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Melk Suid-Afrika

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South African Milk Processors Organisation
www.milksa.co.za | Tel +27 12 460 7312

Milk SA foreword

The purpose of this publication is to provide information on the structure and performance of the dairy industry, with a view to promoting optimal development for the benefit of the South African dairy industry and consumers.

Milk South Africa (Milk SA) is proud to present this publication, which was made possible through the contributions of the persons or entities sharing their information via statutory regulations. The SA Milk Processors' Organisation (SAMPRO), the Milk Producers' Organisation (MPO), and the Milk SA work group comprises Messrs Nico Fouché, De Wet Jonker, Alwyn Kraamwinkel, and Bertus van Heerden.

Executive summary

Rising energy prices are expected to fuel inflation and create upward pressure on a wide front of commodity and product prices. In most countries, central banks will be faced with challenges on both the supply and demand side. Bottleneck inflation (supply disruption as part of the COVID-19 aftermath and the Russia–Ukraine conflict) will continue affecting supply; while wage inflation (demand), as consumers are faced with steep increases in living expenses, will make it difficult for central banks to strike a balance. The risk of increased inflation and higher interest rates with lower than expected economic growth is high.

The global dairy sector as a whole showed its resilience through the COVID-19 pandemic, which impacted the world for most of the year and thereafter. Moreover, global milk production broke the 900 million tonnes (t) barrier for the first time in history. The average per capita consumption of dairy products was 116,9 kg in milk equivalent in 2020, which is an increase of 1,7% compared to the previous year.

The dairy value chain in South Africa, starting at input suppliers right through to the retail segment, succeeded in satisfying market demand. Where consumer demand shifted away from some dairy products to other dairy products because of the restriction on human movement, role players downstream from the farmer were nimble and dynamic enough to channel unprocessed milk towards those dairy products. The end result is that all milk was absorbed into the market and utilised towards nutrition.

Annual unprocessed milk production in South Africa shows a steady linear upward trend over time. For the last two years, unprocessed milk production was suppressed compared to the overall trend. The total unprocessed milk to market for 2021 was 3 403 100 t, down 0,71% from the previous year, with total dairy product imports and exports at 75 600 t and 51 000 t, respectively. The quantity of dairy products sold in the retail market in 2021 was less than the sales in 2020. In 2021, the South African dairy products market was divided into 61,6% liquid and 38,4% concentrated products. Pasteurised liquid milk and UHT processed milk were the major liquid products, with hard cheese the main concentrated product.

Contents

Sales quantities of all monitored dairy products decreased over the twelve-month period January 2021 to December 2021 versus January 2020 to December 2020, with the exception of flavoured milk, which increased by a marginal 1,1%. In January 2021, the South African headline inflation rate was 3,2%, and in January 2022, 5,7%. Consumer demand will be under pressure and supply-side role players should be wary of this.

Compiled by Bertus van Heerden
for Milk SA.

Milk Producers' Organisation
PO Box 1284 | Pretoria | 0001
Tel +27 (0)12 843 5600
Fax +27 (0)12 804 4811
Design and layout by
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INTERNATIONAL SITUATION

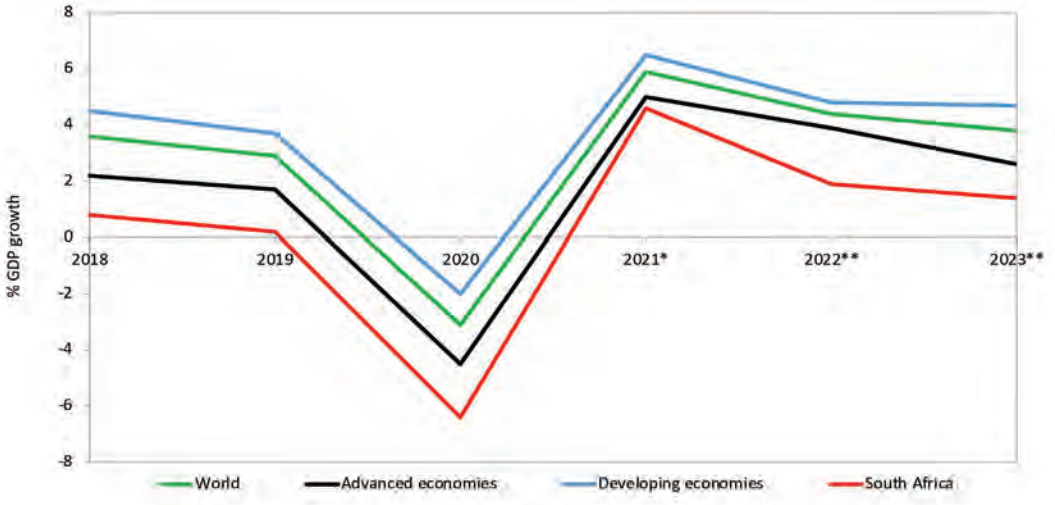
Global economic growth

The following calculations, views, and projections were based on the world outlook before the Russia—Ukraine conflict, which will significantly impact on, among other things, world economic growth, international relations, and trade. The world economy is faced with a rising caseload, a disrupted recovery, and higher inflation. The rising caseload will be amplified by the invasion of Ukraine by Russia and the consequential and causality fallout across the world. Rising energy prices will fuel inflation and create upward pressure on a wide front of commodity and product prices.

In most countries, central banks will be faced with challenges on both the supply and demand side. Bottleneck inflation (supply disruption as part of the COVID-19 aftermath and the Russia—Ukraine conflict) will continue affecting supply, while wage inflation (demand) as consumers are faced with steep increases in living expenses, will make it difficult for central banks to strike a balance. The risk of increased inflation and higher interest rates with lower than expected economic growth is high.

The future holds a less accommodative monetary policy in the United States, which will have to be introduced delicately, with elaborate communication. The current forecast is an end to asset purchases in March 2022 and three

Figure 1 International economic growth and expected growth, 2018–2023 (source: IMF, 2021* estimate, 2022** and 2023** projections)



rate increases in both 2022 and 2023, the goal being to bring inflation back to the 2% level. Any miscommunication or misunderstanding of the move may put undue pressure on emerging market currencies and fiscal positions.

When will supply chain disruption ease?

The strict post-pandemic regulations introduced a shift towards goods consumption, particularly in the advanced economies that overloaded global supply chain networks. This problem was compounded by the pandemic-related hindrances in transport and staffing, as well as the environment created by the just-in-time logistics and inventory management system. These bottlenecks were particularly severe in the United States as demand expanded quickly.

Supply chain disruptions will ease during 2022 as more demand moves away from consumer goods to services, but the expectation of higher future prices due to higher inflation could create the space in which disruptions will persist longer. A new virus variant could easily delay the rebalancing of consumer goods to services and, consequentially, extend the supply–demand imbalance.

FAO Food Price Index rises to new all-time high

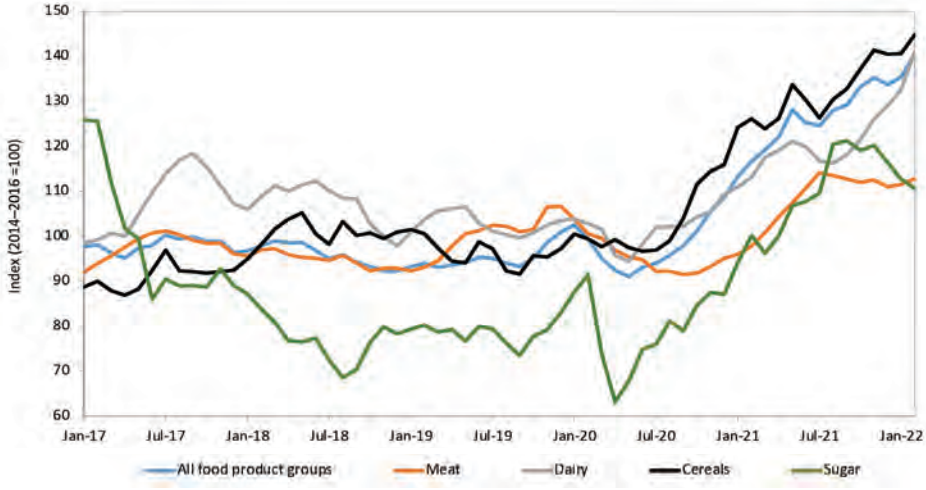
The FAO Food Price Index (FFPI) increased by 3,9% from January to February 2022, and by as much as 20,7% compared to the corresponding month the previous year. This represents a new all-time high, exceeding the previous high of February 2011 by 3,1 points. The February rise was led by large increases in vegetable oil and dairy price sub-indices. Cereals and meat prices were also up, while the sugar price sub-index fell for the third consecutive month.

The FAO Dairy Price Index (FDPI) increased by 6,4% from January to February 2022, marking the sixth consecutive monthly increase and placing the index 24,8% above its value in the corresponding month the previous year. In February, international quotations for all dairy products represented in the index firmed, underpinned by the continued tightening of global markets on the back of lower than expected milk supplies in Western Europe and Oceania. Besides tight global supplies, persistent import demand, especially from North Asia and the Middle East, led to steep increases in whole milk powder (WMP) and cheese price quotations.

For February 2022, year-on-year, the FAO Cereal Price Index (FCPI) increased by 14,8%, the FAO Vegetable Oil Price Index (FVOPI) by 36,7%, the FAO Meat Price Index (FMPI) by 15,3%, and the FAO Sugar Price Index (FSPI) by 10,1%. The price increases for cereals and vegetable oil are due to the uncertainties and disruption in the Black Sea region.

International bovine meat quotations reached a new record high, driven by strong global import demand amid tight supplies of slaughter-ready cattle in Brazil and high demand for herd rebuilding in Australia. Favourable production prospects in major sugar exporting countries, notably India and Thailand, coupled with improved growing conditions in Brazil, continued to suppress upward momentum in world sugar prices.

Figure 2 FAO food price indices of internationally traded product groups, 2017–2022 (source: FAO Food Price Index, 2022)



International dairy product prices

The start of 2022 saw hardened dairy product prices due to robust import demand, with tight export availability being reinforced by the seasonal decline in production in Oceania.

During 2021, the trading price range for butter was between US$4 625 (R70 023) and US$5 800 (R91 930), a 25% variance between the highest and lowest prices. The butter price in February 2022 increased to US$6 413 (R97 727), an increase of 29% on February 2021. Dairy products prices (R/t), in February 2022, reached record high levels.

