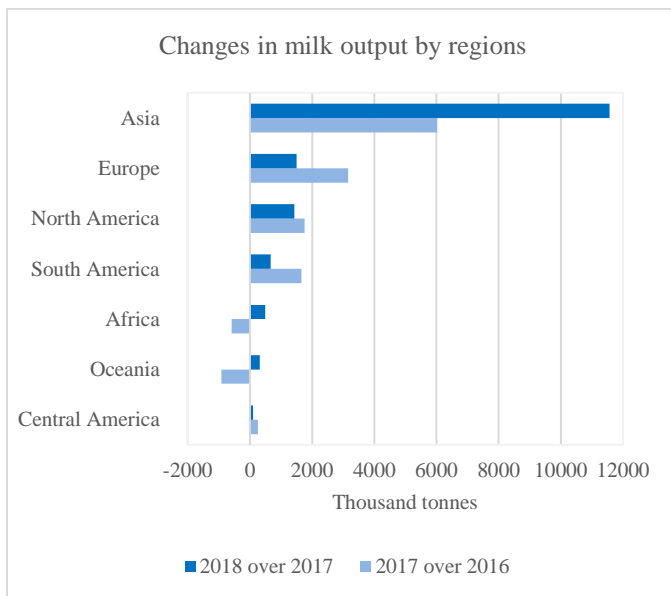


# DAIRY MARKET REVIEW

World milk output is forecast to reach nearly 827 million tonnes in 2018, up 2.0 percent from 2017. This year, milk outputs are anticipated to increase in all major regions, with the largest gain foreseen in Asia, followed by Europe, North America, and South America. Outputs in Africa, Oceania and Central America are likely to recover from the downturns experienced in 2017.



In *Asia*, milk output is forecast at 334 million tonnes, an increase of 11.6 million tonnes, or 3.6 percent higher than in 2017, principally contributed by **India, China, Turkey** and **Pakistan**. Milk production is likely to remain stable in many countries including in **Japan, Uzbekistan, Kazakhstan, Myanmar, Syrian Arab Republic** and the **Republic of Korea**. By contrast, output could decline marginally in **Saudi Arabia**.

**India**'s milk output is expected to expand by 4.4 percent to 173 million tonnes in 2018, underpinned by an enlarged dairy herd, a near-normal monsoon that would support increased availability of fodder and higher productivity per animal. Meanwhile, higher disposable incomes, urbanization and food habit changes are supporting an increased demand for nutritive and value-added dairy products. In **China**, after declining for two consecutive years, milk output is forecast to recover, supported by the stabilization of dairy herd numbers and of farm-gate prices. Milk yields have also improved following policy reforms that have led to a rise in the share of milk output originating in large-scale farms, which are increasingly adopting modern farm practices. **Turkey**'s milk output is likely to be boosted by higher number of milking cows, and increased

farm gate prices, partially offsetting an increase in feeding costs. In **Japan**, continuing structural weaknesses, especially labour shortages, are resulting in a reduction in the number of dairy farms. In addition, the September earthquake in Hokkaido, one of the main dairy regions in Japan, disrupted dairy farm operations, constraining growth prospects.

In *Europe*, milk output is estimated at 226.7 million tonnes, up 0.7 percent from 2017. Much of the projected increase is to concentrate in the **EU, the Russian Federation, Switzerland** and **Belarus**, while **Ukraine** might face a decline. In the **EU**, milk production is predicted to expand by 0.6 percent to 166.6 million tonnes, 1.0 million tonnes more than in 2017. Milk yields have risen due to the replacement of unproductive dairy animals, offsetting a marginal reduction in the dairy cattle herd. The droughts in parts of Europe impaired pasture growth, adding some uncertainty to prospects for higher milk output. In the **Russian Federation**, milk output is forecast to rise, owing to a better performance of large-scale dairy farms that have managed to increase yields through improvements in management practices, adequate to counter reduced output of small-scale farms. Milk output in **Belarus** continues to expand, supported by improved farm practices and the use of quality feed. Yet, the sector is facing a difficult situation with its stocks of dairy products rising, following a decline of imports by the Russian Federation. In **Ukraine**, milk production has trended lower until August this year, reflecting, among others, subdued farm gate prices and higher feeding costs.

