The World Dairy Situation 2021[1]

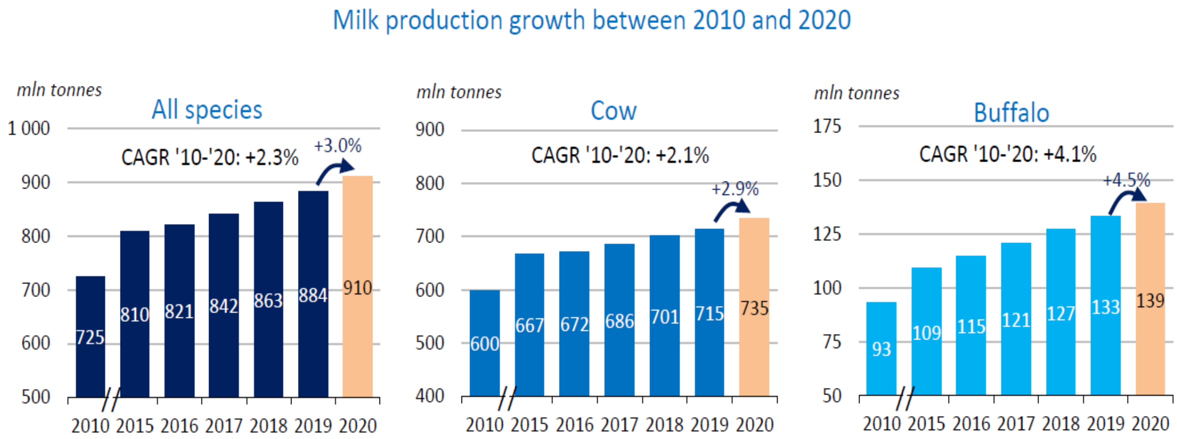
[1] Summary report on IDF Bull. 512/2021 World Dairy Situation. The complete document is available from the IDF www.fil.idf.org

Introduction

The 2021 World Dairy Situation report was published in October 2021. As always, it provides a general survey and overview of the global dairy industry in the previous year. The complete report is available from the International Dairy Federation (IDF). In this article the most salient points are covered to provide a snap shot of the world dairy situation in 2020.

Production of unprocessed (raw) milk

Total production of unprocessed milk (all species) increased by 3.0% from 2019 to 2020, which is noteworthy higher than the historical rate of 2,2% over the previous ten years. The growth rate of buffalo milk exceeded the growth rate of cow's milk, indicating a growing appetite for buffalo milk.



Cows' milk production represents 81,0% of total milk production internationally. It grew by 2,9% to 735 million tonnes in 2020, bolstering the overall production of unprocessed milk. The growth in unprocessed cows' milk production during 2020 is significantly higher than the compounded annual growth rate (CAGR) over the period from 2010 to 2020. The major unprocessed milk-producing continents are listed in Table 1.