Figure 3a International FOB dairy product prices, US$/t, Jan 2012–Feb 2022 (source: USDA)

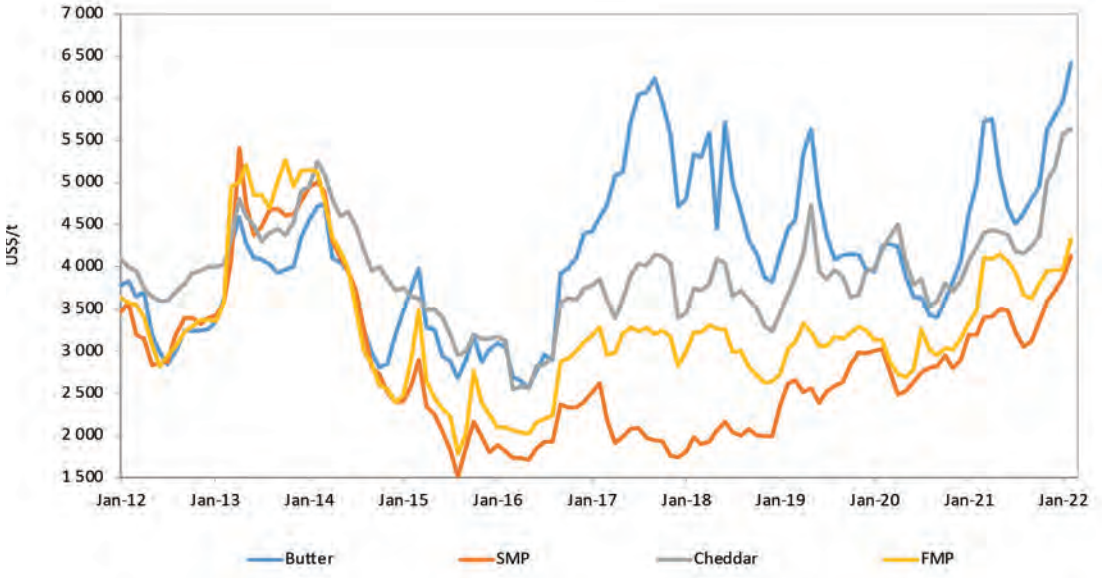
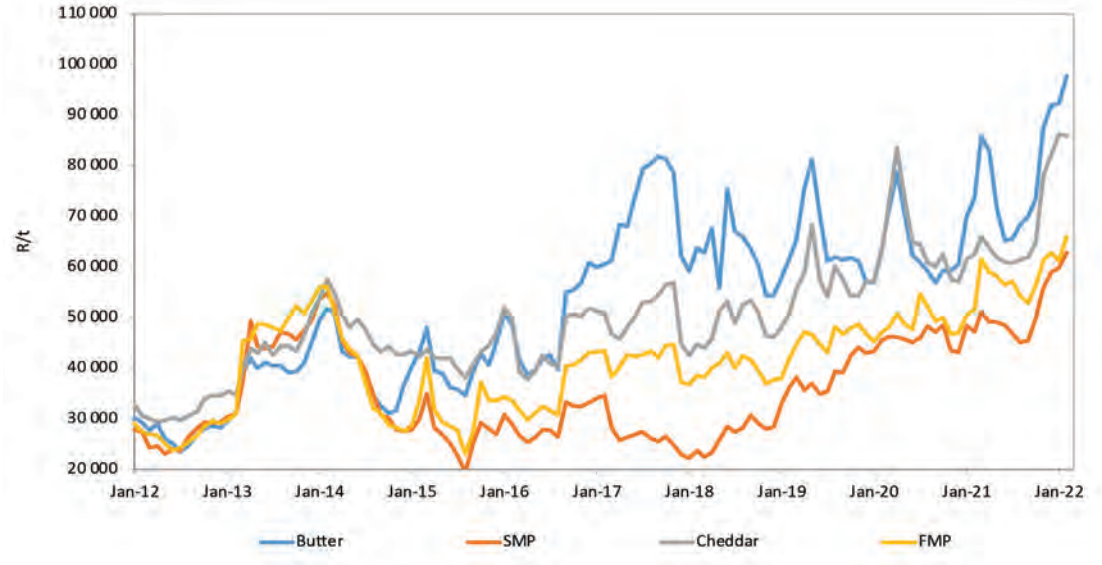


Figure 3b International FOB dairy product prices, R/t, Jan 2012–Feb 2022 (source: USDA, Reserve Bank)



Through 2021, the trading price of skimmed milk powder (SMP) was between US$3 056 (R45 141) and US$3 719 (R58 942), a 22% variance between the highest and lowest prices. The SMP price in February 2022 increased to US$4 125 (R62 865), an increase of 29% on February 2021.

The trading price range of full-cream milk powder (FMP) during 2021 was between US$3 338 (R50 530) and US$4 150 (R58 183), a 24% variance between the highest and lowest prices. The FMP price in February 2022 increased to US$4 331 (R66 008), an increase of 24% on February 2021.

During 2020, the trading price range of Cheddar was between US$4 063 (R61 506) and US$5 181 (R82 123), a 28% variance between the highest and lowest prices. The Cheddar price in February 2022 increased to US$5 638 (R85 916), an increase of 33% on February 2021.

International unprocessed milk production and prices

During 2021, the average unprocessed milk price in Europe was €0,38 (R6,25) per litre of standardised milk. There was a significant increase in the average unprocessed milk price in Europe (in euros) from January 2021 to December 2021. In January 2021, the price was €0,36 (R5,45) per litre and in December 2021, €0,43 (R6,75) per litre. Over the same period, the average unprocessed milk price in South Africa was R5,72 per litre.

During 2020, global unprocessed milk production (cow's milk 81%; buffalo milk 15%; and goat's, sheep's, and camel's milk 4% combined) remained on a steady growth path of about 3%, totalling a volume of 910 million tonnes solid-corrected milk (SCM). With that, the global dairy sector in its entirety showed its resilience during the COVID-19 pandemic, which impacted the world for most of the year and thereafter.

Moreover, global unprocessed milk production broke the 900 million tonnes barrier for the first time in history. However, production growth in the traditional export regions [European Union (EU-28), Oceania, and the United States] remains below the world's growth average. The reasons for the limited expansion in these regions may differ from one country to another, but a cocktail of climate change-related weather distortions, environmental limitations, succession challenges, appreciating production costs, and an increasing hesitance for financing at bank level all play a role, holding back production. Several of these factors may prove to be structural and will cause a higher number of exits from dairy farming in some of the most important dairy regions in the world.

Table 1 International calculated standardised unprocessed milk producer prices, 2020–2022 (R/ℓ) (source: European Commission. Based on real fat and protein content paid to milk producers. Exchange rates: Reserve Bank monthly middle rates)

Country	Feb 2020	Feb 2021	Feb 2022
Belgium	5,25	5,00	7,59
Germany	5,40	5,28	6,77
Denmark	5,55	5,23	6,87
France	5,70	5,55	6,40
Ireland**	5,41	5,67	7,76
Netherland	5,67	5,33	7,07
South Africa*	4,70	5,55	5,86

*Based on MPO price survey, Feb 2022 preliminary
**Estimate for Feb 2022

Figure 4 Global milk production per species, 2014–2020 (source: IDF Bull. 512/2021)

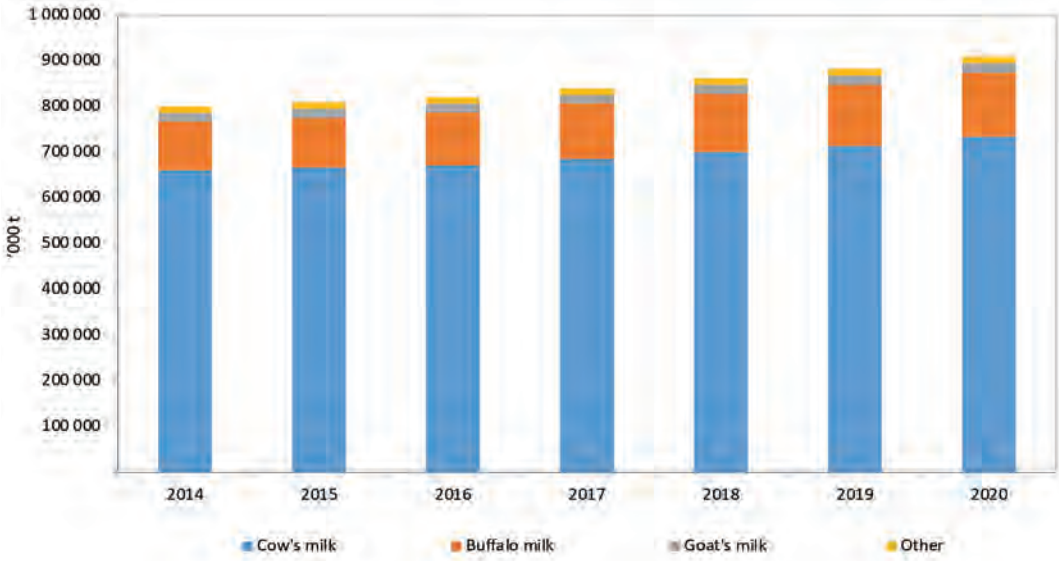


Figure 5 Cow's milk production per region, 2014–2020 (source: IDF Bull. 512/2021)

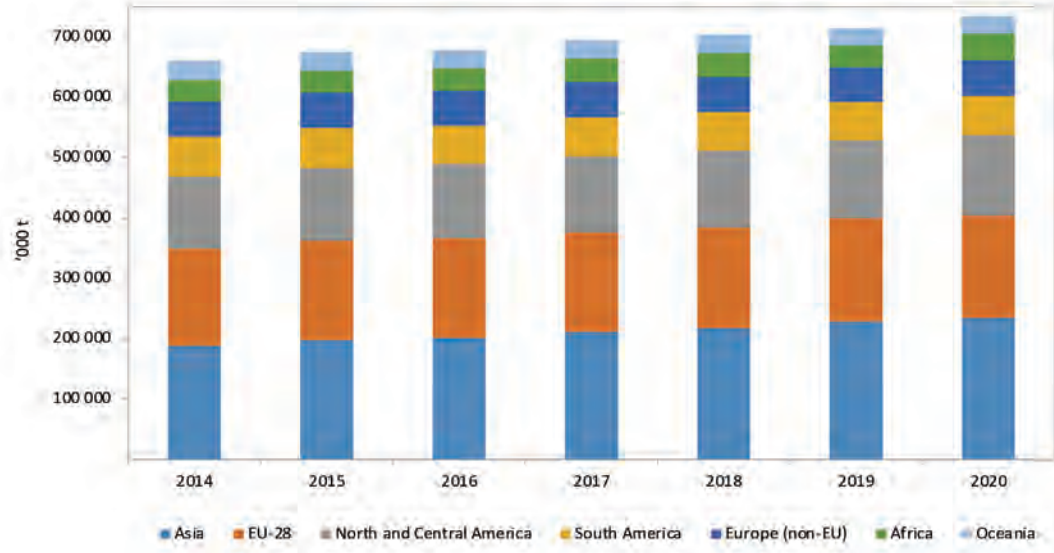


Table 2 Milk production growth: 2017 compared to 2016, 2018 compared to 2017, 2019 compared to 2018, 2020 compared to 2019, and 2021 compared to 2020 (source: CLAL, 2021)

Country	2017/2016	2018/2017	2019/2018	2020/2019	2021/2020
Australia	+0,0%	+2,7%	–6,6%	+2,8%	–0,8%
European Union	+2,2%	+1,8%	+0,5%	+1,6%	–0,2%
New Zealand	+1,7%	–0,6%	–0,7%	+0,4%	+0,8%
United States	+1,7%	+1,1%	+0,4%	+2,1%	+1,5%
Uruguay	+6,3%	+6,3%	–4,2%	+5,8%	+1,9%
Argentina	–1,6%	+6,8%	–1,8%	+7,4%	+4,0%

Manufacturing of dairy products globally

Notwithstanding the COVID-19 pandemic, global cow's milk deliveries rose sharply in 2020 by 2,5%, after a rather stable year in 2019. Global production of packaged milk increased by 1,3% in 2020, after two years of decline. China's production rebounded (+5,6%) to face the growing demand after three years of decrease, and in the EU-28, the same trend was observed with liquid milk production increasing by 2,0%, reversing the trend of recent years.