In the Americas, consisting Central, North and South America, milk output growth in 2018 is expected to slow down compared to last year. In *Central America and the Caribbean*, milk output is anticipated to reach 17.7 million tonnes, slightly above the 2017 level. Milk output in **Mexico** - the largest milk producer in the sub-region - is expected to increase marginally, constrained by rising costs of production.

In *North America*, milk output is forecast at 108.6 million tonnes, up 1.3 percent from 2017. In the **United States**, higher feed costs have reduced producer margins, contributing to an above normal level of dairy cow culling. This has brought down dairy cow numbers, but an increase in milk yields is partially compensating for the herd decline, enabling output to expand by 1.1 percent in 2018. In **Canada**, milk output is expected to grow by 3.7 percent, supported by higher production quotas allocated to provinces under the managed production system, and the National Ingredient Strategy. The new milk class-7 introduced under this strategy allows

processors to make efficient use of leftover milk from butter making and raised milk prices received by farmers.

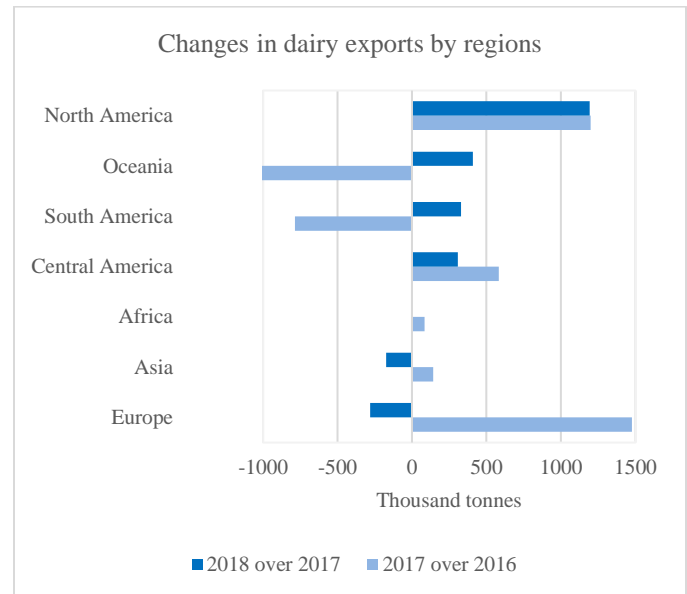
In *South America*, milk production is expected to reach 64.0 million, up 1.1 from 2017. Outputs are foreseen to expand in **Argentina, Colombia, Chile** and **Uruguay**, but decline in **Brazil**. This is likely to limit regional growth to 1 percent. In **Argentina**, milk output has been expanding since April 2018, raising the possibility for overall output in 2018 to be 7 percent larger than in 2017. Yet, high inflation and transport costs are of considerable concern for the industry. On the one hand, they could reduce producer profit margins, and on the other, affect consumer purchasing power and demand. In **Colombia**, milk output is to grow for a second year to reach the highest level since 2008, signalling a recovery from the declines the sector suffered in 2015 and 2016 due to the El Niño weather phenomenon. A buoyant demand from urban consumers is also supporting the recovery. **Uruguay** is expected to maintain milk output growth at over 5 percent, supported by favourable weather in 2018. In **Brazil**, the truckers' strike in May disrupted milk collection and feed delivery, negatively affecting production. The impacts are likely to last long because it normally takes time for milk yield to recover when lactating animals are deprived of adequate food for an extended period. Considering the overall conditions, milk output in Brazil is forecast to drop to 34.9 million tonnes, down 1.1 percent from 2017.

In *Oceania*, milk output is expected to expand by 1.0 percent to 31.0 million tonnes in 2018. In **Australia**, after two-years of declines, milk output is set to rebound by 3.1 percent to 9.6 million tonnes in the 2017/18 production season. Although Australia faced drought conditions this year, these coincided with dairy lean periods with little impact on national milk output. After two years of declines, **New Zealand's** milk production is expected to reach 21.4 million, up 0.2 percent from the previous season, supported by slightly larger dairy herd and higher farm gate prices that have raised optimism over the 2018/19 production cycle.