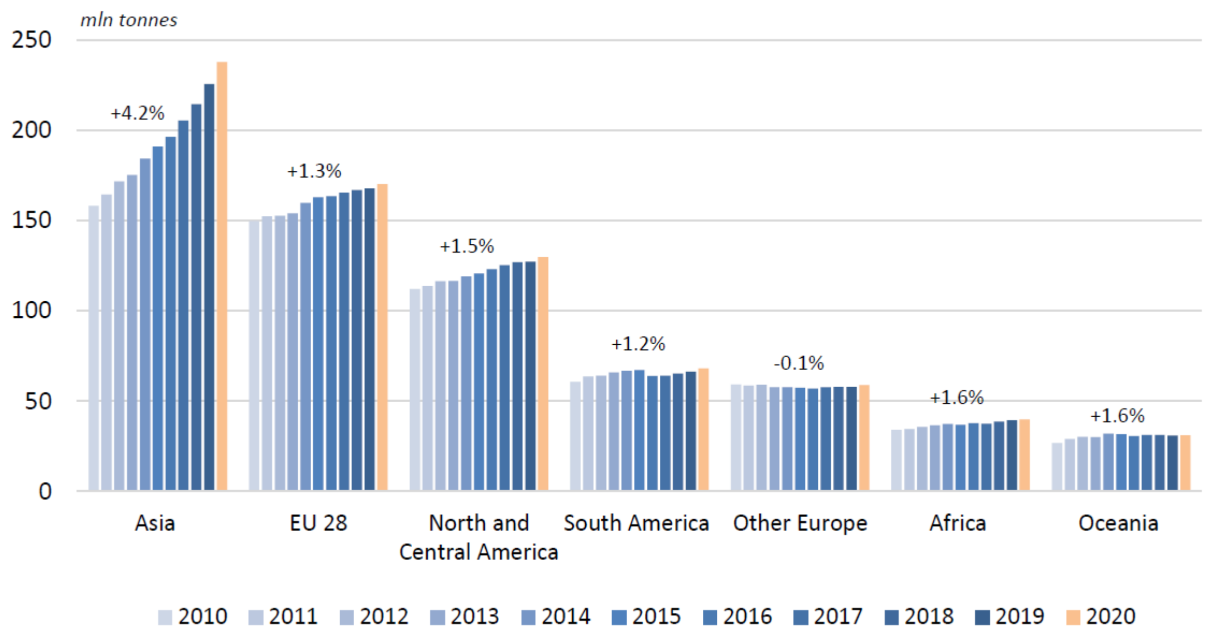
Table 1: Unprocessed cow's milk production per continent, 2020

Continent	Milk production 2020 (mil. tonnes)	Share in total cows' milk production (%)	Annual growth 2019 – 2020 (%)
Asia	235,2	32%	4,5
EU-28	169	23%	0,6
North and Central America	132	18%	3,9
South America	66,2	9%	-1,2
Other Europe	59	8%	1,7
Africa	44,1	6%	13,1
Oceania	29,4	4%	-5,2
World	735	100,0%	1,9

Source: IDF World Dairy Situation 2021

Comparing the unprocessed milk production of 2020 to that of 2019, the growth in production in Asia and in the EU-28 in 2020 is very similar to the growth that was experienced in 2019. However, the growth in North and Central America and Africa increased significantly from 0,5% and 0,7% respectively in 2019 to 3,9% and 13,1% respectively in 2020. Contra to the growth in these two continents, both South America and Oceania experienced significant negative growth. South America fell back from +1,8% in 2019 to -1,2% in 2020 and Oceania from +1,0% to -5,2%.

Regional development of cow milk production between 2010 and 2020 (CAGR '10-'20 in %)



Source: CNIEL, ZuivelNL, FAO, IDF National Committees, national statistics.

Unprocessed milk production growth in selected countries is shown in Table 2. Strong growth is observed in Argentina, Belarus and Turkey.

Table 2: Production of unprocessed cow's milk in selected countries, 2020

Country	'mln' Tonnes	Growth 2019 – 2020 (%)
Argentina	11,4	7,5
Australia	9,1	0,6
Belarus	7,8	5,0
Brazil	36,7	2,3
Canada	10,3	1,3
Colombia	7,6	2,9
EU-28	170,1	1,3
Japan	7,4	1,7
Kazakhstan	6,0	3,2
Mexico	12,9	2,3
New Zealand	22,0	0,5
Russia	32,2	2,8
Turkey	21,5	3,5
Ukraine	9,3	-4,1

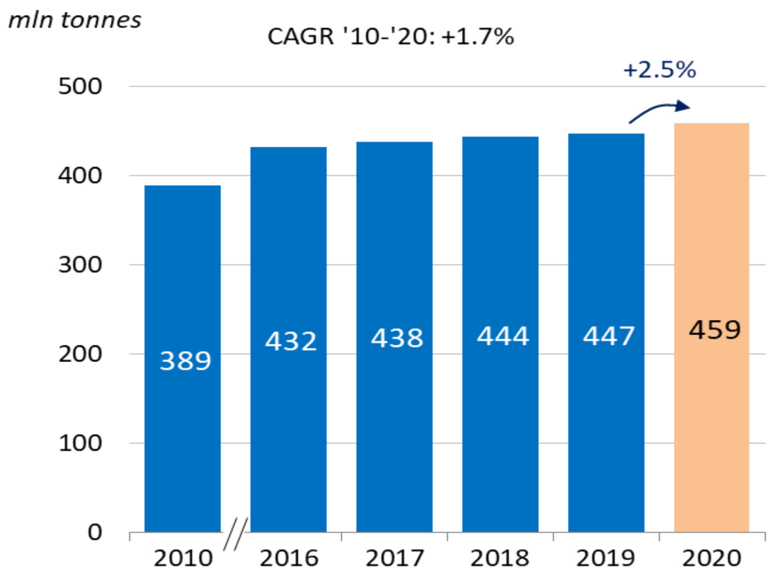
USA	101,3	2,2
Uzbekistan	11,0	2,8
South Africa	3,4	-0,2