Lockdown measures have changed dietary habits in most European countries and contributed to an increase in liquid milk consumption. The production of liquid milk and fresh dairy products is expected to keep growing in developing countries, following the trend towards improvement of nutritional intake in consumption habits.

More than 12 million tonnes of butter and other milk fats, such as butter oil and ghee (expressed in butter equivalent), are produced around the world annually. In 2020, the growth in output reached 3,1%, in line with the ten-year average growth rate.

Total global cheese production was estimated at slightly over 24 million tonnes in 2020 (excluding processed cheese, to avoid double-counting). In 2020, cheese production grew by 2,0%, a little under the average annual growth of 2,2% registered since 2010.

Whole and semi-skimmed milk powder production increased in 2020, up to 4,84 million tonnes (+3,0%) after a decrease in 2019. The main producer, 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.

Global condensed milk production rose by 2,3% to 4,1 million tonnes. This is the first increase in production since 2015. The market is dominated by the United States and the European Union.

Global whey powder production rose by 0,6% to 3,2 million tonnes. This is the first increase in production since 2015. The market is dominated by the United States and the European Union, the main cheese-producing regions, with liquid whey being mostly a by-product of cheese manufacturing. The trend towards increased processing of whey into whey derivatives (whey protein concentrate and whey protein isolate) was again confirmed. Whey ingredients are a growing market worldwide, thanks to opportunities related to infant formulas, nutritional foods, and medical uses.

Table 3 Major dairy companies, 2020 (source: IDF Bull. 512/2021)

Rank	Company name	Country	Dairy turnover US$ billion
1	Lactalis	France	24,1
2	Dairy Farmers of America	United States	17,8
3	Danone	France	14,6
4	Yili	China	14,1
5	Fonterra	New Zealand	13,3
6	Friesland Campina	Netherlands	12,7
7	Arla Foods	Denmark	12,1
8	Nestlé	Switzerland	11,8
9	Mengniu	China	11,0
10	Saputo	Canada	10,8
11	DMK	Germany	6,4
12	Savencia	France	5,9
13	Agropur	Canada	5,7
14	Sodiaal	France	5,5
15	Morinaga Milk Industry	Japan	5,5
16	Amul	India	5,3
17	Megmilk Snow Brand	Japan	5,1
18	Schreiber Foods	United States	5,0
19	Müller	Germany	4,9
20	Meiji Daines	Japan	4,7

Consumption of dairy products

COVID-19 took its toll around the world, leading to the smallest population growth rate in years (0,8%), with 2020 totalling 7,8 billion people. The average population growth rate between 2010 and 2019 was 1,16% per year. The average per capita consumption of dairy products was 116,9 kg in milk equivalent in 2020, which is an increase of 1,7% compared to the previous year. Between 2005 and 2020, the average per capita milk consumption rose by 15,2 kg, representing a growth of 1% per year over this period.

According to the IMF's *OECD-FAO Agricultural Outlook 2021–2030*, demand for dairy products will continue to grow, backed up by the population upswing (the Population Reference Bureau predicts a population of 9,9 billion by 2050), increasing incomes, and dietary changes. An increase of 24% is expected in total dairy consumption (in milk equivalent based on the milk and protein solids content method) between 2017 and 2030, with a higher pace for fresh products (+28%) and butter (+29%).

Figure 6 World population and per capita consumption of dairy products (unprocessed milk equivalent), 2011–2020 (source: IDF Bull. 512/2021)

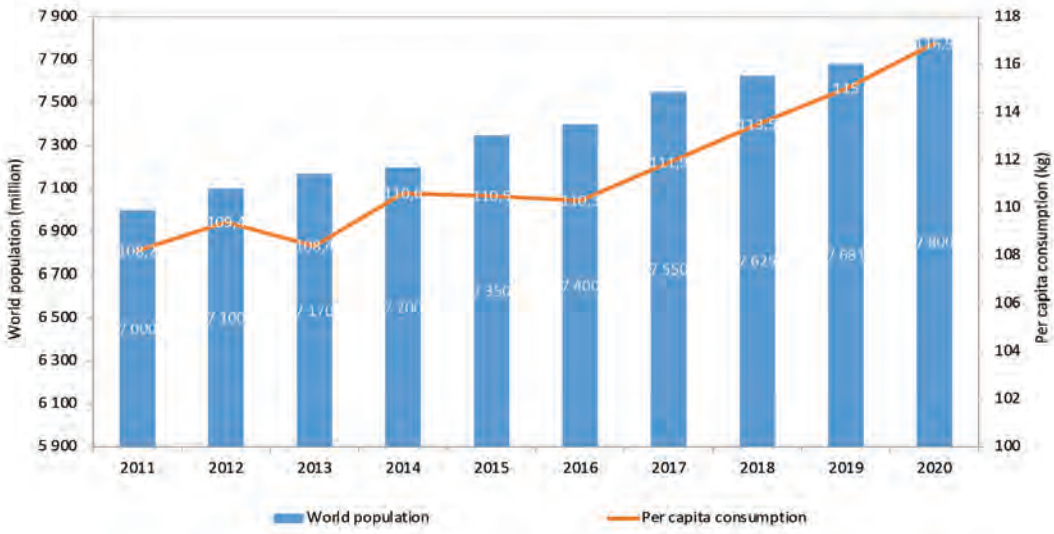


Figure 7 Annual sales in dairy (unprocessed milk equivalent), 2011–2020 (source: IDF Bull., 512/2021)

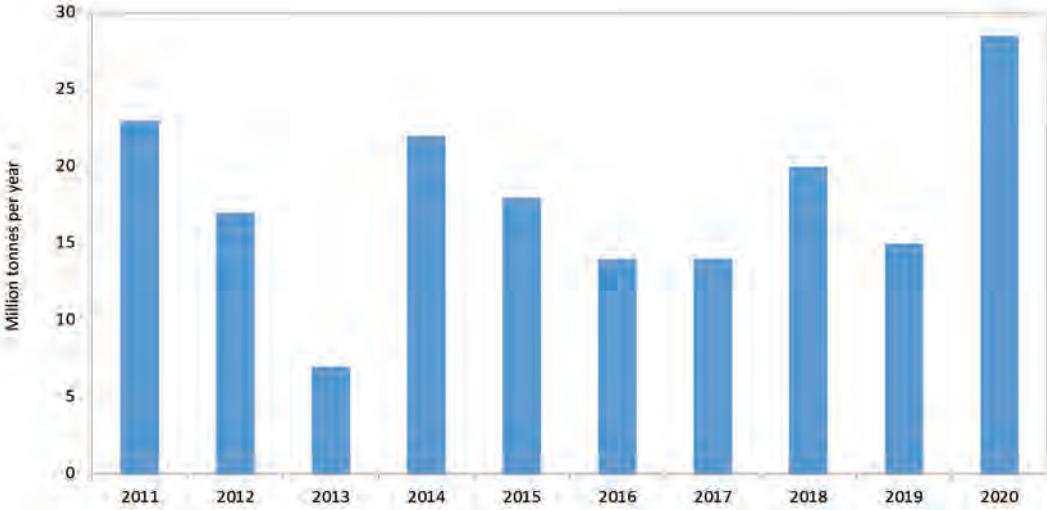
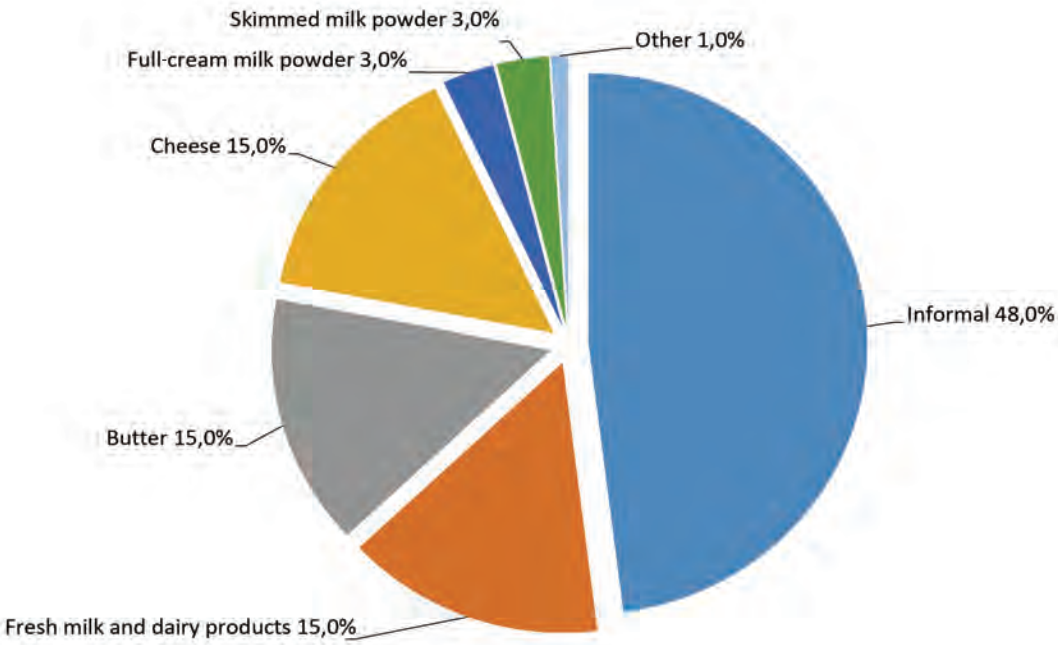


Figure 8 Percentage breakdown of global dairy products consumption, 2020 (source: IDF



The average per capita consumption of dairy products was 116,9 kg in milk equivalent in 2020, which is an increase of 1,7% compared to the previous year."

International dairy trade

Despite the COVID-19 pandemic, in 2020, overall world dairy trade (excluding European Union intra-trade) was still able to expand, as dairy sectors worldwide generally showed resilience during the pandemic and the overall demand on international markets increased in China and in lower producing countries in Africa and Asia.

Consequently, world trade in 2020 grew by 1.6%, reaching a volume of about 81,8 million tonnes in milk equivalent. The EU-28 and New Zealand, both of which fell slightly in overall export volume in 2020, remain the dominant export forces in global dairy supply. Globally, the EU-28 is the world's largest dairy exporter, representing 28% of world trade. Almost half of this comprises exports from the Netherlands, Germany, and France. New Zealand follows second, with a share of nearly 25%.

