

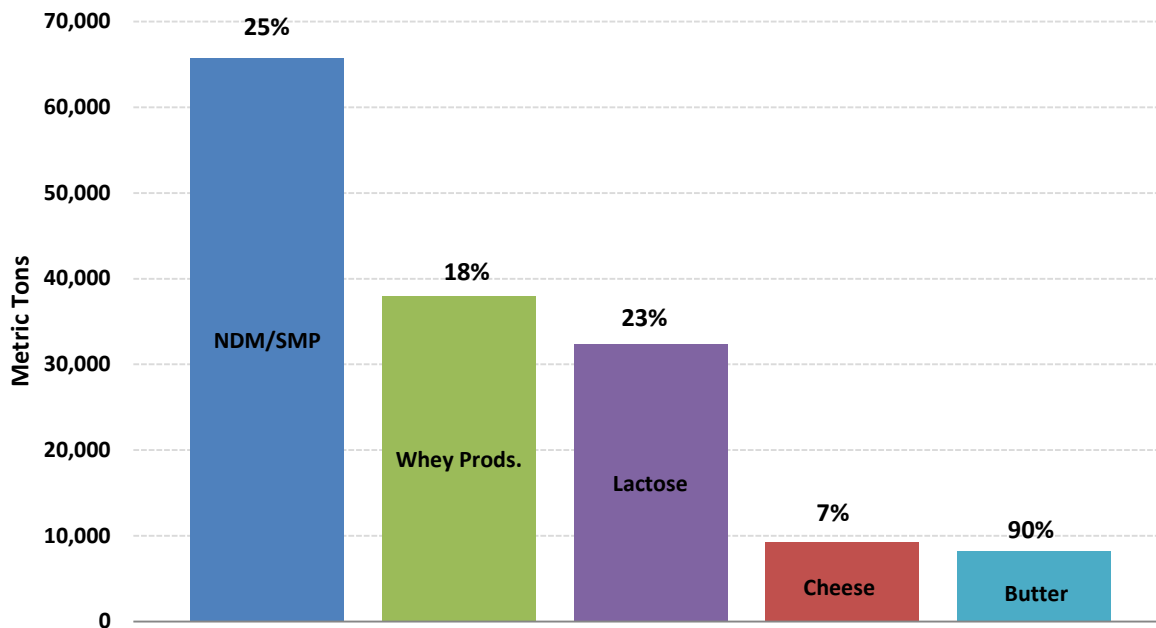


# Dairy: World Markets and Trade

July 2018

Although the value of U.S. dairy exports grew by 15 percent in 2017 to reach \$5.4 billion, shipments of skimmed milk powder (SMP) were disappointing posting a volume gain of only 12,000 tons. In contrast, EU exports of SMP expanded by 201,000 tons. This year, the competitive situation has swung in favor of the United States and shipments of SMP through May are now up 25 percent year-over-year (YOY) which equates to a gain of about 65,000 tons. Significant gains were registered in shipments to Mexico and key Asian markets such as Indonesia, Philippines, and Vietnam. Moreover, this success is also being experienced by other products such as lactose, cheese, whey products, and butter.

**January-May 2018 Shipments of U.S. Dairy Products Surge Ahead of Last Year - YOY Gain in Tons and Percent**



For the balance of the year, the outlook for U.S. dairy exports is mixed due to the imposition of retaliatory tariffs by Mexico and China on a range of U.S. dairy products. These have been in effect since early July. The Mexican tariffs target imports of U.S. cheese while the tariffs imposed by China cover a broad range of U.S. dairy products particularly affecting skim milk products such as SMP, whey, and cheese. However, they exclude such products as lactose and infant formula. While U.S. exporters are likely to lose some market share in these countries, U.S. exporters are expected to remain competitive in other markets thus helping offset a portion of these losses.

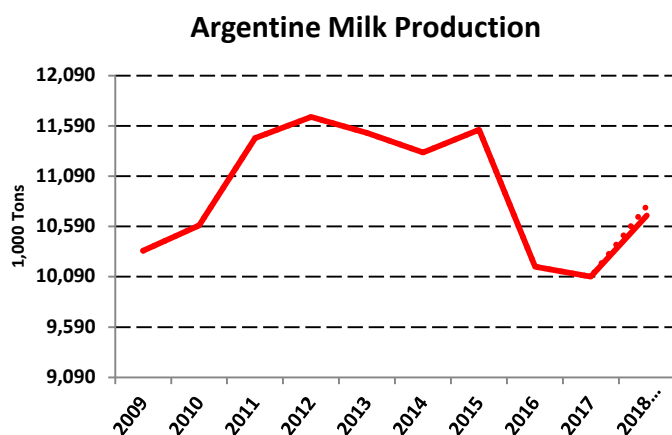
# Dairy Production and Trade Developments

## Milk Production Summary for Major Exporters (Million Tons)

	2017	Initial 2018 Dec. Forecast	Revised 2018 July Forecast	2018 Forecast Change %
<b>Argentina</b>	10.1	10.7	10.8	<b>+1%</b>
<b>Australia</b>	9.5	9.5	9.7	<b>+2%</b>
<b>EU-28</b>	153.4	152.1	155.6	<b>+2%</b>
<b>New Zealand</b>	21.5	21.9	21.7	<b>-1%</b>
<b>United States</b>	97.8	99.5	98.8	<b>-1%</b>
<b>Major Exporter Total</b>	292.3	293.7	296.6	<b>+1%</b>

### Fluid Milk:

- As a result of higher domestic prices, improved weather conditions, and increased productivity; the 2018 milk production forecast for **Argentina** is revised up 1 percent from December 2017 to 10.8 million tons. So far this year, cumulative milk production through May is up 8 percent in comparison to the same period last year and the updated forecast represents an annual gain of 7 percent over 2017. This will be a marked reversal after two



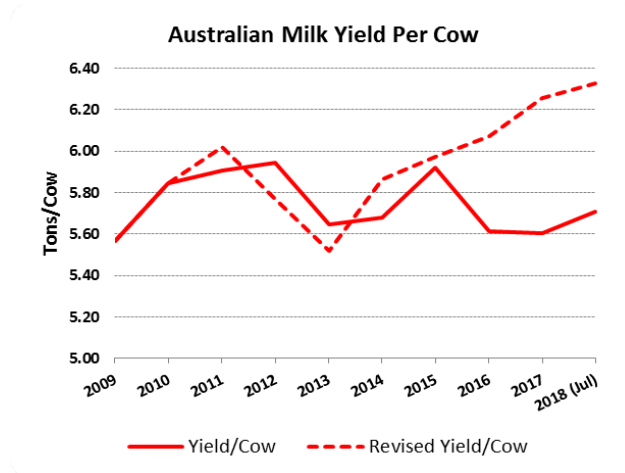
years of declining milk output. Most of the additional milk is expected to flow into the cheese vats.

Although dairy farmers have benefited from a return to normal weather and improved pasture growth during the first half of 2018, the economic environment is proving challenging. In early 2018, Argentina experienced a severe

drought that had a negative impact on soybean export revenues. At the same time, Argentina was also facing rising energy costs and struggling with fiscal pressures that became evident as inflation hit 27 percent and interest rates climbed to nearly 40 percent annually. However, in early June the International Monetary Fund brought some economic

stability by agreeing to a three-year Stand-By Arrangement of \$50 billion to allow Argentina to continue its economic reforms. Nevertheless, the smaller and less efficient farmers will face challenging conditions as the costs of production rise and their margins are squeezed. For 2018, the herd is forecast to shrink by just under 1 percent to 1.66 million cows or down nearly one quarter from the herd peak in 2012.