Source: IDF World Dairy Situation 2021

Dairy processing

Despite the COVID-19 crisis, global cow's milk deliveries to the industry increased sharply by 2,5% from 2019 to 2020, a noticeable upbeat performance if compared to the slowdown that occurred in 2018 to 2019 when deliveries increased with only 0,7%. Four hundred and fifty nine million tonnes of cow's milk (62,4% of total cow's milk production) were delivered to dairies for further processing. The EU-28 processes the largest quantity of milk, followed by the United States, China, Brazil, Russia and New Zealand, with India not being ranked.

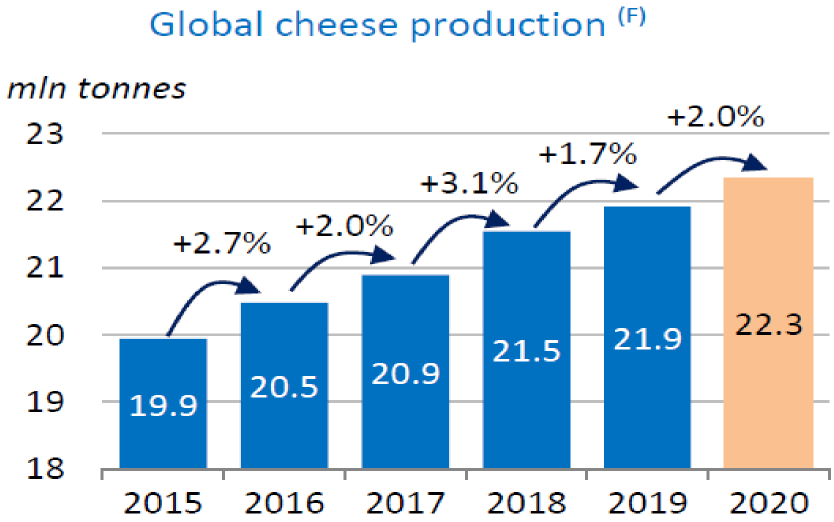
World: cow's milk deliveries (2010-2020) (Source: IDF World Dairy Situation)



The aggregate dairy production statistics used to indicate dairy product output represent between 75% and 90% of the estimated total world production. Fresh dairy products are an exception, as a large proportion of these come from and are marketed via the informal global market or are simply excluded from official statistics. With a significant growth in milk deliveries in 2020, the total output of dairy products showed a higher growth compared to the long-term trend for most of the product categories. Overall, processors favoured butter and butter-oil, cheese, cream, liquid milk and milk powders, whereas fermented products and whey powder output hardly changed from last year.

Growth in the production of packaged milk (liquid milk) was 1,3% from 2019 to 2020 after two years of decline. China's production rebounded (+5.6%) to face the growing demand after three years of decrease. In India, production by cooperatives came to a halt (-3.0%), as the restrictive measures linked to the COVID-19 crisis have had a negative impact on consumption. In the EU 28, liquid milk production increased by 2.0%, reversing the trend of recent years. Lockdown measures have changed dietary habits in most European countries and have contributed to an increase in liquid milk consumption. This trend was also seen in Russia (+1.6%) and Canada (+1.2%), while production in the USA remained stable, with a focus on the production of other dairy products. These products are less traded than the concentrated products and consumption tends to follow population and income trends.