Figure 9 Share of key exporting countries in total trade in dairy products (milk-equivalent basis), 2016, 2017, 2018, 2019, and 2020 (source: IDF Bull. 512/2021)

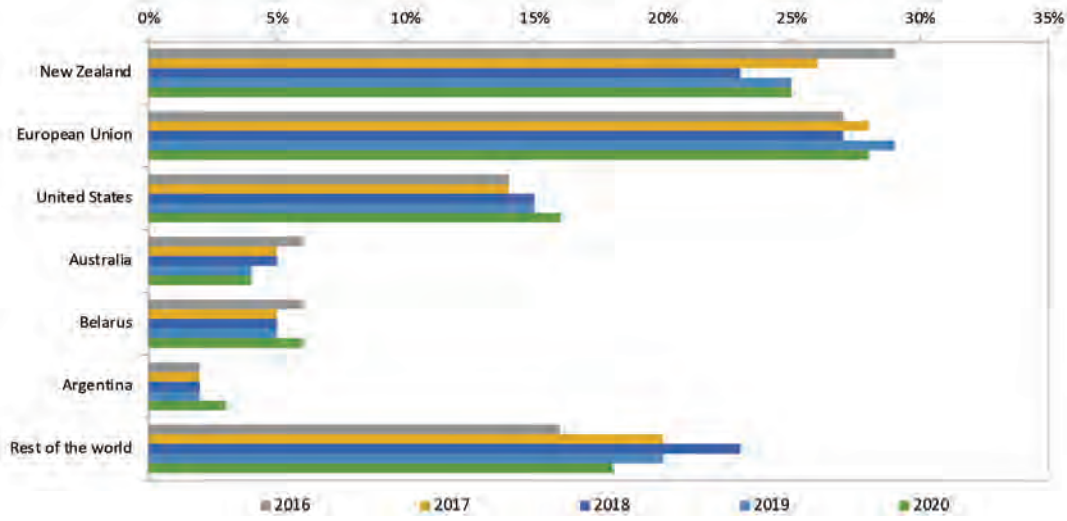


Table 4 Average herd size, selected countries, 2020 (source: IFCN 2021)

Country	Average number of cows in herd (cows in herd = cows in milk plus dry cows)
Saudi Arabia	3 850
South Africa	453
New Zealand	440
United States	296
Australia	279
Czech Republic	248
Denmark	210
Israel	196
United Kingdom	157
Argentina	152
Uruguay	124
Canada	97
Kenya	3
Uganda	2
India	2

Table 5 Unprocessed milk production for the top 10 milk-producing countries and South Africa, 2020 (source: IFCN, 2021)

	Country	Milk produced (million tonnes SCM)
1	India	226
2	United States	98
3	Pakistan	50
4	Germany	35
5	Brazil	34
6	China	33
7	France	25
8	New Zealand	25
9	Turkey	19
10	Russian Federation	19
	South Africa*	3,4

*not SCM

International primary sector

There are 116 million dairy farms worldwide, with more than 57% of these in South Asia. With an average per farm population of five, this implies that 580 million people live on dairy farms. Globally, the average dairy farmer milks three cows. Some of the largest average herd sizes are found in Saudi Arabia, New Zealand, and South Africa. In South Africa, the average number of cows in a herd was 453 in 2020. Average herd sizes (cows in herd) for various countries are shown in Table 4. After increasing to 125 million in 2013, dairy farm numbers are now decreasing at a rate of 1,4% per year.

In 2020, 57% of all dairy animals were kept on household farms, 24% on family farms, and 19% on larger commercial farms. Household farms are the dominant type in South Asia and Africa. In Latin America, East Asia, and the European Union, family farms predominate, with the larger commercial farms the dominant type in Oceanic countries, South Africa, and the United States.

> "Globally, the average dairy farmer milks three cows. Some of the largest average herd sizes are found in Saudi Arabia, New Zealand, and South Africa."

Cost of milk production internationally

This section is based on the analysis of typical dairy farms within the International Farm Comparison Network (IFCN). The IFCN is a network of dairy experts in many countries who strive to create a better understanding of milk production worldwide.

Scientists from 52 countries and 64 dairy regions contributed to the work of the IFCN in 2021. The organisation analysed the production and cost of 171 typical dairy farms in 52 countries and published the results in the *IFCN Dairy Report 2021*. The comparison of farms is based on the actual income and cost figures for 2020. The MPO's participation in the work of the IFCN is financially supported by Milk SA as part of their Economics and Market Project.

The IFCN's cost comparisons are based on full economic cost. Farm-produced feed is valued at a farm-gate price and not at production cost levels, and the farmer's own labour and management time is valued at comparable industrial rates.

MORE INFO

World unprocessed milk production 2020

910 million tonnes SCM

[96% = cow's milk + buffalo milk]

SA produces **0,4%** of global milk production

Main producing countries (IFCN, 2021)

- INDIA (226 MILLION TONNES SCM)
- UNITED STATES (98 MILLION TONNES SCM)
- PAKISTAN (50 MILLION TONNES SCM)
- BRAZIL (35 MILLION TONNES SCM)
- GERMANY (34 MILLION TONNES SCM)

Figure 10 Estimated unprocessed milk production cost (US$/100 kg SCM) per average farm in participating countries, 2020 (source: IFCN, 2021)

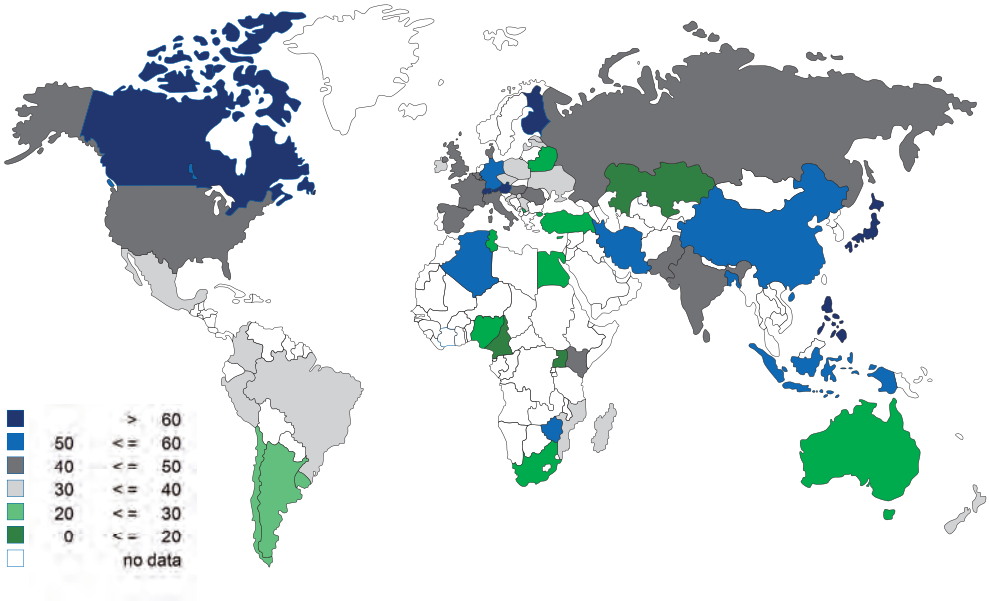
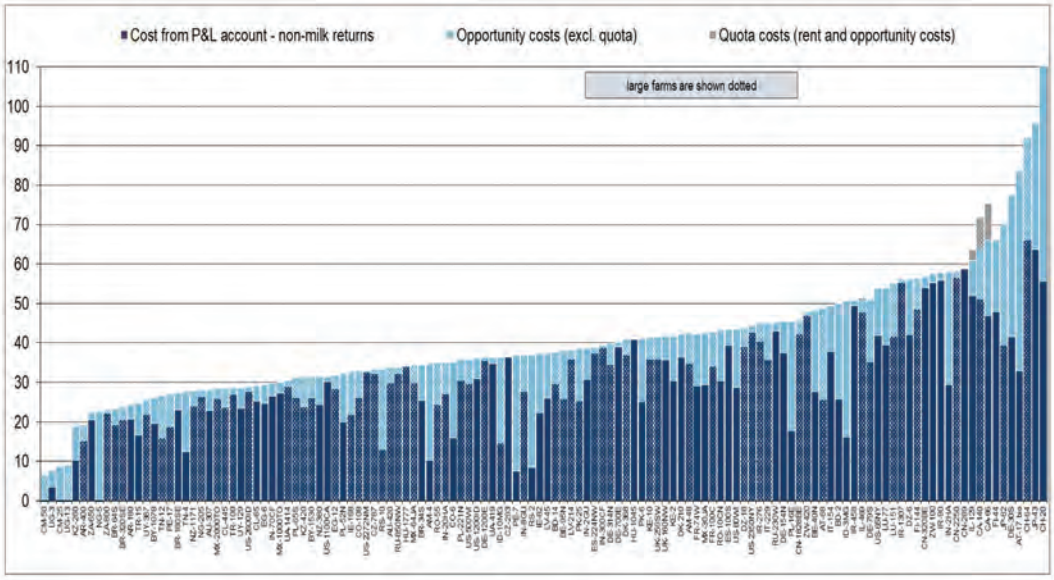


Figure 11 Estimated cost of unprocessed milk production per farm in US$/100 kg SCM for average and large farms in IFCN analysis, 2020 (source: IFCN, 2021)



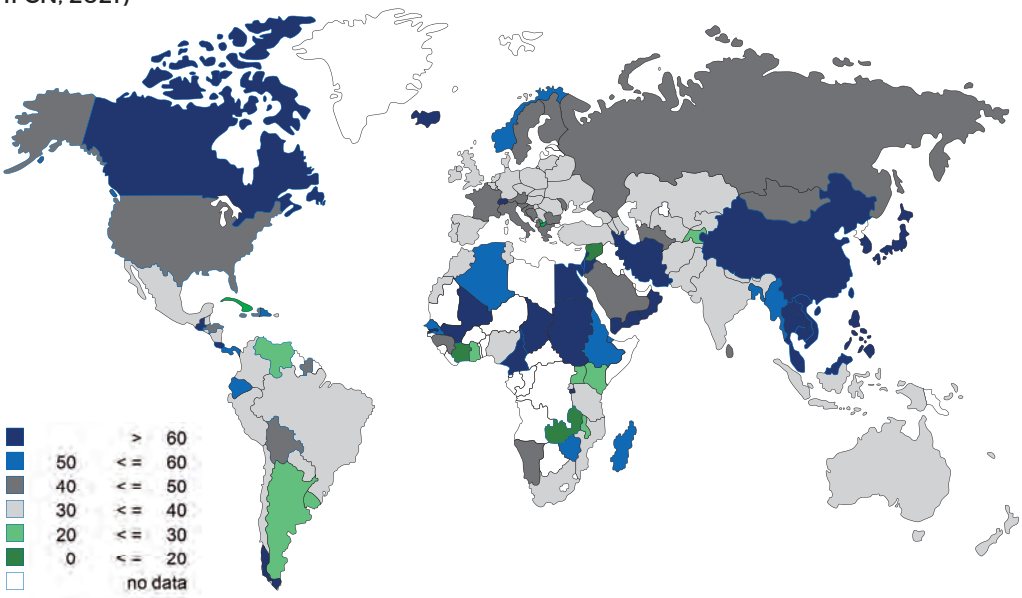
P&L – profit and loss account
Country by international country code and herd size, ZA 650 + ZA 800-cow herd

The inclusion of opportunity costs creates a bias towards countries with very little or no opportunity costs for labour and without a viable market for feed.

The average cost level of the 128 farms evaluated by the IFCN in 2020 stood at US$41,60 (R684,32) per 100 kg SCM, which is 13,2% higher than in 2019.