- The milk production forecast for **Australia** is revised up by 1 percent to 9.7 million tons due to improved rainfall that has led to better pasture growth, greater feed availability, and lower water prices. Already Australian milk output for 2018 through May is up nearly 3 percent YOY. However, the latest rainfall outlook summary issued by the Australian Bureau of Meteorology (June 14) forecasts the likelihood of a drier-than-average period for South-eastern Australia from July to September. In 2017, approximately 25 percent of Australia’s total milk production took place during the third quarter while fourth quarter accounted for about one-third of total milk produced for the year.

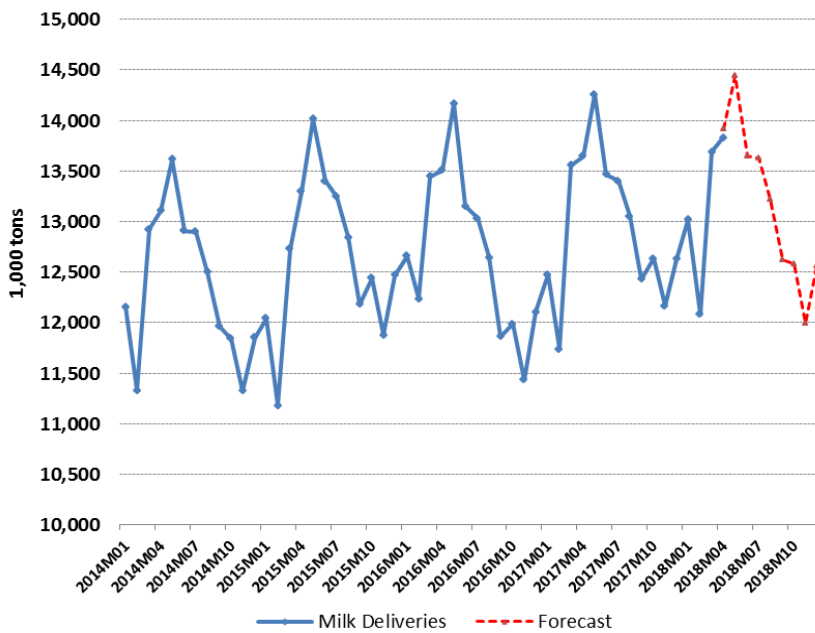


The size of Australia’s dairy herd from 2011 to 2017 has been revised significantly due to new data published by the Australian Bureau of Statistics. This has resulted in a sharp cut to the forecast size of the herd for 2018 – from 1.7 million cows to 1.5 million head. This has also raised the yield per cow over the past several years indicating that the herd was more productive than initially determined.

Australian exports of fluid milk (primarily Ultra High Temperature milk) continue to grow rapidly with exports through May up nearly 20 percent YOY. The bulk of the fluid milk – some 36 percent – has so far been shipped to China with most of balance going to other Asian countries such as Singapore, Malaysia, and the Philippines. Over the past five years, exports of fluid milk have been growing at an average rate of 18 percent annually and this strong growth is expected to persist. For 2018, the export forecast for fluid milk is revised up to 245,000 tons.

- The **European Union** milk production forecast for 2018 is revised up by 2 percent to 155.6 million tons due to strong domestic and export demand for dairy products as well as a 1 percent rise in the 2017 production estimate. EU milk output during the early months of 2018 has been strong with milk production in the January to April period running 2 percent ahead of last year. However, the average (weighed) price of milk paid to farmers has been trending down since January. In April and May, the estimated average milk price received by farmers was about 2 percent below last year’s comparable prices. For this reason, milk production is expected to moderate during the second half of the year. Consequently, YOY 2018 annual milk output is forecast to grow by slightly over 1 percent.

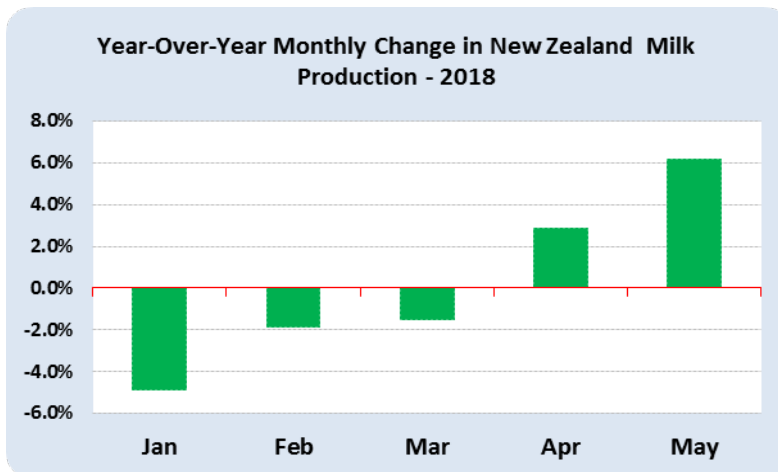
### EU Milk Deliveries Continue to Trend Up



Source: Eurostat

Fluid milk exports from the EU have been expanding rapidly growing from \$353 million in 2013 to \$562 million in 2017. While volumes declined in 2017, shipments through April are running 6 percent ahead YOY with the majority of shipments – 36 percent – being sent to China. This strength is expected to persist and the 2018 forecast for shipments of fluid milk is raised by 55,000 tons to 855,000 tons.

- After a poor start to the year due to hot and dry conditions in late 2017 and early 2018, **New Zealand** milk production is rebounding strongly. In May 2018, milk output for the month was up about 6 percent YOY although cumulative production for the year still lags



last year's pace by 1 percent. This deficit is expected to be gradually erased and although the new 2018 forecast has been trimmed to 21.7 million tons, this nevertheless represents an increase of 1 percent over 2017. Confidence in the sector has improved as the farm-gate price of milk solids is now expected to rise to NZ \$6.91 per kilogram (US \$2

per lb) for the 2017/18 (May-June) season. This is in contrast to the NZ \$6.50 per kilogram received for the prior 2016/2017 season. This improved outlook is largely due to the improved performance of dairy exports that have benefitted from strong global butter and whole milk powder (WMP) prices. Export revenue for the 2017/18 season is forecast by Ministry of Primary Industries (MPI) to grow by 14 percent to NZ\$16.6 billion (US \$11.2 billion). In 2016/17, WMP accounted for slightly over a third of total dairy export

revenues.

One uncertainty facing New Zealand dairy farmers is the presence of Mycoplasma Bovis which has been detected in a number of herds leading to a mandatory cull of some 26,000 dairy cows. Mycoplasma Bovis is a bacterial disease that can induce a range of infections in cows such as mastitis. It is present in most dairy producing countries including the United States. Its principal impact is economic as it poses no known risk for human disease. It is estimated that it will cost the MPI between \$500 and \$700 million to completely eradicate this disease and may require the culling of about 150,000 dairy cattle over the next two years. Despite the mandatory cull, cow numbers are forecast to about one-half percent above 2017. Thus, for 2018, the impact of this culling on milk production is expected to be minor.

## **Cheese**

- **EU** cheese production in 2018 is expected to grow as a result of the greater than anticipated growth in milk flows. The pace of cheese production is up by over 2 percent in the first four months of 2018 and as a result the forecast is revised up by 2 percent to 10.3 million tons. This represents an additional 200,000 tons over 2017, but most of this additional cheese will be absorbed by the domestic market which has been growing steadily during the past 5 years at an annual average rate of 2 percent.