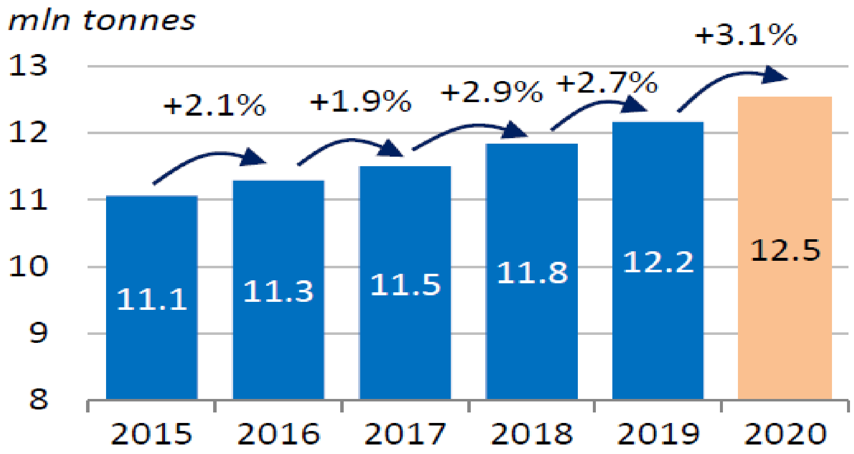
The production of fermented dairy products in 2020, decreased with 0,3%, far from the 10 year average upward trend of 3,2%. Global cheese production increased by 2,0% to 22,3 million tonnes, which is in line with the annual growth rate of 2,2% over the last 10 years. In the EU 28, the world's largest producer of cheese, production increased with 1,9%, in the USA, the second largest producer the increase was more modest at 0,9% and in Brazil the third largest producer of cheese, production increased by 2,8%. In Turkey, which is off the podium at number four, production increased with 8,6% after a decline in 2019. The potential negative effect on consumption of cheese in the food services industry in the EU 28 countries due to the COVID-19 crisis, was countered by the implementation of the private storage aid scheme by the European Commission which helped to maintain the dynamic production of cheese in most of the EU 28 countries.



Source: IDF World Dairy Situation 2021; (F) is based on 56 countries

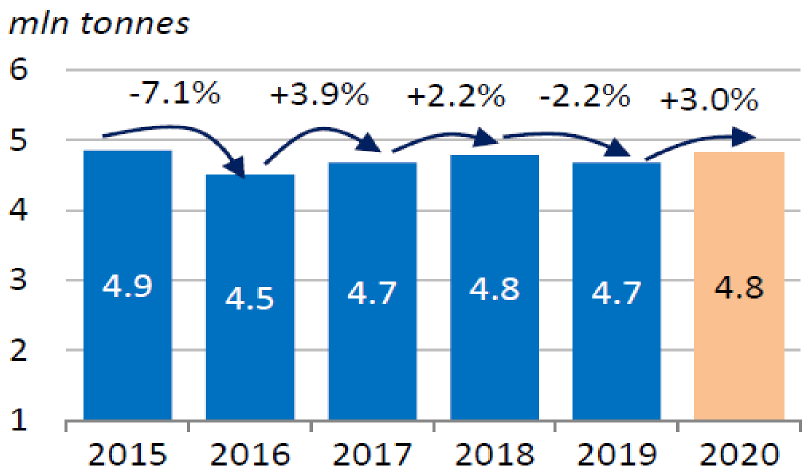
Butter and other milk fat production increased by 3,1% in line with the 10 year average of 2,9%. In 2020 the world produced 12,5 million tonnes of butter and other milk fats such as butter-oil and ghee (expressed in butter equivalents). Production is dominated by India, which alone accounts for just under half (49%) of the world's dairy fat production, having outpaced Europe fifteen years ago and since then, more than doubled its volumes, up to 6.1 million tonnes in 2020. Indian butter and ghee output grew another 4.3% in 2020. In 2020, butter output in Europe 28, the second largest producer, increased by 1.6%, supported by strong export growth. Robust butter production in the USA saw production increased with +7.6% while in New Zeeland, which is the main exporting country in the world, production decreased with 4.1%.

