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# LACTO DATA

A Milk SA publication compiled by  
the Milk Producers' Organisation

**mLK**  
MELK SUID-AFRIKA / MILK SOUTH AFRICA

**mpo**  
MELKPRODUSENTE-ORGANISASIE  
MILK PRODUCERS' ORGANISATION

**sampro**  
Suid-Afrikaanse Melkprosesseerderorganisatie  
South African Milk Processors' Organisation

# Melk SA bevorder 'n gesonde Suid-Afrikaanse suiwelgemeenskap

Die MPO en SAMPRO spreek gemeenskaplike  
uitdagings deur Melk SA aan.

Melk SA voeg sedert 2002 waarde by tot 'n groeiende  
SA suiwelbedryf deur sy inisiatiewe en projekte.

Melk SA werk met nasionale en internasionale  
instellings saam en geniet erkenning as die amptelike  
sambreel-organisasie van die SA suiwelbedryf.



## Milk SA foreword

**The purpose of this publication is to make information available on the structure and performance of the dairy industry, with a view to promoting optimal development to 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 especially 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 Advisory Committee. A special word of thanks to the MPO for compiling the information contained in *Lacto Data*.

## Executive summary

**The South African milk intake for the first eight months of 2018 is 4,64% higher than the first eight months of 2017. Supply is outstripping demand to such an extent that producer prices over the same period decreased by 14%. South Africa imported 83 504 t of dairy products in 2017 (up 44%) and exported 48 627 t of dairy products (3,2% less).**

Dairy product prices remained highly volatile during 2017. Dairy products prices, excluding prices for skimmed-milk powder (SMP), peaked around September 2017. The increased demand for full-cream dairy products and butter resulted in a sharp increase in butter prices which reached an all-time high of US\$6 235 (R81 866) in New Zealand and more than US\$8 000 (R101 500) in Europe. Full-cream milk powder (FMP) prices followed the same trend as butter prices. Prices have decreased since September 2017, with butter and full-cream milk powder trading 25% and 6% lower respectively in August 2018. The butter price is highly volatile, zigzagging between US\$4 718 (R62 136) and US\$5 713 (R75 297) from December 2017. The downward trend of SMP prices since January 2017 was reversed in January 2018.