Feed is the highest single cost component, contributing about 60% to total cost. Feed costs and the efficient management of feeding practices have a big impact on total costs and play a huge role in determining cost competitiveness. Milk production costs for typical dairy farms, as analysed by the IFCN, are shown in Figure 11. In countries with very low milk production costs, low opportunity costs of labour and lower feed prices are the main drivers of cost competitiveness. In most of these cases, milk is produced for own use and not for the market.

Figure 12 Estimated producer milk prices in various regions (US$/100 kg SCM), 2020 (source: IFCN, 2021)



International producer price of unprocessed milk

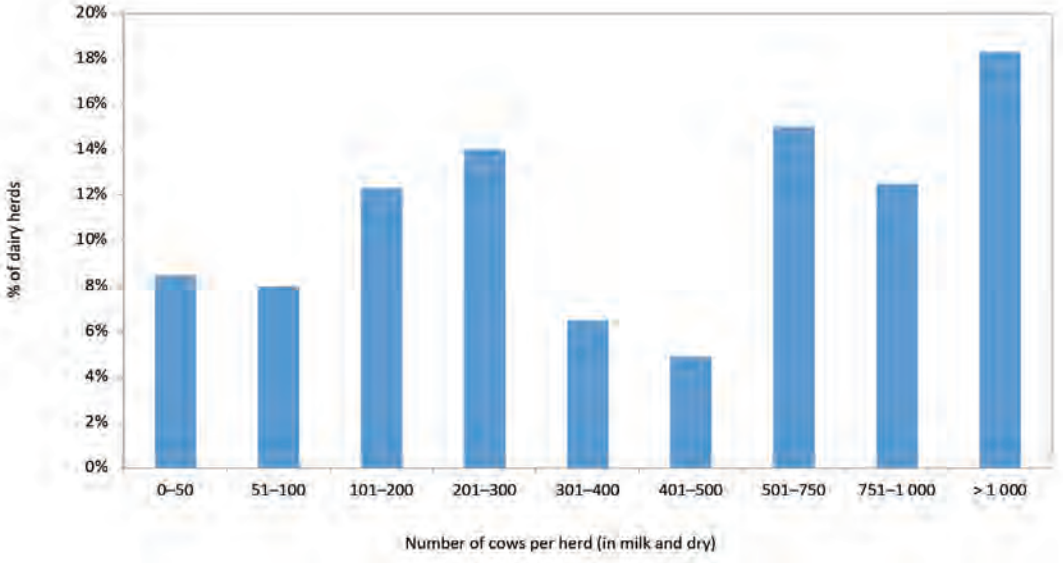
The IFCN world milk price indicator of unprocessed milk stood at an average level of US$36,5 (R600,43) per 100 kg SCM in 2020, which is a decrease of 1,3% over the previous year. After reaching a peak of US$39,8 (R654,71) per 100 kg SCM in February 2020, it dropped to a level of US$34,0 (R559,30) per 100 kg SCM in August 2020.

During 2020, the performance of the milk price was essentially a continuation of the zig-zag trend (meaning fluctuations around the average of approximately 10%) observed in the price since 2016. The recovery of milk supply growth coupled with uncertainties regarding dairy demand and supply chain disruptions resulted in the slight drop in the world milk price in 2020.

SOUTH AFRICAN SITUATION

The COVID-19 pandemic that caused major disruptions in most markets had a limited effect on the South African dairy market in 2020. Some specific dairy products were affected, but the major dairy products performed well, under the circumstances. The value chain, starting at input suppliers right through to the retail segment, succeeded in satisfying market demand. Where consumer demand shifted away from some dairy products to other dairy products because of the restriction on human movement, role players downstream from the farmer were nimble and dynamic enough to channel unprocessed milk towards those dairy products. The end result is that, in 2020, all milk was absorbed into the market and utilised towards nutrition. In 2021, unprocessed milk production decreased in line with reduced sales quantities of dairy products at retail level. The change in the severity of different lockdown levels introduced changes in consumer behavior regarding product mix bought and the quantity of products purchased. Furthermore, consumer preference and choice were influenced by the low economic growth of the South African economy and causality with unemployment and lower disposable income of consumers.

Figure 13 Size distribution of dairy cows per herd, 2021 (source: MPO October 2021 statutory survey)



South African primary dairy sector

Structure of the primary dairy sector

The number of milk producers in South Africa decreased from 1 053 in January 2021 to 984 in January 2022. The number of producers per province is shown in Table 6. From January 2021 to January 2022, the number of milk producers decreased by 6,6%.

NEED TO KNOW

Number of producers (↓46%)

Jan 2015	Jan 2022
1 834	984

Milk production (↑7,2%)

2015	2021
3 173 000 t	3 403 100 t

Milk production per producer (↑100%)

2015	2021
1 730 t	3 458 t

Table 6 Number of milk producers per province, January month, 2015–2022 (source: MPO)

Province	2015	2016	2017	2018	2019	2020	2021	2022
Western Cape	533	502	481	419	402	379	348	324
Eastern Cape	262	251	244	212	201	206	172	166
Northern Cape	14	14	7	7	6	4	4	4
KwaZulu-Natal	267	253	247	221	212	208	207	202
Free State	328	280	249	206	165	145	130	117
North West	222	181	165	135	117	100	84	70
Gauteng	100	97	98	84	83	65	56	52
Mpumalanga	94	93	87	69	56	50	46	44
Limpopo	14	12	15	12	11	7	6	5
TOTAL	**1 834**	**1 683**	**1 593**	**1 365**	**1 253**	**1 164**	**1 053**	**984**

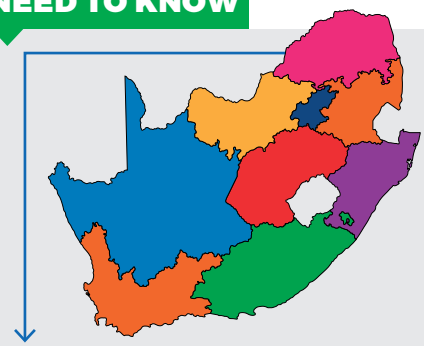
The production of unprocessed milk is concentrated in the coastal regions of South Africa. In total, 85,4% of production originates from the Western Cape (30,6%), Eastern Cape (27%), and Kwazulu-Natal (27,8%). Milk production per province, according to the MPO's estimates, considering the results of the October 2021 statutory survey, is shown in Table 7.

Cow numbers vary widely among producers. The percentage distribution of herd size is shown in Figure 13.

The average number of cows in milk per producer in the different provinces is shown in Table 7.

Average milk production per cow per day was 15,2 ℓ in 2021. Ninety-nine per cent of unprocessed milk was delivered to the market. The balance was used for on-farm consumption. The distribution of herds on a production basis is shown in Figure 14.

NEED TO KNOW



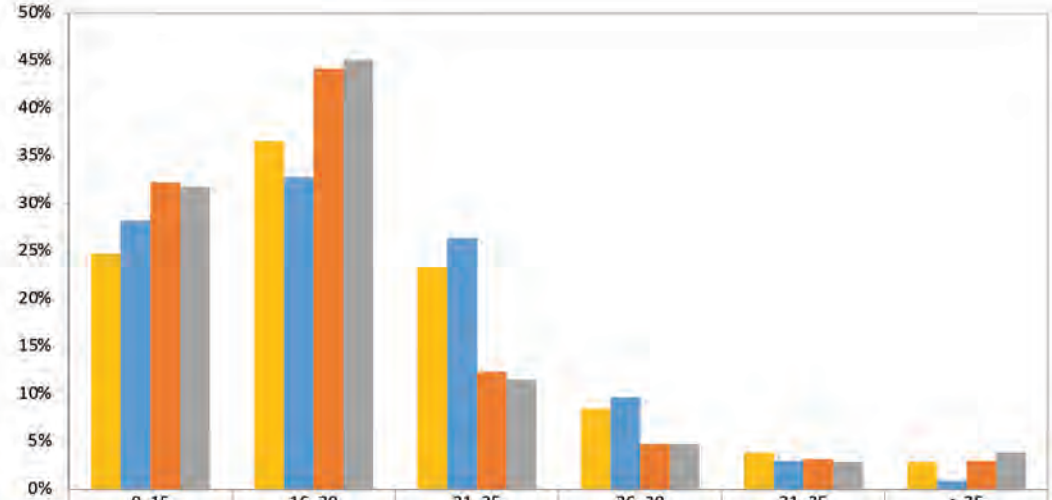
Milk production per province, 2021 (%)

Western Cape	30,6
KwaZulu-Natal	27,8
Eastern Cape	27,0
Free State	4,8
Gauteng	4,0
Mpumalanga	3,6
North West	1,7
Limpopo	0,5
Northern Cape	0,0

Table 7 Unprocessed milk production per province and cows in herd (in milk and dry cows) per producer, specific month in specific year (source: MPO October 2021 statutory survey)

Province	Percentage distribution of milk production		Number of cows in herd per producer, 2021
	Sep 2009	Oct 2021	Average
Western Cape	27,1	30,6	446
Eastern Cape	25,0	27,0	865
Northern Cape	0,4	0,0	107
KwaZulu-Natal	19,8	27,8	766
Free State	14,0	4,8	280
North West	5,3	1,7	172
Gauteng	3,4	4,0	342
Mpumalanga	4,5	3,6	313
Limpopo	0,3	0,5	294
TOTAL	**100,0**	**100,0**	**398**

Figure 14 Distribution of herds based on daily production per cow in herd, 2018–2021 (source: MPO October 2021 statutory survey)



	0–15	16–20	21–25	26–30	31–35	> 35
2018	24,8%	36,6%	23,3%	8,5%	3,9%	2,9%
2019	28,2%	32,8%	26,4%	9,7%	3,0%	0,9%
2020	32,2%	44,2%	12,4%	4,8%	3,2%	3,0%
2021	31,8%	45,1%	11,5%	4,8%	2,9%	3,9%

Average daily yield (litres) per cow in a herd, for yield category

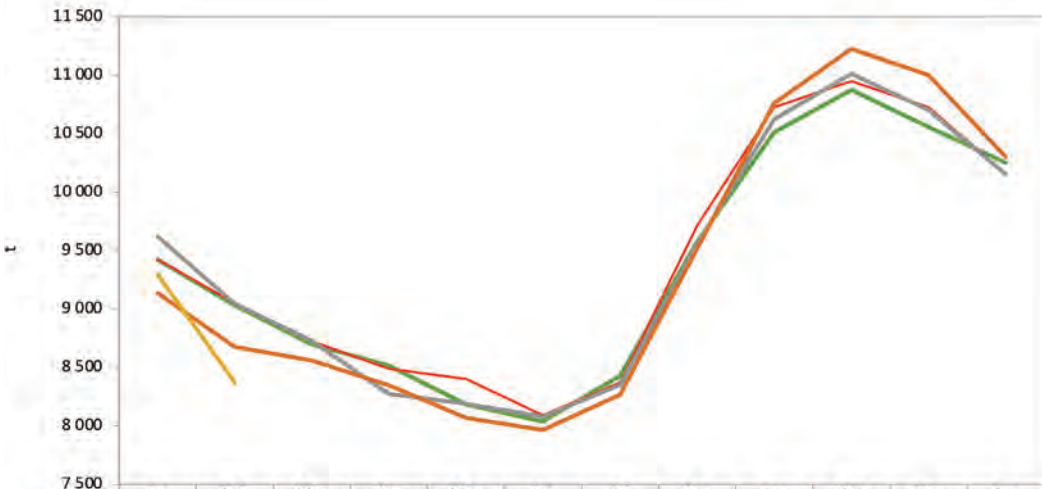
Photograph by Ilse Hugo.