In *Africa*, milk output in 2018 is expected to increase by 1.1 percent to 45.6 million tonnes. Output expansions are anticipated in **Kenya, Algeria** and **Tunisia**, supported by favourable weather conditions and improved fodder availability. In contrast, milk output is expected to fall by 1 percent in **South Africa** due to a reduced contribution of small-scale producers. Milk producer prices there have dropped by 5.5 percent since March, causing producer profit margins to decline and inducing some producers to reduce output or leave the industry. Drier conditions in Southern Africa have cut milk output there, while conflicts continue to disrupt milk production activities in some African countries.

## World trade in milk products in 2018

In 2018, World dairy exports are forecast to reach 75 million tonnes, up 2.5 percent from the revised export figures for 2017. Much of the 2018 expansion in global exports is expected to originate in the Americas and Oceania; remain stable in Africa; but to decline in Asia and Europe.



The **United States, Uruguay, Mexico, New Zealand, Argentina** and **Australia** are expected to lead this year's export expansion in dairy products, while sales from **Belarus** and the **Islamic Republic of Iran** may decline.

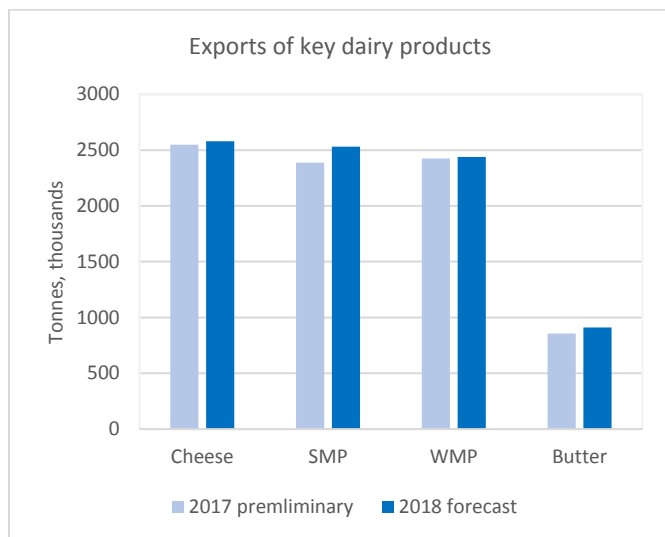
Exports by the **United States** are likely to be boosted by the continued expansion of production and assisted by the existence of extensive trading networks, and improvements in global outreach through franchised restaurant chains. The **EU's** total milk exports are likely to marginally decline, resulting from a possible decline in butter and WMP exports, although SMP and cheese exports are on the rise. While the EU is benefitting from the recognition of its geographical names under bilateral agreements in expanding cheese exports, especially in Asia, competitive prices help lift SMP exports. Meanwhile, **Australia** and **New Zealand** continue to benefit from a preference for milk originating from that region and proximity to markets. Bilateral and regional agreements that the two countries have entered into with, for example, the ASEAN, China, Malaysia, the Republic of Korea, Thailand and Singapore, further strengthen dairy trade.

In 2018, **Mexico, Algeria** and **Viet Nam** are forecast to record the largest increases in dairy imports while the **Russian Federation** and **Brazil** are expected to cut down their purchases. In some countries, such as China, Mexico, Viet Nam, Indonesia and Malaysia, demand from affluent

consumers for high value-added dairy products continue to rise faster than production, contributing to boost imports. Elsewhere, like in **Japan**, the shrinking size and ageing of the population is a factor that partially limit imports.