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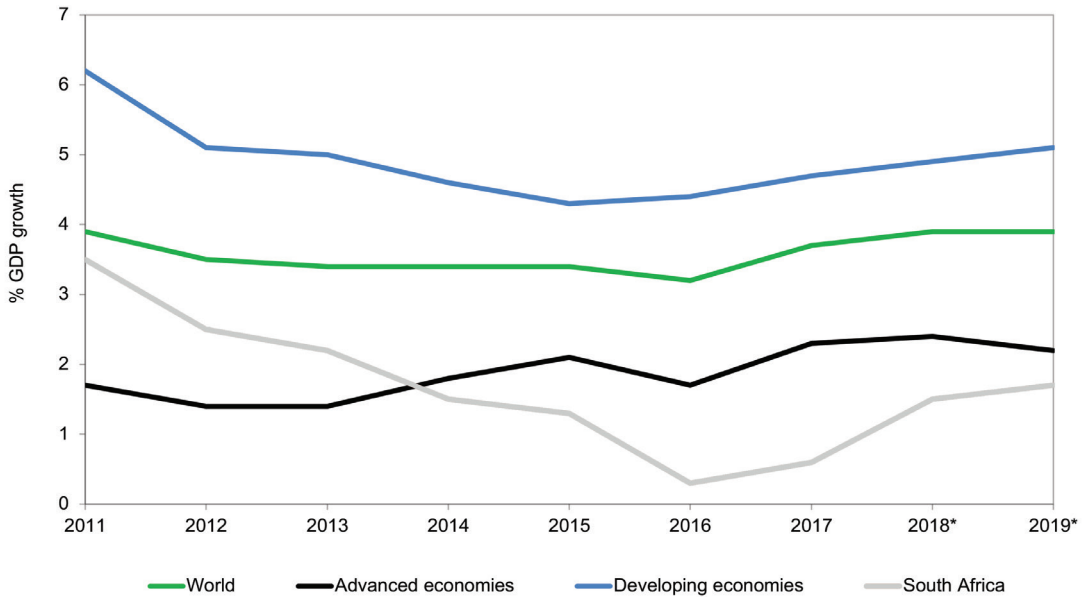
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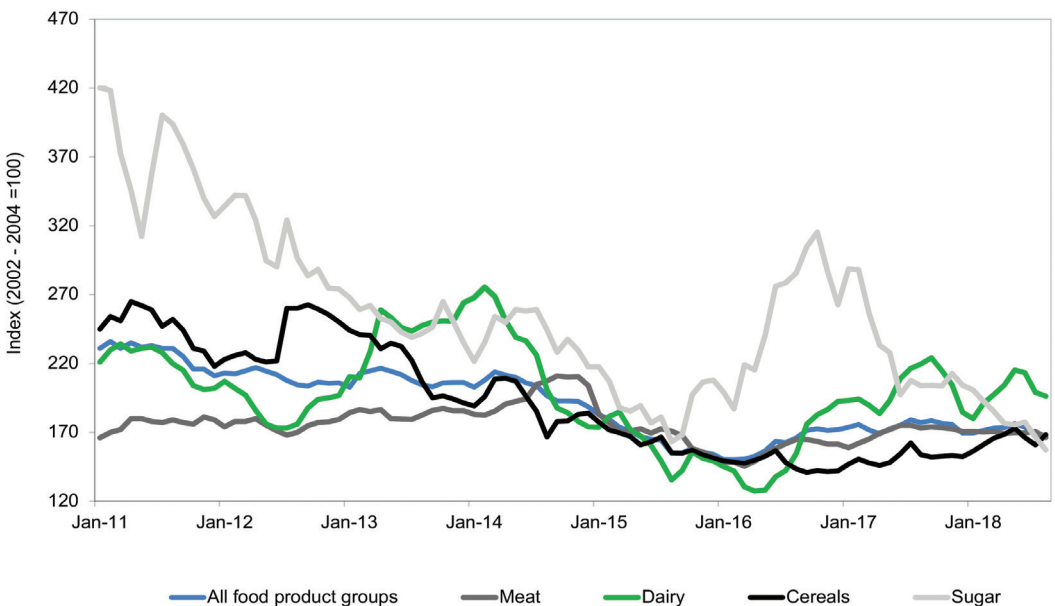
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*Lacto Data* is compiled from sources that are deemed to be reliable. However, the compilers and publisher accept no responsibility for any errors or the effect of any decisions based on this publication.



**Figure 1: International economic growth and expected growth\*, 2011-2019**  
(source: IMF, 2018 and 2019 IMF projection)



**Figure 2: FAO food price indices of internationally traded product groups, 2011-2018**  
(source: FAO Food Price Index, 2018)





# INTERNATIONAL SITUATION



## Global economic growth

According to the International Monetary Fund (IMF), global economic activity is still improving. The global economy is estimated to have grown by 3.7% in 2017. Improved economic growth was experienced in nearly all areas, with surprisingly high growth in Europe and Asia. The global economy is expected to grow by 3.9% in 2018 and 2019. Global growth momentum and the impetus of changes in the United States (US) tax policy are the main drivers of increased growth.

In the developed world, higher growth is expected in the US, driven by tax reform and improved external demand. In several European countries higher growth is expected as both domestic and external demand improves. Developed countries in Asia will also grow at faster rates than previously expected as global trade improves.

Emerging countries in Asia will continue to grow at about 6.5%, but growth in China is expected to moderate slightly. Accelerated growth is also expected in developing countries in Europe, Latin America, North Africa, and the Middle East. In sub-Saharan Africa growth is expected to improve from 2.7% in 2017 to 3.3% in 2018 and 3.9% in 2019. The impact on world growth of the current drive of the USA to rebalance trade deficits with import duties, and the counters from other countries, is still uncertain. The IMF still expects the South African economy to grow at 1.5% in 2018 and 1.7% in 2019. Recently released figures show that the South African economy grew by 1.3%

