, but as those tariffs remain in place, a slowdown could be felt once stocks are drawn down. Indonesia, meanwhile, is also threatening the EU with tariffs, but their ability to source sufficient product from New Zealand and elsewhere will be a challenge.

China Supply and Demand

In China, favorable milk prices are driving herd expansion and increased milk production. The domestic market should be well-supplied to begin 2020. Higher than normal carry-in stocks are also expected, which could lead to less reliance on imports to meet Chinese needs in 1H 2020.

Currency Wars

With US elections pending next year, volatility in the US dollar is one of the only certain outcomes in the 2020 election cycle. How other currencies perform against a stronger US dollar, in a setting of elevated commodity prices will be important for both global dairy demand and future commodity price direction.

Table 1: Quarterly dairy commodity prices (historic and forecast), Q4 2018-Q1 2021f

		2018	2019				2020				2021
		Q4	Q1	Q2	Q3	Q4e	Q1f	Q2f	Q3f	Q4f	Q1f
Butter											
Europe	EUR/mt	4,672	4,332	4,113	3,713	3,670	3,600	3,700	3,675	3,650	3,650
US	USD/mt	4,991	4,977	5,091	5,136	4,665	4,555	4,755	5,290	5,260	4,740
Oceania	USD/mt	4,038	4,482	5,350	4,227	4,200	4,150	4,150	4,100	4,100	4,100
Cheese											
Europe (Gouda)	EUR/mt	3,190	3,101	3,087	3,083	3,135	3,200	3,200	3,200	3,175	3,175
US (Cheddar)	USD/mt	3,225	3,174	3,700	4,083	4,550	4,190	4,115	4,310	4,240	4,100
Oceania (Cheddar)	USD/mt	3,375	3,688	4,154	3,896	3,800	3,900	3,900	3,950	3,950	3,900
Dry whey powder											
Europe	EUR/mt	829	867	813	715	790	785	780	775	775	775
US	USD/mt	1,013	990	834	808	695	680	750	800	825	850
Skim milk powder											
Europe	EUR/mt	1,612	1,868	1,993	2,100	2,440	2,575	2,600	2,575	2,550	2,525
US	USD/mt	1,956	2,124	2,221	2,296	2,520	2,700	2,845	2,875	2,780	2,645
Oceania	USD/mt	2,017	2,518	2,502	2,586	3,000	3,050	3,050	3,000	2,950	2,900
Whole milk powder											
Europe	EUR/mt	2,726	2,827	2,929	2,897	3,010	3,025	3,000	2,900	2,850	2,850
Oceania	USD/mt	2,675	2,982	3,206	3,129	3,300	3,250	3,200	3,100	3,050	3,100
South America	USD/mt	3,020	2,882	3,000	3,180	3,100	3,050	3,000	3,100	3,100	3,100

Source: USDA, forecasts by Rabobank 2019

EU

Low comparables and more favorable weather conditions as of August, pushed EU milk production growth up to 0.8% YOY or 309,000 metric tons in Q3 2019 (July +0.4%, August +1.2%, September +0.8%). For October, based on preliminary figures, we expect a growth of around 0.5% YOY. Through September, year-to-date EU milk supply is up 0.5% YOY or 570,000 metric tons (see Figure 3).

Over this period, the highest growth was recorded in Ireland (+8.0%), followed by the UK (+2.4%) and Poland (+2.0%), while Germany (-0.2%), France (-0.7%), Italy (-0.7%) and the Netherlands (-1.8%) showed a decline in milk volumes.

In August, Germany, France and the Netherlands finally showed some positive growth figures. However, for the full year, milk supply in Germany and France is expected to end slightly below 2018 levels. In contrast, due to exceptionally low levels in the closing months of 2018, Dutch milk volumes for 2019 will finish around -0.8% below the prior year, compared to a 2.9% YOY annual decrease in 2018. Milk supply growth in Ireland and Poland lost momentum in recent months and for the full year will end at 7% and 2%, respectively, above last year.

The EU dairy herd is in contraction mode, according to recently released mid-year data. Germany and France, the EU's two largest milk-producing countries, reduced cow numbers by 2.4% YOY (100,000 head) and 1.2% (41,000 head), respectively, during 1H 2019. During the same period, the Dutch herd shrank by 2.0% YOY (33,000 head), however, compared to December 2018, the Netherlands registered a small rebound in cow numbers (37,000 head) after drastic culling in 2H 2018. Ireland remained an exception by growing its herd size by 1.6% YOY (24,000 head), while Poland reported a small loss in cow numbers of 0.5% YOY (12,000 head). In 2020, Rabobank does not see a significant growth of the EU herd, as feed availability and environmental compliance limit the potential for milk supply growth.

In the months up to August, cow culling in the EU went down by 6.5% YOY or 317,000 head on average, of which 92,000 head in the Netherlands (-26.1%) and 48,000 head in Poland (-12.1%).