### Trade performance of key dairy products

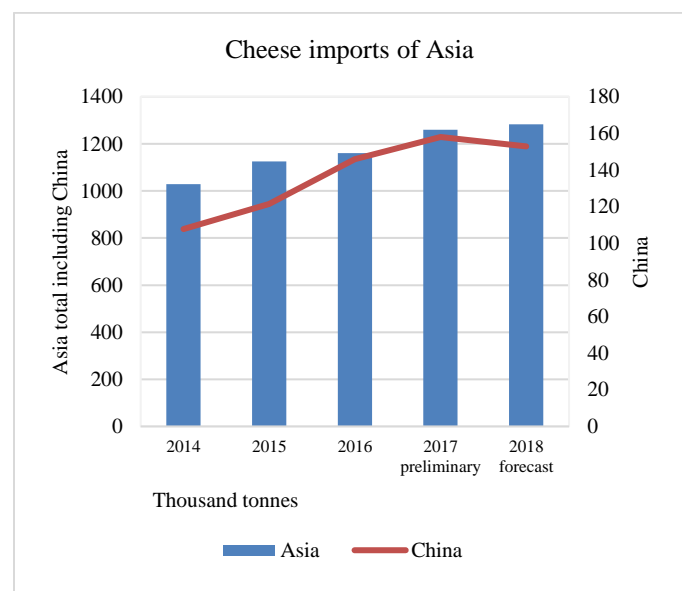
Exports are forecast to expand across all the main dairy commodities, namely butter, cheese, Whole Milk Powder (WMP) and Skim Milk Powder (SMP). This year, exports are forecast to expand the most for butter (+6.3 percent), followed by SMP (+6.0 percent), cheese (+1.2 percent) and WMP (+0.6 percent). In terms of volumes in milk equivalent, however, cheese has become the most traded dairy commodity in the world, followed by Skim Milk Powder (SMP), Whole Milk Powder (WMP) and butter.



**World cheese trade** is forecast to rise for a third consecutive year to 2.6 million tonnes in 2018, up 1.2 percent, but below the 4.5 percent gain recorded in 2017. In 2018, cheese exports are anticipated to expand in Europe (+2.4 percent), Central America and the Caribbean (+13.2 percent) and South America (+5.7 percent), but to decline in North America (-1.3 percent), Oceania (-0.9 percent) and Asia (-0.6 percent).

At country level, much of the export expansion is anticipated to come from the **EU**, **Belarus**, **Argentina**, **Saudi Arabia** and **Australia**. On the other hand, this year, exports are expected to end lower in two of the world's largest cheese exporters, the **United States** and **New Zealand**. In the **United States**, a slowdown in demand from overseas importers, partially reflecting strong dollar, appears to be a factor. In **New Zealand**, cheese exports are likely to be constrained by a limited production mainly because of an apparent preference among processors for producing WMP over cheese.

Asia currently accounts for one-half of global cheese imports. In 2018, imports are forecast to increase by 1.8 percent, but well below the 8.5 percent growth realized in 2017. Rising incomes, changing food habits are fuelling consumer demand, especially in Asia. Demand is also rising for speciality cheese, for example, with geographic labelling from Europe. Imports are likely to expand in **Japan**, the **Russian Federation**, **United Arab Emirates** and **Saudi Arabia**, but those in **China**, **Australia**, the **United States**, **El Salvador** and **Iraq** are anticipated to fall. Current estimates suggest that Chinese cheese imports may decline by as much as 3.2 percent, compared to a 16.2 percent annual average growth recorded for the four preceding years.

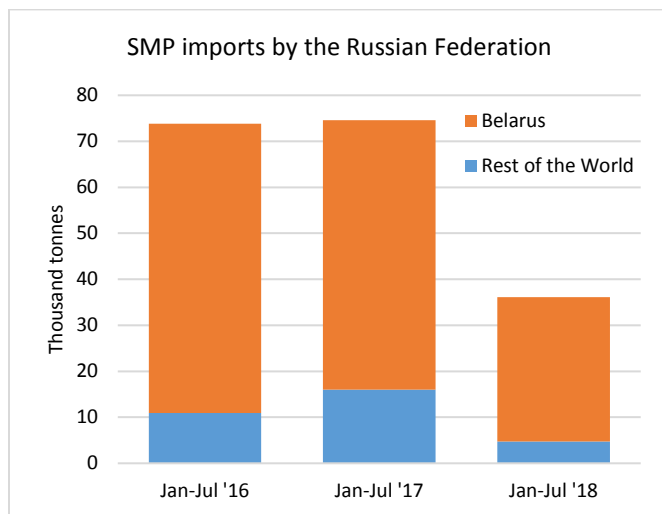


**World SMP trade** is forecast to expand for a second consecutive year and reach 2.5 million tonnes, an increase of 143 000 tonnes, or 6.0 percent, from 2017. Much of this growth is to come from expanded shipments from North America (+15.7 percent), Central America and the Caribbean (+284.5 percent) and Africa (+7.6 percent). In contrast, exports are likely to decline in Asia (-23.0 percent) and Oceania (-3.1 percent), but to remain stable in South America and Europe.