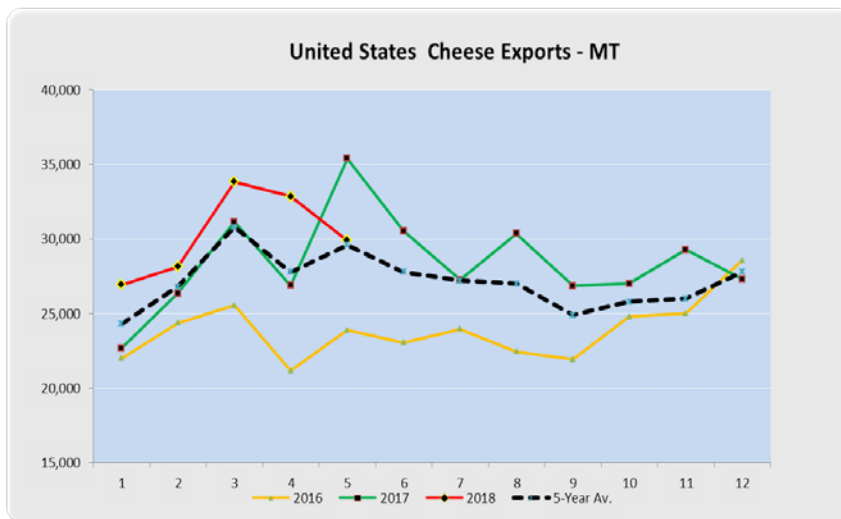
EU exports of cheese during the first four months of this year have grown marginally in comparison to last year. Given such a lackluster pace, the forecast is trimmed to 840,000 tons. Shipments to such principal customers as the United States and Japan are down by 10 percent and 3 percent, respectively. This may be due in part to a strengthening of the Euro which is eroding the competitiveness of EU cheese. For example, the unit price of cheese exports to the United States this year through April is up 23 percent YOY while shipments are down 10 percent.

- Although the production of cheese in **New Zealand** was expected to grow this year, the forecast for 2018 is revised down as the growth in milk production slowed. More of the available milk is expected to be channeled into the production of WMP. Cheese output in New Zealand is cut by 10,000 tons to 375,000 tons for this year which represents a decline of 1 percent over 2017.

The export forecast is also cut to 340,000 tons as shipments through May have fallen behind last year's pace. In 2017, slightly over 50 percent of New Zealand's cheese exports were shipped to Japan, Australia, and China. This year, while exports to Japan are on track to expand, shipments to Australia and China are down 7 percent and 19 percent YOY, respectively. Surprisingly, cheese sales to the United States are down nearly 90 percent

and at the current pace will total only 2,000 tons for the year. As recently as 2016, shipments to the U.S. cheese totaled 17,000 tons. It is likely that the U.S. cheese market has become much more competitive particularly for cheddar which constitutes the bulk of New Zealand cheese sold to the U.S. market.

- After a strong start, **U.S.** shipments of cheese have been showing some weakness as



exports since April and May have been trending down. In addition, the retaliatory import tariffs imposed by Mexico, and to a lesser extent China, are expected to affect almost all the U.S. cheeses brought into Mexico and therefore will likely have some negative impact during

the second half of the year. The retaliatory tariffs came into full force on July 5, and range from 20-25 percent (See [GAIN Report MX8034](#) for updates).

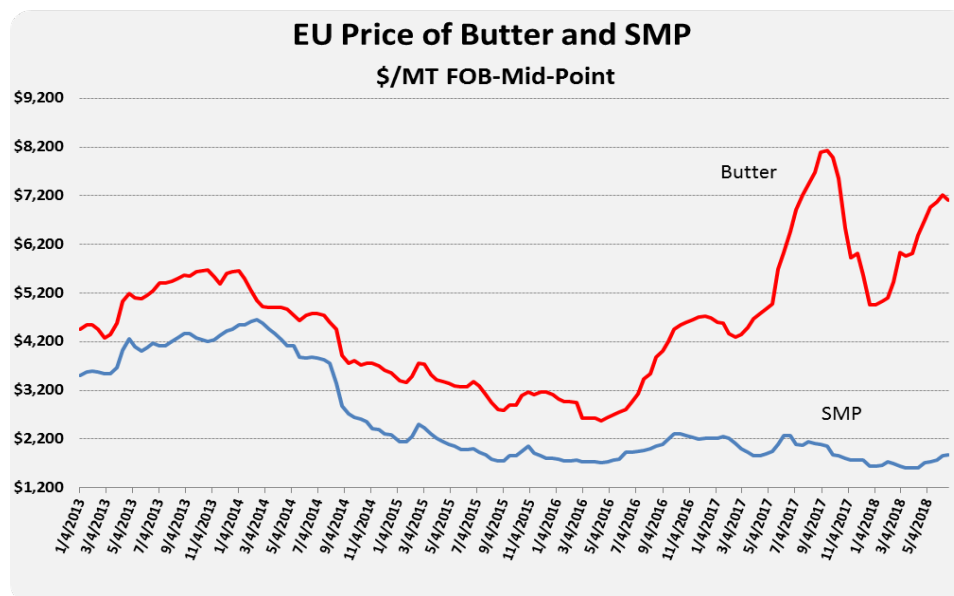
For 2018, the U.S. export forecast for cheese is reduced by 6 percent to 334,000 tons which represents a decline of 3 percent from the previous year.

U.S. imports of cheese (made from cow's milk) have been declining since 2016 and this trend is anticipated to persist through 2018. Although, the import forecast has been raised marginally, cheese imports are expected to drop by 2 percent over 2017. In 2017, imports fell by 17 percent reflecting the increasingly competitive nature of the U.S. market.

## **Butter:**

- In response to higher milk production, butter production in the **European Union** is expected to be stronger than anticipated and the 2018 forecast is revised up by 70,000 tons to 2.39 million tons. Despite the relatively high prices of butter prevailing during 2017, EU butter output was fractionally lower. In contrast, the churning of butter through April of this year is up 1 percent YOY. This rate is anticipated to accelerate due to the greater availability of milk during the spring flush and the current high prices of butter as a result of strong domestic demand. Consequently, butter production for 2018 is forecast to expand by 2 percent over last year.

In late June, EU butter was priced at around \$7,100 per ton FOB (\$3.22 per lb.); well above Oceania or U.S. butter prices. Although, the export forecast was revised up sharply by 20 percent, the volume of butter exported is expected to be near 2017 levels as exportable supplies will be limited due to the strength of internal demand. So far, the bulk of shipments have been destined for the United States, Saudi Arabia, and China.



- The **New Zealand** 2018 forecast for butter production is lowered by 1 percent as more milk is expected to flow into the more profitable WMP stream. However, the export forecast is raised with shipments still expected to show a YOY increase of 10 percent. New Zealand has been focusing on shipping larger volumes to China which accounted for nearly 20 percent of total shipments in 2017. Import demand for butter in China is growing rapidly averaging 14 percent annually from 2012 to 2017 to reach 98,000 tons in 2017. New Zealand supplies about 90 percent of the market with most of the balance supplied by the European Union.
- **U.S.** exports of butter – including anhydrous milk fat (AMF) and butteroil - are off to a strong start with shipments in the first 5 months of the year running over double last year's pace during the comparable period. The bulk of the butter – about 18,000 tons - has been shipped to Canada and Mexico. Most of the product going to Canada has been in the form of butter while Mexico has been importing mostly U.S. AMF/butteroil. For the balance of the year, U.S. butter is expected to remain relatively competitive on world markets and so the 2018 export forecast is revised up by over 50 percent to 43,000 tons.

## Skimmed Milk Powder:

- On July 6, 2018 **China** applied retaliatory tariffs on a number of U.S. dairy products notably SMP, whey and whey products, and WMP. These tariffs comprise the Most Favored Nation (MFN) plus additional retaliatory tariffs bringing the aggregate rate to 35 percent of the imported value of SMP and 27 percent for whey and whey products. Additional details are available on [GAIN Report CH18034](#).

China is slated to import 275,000 tons of SMP in 2018. The United States has been losing market share in China to the EU and Australia since 2013 so the impact on U.S. shipments of SMP are not expected to be substantial. Exports of U.S. SMP to China this year through May were already lagging last year's YOY pace by nearly one third.