During most of 2019, grass growth across many of the most important milk-producing regions on the European continent was negatively affected by dry conditions and soil moisture deficits. Some welcome rainfall as of August improved grass growth across north-western Europe, allowing for a much needed cut of grass silage around the beginning of September. As of mid-September, abundant rainfall negatively impacted the corn harvest and the planting conditions for winter crops in northwestern Europe.

In October, average milk prices across the EU lifted by EUR 1.40/100kg to EUR 34.92/100kg compared to July. Overall, EU milk prices for 2019 will finish below last year's levels when adjusted for fat and protein content.

On average, prices for EU dairy commodities have improved since early September. Prices for SMP jumped by EUR 385/mt (18.4%) to EUR 2,481/mt by the end of November, passing the EUR 2,400/mt for the first time since 2014. WMP

prices increased by EUR 171 (6.0%) to EUR 3,037/mt – a level last seen in 2H 2017. After moving sideways for most of 2019, Gouda improved by EUR 62 (2.0%) to EUR 3,135/mt. After a sharp decline during the first nine months of 2019, EU butter prices have stabilized in recent months, with a gain of EUR 17/mt to EUR 3,630/mt (+0.5%) in November. Whey prices recovered to EUR 803/mt (+EUR 10/mt or 13.8%), but still remain below last year's level.

Through September 2019, EU SMP production growth slowed to +0.8% YOY. At the same time, butter production increased by +4.4% YOY to 1.7m metric tons. WMP production posted positive year-to-date growth (+0.4% YOY), boosted by a 12.8% YOY gain in September. Since July, cheese production started to regain momentum, with production now up +0.6% YOY in the first three quarters of 2019, to 7.2m metric tons.

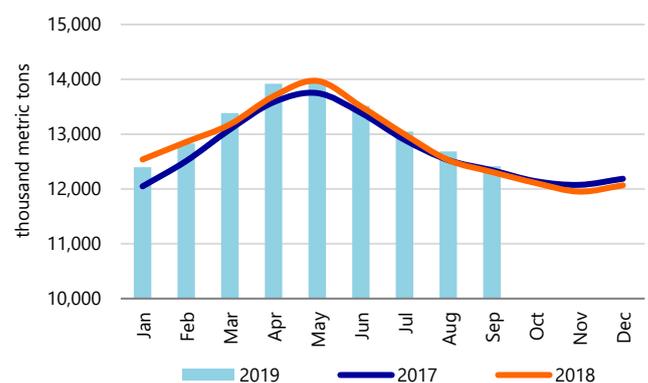
Competitive butter prices in the world market and front-loading to the US ahead of the higher tariffs, pushed EU butter exports up strongly in the three months to September (+75% YOY). EU SMP exports remained strong, up +20% YOY in Q3. SMP exports to China were higher compared to Q3 2018, but down compared to Q2 2019. As with butter, front-loading to the US accounted for the increase of +11% YOY in EU cheese exports in the third quarter. The decline in WMP exports narrowed to -1% YOY in the same period, as more WMP landed in Algeria.

Looking at 2020, Rabobank foresees EU milk production growth at 0.7%, slightly higher than its previous forecast. Based on the current direction of EU commodity prices, Rabobank expects farmgate milk prices to improve in the opening months of 2020. However, despite the potential price upside, availability of roughage will be scarce over the winter months, which could hamper margins at farm level. As such, the pasture and growing conditions during 2020 will be crucial for EU milk supply growth.

The Eurozone economy has started to stabilize in recent months as Germany and Italy managed to avoid looming recessions, but in the short term a strong economic upturn is not foreseen. Trade war tensions and uncertainty over Brexit are still weighing on economic activity and sentiment.

As a result, Rabobank expects EU dairy demand to grow at a modest rate of around +0.2% in 2020. With supply growth forecast at +0.7%, this will leave the EU with an exportable surplus, which will need to find a market.

Figure 3: EU milk production, Jan 2017-Sep 2019



Source: ZMB, Rabobank 2019

US

After months of stagnation, US milk production is showing signs of life again, with 1.3% YOY increases in September and October. An additional 5,000 cows joined the national milking herd in each of these months, and milk per cow increased by 1.8% and 1.7% in September and October, respectively. This is the beginning of a return to more normal year-on-year milk production growth of 1.3% to 1.5% in Q4 2019 into 2020 (see Figure 4).