Milk production

Annual unprocessed milk production shows a steady linear upward trend over time. For the last two years, unprocessed milk production has been suppressed compared to the overall trend. Total unprocessed milk to market for 2021 was 3 403 100 t, down 0,71% from the previous year. Monthly milk purchases from 2019 to February 2022 are shown in Figure 15. Annual milk purchases are indicated in Figure 16.

The growth in the intake of unprocessed milk for 2021 was subdued, due to lower retail sales quantities experienced during the course of 2021, farm economics being under pressure, and adverse climatic conditions prevailing over certain parts of South Africa. The cost-price squeeze farmers experienced, due to high levels of grain prices (yellow maize and soya), deepened the level of negative farm economics.

Figure 15 Daily average monthly unprocessed milk purchases, 2018–2022* (source: Milk SA, last two months preliminary)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	9 425	9 035	8 699	8 518	8 185	8 039	8 428	9 578	10 511	10 876	10 558	10 254
2019	9 427	9 052	8 727	8 491	8 401	8 092	8 374	9 717	10 726	10 951	10 727	10 155
2020	9 622	9 048	8 728	8 275	8 192	8 081	8 352	9 562	10 624	11 014	10 703	10 158
2021	9 137	8 680	8 561	8 349	8 070	7 966	8 269	9 520	10 761	11 227	11 004	10 303
2022*	9 298	8 375										

*Estimate based on Milk SA sample

Figure 16 Annual unprocessed milk purchases, 2012–2021 (source: Milk SA)

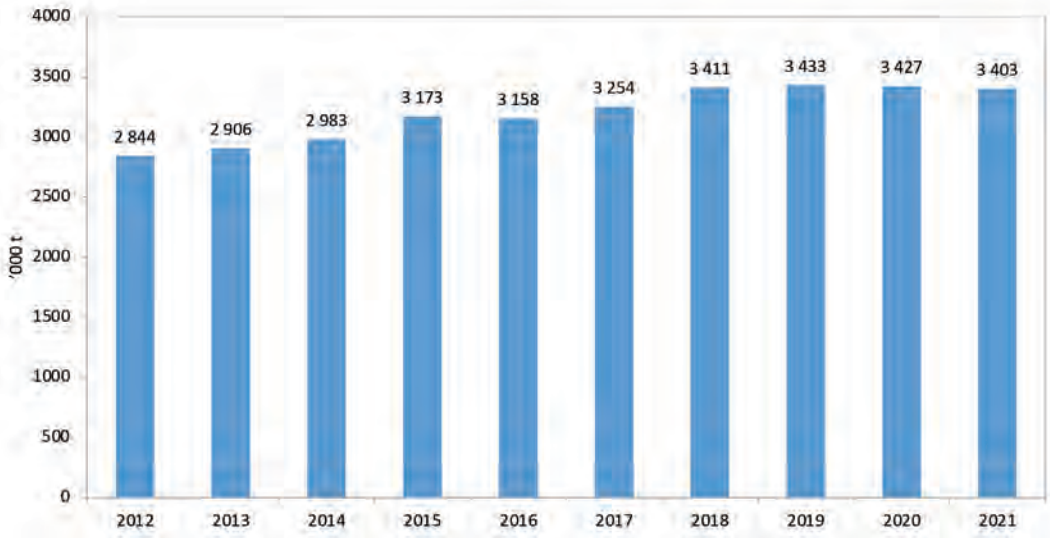


Table 8 Farm requisite price indices, base 2015 = 100 (source: DALRRD)

Period	Machinery and implements	Material for fixed improvements	Intermediate goods and services	All farming requisites
2016	106,2	107,4	105,7	105,8
2017	109,7	112,0	111,0	110,9
2018	113,9	118,3	117,0	116,7
CAGR* 2015–2021	**4,4%**	**5,8%**	**5,4%**	**5,3%**
Jan '19	116,7	117,9	119,4	119,0
Apr '19	115,8	129,2	120,2	120,1
Jul '19	119,2	124,9	121,2	121,1
Oct '19	119,7	123,0	125,8	124,7
Jan '20	121,1	122,5	123,6	123,3
Apr '20	118,2	125,6	122,9	122,4
Jul '20	122,5	138,3	124,0	124,5
Oct '20	123,1	126,5	130,0	128,9
Jan '21	128,4	134,3	128,0	128,3
Apr '21	125,4	132,0	128,5	128,3
Jul '21	126,4	144,2	129,4	129,7
CAGR* Jan '19–Jul'21	**0,80%**	**2,00%**	**0,81%**	**0,87%**

*Compound annual growth rate

South African secondary dairy sector

Structure of the secondary dairy sector

The South African secondary dairy industry consists of a few large processors operating nationally, a growing number of processors who operate in more than one region, a large number of smaller processors who operate in specific areas, and a number of milk producers who sell their own produce to retailers and consumers – known as producer-distributors (PDs). The number of PDs and milk buyers (processors) per province is shown in Table 9.

From January 2021 to January 2022, the number of PDs remained steady at 67, while milk buyers increased by 2,3% over the same period.

NEED TO KNOW

Number of producers-distributors (↓39%)

Jan 2015	Jan 2022
110	67

Number of milk processors (↓15%)

Jan 2015	Jan 2022
160	136

Dairy market composition: Estimate → 2021

61,6% liquid

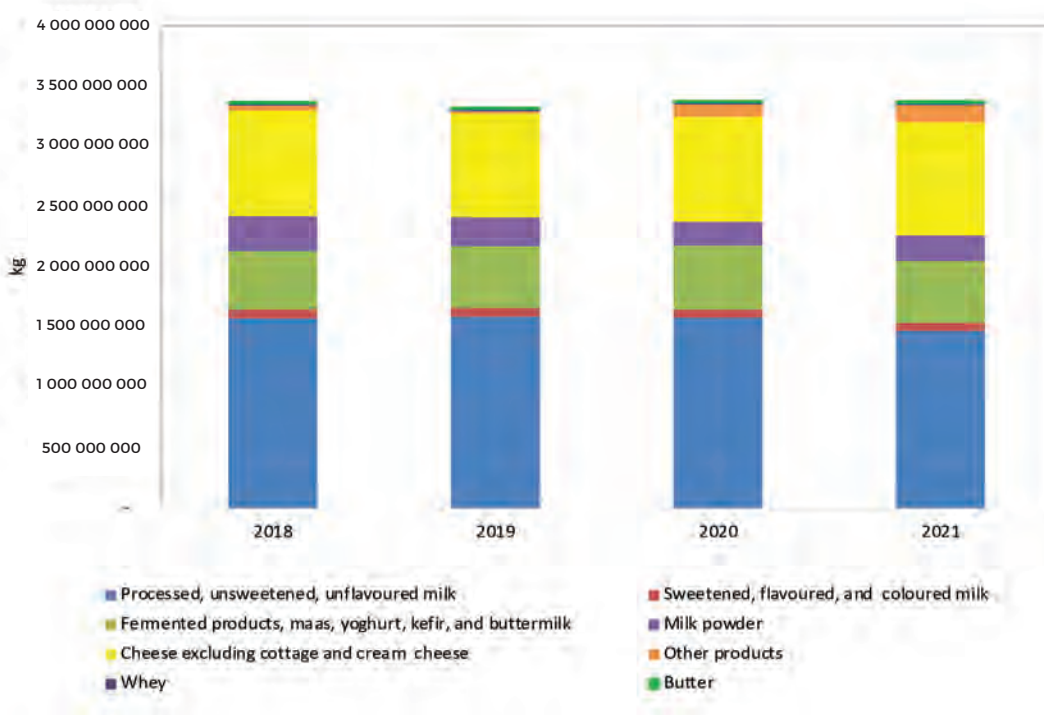
38,4% concentrated

Table 9 Number of PDs and processors (Proc) per province (indicated according to position of head office), as registered with Milk SA, Jan 2015–Jan 2022 (source: Milk SA)

Province	Jan '15		Jan '16		Jan '17		Jan '18		Jan '19		Jan '20		Jan '21		Jan '22	
	Proc	PDs	Proc	PDs	Proc	PDs	Proc	PDs	Proc	PDs	Proc	PDs	Proc	PDs	Proc	PDs
Eastern Cape	12	15	13	14	12	13	8	9	12	15	9	7	9	7	7	6
Free State	15	11	13	10	13	9	12	7	15	11	12	7	12	6	11	4
Gauteng	51	21	48	21	46	22	42	17	51	21	39	15	40	15	40	18
KwaZulu-Natal	16	9	18	10	21	10	20	8	16	9	20	7	19	7	20	7
Limpopo	4	7	4	8	4	9	4	10	4	7	3	10	4	10	4	10
Mpuma-langa	6	9	6	9	6	8	5	9	6	9	4	8	4	8	3	7
North West	16	4	16	4	14	4	11	3	16	4	11	3	10	1	12	2
Northern Cape	1	9	1	8	1	8	1	7	1	9	2	6	2	3	2	2
Western Cape	39	25	39	24	38	23	35	18	39	25	31	14	33	12	37	11
Total	**160**	**110**	**158**	**108**	**145**	**106**	**138**	**88**	**160**	**110**	**131**	**77**	**133**	**67**	**136**	**67**

Milk processors refer to producers of processed milk and manufacturers of other dairy products, PDs refer to producers who sell their own produce to retailers and consumers.

Figure 17 Unprocessed milk used for the manufacturing of dairy products 2018–2021 (source: industry estimate supplied by Milk SA)



Production and consumption

In 2021, the South African dairy products market was divided into approximately 61,6% liquid products and 38,4% concentrated products. Pasteurised liquid milk and UHT processed milk were the major liquid products, with hard cheese the main concentrated product. Figure 18 and Figure 19 show estimated composition of the markets for liquid and concentrated products.