Skimmed Milk Powder Imports by China										
	2012	2013	2014	2015	2016	2017	2013-2017 Av. Mkt Size	2013-2017 Growth Rate	Av. Market Share 13-'17	Market Share Growth Rate
New Zealand	105,403	123,919	115,211	115,375	111,416	116,598	116,504	-2%	53%	↓ -3%
EU-28	29,460	37,974	67,317	42,723	42,096	69,979	52,018	17%	23%	↑ 15%
Australia	12,016	13,200	17,156	19,873	15,765	32,271	19,653	25%	9%	↑ 23%
<b>United States</b>	<b>18,498</b>	<b>53,327</b>	<b>49,290</b>	<b>21,020</b>	<b>14,664</b>	<b>27,607</b>	<b>33,182</b>	<b>-15%</b>	<b>14%</b>	<b>↓ -16%</b>
Singapore	1,074	1,707	941	250	302	151	670	-45%	0%	↓ -46%
Other	1,102	4,892	2,926	1,028	221	692	1,952	-39%	0%	↓ -39%
<b>Total</b>	<b>167,553</b>	<b>235,019</b>	<b>252,841</b>	<b>200,269</b>	<b>184,464</b>	<b>247,298</b>	<b>208,029</b>	<b>1%</b>		

- Exports of SMP from the **United States** have accelerated at an impressive pace with shipments through May averaging about 66,000 tons per month. As a result, the export forecast is revised up by 13 percent to 720,000 tons which would represent a new record for annual exports of U.S. SMP. Mexico remains a key market accounting for about 44 percent of total shipments of U.S. SMP so far this year. However, the strongest gains over this period have been posted in such import markets as Indonesia and Vietnam where shipments of U.S. SMP have more than doubled.

Although China has imposed retaliatory tariffs on imports of U.S. SMP, their impact on overall U.S. SMP exports is not expected to be significant. On a skim solids milk equivalent (M.E.) basis, the volume of SMP shipped to China through May of this year only accounted for 7 percent of total skim solids M.E. basis exported to China. The bulk of skim solids exported to China comprised whey and whey products and lactose. While whey and whey products will face retaliatory tariffs of 25 percent on top of a MFN tariff of 2 percent, lactose was not a targeted product.

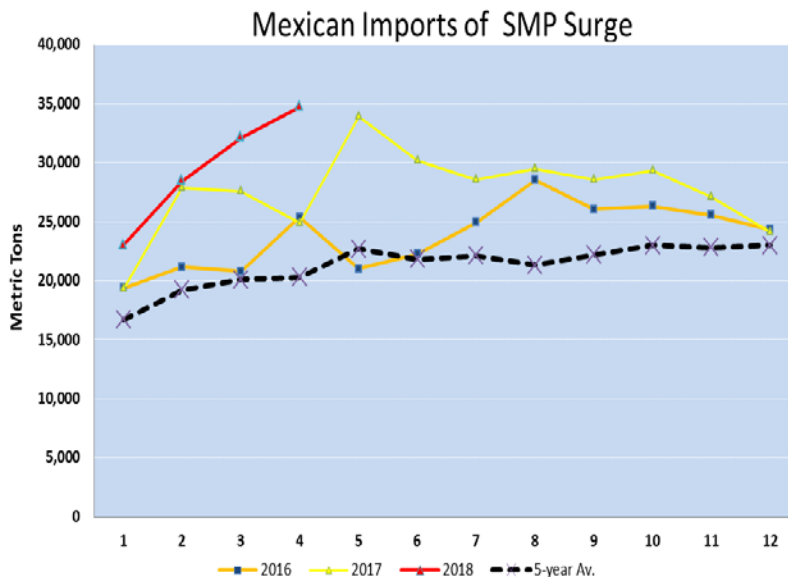
- In 2017, **European Union** exports of SMP climbed by just over a third to 781,000 tons capturing market share largely at the expense of the United States. The competition for



markets is likely to remain fierce as the EU is expected to have ample exportable supplies of SMP since milk output this year is forecast to grow by over 1 percent. The SMP production forecast is revised higher by 115,000 tons to 1.8 million tons while the export forecast is raised by 9 percent to 850,000 tons. So far this year, about 20 percent of SMP shipments have been destined to Algeria, while another 19 percent has been shipped to Egypt, China, and Indonesia.

In an effort to limit the accumulation of intervention stocks, the EU has effectively suspended the purchase of surplus SMP at the fixed support price of €1,698 per ton (90 cents/lb) from March 1-September 30, 2018. Further, in an effort to drawdown stocks, the EU has been offering stocks dated from 2016 for sale with the latest tender resulting in the sale of 24,000 tons in June at €1,195 per ton (63 cents/lb). So far this year, nearly 100,000 tons have been sold from intervention and year-end stocks are expected to drop down to 320,000 tons. The ability of the EU to further drawdown intervention stocks will likely be determined by the course of SMP prices. The recent downturn in SMP prices will likely mean that the EU will have to meter out stocks cautiously in order to prevent a sharp drop in domestic market prices for SMP and fluid milk.

- Mexico** continues to import growing volumes of SMP with January through May imports surging YOY by 19 percent. For 2018, the import forecast is raised by 70,000 tons to a record 400,000 tons which would represent a 21 percent increase over the previous year. Most of the imported SMP is used as an ingredient to be used in processed products or is reconstituted into milk. Interestingly, Mexico is reporting the export of substantial volumes of SMP almost exclusively to Venezuela. These totaled 28,000 tons in 2017 and



this year has so far grown to nearly 73,000 tons. While the United States dominates the SMP import market due to its geographic proximity and duty free access, Mexico has signed two free trade agreements (FTA) that will likely ratchet up the level of competition. In April 2018, Mexico and the European Union signed a trade agreement which in terms of major dairy products established a tariff rate quota (TRQ) of 20,000 tons

for mature cheeses, 5,000 tons for fresh cheeses, and 50,000 tons for SMP, to be all phased-in within 5 years. Additionally, there was also a TRQ for dairy preparations and a tariff reduction for infant formula. Notably, the agreement also included geographical

indicators that could have a negative impact on U.S. cheese exports.

In March 2018, Mexico signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership with a number of countries including such dairy exporters as Australia, Canada, and New Zealand. The agreement established a number of dairy TRQ's and country specific quotas for such key products as 42,000 tons milk powder, 6,500 tons of cheese, and 2,000 tons of butter.

The net effect of these FTAs is that upon implementation, competing countries have greater duty-free access to the Mexican import market. In 2012, other WTO country members were limited to a TRQ of 80,000 tons of milk powder of which 40,000 tons were allocated to LICONSA - a Mexican government parastatal charged with supplying subsidized dairy products to low income families. Now, competitors such as the EU will be able to access an additional TRQ of 92,000 tons.

### **WHOLE MILK POWDER:**

- **China** is expected to import 500,000 tons of WMP in 2018 – down 17 percent from the December 2017 forecast - as the pace of imports for the balance of this year are anticipated to slow. Trade data through the first quarter indicates that Chinese imports of WMP are up 10 percent YOY, but shipments through May as reported by exporters is only up 2 percent compared to the same period last year. Nevertheless, total WMP imports are forecast to grow by 6 percent over last year as consumer demand for processed dairy products continues to drive the market. However, this import growth is sharply lower compared to the past two years, as the availability of relatively low priced SMP is likely to lead to some substitution.

The bulk of the WMP imported through March – 216,000 tons – originates from New Zealand due to the China-New Zealand FTA that effectively sets a milk powder TRQ of about 155,000 tons at a tariff rate of 0.8 percent. This is set to rise to 164,482 tons in 2019 when tariffs will be phased-out. The standard import duty (MFN) for milk powder is currently set at 10 percent.