Ample production and high stocks are assisting the **United States** to lift its exports (+17.2 percent), but partially restrained by strong dollar and ongoing trade disputes. **Mexico's** unusual expansion of exports (+294.8 percent) is a result of a one-off export consignment to Venezuela. Competitive prices and strong demand, in particular from Algeria and Egypt, among others, are lifting **EU's** exports by 2.0 percent. In **Canada**, implementation of the new ingredient class-7 as part of the National Ingredient Strategy and improvements to new

processing capacities continue to boost SMP exports by an estimated 3.2 percent, but only a fraction of the 204 percent growth registered last year. Higher milk outputs are likely to lead to increased export availabilities in **Argentina**. In contrast, exports are to decline in **Belarus, Turkey and New Zealand**. The expected decline of SMP from **Belarus** mirrors a sharp reduction of imports by the Russian Federation, but in **New Zealand**, it reflects supply constraints.

Much of the expansion in global trade in SMP is anticipated to be fuelled by higher imports to South America (+59.9 percent), Central America and the Caribbean (+14.5 percent), Africa (+6.7 percent) and Asia (+1.7 percent). At country level, imports are likely to expand in **Mexico, Algeria, Yemen and Viet Nam**, while they may fall in the **Russian Federation, China, Indonesia and Nigeria**. High demand for SMP imports partly reflects the growing use of SMP by the food processing industry, including re-constituted milk products and dry mixes. Meanwhile, current low international prices appear to have induced some countries to purchase more SMP.

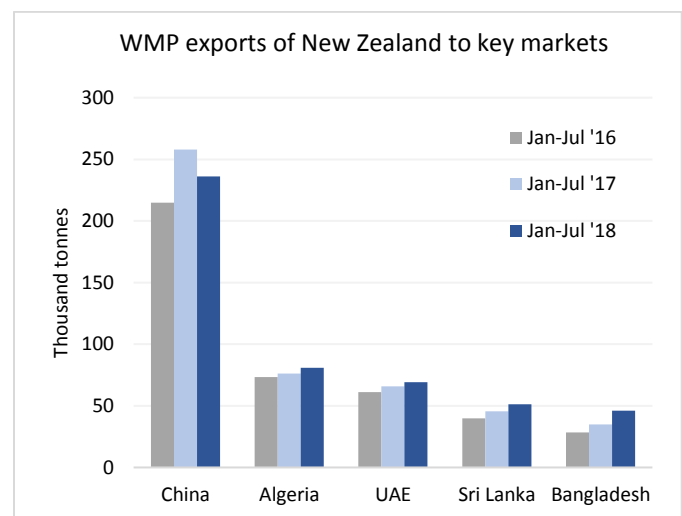


**World WMP trade** is forecast to recover partially in 2018, expanding by 0.6 percent to 2.4 million tonnes. However, global trade is still 152 000 tonnes below the volume of trade in 2014. In 2018, WMP exports are anticipated to expand in South America (+21.1 percent), Oceania (+2.4 percent), North America (+64.3 percent), Asia (+1.6 percent) and Africa (+1.9 percent), but to decline in Central America and the Caribbean (-56.3 percent) and Europe (-7.8 percent).

In Oceania, **New Zealand** is anticipated to account for much of the export expansion. The optimism rests on the higher milk production expected in the 2018/19 dairy cycle, and New Zealand's preference for producing WMP over other dairy products. The pace of monthly export figures in 2018 indicates

the possibility for a recovery this year in WMP exports by the **United States**. In **Mexico**, monitoring of monthly export performance suggests that WMP exports are falling back to the normal level and that of last year's surge appeared to have resulted from a large, one-off shipment to Venezuela.