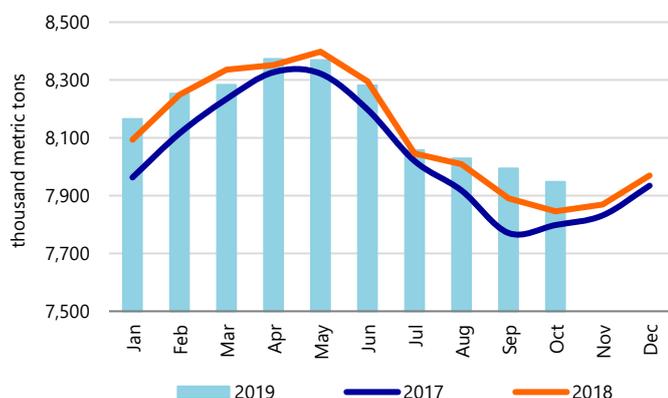
Rising dairy commodity prices have translated into higher milk checks and stronger farm level margins since feed costs are not expected to increase to the same degree. Feed quality, however, remains uncertain and will suffer from a combination of late plantings and early snow, which is likely to temper milk per cow gains in 2020. The outlook for milk production growth depends on whether those additional dollars go toward expanding production, or repairing balance sheets. Our industry sources suggest the latter.

Exceptional cheese prices pushed Class III prices over USD 20.00/cwt. in November, a level not seen since 2014. While cheese prices have fallen from their lofty peaks, they should continue to find support in the months ahead due to modest stock levels and improved exports (+3.4% YTD).

Rising nonfat dry milk prices are boosting the Class IV milk prices. Production and stocks are in similar ranges to recent years. NDM exports improved year-on-year by double-digits in September and October, narrowing the year-to-date gap to 8% or about 50,000 metric tons. US-SMP trades at a discount to others, suggesting there is room for continued price strength.

In general, US exports trail the prior year due to non-competitive prices and trade disruptions. Still, the year-on-year deficit (based on a milk solids equivalent) narrowed in Q3 to 7.4%, an improvement on the 1H 2019 16% gap. The ongoing trade battle with China and the ASF outbreak, factor largely in US dry whey exports being down 33% YOY through October 2019, and depressing dry whey prices.

Figure 4: US milk production, Jan 2017-Oct 2019



Source: USDA, Rabobank 2019

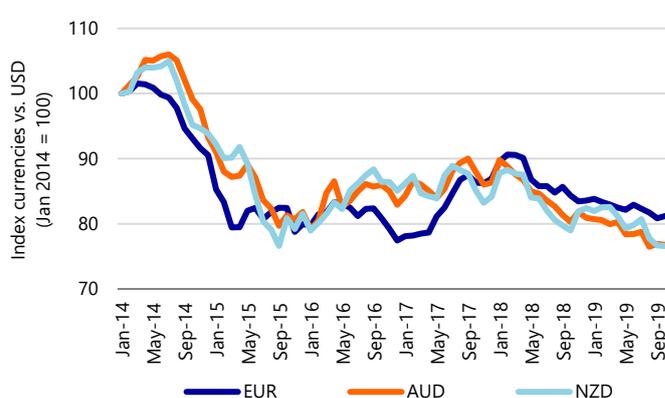
US butter and cheese imports were very strong during Q3, as global prices were at a significant discount to US price levels, and as buyers frontloaded EU dairy products ahead of the additional 25% tariff levied from October 18 onwards. US cheese imports increased by 16% in Q3 compared to the prior year, driven by domestic prices, which exceed EU and Oceania prices by 23% and 34% respectively. US butter imports through October are up 26%, representing an additional 27m pounds. Meanwhile, US butter stocks as of October 31, at 238m pounds, exceeded last year's level by just 6.5m pounds, despite elevated imports. If tariffs slow imports from Europe in 2020, the US butter market could tighten substantially.

US domestic dairy commercial disappearance growth slowed in Q3 2019 to just 0.5% YOY, after a robust 3.5% increase during 1H 2019. Softening domestic demand is attributed to rising retail and food service prices. Looking forward, US dairy demand will continue to grow, but at lower rates, as higher prices and a weaker economy, based on a heightened probability of a recession in 2H 2020, impact consumer spending.

According to IRI, Q3 retail processed cheese, milk, and yogurt sales declined by 0.7%, 3.8%, and 1.2%, respectively compared with last year. During the same period, ice cream sales were flat, but natural cheese and butter grew by 3.1% and 3.8%, respectively. Still, the 3.8% retail butter volume growth slowed considerably from Q2, which was up 10.5%. On average, year-to-date retail prices have risen slightly less than 2% for 2019. The food-away-from-home Consumer Price Index rose by 3.2% through Q3, signaling a potential slowdown or trading down in away-from-home food sales.

With a return to more normal milk production growth in 2020, combined with a looming domestic demand slowdown, the US will have a larger exportable surplus in 2020. Fortunately, low stocks and limited expansion in the rest of the world should present opportunities for export.

Figure 5: Exchange rates, USD vs. exporters, 2014-2019



Source: UDM Board of Governors of the Federal Reserve System, Rabobank 2019

New Zealand

Export volumes for the three months to October 2019 were higher by 10% on the same period last year, driven by exceptionally strong Chinese imports. Shipments to China for October 2019 were particularly outstanding, with volumes jumping 30% YOY.