- Given the importance of WMP as a source of export revenue for **New Zealand**, most of the additional milk forecast to be produced in 2018 is anticipated to be channeled into the production of WMP. The 2018 export forecast is revised up by 1 percent to 1.4 million tons or about 4 percent higher than in 2017. So far in 2018 through May, nearly one quarter of WMP shipments have been destined for China with another 21 percent going to Algeria and the United Arab Emirates.



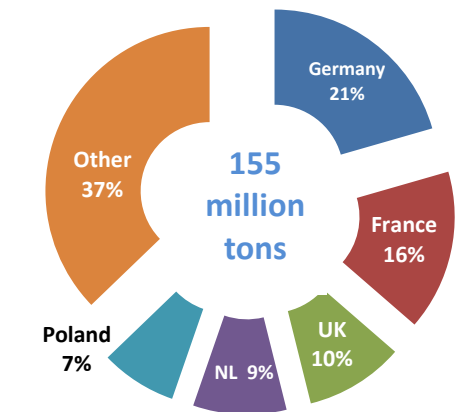
## SPECIAL REPORT ON EU MILK PRODUCTION

### Milk Production Growth Varies Throughout EU-28 After Removal of Production Quota

Since the elimination of the EU milk production quota in 2014, a small cadre of countries – the Netherlands, Ireland, Poland and Italy – accounted for nearly three-quarters of the total net gain in EU milk production. Meanwhile, one country – France – is responsible for three-quarters of member states' declines in milk production. Despite fears that post-quota output would surge, the annualized rate of 1.2 percent growth (2014-2017) was only slightly above the previous 5-year average of 0.9 percent (2009-2013). For 2018, production is forecast up a further 1 percent year-over-year, but as in past years, modest overall growth obscures greater changes within individual member states. Several factors have influenced varying rates of expansion by member state.

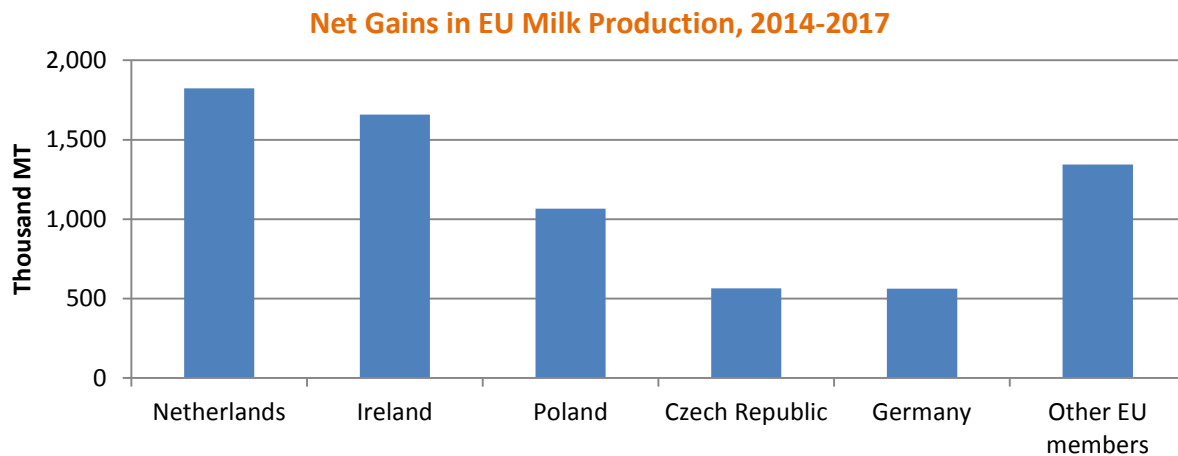
- Production costs vary considerably from member state to member state, in part due to differences in farm size and efficiency. While the quota capped production in any member state to 1 percent growth, the removal of the quota incentivizes production growth in lower-cost states and dis-incentivizes production in higher-cost states.
- Demand is rising for some dairy products (including butter, cheese, infant milk formula (IMF), and other high-value processed products) and falling for lower-valued commodities (fluid milk, skim milk powder (SMP)). As processing capacity varies by region, higher prices for some products have incentivized production in particular regions. Likewise, weakness in powder markets has negatively impacted some member states more than others.
- The EU continues to use support programs including direct payments to farmers, which sustains production in high-cost regions. Despite significant consolidation in recent years, these programs continue to support less-efficient small-holder farmers who would have otherwise been driven out by low milk prices.

Top 5 EU Milk Producers, 2017



Source: Eurostat

## Milk Production Surges in the Netherlands, Ireland and Others



Source: Eurostat

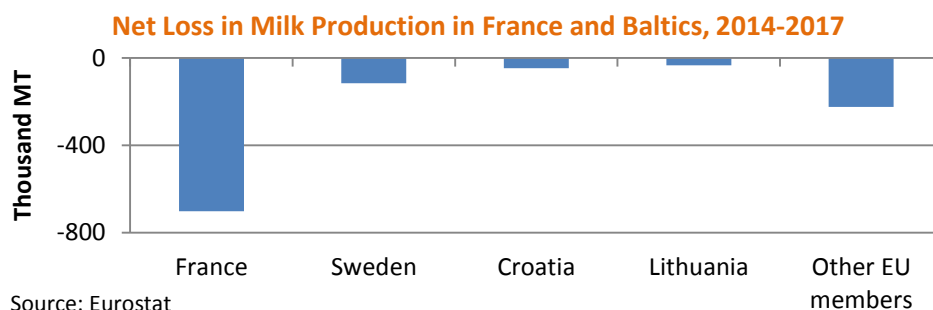
Around the same time that the milk quota was repealed, global dairy demand cooled considerably, reflecting lower economic growth in most importing countries. Compounding this were high dairy stocks in China and an import ban from Russia, one of the top markets for EU dairy products. Lower import demand from most markets contributed to a major reduction in global and EU milk prices during 2015-2016. Despite lower prices, milk production continued to grow.

The Netherlands – fourth largest producer among member states – had the largest net gain in milk production in the post-quota era, largely due to its highly-competitive milk sector. Compared to the rest of the EU, Dutch dairy farms are larger, more efficient, and therefore more profitable. The scale and efficiency of Dutch dairy farms made its industry better able to handle downturns in milk prices. However, future output growth is severely restricted by environmental restrictions on phosphate emissions. Farms in the Netherlands are limited to keeping cow numbers at 2015 levels, which means gains in milk production growth can only be achieved by further improvements in yields (milk per cow).

Ireland's milk production expanded at the fastest rate post-quota and now ranks seventh among all member states. Production increased 34 percent between 2013 and 2017, mostly through a 25-percent increase in cow numbers. Ireland faces some of the lowest production costs in the EU aided by lower feed costs due to ample forage and lower land costs. Irish dairy farmers also had significantly lower debt levels when the quotas were lifted, averaging €24,000 per farm compared to an EU average of €69,000 per farm in 2015. With a relatively small domestic market, processors have looked to global markets to expand demand and have developed strong brands which command premiums. The outlook for Ireland's milk production remains robust given robust profitability and lack of constraints to growth.

## Production Plummet in France, Baltics and Southern Europe

While the rollback of the quota benefitted large and more efficient enterprises, small and inefficient operations were expected to feel the brunt of the change. As a result, while the dairy herd declined in many member states, most experienced just a fractional decline in production as farms consolidated. Milk production declined in just 9 states during 2014-2017, mostly in smaller states accounting for less than 1 percent of EU production. In contrast, losses in France accounted for three-quarters of the total decline. France is the second largest milk producer in Europe and the only major milk producer to reduce output. Production has declined in France due to low milk prices and relatively high cost of production – including land, feed, and labor – and a stricter regulatory environment than other states. Low milk prices hit French farmers hard in 2016, driving a near 4-percent decline while output showed only marginal improvement in 2017. The accumulation of stocks, especially of SMP, and stagnant domestic demand continues to weigh on milk prices. While France will continue to be a major producer, the outlook for production growth appears more limited than other countries, due to high costs relative to other states.