Global butter and butter-oil output



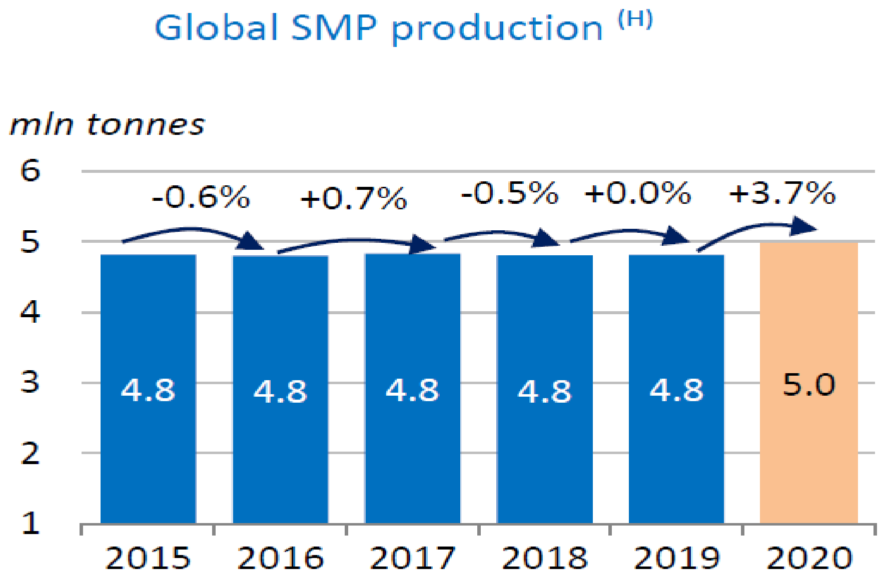
The production of whole and semi-skimmed milk powder increased with 3% in 2020 to 4.84 million tonnes. The main producer of whole and semi-skimmed milk powder, New Zealand, increased its production by 4.0%, choosing to channel more milk into this product category to supply exports to China, whose demand is driving the market for WMP. In China production increased with 3.6% in 2020 after a sharp decline of 13% in 2019. China is therefor still playing catch-up after the negative growth of 2019.

Global WMP production (I)



Source: IDF World Dairy Situation 2021; (I) is based on 51 countries

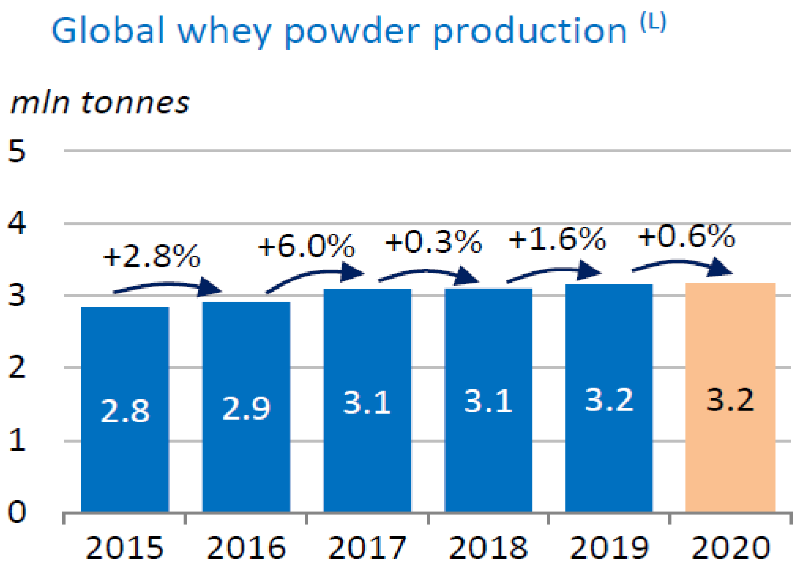
The world skim milk powder production rose significantly, up to 5.0 million tonnes in 2020 (+3.7%) after 5 years of stagnation. EU 28 production increased (+1.7%), partly due to an increased production in Germany (+5.8%). The Netherlands and Ireland also significantly increased their production. In 2021, SMP production will likely rise because of a high demand in international markets, particularly from China.



Source: IDF World Dairy Situation 2021; (I) is based on 54 countries

Global production of condensed and evaporated milk rose by 2.3% to 4,1 million tonnes. This is the first increase since 2015.