Figure 18 Concentrated dairy products: The mass of each product in relation to the total mass of concentrated dairy products in respect of 2021 (source: industry estimate supplied by Milk SA)

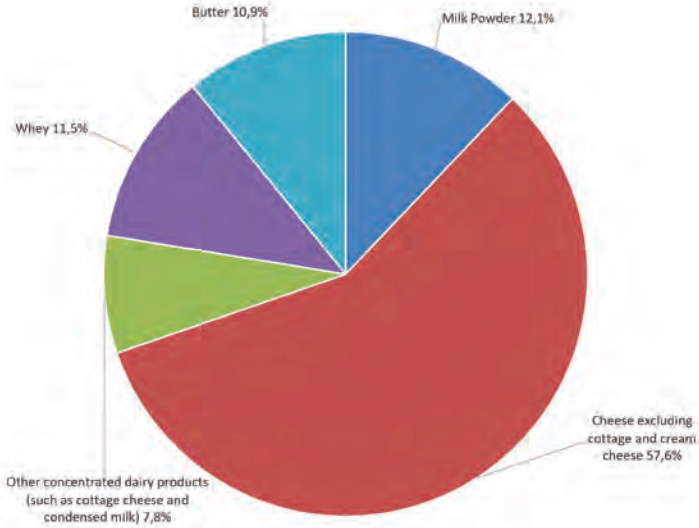
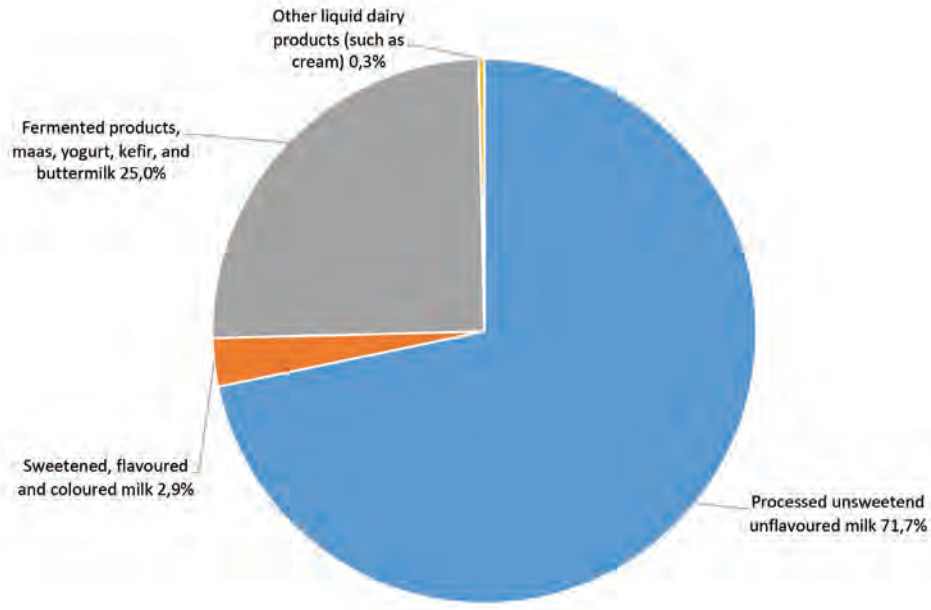


Figure 19 Liquid dairy products: The volume (kg of unprocessed milk) used in the manufacturing of liquid dairy products in respect of 2021 (source: industry estimate supplied by Milk SA)



Imports and exports

Total dairy product imports and exports are shown in Figure 20 and Figure 21. In 2021, 75 600 t of products were imported, and 51 000 t exported. The total composition of imports and exports in 2021 is shown in Figure 22 and Figure 23. On a mass basis, milk and cream were the most important products being exported and imported.

Figure 20 Dairy product imports and exports, 2012–2021 (source: SARS data, as supplied by SAMPRO)

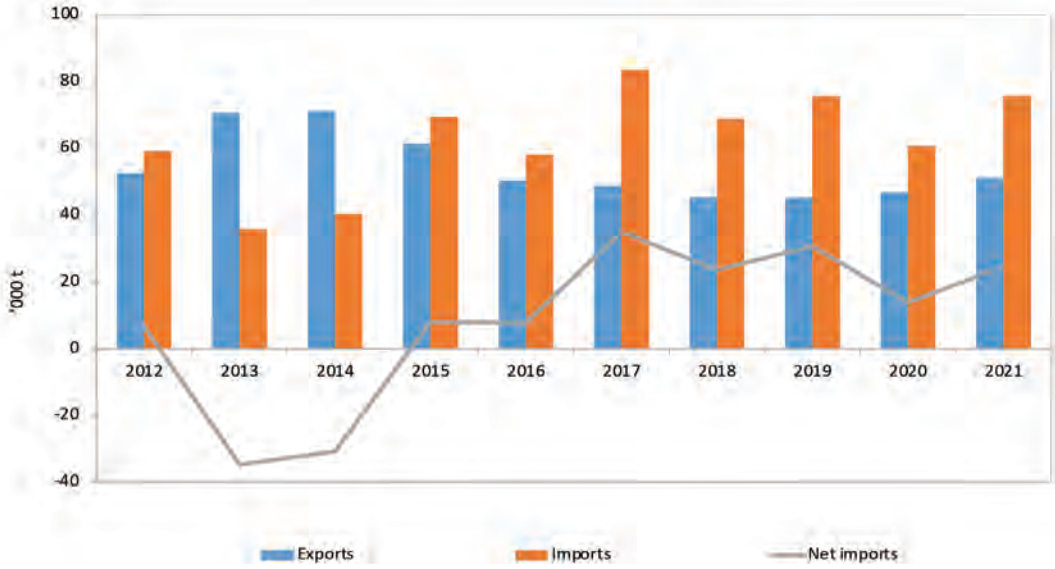


Figure 21 Dairy product imports and exports on milk-equivalent basis, 2012–2021 (source: SARS data, as supplied by SAMPRO)

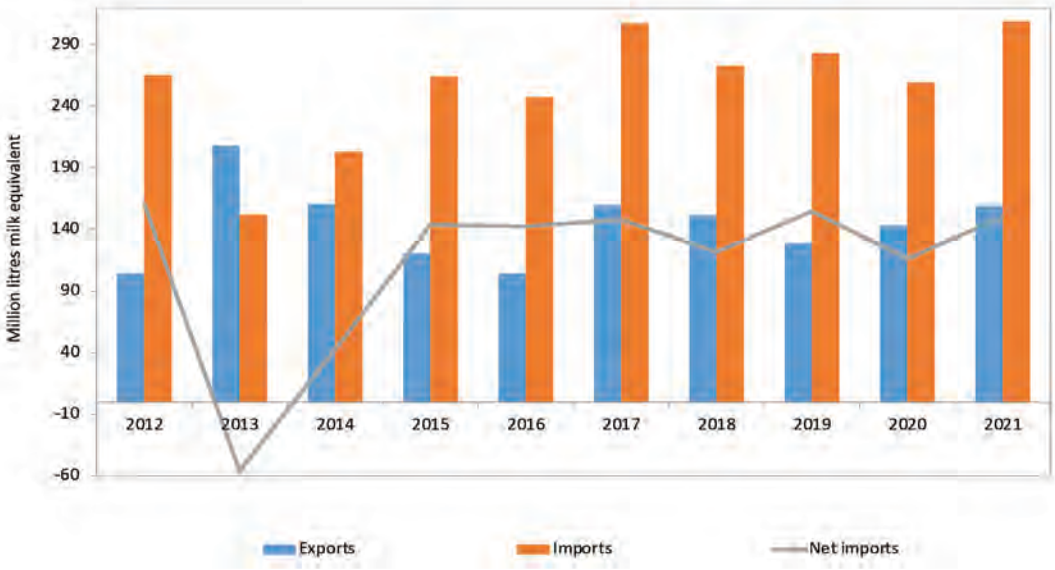


Figure 22 Percentage composition of imports on a mass basis, 2021 (source: SARS data, as supplied by SAMPRO)

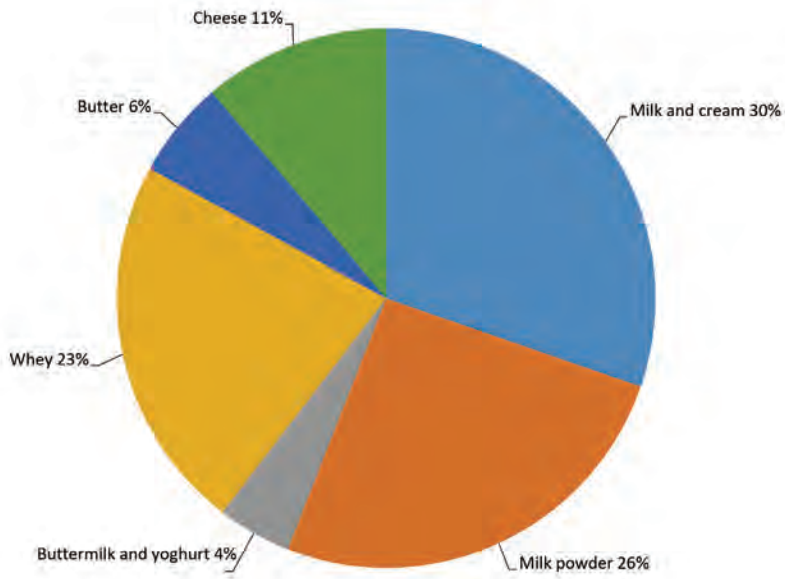


Figure 23 Percentage composition of exports on a mass basis, 2021 (source: SARS data, as supplied by SAMPRO)

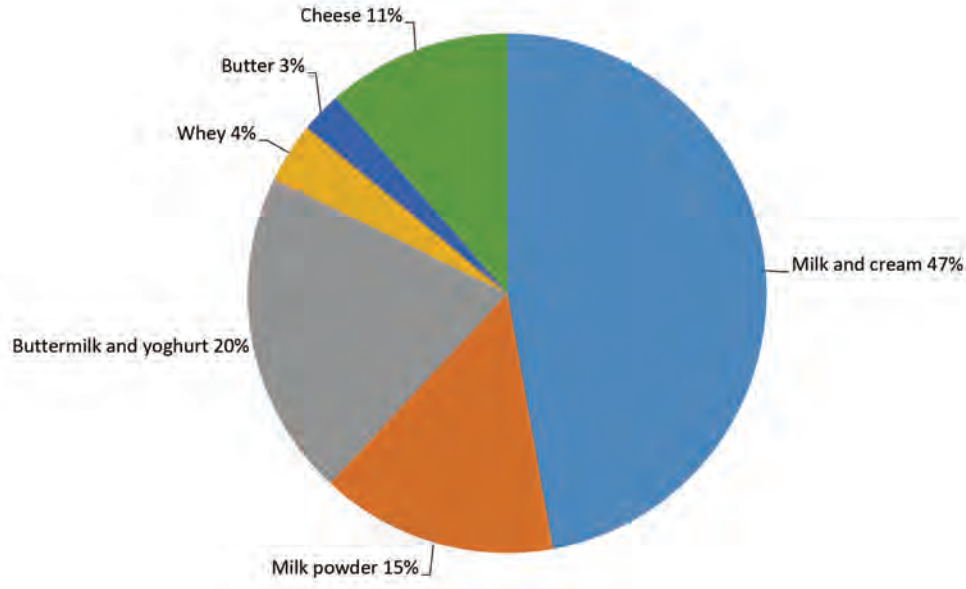


Figure 24 Price index of unprocessed milk at farm level, dairy products at processor level, and milk and eggs at consumer level, Jan 2012–Feb 2022 (source: Stats SA)