**For further information on this article contact Lindsay Kuberka, Telephone # 202-644-4650**

## U.S. Dairy Export Forecasts:

### U.S. Dairy Products Export Forecast - Calendar Year 2018-2019

	Milk Equivalent (Bil. Lbs.)			Milk Equivalent (Bil. Lbs.)		
	2018 (For.)	Fat	Skims	2019 (For.)	Fat	Skims
NON-FAT DRY AND SKIM MILK PWDR	720,269 MT	0.3	16.9	690,750 MT	0.3	16.3
MILK POWDER > 1.5% MILK FAT	45,119 MT	0.6	0.7	32,500 MT	0.4	0.5
BUTTER/MILKFAT/SPREADS	40,319 MT	2.0	0.0	40,405 MT	2.0	0.0
CHEESE AND CURD	344,415 MT	5.4	2.8	334,200 MT	5.2	2.7
FLUID PRODUCTS 4/	145,814 Liters	0.4	0.3	145,700 Liters	0.5	0.3
DRIED WHEY PRODUCTS	580,829 MT	0.8	13.4	569,550 MT	0.7	13.2
LACTOSE	406,790 MT	0.0	10.0	409,000 MT	0.0	10.0
OTHER DAIRY PRODUCTS	194,329 MT	0.7	1.8	195,350 MT	0.7	1.9
<b>TOTAL - Billion Pounds</b>		<b>10.2</b>	<b>46.0</b>		<b>9.9</b>	<b>44.9</b>

Note: 1) CY 2018 includes actual exports through May 2018  
 2) Milk Equivalent figures are rounded and totals may not add up.  
 3) Forecasts assume current policy  
 4/ Includes milk based drinks, fluid whey, cream and fluid milk

#### Cumulative Shipments Through May 2018

Top Destinations-M.E. Milkfat Basis (Mill. lbs)	2018
MEXICO	1,153
SOUTH KOREA	413
CHINA (MAINLAND)	408
CANADA	404
JAPAN	297
AUSTRALIA	188
Other	1,545
<b>TOTAL</b>	<b>4,407</b>

Top Destinations-M.E. Skim Basis (Mill. lbs)	2018
MEXICO	4,948
CHINA (MAINLAND)	4,167
PHILIPPINES	1,282
INDONESIA	1,060
JAPAN	1,001
VIETNAM	946
Other	6,853
<b>TOTAL</b>	<b>20,257</b>

**Additional Resources:**

For additional information, please contact Paul Kiendl at 202-720-8870 or [Paul.Kiendl@fas.usda.gov](mailto:Paul.Kiendl@fas.usda.gov) or Lindsay Kuberka at 202-644-4650 or [Lindsay.Kuberka@fas.usda.gov](mailto:Lindsay.Kuberka@fas.usda.gov)

Subscription services for FAS circulars can be obtained at:  
<https://public.govdelivery.com/accounts/USDAFAS/subscriber/new>

Individual FAS country reports covering dairy are available at:  
<http://gain.fas.usda.gov/Pages/Default.aspx>

The USDA Production, Supply and Demand database is available at:  
<http://www.fas.usda.gov/psdonline>

A monthly “Livestock, Dairy, and Poultry Outlook” for the United States published by the Economic Research Service is available at: <https://www.ers.usda.gov/publications/>

U.S. trade data is available on the Global Agricultural Trade System (GATS):  
<http://apps.fas.usda.gov/gats/default.aspx>

The next publication of this circular will be in December 2018.

## Cows Milk Production and Consumption: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Cows Milk Production</b>						
Argentina	11,326	11,552	10,191	10,090	10,700	10,795
Australia	9,798	10,091	9,486	9,462	9,530	9,650
Belarus	6,705	7,044	7,140	7,320	7,425	7,475
Brazil	25,489	24,770	22,726	23,550	23,980	23,980
Canada	8,437	8,773	9,081	9,450	9,800	9,800
China	37,250	37,550	36,020	35,450	36,500	37,200
European Union	146,500	150,200	151,000	153,400	152,100	155,550
India	60,500	64,000	68,000	72,000	76,000	76,000
Japan	7,334	7,379	7,394	7,280	7,240	7,240
Korea, South	2,214	2,169	2,070	2,081	2,091	2,091
Mexico	11,464	11,736	11,956	12,162	12,230	12,230
New Zealand	21,893	21,587	21,224	21,530	21,850	21,736
Russia	30,499	30,548	30,510	30,600	30,550	30,700
Taiwan	363	374	380	380	375	375
Ukraine	11,152	10,584	10,375	10,300	10,250	10,250
Others	20	13	14	15	0	16
<b>Subtotal</b>	<b>390,944</b>	<b>398,370</b>	<b>397,567</b>	<b>405,070</b>	<b>410,621</b>	<b>415,088</b>
<b>United States</b>	<b>93,465</b>	<b>94,618</b>	<b>96,345</b>	<b>97,734</b>	<b>99,473</b>	<b>98,838</b>
<b>World Total</b>	<b>484,409</b>	<b>492,988</b>	<b>493,912</b>	<b>502,804</b>	<b>510,094</b>	<b>513,926</b>
<b>Fluid Use Dom. Consum.</b>						
Argentina	2,044	2,084	1,708	1,681	1,925	1,798
Australia	2,600	2,700	2,550	2,530	2,550	2,550
Belarus	1,054	1,065	1,050	1,065	1,050	1,080
Brazil	9,660	9,573	9,600	10,000	10,010	10,010
Canada	2,946	2,923	2,917	2,900	2,950	2,950
China	15,150	15,360	14,600	14,792	14,880	14,960
European Union	34,066	33,800	33,600	33,550	33,500	33,500
India	57,000	59,750	62,750	65,200	66,800	66,800
Japan	3,911	3,935	3,992	3,970	3,950	3,950
Korea, South	1,540	1,529	1,500	1,540	1,568	1,568
Mexico	4,180	4,185	4,183	4,184	4,185	4,183
New Zealand	495	497	497	500	500	500
Russia	9,859	9,500	8,960	8,600	8,300	8,300
Taiwan	369	384	397	408	408	408
Ukraine	5,538	5,385	5,241	5,199	5,150	5,150
Others	62	57	85	76	0	77
<b>Subtotal</b>	<b>150,474</b>	<b>152,727</b>	<b>153,630</b>	<b>156,195</b>	<b>157,726</b>	<b>157,784</b>
<b>United States</b>	<b>27,060</b>	<b>26,668</b>	<b>26,487</b>	<b>26,320</b>	<b>26,200</b>	<b>26,200</b>
<b>World Total</b>	<b>177,534</b>	<b>179,395</b>	<b>180,117</b>	<b>182,515</b>	<b>183,926</b>	<b>183,984</b>



**Fluid Milk - Cow Numbers: Summary For Selected Countries**  
1,000 Head

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Cows In Milk</b>						
Argentina	1,826	1,786	1,720	1,672	1,683	1,663
Australia	1,647	1,689	1,562	1,512	1,670	1,525
Belarus	1,525	1,533	1,512	1,520	1,525	1,525
Brazil	16,825	17,426	17,430	17,650	17,950	17,950
Canada	955	954	945	945	945	945
China	8,400	8,400	8,000	7,200	7,500	7,200
European Union	23,468	23,559	23,548	23,525	23,500	23,299
India	50,500	52,500	54,500	56,500	58,500	58,500
Japan	773	750	752	735	730	730
Korea, South	208	197	194	190	191	191
Mexico	6,350	6,400	6,450	6,500	6,550	6,550
New Zealand	5,176	5,056	4,998	4,861	4,925	4,885
Philippines	18	10	11	12	0	12
Russia	8,050	7,750	7,235	7,000	6,800	6,800
Taiwan	60	62	61	61	60	60
Ukraine	2,509	2,322	2,226	2,172	2,100	2,100
<b>Subtotal</b>	128,290	130,394	131,144	132,055	134,629	133,935
<b>United States</b>	9,257	9,314	9,325	9,392	9,434	9,405
<b>World Total</b>	137,547	139,708	140,469	141,447	144,063	143,340