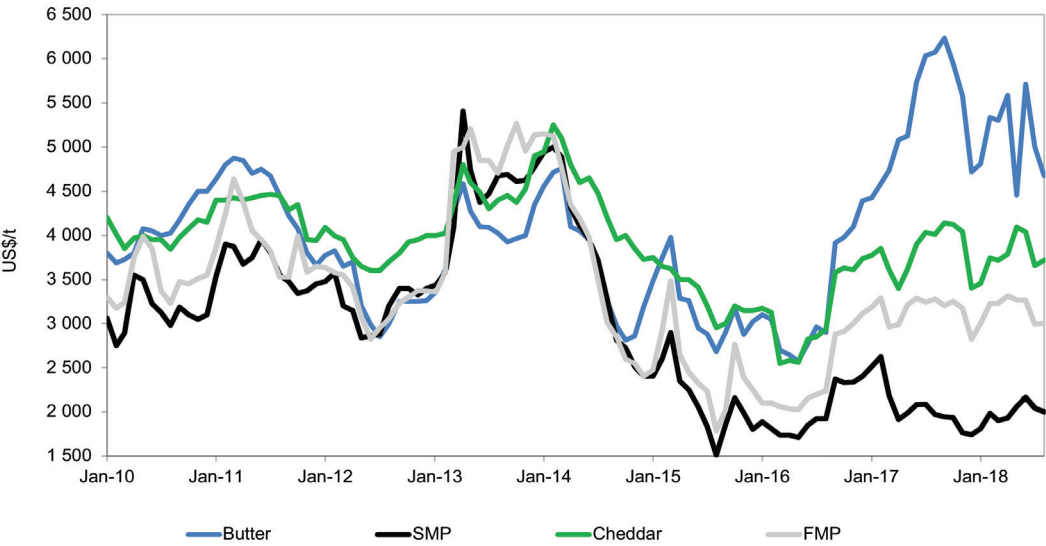
“The global economy is estimated to have grown by 3.7% in 2017.”

in 2017. Gross domestic product decreased by 0.7% in the second quarter of 2018, following a decrease of 2.6% in the first quarter.

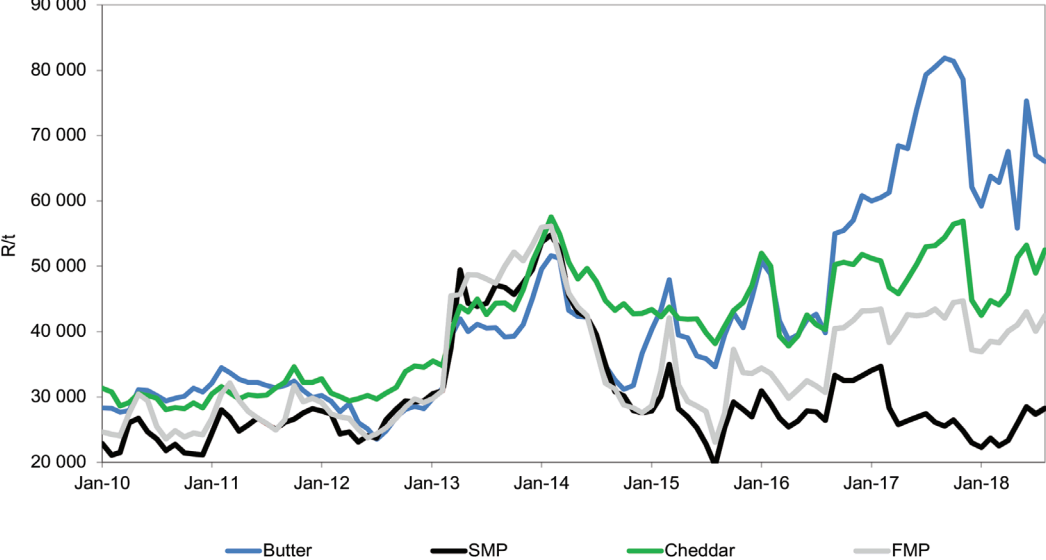
## Global food prices

Global food prices remain highly volatile. The Food and Agricultural Organization of the United Nations (FAO) Food Price Index decreased by 5.3% from August 2017 to August 2018. Meat and dairy prices decreased by 4% and 11%, respectively, while sugar took a beating and decreased by 23%. From January 2017 to August 2018, sugar prices decreased by a massive 46%, mainly due to higher production worldwide. The FAO Dairy Price Index varied between a peak of 224 in September 2017 and a low of 196 in August 2018. The food market is characterised by high volatility due to both the demand and supply curves being highly inelastic, meaning that there is little reaction to price changes in the short term. However, small shocks in either the supply or demand will lead to large price changes. These shocks typically occur as a result of extreme weather, inputs costs linked to the volatile oil price, and sudden policy decisions to, for example, increase the biofuel content in gasoline. Volatility in the food market is here to stay.