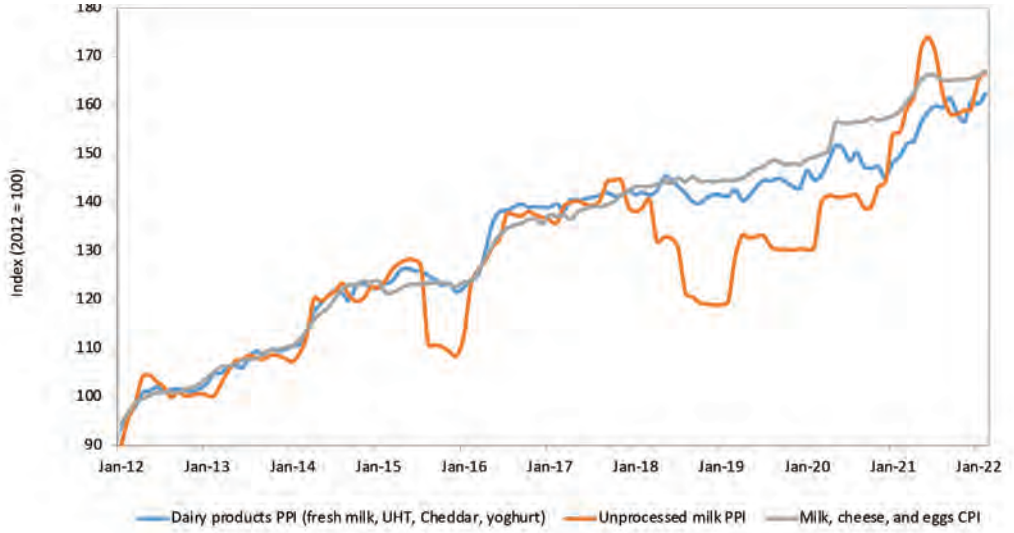


Figure 24 shows the trend in the price indices of unprocessed milk at farm level; dairy products at processor level; and milk, cheese, and eggs at consumer level. For most of the period, prices follow the same general trend, excluding the period from the end of 2017 to December 2020, when the indices for unprocessed milk (farmer prices) developed a different trend and the magnitude of negative price changes for this index resulted in the index significantly lagging behind the other indices.

Since January 2021, the producer price index (PPI) for unprocessed milk has rebounded and outstripped the other two indices, with high volatility present in the indices. During 2021, this index increased by 9,8%, from December 2020 to December 2021. The half-year increase was more pronounced, increasing by 23,2% from June 2020 to June 2021. Over the same time period, the PPI for dairy products increased only by 4,9%. The aggressive increase in the PPI for unprocessed milk should be viewed against the significant lagging behind of the index during that time. Also during the period December 2020 to December 2021, the index for dairy products increased by 10,5%, and the CPI for milk, cheese, and eggs increased by 5,3%.

Tables 10 to 11 indicate the trend of retail sales (quantity and average price) of nine dairy products, as reported by Nielsen South Africa and collated by SAMPRO. The Nielsen Company provides information based on monthly surveys of the retail sales of milk and other dairy products. Non-retail sales, such as sales to wholesalers and industrial buyers, which form a significant part of the total sales of dairy products, are not part of the Nielsen surveys. During 2021, less dairy products were sold when compared to sales volumes in 2020. With the exception of butter, for the period December 2021 compared to December 2020, all dairy product prices increased.

Sale quantities of fresh milk, yoghurt, cream cheese, and cream decreased in all five of the different periods; the other five dairy products were a mixed bag of increases and decreases over the different periods.

From December 2020 to December 2021, UHT processed milk sales increased by 12,2%, but decreased over the twelve-month period January 2021 to December 2021 versus January 2020 to December 2020 by 4%.

Pre-packaged cheese sales increased by 2,0% from December 2020 to December 2021, but decreased by 1,2% over the twelve-month period January 2021 to December 2021 versus January 2020 to December.

The sales quantities for maas and butter decreased over the twelve-month period January 2021 to December 2021 versus January 2020 to December 2020 by 4,5% and 1,1%, respectively.

The average retail price of three of the dairy products that increased for the twelve-month period December 2021 versus December 2020, increased by an amount less than inflation.

Table 10 Changes in quantities of retail sales of specific dairy products (source: Nielsen, as supplied by SAMPRO)

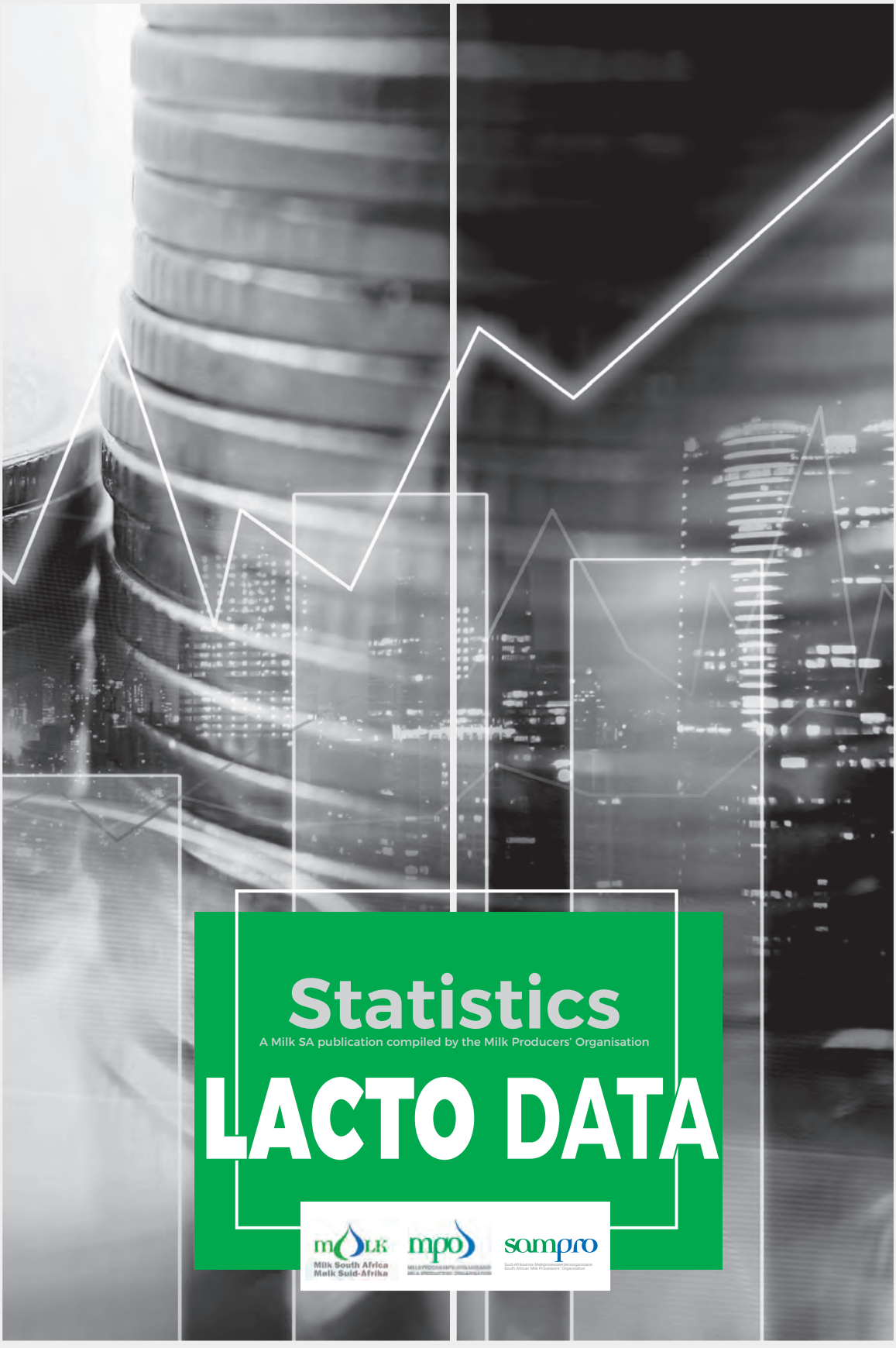
Product	Sales in the month of Dec 2021 versus sales in the month of Dec 2020 (%)	Sales in the 3 months from Oct 2021–Dec 2021 versus sales in the 3 months from Oct 2020–Dec 2020 (%)	Sales in the 6 months from Jul 2021–Dec 2021 versus sales in the 6 months from Jul 2020–Dec 2020 (%)	Sales in the 9 months from Apr 2021–Dec 2021 versus sales in the 9 months from Apr 2020–Dec 2020 (%)	Sales in the 12 months from Jan 2021–Dec 2021 versus sales in the 12 months from Jan 2020–Dec 2020 (%)
Fresh milk	–4,7	–6,5	–7,1	–6,1	–6,7
UHT processed milk	12,2	6,2	3,2	–3,3	–4,0
Flavoured milk	–1,8	–3,6	–1,1	1,2	1,1
Yoghurt	–0,5	–4,8	–7,9	–7,9	–6,0
Maas	1,8	0,5	–3,6	–4,8	–4,5
Pre-packed cheese	2,0	4,2	1,4	–1,3	–1,2
Cream cheese	–6,7	–3,1	–4,1	–7,2	–5,6
Butter	13,2	8,7	3,2	–3,9	–1,1
Cream	–8,8	–5,1	–5,4	–8,2	–4,0

Table 11 Changes in the average retail prices of specific dairy products (source: Nielsen as supplied by SAMPRO)

Product	Dec 2021 versus Nov 2021 (1 month ago) (%)	Dec 2021 versus Sept 2021 (3 months ago) (%)	Dec 2021 versus Jun 2021 (6 months ago) (%)	Dec 2021 versus Mar 2021 (9 months ago) (%)	Dec 2021 versus Dec 2020 (12 months ago) (%)	Dec 2021 versus Jun 2020 (18 months ago) (%)	Dec 2021 versus Dec 2020 (24 months ago) (%)
Fresh milk	0,1	–0,5	0,5	3,1	6,1	6,7	9,0
UHT processed milk	0,1	–1,5	–2,0	2,4	2,5	2,2	7,0
Flavoured milk	6,2	–2,2	–1,2	8,2	6,2	5,7	11,0
Yoghurt	–0,01	–1,1	–2,6	2,8	6,9	6,7	9,6
Maas	2,1	1,4	0,4	2,0	6,0	5,7	5,7
Pre-packaged cheese	4,6	2,1	3,1	6,0	5,0	6,9	8,7
Cream cheese	1,7	1,0	0,5	2,2	6,0	9,9	16,1
Butter	2,3	–0,9	–2,8	–0,1	–3,3	–1,6	7,4
Cream	4,1	2,2	2,7	5,5	3,8	6,6	6,0

ACRONYMS AND ABBREVIATIONS

CPI	consumer price index
DALRRD	Department of Agriculture, Land Reform and Rural Development
FAO	Food and Agricultural Organization of the United Nations
FMP	full-cream milk powder
FOB	free on board
IDF	International Dairy Federation
IFCN	International Farm Comparison Network
IMF	International Monetary Fund
Milk SA	Milk South Africa
MPO	Milk Producers' Organisation
OECD-FAO	Organization for Economic Co-operation and Development and the Food and Agricultural Organization of the United Nations
PD(s)	producer-distributor(s)
PPI	producer price index
SAMPRO	South African Milk Processors' Organisation
SARS	South African Revenue Service
SCM	solid-corrected milk
SMP	skimmed milk powder
t	tonnes (a metric tonne, equal to 1 000 kilograms)
UHT	ultra-high temperature
USDA	Unites States Department of Agriculture
WMP	whole milk powder



Statistics

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