## Cheese Production and Consumption: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Production</b>						
Algeria	0	0	0	0	0	0
Argentina	564	548	475	435	466	475
Australia	328	343	344	348	355	360
Belarus	226	241	275	260	255	270
Brazil	736	754	745	772	780	780
Canada	396	419	445	445	450	450
European Union	9,560	9,740	9,810	10,050	10,060	10,250
Japan	46	46	47	46	46	46
Korea, South	24	23	25	27	28	28
Mexico	343	363	375	396	390	405
New Zealand	325	355	360	380	385	375
Philippines	2	2	2	2	0	0
Russia	760	861	865	925	935	935
Taiwan	0	0	0	0	0	0
Ukraine	203	190	186	187	188	180
<b>Total Foreign</b>	<b>13,513</b>	<b>13,885</b>	<b>13,954</b>	<b>14,273</b>	<b>14,338</b>	<b>14,554</b>
<b>United States</b>	<b>5,222</b>	<b>5,367</b>	<b>5,525</b>	<b>5,742</b>	<b>5,675</b>	<b>5,780</b>
<b>Total</b>	<b>18,735</b>	<b>19,252</b>	<b>19,479</b>	<b>20,015</b>	<b>20,013</b>	<b>20,334</b>
<b>Total Dom. Consumption</b>						
Algeria	0	0	0	0	0	0
Argentina	510	506	431	397	405	437
Australia	265	270	275	291	295	296
Belarus	67	69	71	72	73	75
Brazil	754	773	785	800	815	806
Canada	407	415	460	460	464	464
European Union	8,884	9,087	9,093	9,295	9,251	9,472
Japan	278	295	305	319	316	331
Korea, South	118	137	135	149	155	155
Mexico	438	475	496	511	520	524
New Zealand	40	41	42	45	35	47
Philippines	20	21	23	25	0	0
Russia	1,072	1,052	1,076	1,136	1,150	1,150
Taiwan	26	29	32	32	35	33
Ukraine	197	184	187	187	190	181
<b>Total Foreign</b>	<b>13,076</b>	<b>13,354</b>	<b>13,411</b>	<b>13,719</b>	<b>13,704</b>	<b>13,971</b>
<b>United States</b>	<b>4,977</b>	<b>5,149</b>	<b>5,379</b>	<b>5,498</b>	<b>5,485</b>	<b>5,571</b>
<b>Total</b>	<b>18,053</b>	<b>18,503</b>	<b>18,790</b>	<b>19,217</b>	<b>19,189</b>	<b>19,542</b>

### Cheese Trade: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Total Exports</b>						
Argentina	56	43	53	44	50	50
Australia	151	171	167	171	180	175
Belarus	167	183	205	189	185	200
European Union	721	719	800	830	880	840
New Zealand	278	327	355	343	360	340
Others	68	55	55	55	52	50
<b>Total Foreign</b>	1,441	1,498	1,635	1,632	1,707	1,655
<b>United States</b>	368	317	287	344	357	334
<b>Total</b>	1,809	1,815	1,922	1,976	2,064	1,989
<b>Total Imports</b>						
Australia	80	89	99	116	120	115
Japan	232	249	258	273	270	285
Korea, South	97	112	110	125	125	125
Mexico	99	116	126	122	135	125
Russia	349	220	230	226	235	235
Others	202	181	221	206	195	187
<b>Total Foreign</b>	1,059	967	1,044	1,068	1,080	1,072
<b>United States</b>	127	157	165	137	132	134
<b>Total</b>	1,186	1,124	1,209	1,205	1,212	1,206

## Butter Production and Consumption: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Production</b>						
Algeria	0	0	0	0	0	0
Argentina	52	50	47	45	37	50
Australia	125	120	110	103	105	110
Belarus	107	113	118	120	130	125
Brazil	85	83	82	84	85	85
Canada	88	91	93	120	127	127
European Union	2,250	2,335	2,345	2,340	2,320	2,390
India	4,887	5,035	5,200	5,400	5,600	5,600
Japan	61	65	66	59	57	57
Mexico	207	216	217	223	220	226
New Zealand	580	594	570	525	540	535
Russia	252	260	246	262	260	270
Taiwan	0	0	0	0	0	0
Ukraine	115	103	103	107	104	115
<b>Total Foreign</b>	<b>8,809</b>	<b>9,065</b>	<b>9,197</b>	<b>9,388</b>	<b>9,585</b>	<b>9,690</b>
<b>United States</b>	<b>842</b>	<b>839</b>	<b>834</b>	<b>838</b>	<b>850</b>	<b>845</b>
<b>Total</b>	<b>9,651</b>	<b>9,904</b>	<b>10,031</b>	<b>10,226</b>	<b>10,435</b>	<b>10,535</b>
<b>Domestic Consumption</b>						
Algeria	0	0	0	0	0	0
Argentina	38	41	42	43	31	45
Australia	89	94	102	115	115	129
Belarus	53	43	41	48	47	50
Brazil	80	84	89	89	92	92
Canada	99	106	117	123	133	135
European Union	2,162	2,150	2,181	2,207	2,190	2,232
India	4,876	5,032	5,196	5,392	5,603	5,603
Japan	75	77	72	66	68	68
Mexico	236	249	267	264	272	265
New Zealand	22	24	28	28	32	28
Russia	376	350	350	365	377	362
Taiwan	22	25	24	24	26	24
Ukraine	116	97	93	81	91	82
<b>Total Foreign</b>	<b>8,244</b>	<b>8,372</b>	<b>8,602</b>	<b>8,845</b>	<b>9,077</b>	<b>9,115</b>
<b>United States</b>	<b>794</b>	<b>831</b>	<b>852</b>	<b>855</b>	<b>873</b>	<b>850</b>
<b>Total</b>	<b>9,038</b>	<b>9,203</b>	<b>9,454</b>	<b>9,700</b>	<b>9,950</b>	<b>9,965</b>

**Butter Trade: Summary For Selected Countries**  
1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Total Imports</b>						
Russia	137	90	103	115	115	85
Mexico	37	43	65	49	60	45
Australia	23	22	30	35	25	37
Taiwan	22	25	24	24	26	24
Canada	11	17	27	22	15	20
European Union	52	27	23	16	15	17
Japan	11	16	12	8	10	10
Brazil	1	2	7	5	7	7
India	1	6	6	4	4	4
New Zealand	1	1	2	1	1	1
Ukraine	11	1	1	1	0	1
Algeria	0	0	0	0	0	0
Argentina	0	0	0	1	0	0
Belarus	1	0	0	0	0	0
<b>Total Foreign</b>	308	250	300	281	278	251
<b>United States</b>	22	38	50	47	48	54
<b>Total</b>	330	288	350	328	326	305
<b>Total Exports</b>						
New Zealand	560	552	554	476	505	525
European Union	142	183	213	174	145	175
Belarus	55	70	77	72	83	75
Ukraine	5	11	9	28	13	35
Australia	44	35	30	16	30	16
India	10	9	9	12	10	10
Mexico	8	10	15	8	8	6
Argentina	14	9	6	4	5	4
Russia	4	3	4	3	3	3
Canada	2	1	1	1	1	2
Algeria	0	0	0	0	0	0
Brazil	6	1	0	0	0	0
Japan	0	0	0	0	0	0
Taiwan	0	0	0	0	0	0
<b>Total Foreign</b>	850	884	918	794	803	851
<b>United States</b>	74	23	27	29	28	43
<b>Total</b>	924	907	945	823	831	894