Demand has remained strong for New Zealand product and this will be reflected in export volumes tracking higher YOY for the month of November 2019. However, December 2018 volumes set a new record, and despite a modest global milk production setting, it will be difficult to beat this due to consistently strong export volumes to China across the calendar year and weak New Zealand milk production over the spring months.

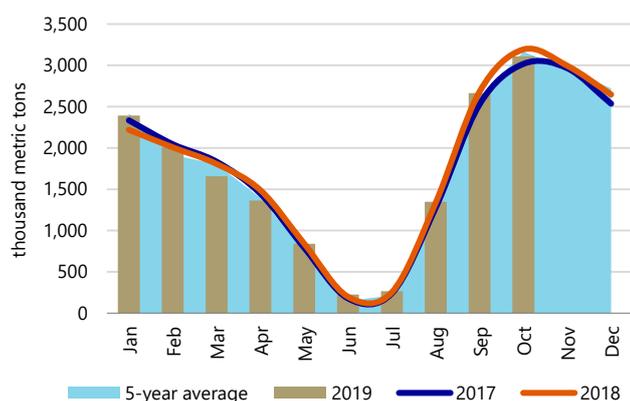
As foreshadowed in the last Quarterly report, fickle weather has had a tangible mark on spring milk production. September collections were -0.7% lower and October fell by 2.6% YOY on a tonnage basis. Season-to-date (October) collections are trailing behind by 0.7% (see Figure 6).

While Waikato weather has been cold in some parts of the region, grass growth is good and shaping up to provide ample feed reserves across summer. However, the risk still remains that some water tables are low, and should summer conditions start to heat up, grass growth may be impacted.

The general theme is still consistently inconsistent weather in the South Island, with the decline in national collections to date largely due to the lower South Island having a wet and cold spring. Recent torrential rainfall in South Canterbury will further pressure total milk production growth numbers for December 2019.

NIWA anticipate variable weather over the course of summer dependent on a change in wind patterns. While temperatures are anticipated to be above average for the summer period, rainfall levels are forecast to remain near-normal across the country. As 2019 rolls into 2020, changeable wind patterns could see drier conditions across typically wetter regions.

Figure 6: New Zealand milk production, Jan 2017- Oct 2019



Source: DCANZ, Rabobank 2019

We now forecast full-year season milk production through to Q2 2020 to range between +0.5% and -0.5% YOY. New Zealand's dairy industry is in a new milk production era, where incremental growth (or decline) each season will be the new norm – as opposed to the large gains seen in the past decade. With dairy conversions no longer featuring across the country, and challenges to existing stock numbers via tighter environmental legislation, the weather will play an even more important role in determining the production needle movement.

In light of strong Oceania-origin commodity prices since the last quarterly report, Fonterra has twice revised upwards its forecast range for the 2019/20 season to NZD 7.00/kgMS to NZD 7.60/kgMS. Rabobank anticipates NZD 7.60/kgMS for the full season.

2H 2020 milk production (the start of a new NZ season) can be expected to be a modest improvement on 2H 2019 based on low 2019 comparables and assuming no extreme climatic conditions significantly impact milk production, before declining in 1H 2021 with resource constraint pressure.

Australia

In the four months of the 2019/20 season, milk production fell 5.5%. This represents a loss of 190m liters, with falls recorded in all states and regions excluding Eastern Victoria (see Figure 7). The impact of recent bushfires on the dairy industry is still being assessed, but has been minimal. Some dairy farm businesses in the affected areas have encountered logistical issues.

Seasonal conditions largely remain unfavorable heading into summer. Rainfall deficits have been evident across much of the key dairying regions through November. The latest outlook from the Bureau of Meteorology suggests drier-than-average conditions (and above average temperatures) over the summer months across much of the Australian east coast. Irrigation farmers in the Murray irrigation district continue to battle with lower allocations and very high temporary water pricing.

Some recently released data showed the Australian dairy industry starting the new season on July 1 with 1.44m head of milking cows. This is 7% (or 107,000 head) below the previous season.

The recovery in dairy farm confidence levels gained through strong price signals has quickly evaporated. The latest Rural Confidence Survey data for December showed a sizeable fall in confidence as elevated input costs and unfavorable seasonal conditions damped expectations for profitability ahead of summer.

For the season, Rabobank has revised down its milk production forecast. The latest expectation is for national production to decline by 5.8%, to 8.3bn liters. On a volume basis, this represents another loss of 500m liters of milk

from the system – the majority of the falls to come from the Northern Victoria and Southern NSW irrigation districts.

On a bright note, there are some key dairying regions in Southern Australia where milk production is tipped to return to growth. This is supported by dairy farm operators in these regions being in a better position to capitalize on high milk prices given their on-farm silage reserves.

Over the past quarter there were further upward movements in announced farmgate milk prices. Most reported weighted average prices across the southern export region range between AUD 6.90/kgMS and AUD 7.20/kgMS, including supplementary payments.