Liquid whey is mostly a cheese manufacturing by-product (more than 80%, the rest derived from casein production). The EU is by far the world's top producer of whey powder, representing 69% of whey produced in the world. Whey ingredients are a growing market worldwide due to usage in infant formula, nutrition foods and medical use. However, African Swine Fever in China reduced the swine population in China significantly impacting negatively on whey exports for animal feed. But the year 2020 was marked by recovery and strong demand from China due to its re-establishment of the pig herd, and this trend seems to be confirmed in the first semester of 2021.

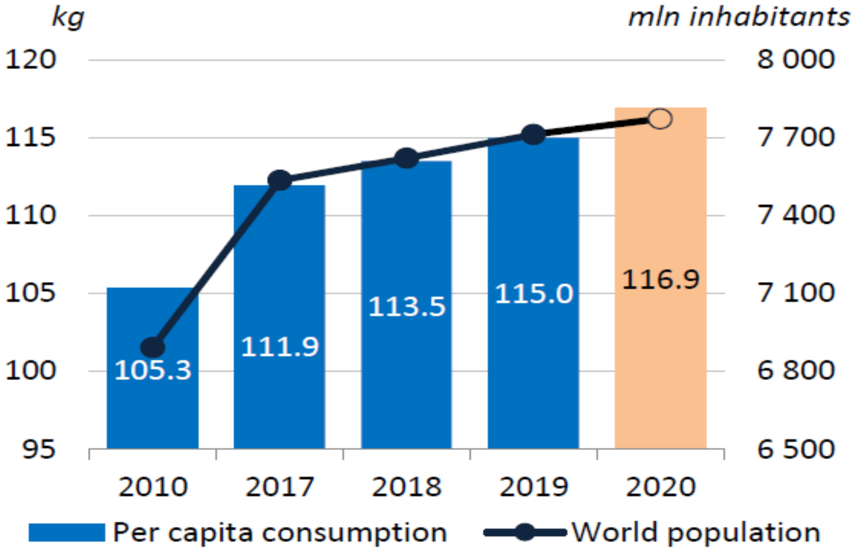


Source: IDF World Dairy Situation 2021; (L) is based on 44 countries

Dairy consumption

The COVID-19 pandemic that lead to the shutdown of some outlets greatly affected consumption trends. Consumption moved to a higher demand for packaged goods in retail and a lower demand for food services. It has resulted in rising stocks of milk powders and butter, especially in the United States and China. COVID-19 took its toll around the world, leading to the smallest population growth rate in years (0.8%), with the world population ending in 2020 at 7.8 billion people. On average, per capita consumption of dairy products was 116.9 kg in milk equivalent.

World: per capita consumption and population



The increase in per capita consumption is mainly driven by per capita income and consumer preference. Regional differences in consumption patterns are very prominent. In Africa dairy per capita consumption is 43kg per year in 2020 and in Europe 286kg per year while China comes in at 90kg per year.

The highest per capita liquid milk consumption of over 100kg is registered in Australia, New Zealand and several northern European countries. Europe is also home to the biggest butter consumers, 8kg per year with the leading cheese consumers in North America, Israel and Europe at more than 20kg per year.