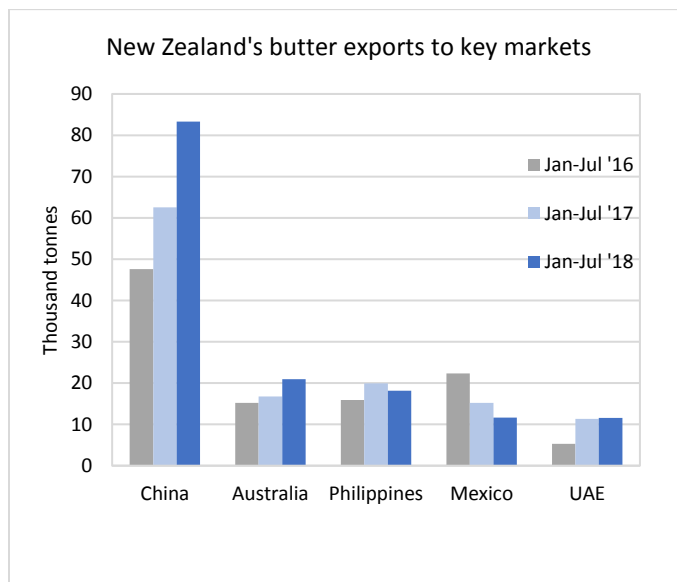
Much of the expansion in global WMP trade in 2018 is expected to be led by Asia (+4.5 percent) and Africa (+4.0 percent), while sharp declines are expected in South America (-38.9 percent) and Europe (-20.2 percent). Driven by expanding consumer demand and slower growth in production, WMP imports are rising in **Algeria, Oman, Bangladesh and China**. In contrast, mirroring expansions in domestic milk production, import curtailments are expected in the **Russian Federation**,



**World butter trade** is forecast to recover partially in 2018, rising to 910 000 tonnes, up 6.3 percent from 2017, but still below the volume of 962 668 tonnes traded in 2016. This year's recovery of exports is expected to be fuelled by expansions in Oceania (+9.0 percent) and North America (+46.7 percent), followed by Asia (+3.2 percent). Shipments are expected to decline from Europe (-0.9 percent), Africa (-15.2 percent), South America (-2.4 percent) and Central America and the Caribbean (-0.3 percent).

In 2018, butter exports are expected to expand in **New Zealand, the United States, Ukraine, India and Uruguay**, while declines are anticipated in the **EU, Malaysia and Australia**. **New Zealand's** butter exports are likely to rebound by 9.3 percent this year, following a 13 percent dip in 2017. Strong import demand from **China, Egypt, the United States, Saudi Arabia and Australia** is expected fuel global butter trade. In contrast, imports by the **Russian Federation, Mexico and Canada** may fall, reflecting higher levels of production or high existing butter stocks.

Despite high butter prices, processors seem reluctant to step up output, limiting themselves to produce enough to fulfil long-term obligations. This is a result of the low relative profitability of butter when considered together with SMP, a by-product of butter processing, which is fetching low prices. Recently, however, markets have switched focus on SMP manufactured recently. This has contributed to a 16.2 percent increase in SMP prices since the beginning of this year. Accordingly, the price strength of SMP is anticipated to nudge butter production to some higher level. However, this might not immediately result in larger butter export availabilities, as domestic consumer demand remains strong in the main producing regions, especially Europe and North America. Demand for butter in importing countries is also growing, especially in **China**. In **Egypt** and **Saudi Arabia**, butter import demand is rising due to a gap between domestic demand and production. In the **Russian Federation**, increased production and stocks are behind an expected sharp contraction in imports.