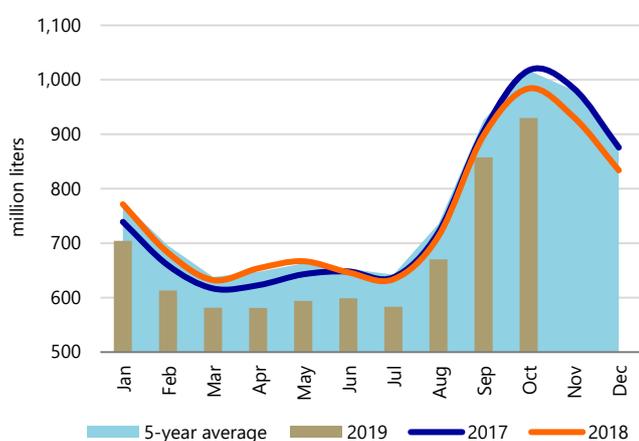
Rabobank has held its commodity milk price forecast for 2019/20 based at AUD 6.65/kgMS. As has been well-publicized, the shrinking milk pool continues to fuel intense competition for milk supply among the dairy companies which is translating into recruitment and retention premiums for dairy farm operators above modelled prices.

The profit pool of the Australian dairy processing sector remains under pressure. Recent announcements from Bega Cheese downgrade its profit guidance for FY2020. Consolidation of the dairy processing sector continues at pace, with China Mengniu in the process of acquiring the Lion Dairy and Drinks business but with regulatory approval still needed. This represents more than AUD 3.5bn of transactions in the past few years.

During the first quarter of the 2019/20 season, dairy exports fell 8% on a volume basis to 176,000 metric tons. There were volume declines across all the categories, with the exception of liquid milk and non-cheddar cheese.

Australian exporters will continue to battle tighter-than-normal exportable surpluses in the near-term. This will mean an ongoing push to optimize their respective product mixes. Based on Rabobank's milk production forecast, Australia's exportable surplus remains under pressure in 2020.

Figure 7: Australian monthly milk production, Jan 2017-Oct 2019



Source: Dairy Australia, Rabobank 2019

Brazil

The Brazilian dairy market ends 2019 on a mixed note. On the positive side, consumer demand is starting to show some signs of recovery with sales of cheese and yogurt growing, and more optimistic projections being made for 2020. On the negative side, margins for both farmers and processors end the year lower than at the start of 2019, as the relative improvement in demand has not been sufficient for brand owners to readjust prices higher.

After a strong first half for farmers, feed costs increased from July onwards, as corn prices became more expensive in the domestic market, and farmgate milk prices remained largely flat.

Milk production should end 2019 with 4% growth in Brazil but production has been losing steam since Q3.

Farmers should start 2020 with lower margins and fewer incentives to invest in additional production after feed costs increased and Rabobank projects higher domestic corn prices at the start of 2020.

In addition to lower margins for farmers, beef prices have reached record levels in the domestic market and this will likely generate a rise in the slaughter rate of dairy cows in Brazil in the coming months.

Dairy processors have had difficulties throughout 2019, with high farmgate milk prices (compared to 2018) and tepid demand that has prevented them from passing higher costs on to end product prices. Fluid milk particularly has had a tough year with many companies reporting low single-digit margins (net profit).

Looking ahead to 2020, demand for dairy as a whole is likely to increase as the economy shows signs of improvement.

Rabobank expects the Brazilian economy to expand at around 2% of GDP in 2020 with record low inflation, which will bring some improvements to incomes and employment levels.

However, we expect demand growth to be geared towards cheese, yogurt and powdered milk, while fluid milk remains a more mature market with limited upside in consumption.

Imports will likely remain subdued in Q1 2020 given that the real has depreciated and that international prices have risen, diminishing the competitiveness of imported milk products in Brazil.

Rabobank expects the exchange rate to remain near 4 BRL/USD in late 2019 and by the end of 2020, which will maintain imports at expensive levels.

Farmgate milk prices will need to increase in 2020 given that production has slowed and that demand should continue to increase, which will be good news for farmers.

However, processors will need to deal with another year of expensive milk and the challenge will be how to pass on these higher costs to end products to improve profitability.

Argentina

After a very negative start to the year, dairy production recovered some of the lost ground as 2019 progressed.

Rabobank expects milk production to contract by 2% in 2019 in Argentina as output increased at an annual rate of 1% in the second half and helped recover some of the declines of 1H 2019.

Higher farmgate prices helped recover margins and this helped accelerate production in key milk-producing regions.

However, domestic consumption has continued contracting as the economic recession worsens. Estimates for consumption suggest that, in 2019, Argentines consumed around 175 liters per person, compared to around 190 liters per person in 2018. This is a reflection of contracting incomes that are suffering the double impact of annual inflation of more than 50% and a recession that reduces employment levels.

According to local sources, the loss of consumption has been centered around premium products such as processed cheese, flavored milk, dairy desserts and yogurt. Liquid milk and especially commodity cheeses have been more resilient to the downturn in consumption.