**Figure 3a: International FOB dairy product prices, US\$/t, Jan 2010–Aug 2018**  
(source: USDA)



**Figure 3b: International FOB dairy product prices, R/t, Jan 2010–Aug 2018**  
(source: USDA, Reserve Bank)



## International dairy product prices

A large difference between fat and protein prices developed in 2016, increased during 2017, and continued into 2018. Global dairy product prices decreased in 2016 as a result of the increased supply and weaker demand in 2014, 2015, and beginning of 2016. Global SMP and butter prices reached a historic low in the middle of 2015 and early in 2016, with prices below US\$1 800 (R25 950) for SMP and US\$2 600 (R37 500) for butter. After reaching this low, SMP and butter prices no longer followed the same trend. Significant stock levels, especially in the European Union (EU), limited the increase in SMP prices, while the growing demand for full-cream dairy products and butter resulted in a sharp increase in butter prices to reach an all-time high of US\$6 235 (R81 866) in New Zealand and more than US\$8 000 (R101 500) in Europe. Full-cream milk powder (FMP) prices followed the same trend as butter prices. Prices decreased since September 2017,

with butter and full-cream milk powder trading 25% and 6% lower respectively in August 2018. The butter price is highly volatile, zigzagging between US\$4 718 (R62 136) and US\$5 713 (R75 297) from December 2017. The downward trend in SMP prices since January 2017 was reversed in January 2018.

## International raw milk producer prices

Producer prices in Europe increased from January 2018 as a result of lower summer rainfall, with New Zealand and the United States (US) following the same trend. Some of the recovery in the prices was due to higher butterfat prices. Producer prices in France increased by 13%, New Zealand by 9%, while prices in Ireland moved sideways. South Africa is currently counter-cyclical to the world producer price trend, with producer prices in South Africa decreasing by 14% since January 2018 mainly due to supply outstripping demand.

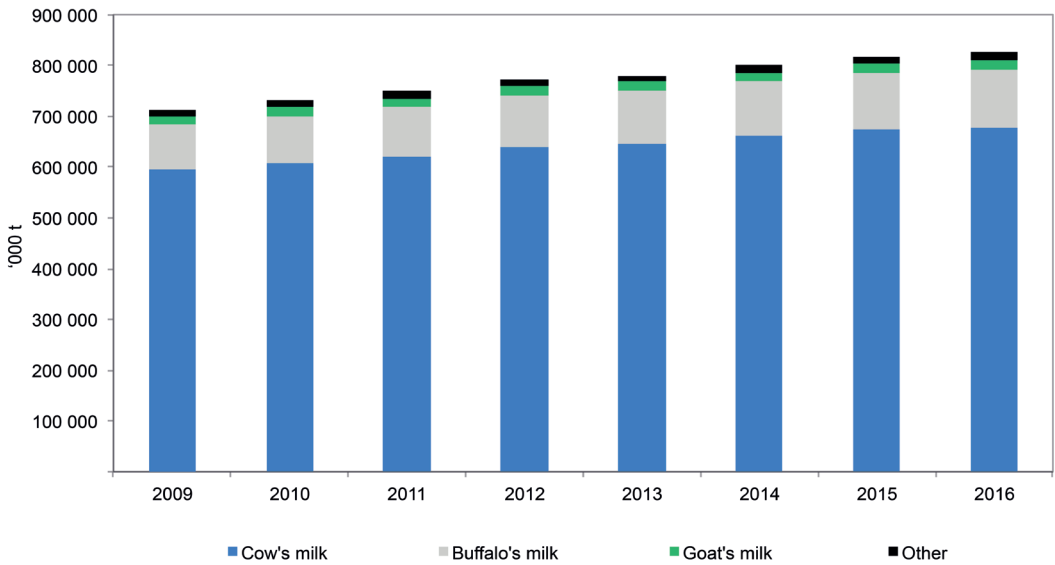
**Table 1: International calculated standardised raw milk producer prices, 2013-2018 (R/t)** (source: LTO Nederland. Based on 4% fat-corrected milk. See [www.milkprices.nl](http://www.milkprices.nl) for a detailed definition of LTO-standardised calculated price. Exchange rates: Reserve Bank monthly middle rates. \*Based on MPO price survey)