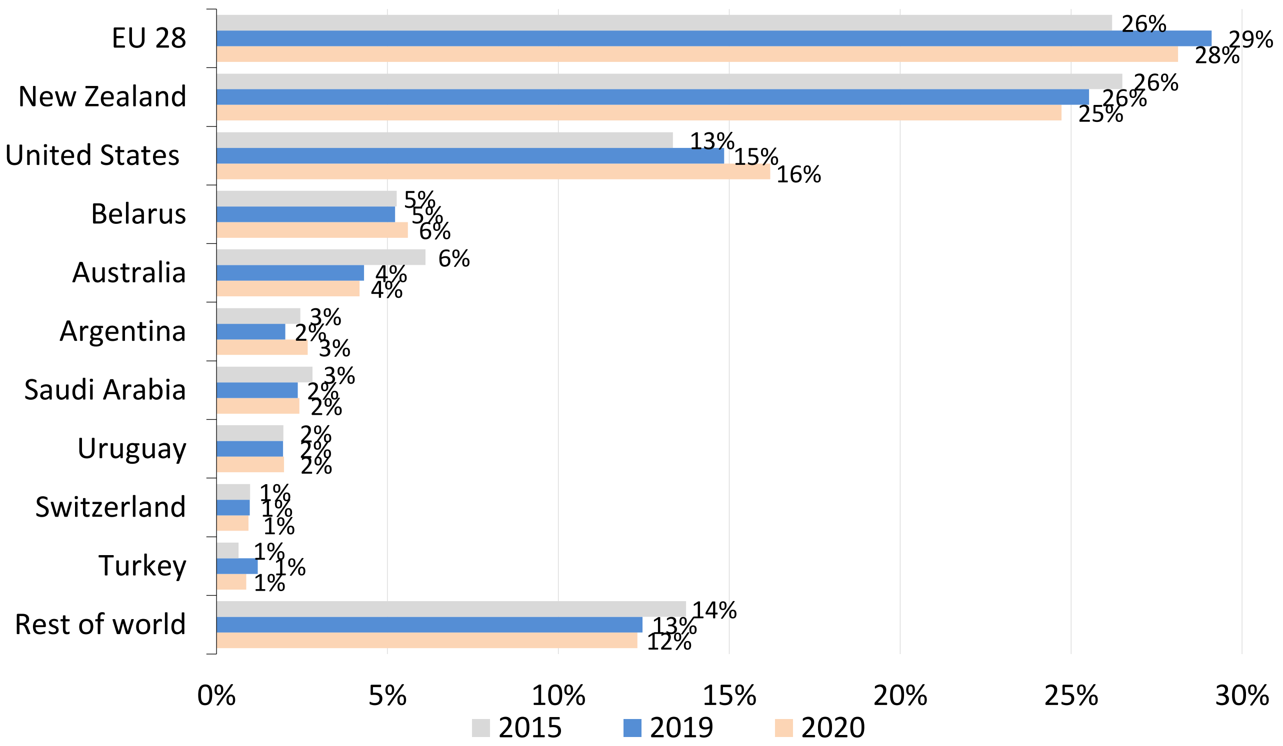
According to the OECD-FAO Agricultural Outlook 2020-2029, demand for dairy products will continue to grow, backed by the population upswing to 9,9 billion by 2050, increasing income and dietary changes. An increase of 24% is expected in total dairy consumption between 2017 and 2030, with a higher pace for fresh products (30%) and butter (26%).

Annual total consumption growth rates between 2017 and 2030

International dairy trade

In 2020 world trade grew by 1,6% to a volume of 81,8 million tonnes in milk equivalent, markedly better than the 1% growth in 2019. The overall share of world trade lies between 9,0% and 10% of total milk production. The average growth from 2015 to 2020 is marginally lower than 2,0% per year, indicating a continuous increasing trade volume. Dairy trade will continue as various countries/regions do not produce enough to fulfil own demand. The EU-28 remains the world's largest dairy exporter, representing 28% of world trade, with the big players in Europe being the Netherlands, Germany and France. New Zealand is in the second place with a share of 25%. Number three is the USA with a share of 16% of world dairy trade. The USA has notably strengthened its position over the last three years. Belarus is in position number 4 at 6% of dairy world trade and it seems that Australian export (position 5) has stabilised at 4% of dairy world trade, after negative growth over the past few years. The overall picture of 2020 reconfirmed that dairy products supply of the international dairy market is highly concentrated and thus vulnerable with the top 5 exporters supplying 79% of the world export volume.