Exports declined by around 12% in the first nine months of the year as lower availability of milk limited the industry's ability to sell to international buyers.

A combination of lower domestic consumption, lower exports and rising costs from inflation, means that margins have remained under pressure for most milk processors in Argentina during 2019.

Argentina prepares for the start of a new government in December after Alberto Fernandez defeated the incumbent Mauricio Macri in the October elections. A result that was widely expected and that will probably bring changes in policies that could have an impact on the wider agribusiness sector and on dairy.

Some analysts speculate that a return to higher export taxes for grains and dairy are a possibility, given that those measures were previously used under Cristina Kirchner's presidency (now elected as vice-president) and that the government's finances are under pressure at a time when the domestic economy continues contracting.

Social demands will be high and voters will expect more subsidies and spending – raising export taxes is one of the few measures available to boost revenues.

In the past, during Cristina Kirchner's term, export taxes meant lower domestic grain prices, which helped dairy farmers' costs. That could be positive for feed costs, although potential taxes on exports to increase domestic market supply could be harmful for dairy processors and the overall value chain, as demonstrated in the past.

In any case it is too early to have any clarity on what the policies of the new government will encompass, and during December and January there will be more clarity on what can be expected of the new administration.

India

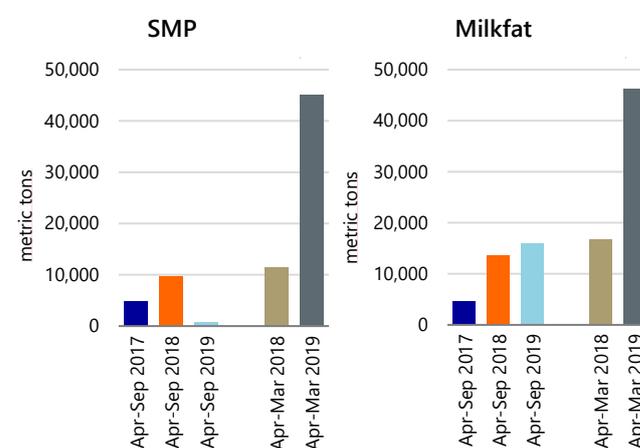
India's milk production was 187.7m metric tons in 2018/2019 (April-March) compared to 176.3m metric tons previous year, growing at the rate of 6.5%.

This monsoon season has been wetter than normal, but the spread was skewed with less rain in the initial months and surplus in the last month. There was also a high degree of regional variability, with flooding in some areas and drought in others. Rabobank expects milk production to grow at about 3.5% to cross 190m metric tons in FY 2020.

Farmgate milk prices have maintained levels of INR 28/liter to INR 30/liter (USD 0.40/liter to USD 0.43/liter) over the past three months in Maharashtra. Prices are expected to stay at this level for the next quarter. There is strong demand for raw milk due to depletion of SMP stocks in the market. Increased milk supplies in the ongoing flush season, and reduced demand after the festival season, are pushing processors to build up SMP inventory. Domestic prices are trading in the range of INR 280/kg to INR 290/kg (USD 4,000/mt to USD 4,150/mt). Prices are expected to hold on to this level with the possibility of a slight decline (around 5%) towards the end of next quarter.

SMP exports have been negligible this year due to depleted inventory and high domestic demand. As per the official estimates, India exported 707 metric tons of SMP during April to September 2019 compared to 9,600 metric tons during April to September 2018. However, milkfat exports have remained strong during the first six months due to attractive export prices and a push to sell-off ageing stock. Milkfat exports reached 15,900 metric tons compared to 13,500 metric tons the previous year (see Figure 8).

Figure 8: Indian exports, Apr 2017-Sep 2019



Source: Indian Department of Commerce, Rabobank 2019

Rabobank expects SMP exports to remain negligible for the current financial year (April to March 2020). Milkfat export opportunities will remain limited in the second half of the year (October to March), with a depletion in milkfat stocks and an increase in domestic prices.

Most of the listed dairy companies have shown double digit revenue growth in 1H primarily because of an increase in prices. Volume growth lifted in Q2 (over Q1) because of increased demand in the festival season. Some of the companies that had to run at lower capacity utilization in 1H due to reduced milk supplies are expected to improve utilization with increased milk handling in 2H (ending March 2020).

After prolonged discussions, India has moved out of the Regional Comprehensive Economic Partnership (RCEP) proposed trade deal. Dairy was one of the sectors for which RCEP partner countries were pushing India to provide access to the Indian dairy market by reducing import duties. However, strong opposition against the deal, to protect Indian farmers and the local dairy industry, is attributed as one of the reasons for India to step out.

China

Average milk prices in China continued to rise during Q3 2019, with current milk prices at CNY 3.83/kg, up 8% since June and year-on-year. On the other hand, the renminbi has depreciated against the US dollar by 2% since June, so that average milk prices in US dollar terms have risen by a smaller 6%.