## Nonfat Dry Milk Production and Consumption: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Production</b>						
Australia	228	266	238	224	228	235
Brazil	154	155	153	157	162	162
European Union	1,550	1,715	1,735	1,725	1,685	1,800
India	520	540	540	570	600	600
New Zealand	415	410	405	402	395	410
Others	610	645	620	631	660	658
<b>Total Foreign</b>	<b>3,477</b>	<b>3,731</b>	<b>3,691</b>	<b>3,709</b>	<b>3,730</b>	<b>3,865</b>
<b>United States</b>	<b>1,047</b>	<b>1,029</b>	<b>1,049</b>	<b>1,073</b>	<b>1,080</b>	<b>1,080</b>
<b>Total</b>	<b>4,524</b>	<b>4,760</b>	<b>4,740</b>	<b>4,782</b>	<b>4,810</b>	<b>4,945</b>
<b>Total Dom. Consumption</b>						
China	300	244	223	276	315	295
European Union	887	978	803	984	937	1,012
India	446	492	531	574	601	601
Mexico	247	301	325	351	358	375
Russia	181	186	191	193	193	192
Others	1,062	1,080	1,095	1,123	1,007	1,123
<b>Total Foreign</b>	<b>3,123</b>	<b>3,281</b>	<b>3,168</b>	<b>3,501</b>	<b>3,411</b>	<b>3,598</b>
<b>United States</b>	<b>457</b>	<b>489</b>	<b>447</b>	<b>425</b>	<b>476</b>	<b>394</b>
<b>Total</b>	<b>3,580</b>	<b>3,770</b>	<b>3,615</b>	<b>3,926</b>	<b>3,887</b>	<b>3,992</b>

## Nonfat Dry Milk Trade: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Total Imports</b>						
Mexico	203	259	286	331	330	400
China	253	200	184	247	275	275
Algeria	168	136	119	170	160	185
Indonesia	215	205	173	165	170	145
Philippines	95	100	185	154	0	145
Russia	103	120	129	125	125	100
Japan	43	53	34	55	55	60
Korea, South	21	21	20	26	35	35
Taiwan	23	25	23	24	26	22
Brazil	23	35	35	31	28	20
Chile	5	10	12	15	18	14
Australia	6	10	6	8	5	10
Canada	6	3	4	4	4	4
European Union	2	3	4	2	2	2
New Zealand	4	5	3	2	1	2
India	1	0	0	1	1	1
Argentina	0	0	0	0	0	0
Belarus	3	0	1	0	0	0
Ukraine	1	0	0	0	0	0
<b>Total Foreign</b>	<b>1,175</b>	<b>1,185</b>	<b>1,218</b>	<b>1,360</b>	<b>1,235</b>	<b>1,420</b>
<b>United States</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Total</b>	<b>1,178</b>	<b>1,187</b>	<b>1,219</b>	<b>1,361</b>	<b>1,236</b>	<b>1,421</b>
<b>Total Exports</b>						
European Union	648	695	580	781	780	850
New Zealand	383	411	444	401	405	410
Australia	164	201	163	157	170	165
Belarus	92	122	111	109	115	105
Canada	13	14	24	72	85	85
Mexico	0	0	3	29	22	75
Argentina	22	24	26	20	23	25
Ukraine	28	35	34	29	35	20
India	61	18	19	12	15	15
Russia	3	2	1	1	2	2
Indonesia	1	2	1	2	1	1
Algeria	0	0	0	0	0	0
Brazil	0	0	0	0	0	0
China	2	1	1	1	0	0
Chile	2	1	2	0	0	0
Japan	0	0	0	0	0	0
Korea, South	0	0	0	0	0	0
Philippines	5	0	0	0	0	0
Taiwan	0	0	0	0	0	0
<b>Total Foreign</b>	<b>1,424</b>	<b>1,526</b>	<b>1,409</b>	<b>1,614</b>	<b>1,653</b>	<b>1,753</b>
<b>United States</b>	<b>545</b>	<b>558</b>	<b>594</b>	<b>606</b>	<b>635</b>	<b>720</b>
<b>Total</b>	<b>1,969</b>	<b>2,084</b>	<b>2,003</b>	<b>2,220</b>	<b>2,288</b>	<b>2,473</b>

## Whole Milk Powder Production And Consumption: Summary For Selected Countries

1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Production</b>						
Argentina	258	252	180	170	160	185
Brazil	612	610	550	598	610	610
China	1,350	1,617	1,375	1,350	1,450	1,300
European Union	720	710	720	760	740	775
New Zealand	1,460	1,380	1,320	1,380	1,390	1,390
Others	514	479	436	482	500	506
<b>Total Foreign</b>	4,914	5,048	4,581	4,740	4,850	4,766
<b>United States</b>	47	49	45	55	55	55
<b>Total</b>	4,961	5,097	4,626	4,795	4,905	4,821
<b>Total Dom. Consumption</b>						
Algeria	180	214	222	235	280	255
Brazil	603	628	662	666	666	658
China	1,845	1,910	1,992	1,918	2,073	1,848
European Union	331	313	344	368	343	387
Indonesia	123	116	122	127	130	130
Others	653	718	571	475	520	517
<b>Total Foreign</b>	3,735	3,899	3,913	3,789	4,012	3,795
<b>United States</b>	28	49	40	57	63	63
<b>Total</b>	3,763	3,948	3,953	3,846	4,075	3,858



**Whole Milk Powder Trade: Summary For Selected Countries**  
1,000 Metric Tons

	2014	2015	2016	2017	2018 Dec	2018 Jul
<b>Total Imports</b>						
Afghanistan	0	0	0	0	0	0
Algeria	204	224	224	262	275	265
Argentina	0	0	0	1	0	0
Australia	9	11	16	28	30	30
Brazil	30	59	126	73	60	50
Chile	4	7	7	12	10	10
China	671	347	420	470	600	500
European Union	1	4	6	2	3	2
Indonesia	50	44	52	45	50	50
Mexico	7	7	12	4	4	3
New Zealand	1	7	4	4	4	4
Philippines	20	17	22	18	0	20
Russia	36	38	48	52	50	40
Taiwan	33	34	30	32	31	34
Venezuela	134	195	58	20	20	20
Others	0	0	0	0	0	0
<b>Total Foreign</b>	1,200	994	1,025	1,023	1,137	1,028
<b>United States</b>	7	9	15	24	25	25
<b>Total</b>	1,207	1,003	1,040	1,047	1,162	1,053
<b>Total Exports</b>						
Afghanistan	0	0	0	0	0	0
Algeria	0	0	0	0	0	0
Argentina	144	138	110	71	80	95
Australia	81	65	70	55	65	70
Belarus	31	38	29	30	30	35
Brazil	39	41	14	5	4	2
Chile	21	6	7	4	5	4
China	6	4	3	2	2	2
European Union	390	401	382	394	400	390
Indonesia	0	0	0	0	0	0
Mexico	6	11	20	77	35	40
New Zealand	1,423	1,380	1,344	1,342	1,380	1,400
Philippines	8	21	27	5	0	20
Russia	1	2	1	1	2	2
Ukraine	2	2	2	4	3	4
Others	0	0	0	0	0	0
<b>Total Foreign</b>	2,152	2,109	2,009	1,990	2,006	2,064
<b>United States</b>	18	15	19	17	20	20
<b>Total</b>	2,170	2,124	2,028	2,007	2,026	2,084