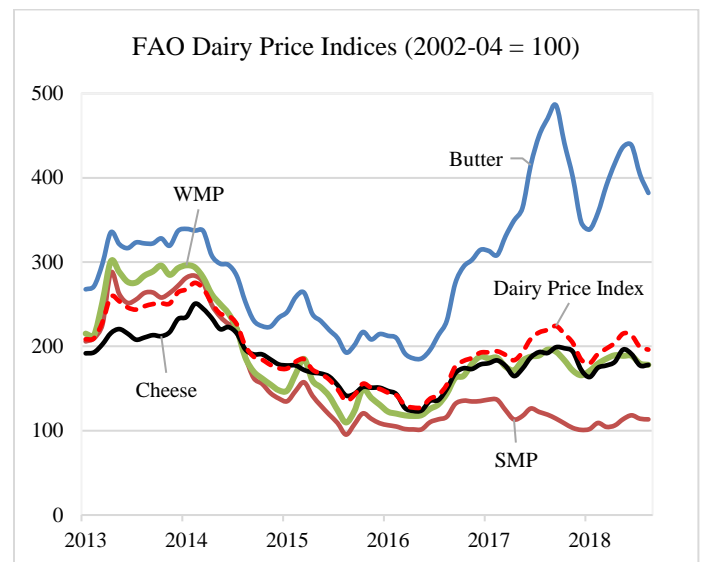
### International dairy price movements

The **FAO Dairy Prices** Index averaged 191.5 in September 2018, 6.4 percent higher than the level in January this year. At this level, the index is 14.6 percent below the corresponding month last year, and 30.5 percent below the peak it reached in

February 2014. At the beginning of 2018, the index reached 179.9, the lowest value it registered between September 2017 and September 2018, mainly caused by increased export supplies from the EU and North America in the last few months in 2017.

Since January 2018, international dairy prices have been on the rise for five months, reaching a peak in May. The trend reflects sharp escalations of butter and cheese prices and also SMP and WMP prices. As for butter, low inventories held by major exporters, especially the EU, coincided with a strong domestic demand from consumers from Europe, North America and Asia, pushing international prices to higher levels. Cheese prices increased, underpinned by strong import demand from Asia. Price quotations of SMP and WMP increased too, although more moderately, reflecting limited export supplies, especially newly manufactured SMP from Oceania.

Since May, however, international price quotations of all the dairy commodities represented in the index have weakened, with the sharpest falls registered for butter and cheese. WMP and SMP prices also faltered. This downward price adjustment reflects the availability of ample export supplies, combined with limited market activities, especially during the summer months in the Northern Hemisphere.





## Statistical Appendix

## International prices of selected dairy products and the FAO Dairy Price Index

PERIOD	International Prices (US\$ per tonne)				FAO Dairy Price Index
	Butter <sup>1</sup>	Skim Milk Powder <sup>2</sup>	Whole Milk Powder <sup>3</sup>	Cheddar Cheese <sup>4</sup>	(2002-2004=100)
<b>Annual</b>					
(January/December)					
2010	4 270	3 081	3 514	4 010	207
2011	4 876	3 556	4 018	4 310	230
2012	3 547	3 119	3 358	3 821	194
2013	4 484	4 293	4 745	4 402	243
2014	4 010	3 647	3 868	4 456	224
2015	3 212	2 113	2 509	3 340	160
2016	3 350	1 983	2 457	3 094	154
2017	5 573	2 025	3 179	3 848	202
<b>Monthly</b>					
2018 – January	4 843	1 740	2 977	3 413	180
2018 – February	5 129	1 864	3 127	3 644	191
2018 – March	5 588	1 784	3 228	3 700	197
2018 – April	5 961	1 813	3 301	3 788	204
2018 – May	6 245	1 941	3 289	4 094	215
2018 – June	6 271	2 018	3 290	3 981	213
2018 – July	5 777	1 949	3 130	3 700	199
2018 – August	5 463	1 937	3 102	3 713	196
2018 – September	5 209	2 023	3 048	3 619	191

<sup>1</sup> Butter, 82 percent butterfat, f.o.b. Oceania and EU; averaged indicative traded prices

<sup>2</sup> Skim Milk Powder, 1.25 percent butterfat, f.o.b. Oceania and EU; averaged indicative traded prices

<sup>3</sup> Whole Milk Powder, 26 percent butterfat, f.o.b. Oceania and EU; averaged indicative traded prices

<sup>4</sup> Cheddar Cheese, 39 percent maximum moisture, f.o.b. Oceania; indicative traded prices

**Note:** The FAO Dairy Price Index is derived from a trade-weighted average of a selection of representative internationally-traded dairy products