Imported Oceania WMP prices in China have strengthened by 7% since June, and, as such, the price discount of landed WMP has remained at 13% versus the average milk price in China. This is similar to the prices seen in Q2. Imports of dairy products have slowed during Q3, with LME import growth (excluding whey) at 13% YOY (vs. 25% YOY in Q1 and 24% in Q2), with October ex-whey imports coming in at 10% YOY. Year-to-October, aggregate WMP, and SMP imports grew by a strong 25% YOY (see Figure 9).

The National Bureau of Statistics (NBS) indicate milk production grew by 2.5% YOY during Q1 to Q3 2019, implying an approximate 4% YOY increase in Q3 (vs. our expectation of 1% YOY for 2H 2019). When looking at year-to-Q3, NBS estimates are at odds with the 5.3% production growth implied by the Ministry of Agriculture (MOA)'s milk production index. The NBS's lower number may be attributed to a larger sample that includes more small farms which continued to decline.

NBS dairy product production statistics for Q3 suggest a 6% volume increase (driven by a strong 9% YOY July output before decelerating to 5% and below for the remainder of Q3). The October production regained some momentum toward 7% YOY. Processing demand growth by processors toward year-end 2019 should remain buoyant, considering

an early Chinese New Year (late January 2020), as processors need to produce and distribute products in advance to capture the pre-holiday market demand.

In light of consistently strengthening milk prices since Q2, dairy farming profitability has improved and there is rising interest in expanding the dairy herd. Despite strong Chinese pork prices, which have driven up beef prices, the dairy cow cull rate remains largely normal based on our channel checks. The dairy sector is being incentivized to expand production, as increases in feed cost slow due to a higher comparison base in 2018.

As such, Rabobank has raised its milk production growth estimate to 2% in 2H 2019, while maintaining its forecast of 2% YOY for both 1H and 2H 2020.

Overall production growth for 2019 now comes up to 1.8% YOY and will accelerate to 2% in 2020, with herd expansion underway since early 2019, as China has increased imports of heifers by 88% YOY or 28,200 head for the year to October.

2020 domestic milk price expectations remain optimistic as large farms have generally secured contract milk prices at CNY 4.00/kg or higher.

Large farming operations are seeing cash flow situations further improve as a 12-month exemption of an additional 25% tariff on US alfalfa was granted by the government in September 2019 – even additional tariffs that had been paid since mid-2018 are being refunded.

Corn prices are likely to strengthen over the next 12 months, but the momentum may slow due to higher-than-expected production in 2019.

A rising concentration of good quality raw milk in the hands of leading processing companies through a series of acquisitions is continuing to leave less milk available to regional processing companies. These regional processing companies are finding it increasingly challenging or more expensive to source raw milk, and this drives their decisions to invest in dairy farming. This also supports a small acceleration in production growth in 2020.

Rabobank expects 1H 2021 milk production to continue to grow, but the growth is likely to reflect a medium-term trend of 1.6% YOY.

Accelerated culling of dairy cattle for beef continues to present a downside risk to this forecast, albeit a lower risk now than it was six months ago.

Rabobank has raised headline dairy demand growth to 2% for 2019, (vs. previously at 1%). This results in an estimated 2.9% YOY demand growth excluding the falling demand of whey for 2019 (vs. 1.9% YOY previously). A number of signs have prompted the upgrade in the demand estimate for 2019: a recovery in domestic production, faster-than-expected import growth (excluding whey), a continuous rise in milk prices as early as in Q2, and anecdotal evidence that inventory pile-up throughout Q3 was lower than previously expected.

That said, Rabobank expects China to finish 2019 with a higher (but not excessive) inventory level than at the beginning of the year. This will be the first year-end stock rise since 2014.

Rabobank has tweaked the headline demand growth forecast for 2020 toward 2.2% YOY (vs. previously at 2.0% YOY), with 2.4% in 1H 2020 and 2% in 2H 2020. With whey demand having less impact in 2020, demand growth excluding whey will be at a similar level. The slowdown in demand growth into 2020 continues to build due to the uncertainty over China's economy, which has been slowing by the quarter during the course of 2019, and is due to both internal and external factors.

Rabobank forecasts demand growth to be near the medium trend at 2% in 1H 2021.