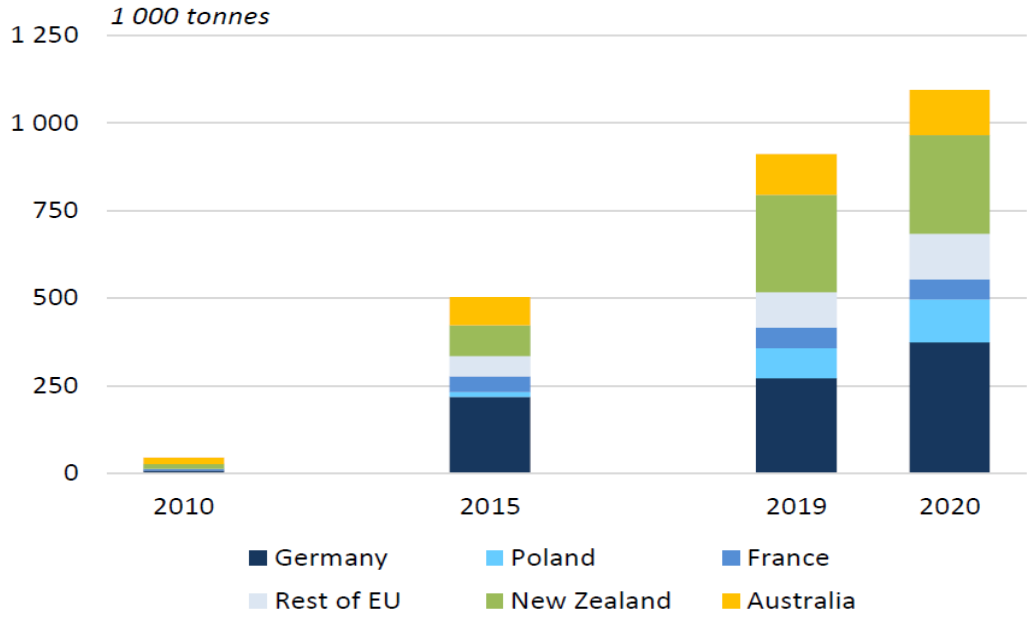
Export share of key exporters on the global dairy market (milk equivalent basis)



Growth opportunities in the international dairy market are increasingly being determined by developments in China, the Middle East and Africa. Key countries that contributed substantially to the increase in international trade are China, Algeria, the Republic of Korea, Philippines and Indonesia. The outlook for international dairy trade remains positive despite ongoing gains in self–sufficiency in various developing countries. Population growth and increased demand for dairy products will make achieving self-sufficiency difficult in many of the developing countries.

To provide some perspective on the demand growth in China, Hong Kong and Macao for milk and cream and the significant change in the export role players the following graph was developed. Most noteworthy are the growth in exports achieved in Germany, Poland and New Zealand.

Evolution of exports of milk and cream (HS 0401) to China (incl. Hong Kong and Macao) (selected exporters, >95% of volume, x 1 000 tonnes)



Source: ZuivelNL

Unprocessed milk prices

During 2020, the supply of unprocessed milk increased noteworthy more than the average of the previous 10 years. Producer prices of unprocessed milk between different countries were a mixed bag of higher and lower prices when compared to 2019.

World: average producer milk price		
	2020	2019/20
	(USD/100kg)	%
Argentina	26.35	-11.2
Brazil	33.44	-11.6
China	54.92	4.0
EU 28	38.64	0.0
France	38.52	1.0
Germany	37.51	-0.6
Netherlands	41.02	-3.0
Poland	34.42	0.6
India (A)	40.88	-8.1
New Zealand	40.10	15.7
Russia	35.90	-6.6
USA	40.23	-1.9
A: mixed (cow and buffalo) milk; refers to cooperative dairies only		

Conclusion

In 2020, global production of unprocessed milk, deliveries of unprocessed milk, trade volumes and consumption, all showed increased activity. This is remarkable when considering the effect in other commodity and product supply chains that were hugely disrupted due to the Covid-19 regulations and restrictions that were in operation in most parts of the world during 2020. This is an indication of the robustness and sophistication present in the world dairy value chain.

Unprocessed cow's milk production increased with 2.9%, outpacing the CAGR of 2.1% since 2010. Growth in North and Central America and Africa increased significantly from 0,5% and 0,7% respectively in 2019 to 3,9% and 13,1% respectively in 2020.

The EU 28 is still the world's largest exporter of dairy products with New Zeeland in the second place and the USA in the third place. The USA has notably strengthened its position over the last three years. The international dairy trade market remains highly concentrated with the top five countries supplying 79% of the market while the most lucrative consumption growth is present in the developing regions of Southeast Asia, Africa and the Middle East.