**Sources:** FAO for indices. Product prices: Mid-point of price ranges reported by Dairy Market News (USDA)

**Total milk production***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>810 888</b>	<b>826 949</b>	<b>2.0</b>
India <sup>1</sup>	165 612	172 899	4.4
EU 28	165 600	166 600	0.6
United States	97 730	98 805	1.1
China	40 288	42 238	4.8
Pakistan	40 167	40 482	0.8
Brazil	35 257	34 869	-1.1
Russian Fed.	31 112	31 645	1.7
New Zealand <sup>2</sup>	21 341	21 373	0.2

<sup>1</sup> Dairy years starting in April (production only).<sup>2</sup> Dairy years ending in May (production only).**Total Milk Imports***(thousand tonnes, Milk Equivalent)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>72998</b>	<b>74 665</b>	<b>2.3</b>
China	13 554	13 619	0.5
Mexico	3 965	4 415	11.3
Algeria	3 473	3 783	8.9
Russian Fed.	4 202	3 441	-18.1
Saudi Arabia	3 038	3 079	1.3
Indonesia	2 736	2 737	0.0
Japan	2 171	2 316	6.6
Malaysia	2 179	2 286	4.9

**Total Milk exports***(thousand tonnes, Milk Equivalent)*

	2017 preliminary y	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>72 763</b>	<b>74 546</b>	<b>2.5</b>
EU 28	20 391	20 310	-0.4
New Zealand	18 707	18 983	1.5
United States	10 724	11 899	11.0
Belarus	3 713	3 596	-3.1
Australia	3 018	3 151	4.4
Argentina	1 341	1 568	16.9

**Cheese imports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 477</b>	<b>2 507</b>	<b>1.2</b>
Japan	273	285	4.6
Russian Federation	203	212	4.5
United States	183	179	-2.2
Saudi Arabia	174	178	2.5
China	158	153	-3.2
Mexico	122	124	2.2
Korea Rep. of	125	124	-0.8

**Cheese Exports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 547</b>	<b>2 578</b>	<b>1.2</b>
EU 28	830	842	1.5
United States	343	341	-0.6
New Zealand	343	335	-2.3
Belarus	189	200	6.0
Australia	172	175	2.0
Egypt	105	106	0.5

**SMP Imports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 341</b>	<b>2 481</b>	<b>6.0</b>
Mexico	331	384	16.0
China	278	249	-10.6
Algeria	161	179	11.2
Philippines	140	142	1.6
Indonesia	147	140	-4.9
Malaysia	120	117	-2.9

**WMP Imports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 408</b>	<b>2 421</b>	<b>0.6</b>
China	586	596	1.7
Algeria	262	285	8.8
UAE	145	154	5.6
Saudi Arabia	142	138	-2.5
Sri Lanka	85	89	4.8
Bangladesh	71	82	15.3

**Butter imports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>834</b>	<b>886</b>	<b>6.3</b>
China	126	155	23.0
Russian Federation	94	73	-21.9
Saudi Arabia	48	53	11.4
United States	44	52	17.3
Iran Islamic Rep Of	36	39	7.0
Australia	34	37	9.2

**SMP Exports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 386</b>	<b>2 529</b>	<b>6.0</b>
EU 28	779	794	2.0
United States	608	713	17.2
New Zealand	403	391	-3.0
Australia	158	152	-3.3
Mexico	29	114	294.8

**WMP Exports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>2 425</b>	<b>2 438</b>	<b>0.6</b>
New Zealand	1 346	1 362	1.2
EU 28	393	354	-10.0
Uruguay	109	128	18.0
Argentina	71	95	34.4
Australia	55	72	31.5

**Butter Exports***(thousand tonnes)*

	2017 preliminary	2018 forecast	Change 2018 over 2017 (%)
<b>World</b>	<b>856</b>	<b>910</b>	<b>6.3</b>
New Zealand	436	477	9.3
EU 28	172	163	-5.0
Belarus	79	80	0.6
United States	34	51	48.0
Ukraine	30	37	21.5



Required citations: Dairy Market Review, Trade and Markets Division (EST), Food and Agriculture Organization of the United Nations. Rome

A collection of the previous market updates (Price and Trade Update) can be found at: <http://www.fao.org/economic/est/est-commodities/dairy/milk-and-milk-products/en>

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