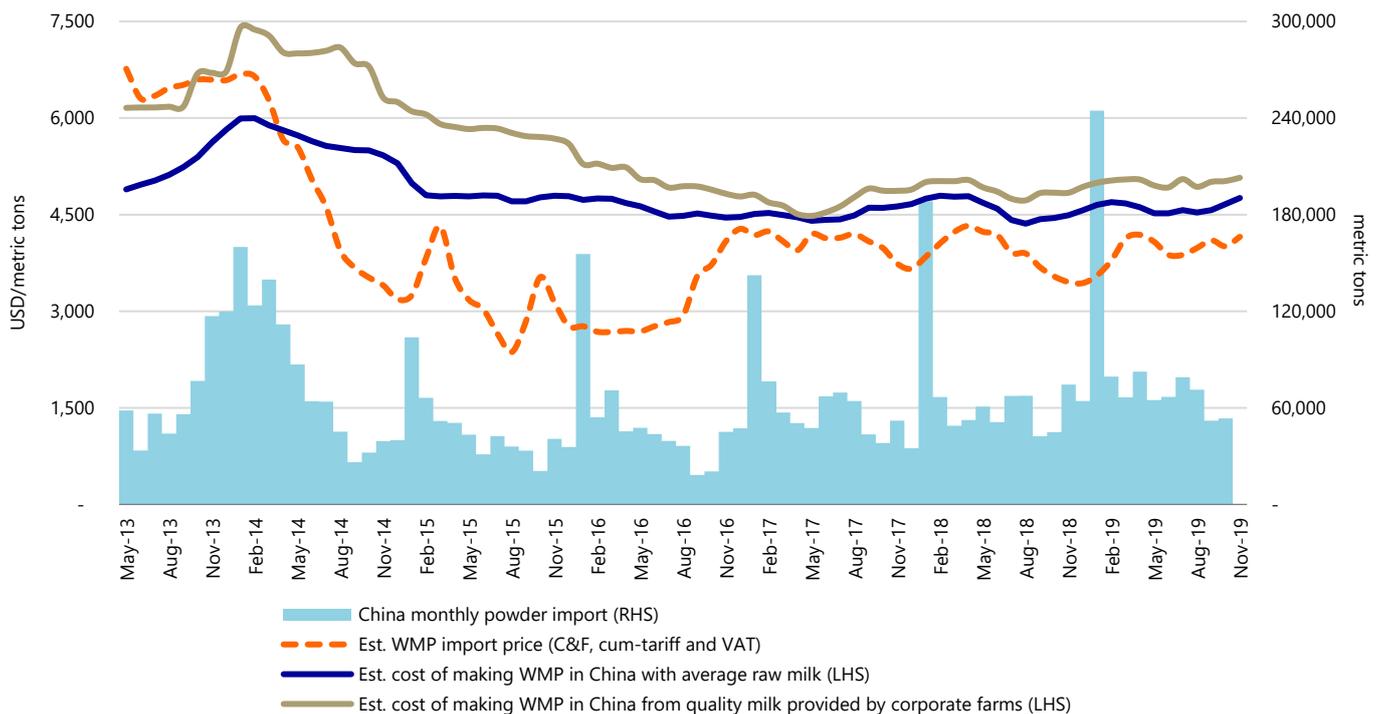
Besides big declines in whey and butter imports, infant milk formula imports started to decline year-on-year in September and October as the market speculated on a substantial fall in birth rates during the year. This has slowed total year-to-October dairy import growth to 14.5% YOY (LME) from 17.4% YOY seen in 1H 2019, despite near 25% YOY growth in total WMP and SMP imports.

With revisions to production and demand forecasts, Rabobank now expects 2H 2019 import growth (LME) to be at about 9% YOY, vs. -2% previously, (or 12% excluding whey, vs. flat YOY previously), making for full-year headline import growth at 13.3% YOY in 2019, up from 8% YOY previously, (or 19% YOY excluding whey, vs. 13% YOY previously).

Looking to 2020, Rabobank expects LME imports to decline by 3% YOY in 1H, (previously rising by 1% YOY) on a high comparison base in 1H 2019 and some inventory carryover from year-end 2019. This should turn into a 6% YOY growth in 2H 2020 (previously 4% YOY), making for a full-year import growth of 1% (previously 3%), as production growth accelerates and consumption growth slows down mildly.

With a new production and demand forecast for 1H 2021, Rabobank expects Chinese imports to grow by 2% YOY in LME terms.

Figure 9: China WMP import parity, May 2013-Oct 2019



Source: China Customs, Euclait, Chinese Ministry of Agriculture, Rabobank 2019

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far.rabobank.com

Mary Ledman	Global Strategist	mary.ledman@rabobank.com +1 312 408 8203
Michael Harvey	Australia	michael.harvey@rabobank.com +61 3 9940 8407
Andrés Padilla	Brazil	andres.padilla@rabobank.com +55 11 5503 6936
Sandy Chen	China	sandy.chen@rabobank.com +86 21 2893 4691
Saskia van Battum	Europe	saskia.van.battum@rabobank.com +31 30 712 3809
Richard Scheper	Europe	richard.scheper@rabobank.com +31 30 712 3788
Shiva Mudgil	India	shiva.mudgil@rabobank.com +91 22 2481 7724
Emma Higgins	New Zealand	emma.higgins@rabobank.com +64 3 961 2908
Tom Bailey	US	thomas.bailey@rabobank.com +1 212 916 7831
Ben Laine	US	ben.laine@raboag.com +1 314 317 8274

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