Country	Jan '13	Jan '14	Jan '15	Jan '16	Jan '17	Jan '18	Jul '18
Belgium	3,94	5,54	3,85	4,55	4,60	4,32	5,21
Germany	3,84	5,51	3,72	4,72	4,18	5,04	5,07
Denmark	3,73	5,51	3,82	4,51	4,45	5,06	5,23
France	3,90	5,68	4,38	5,55	4,42	4,89	5,54
Great Britain	4,07	5,35	4,69	5,29	4,08	5,04	4,89
Ireland	3,75	5,25	3,95	4,41	4,09	5,20	5,11
Netherlands	3,92	5,60	3,84	4,90	4,41	5,23	5,46
New Zealand	3,15	5,44	3,26	3,66	4,38	4,49	4,91
US	3,78	5,13	4,47	5,55	5,23	4,21	4,82
*South Africa	3,60	4,05	4,45	4,11	4,65	5,00	4,30



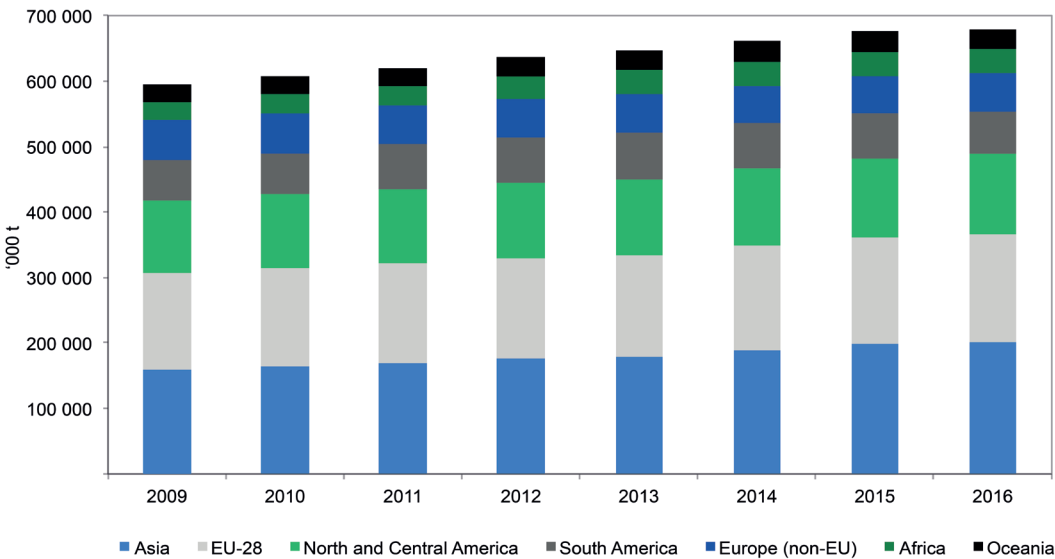
**Figure 4: Global milk production per species, 2009–2016**

(source: IDF Bull. 489/2017)



**Figure 5: Cow's milk production per region, 2009–2016**

(source: IDF Bull. 489/2017)



## World milk production

The 2.2% growth in milk production in 2015 surprised analysts because lower milk production growth was expected. In 2016, lower producer prices resulted in a much slower production growth of 0.9%, which is significantly lower than the average annual growth rate of 2.1% recorded since 2005. Total production during 2016 is estimated at 826 million tonnes. The higher producer prices in the second quarter of 2017 resulted in a 2.7% growth in milk production in 2017.

Growth was slower for cow's milk than for other types of milk. Cow's milk production increased by only 0.5% year on year. The slow growth was the result of negative growth in South America (-5.3%) and Oceania (-3.3%). Slow production growth in the EU was the result of negative growth in the top three countries, Germany, France, and the United Kingdom (UK), as well as in Russia and the Ukraine. Climatic factors as well as farmers' reaction to lower producer prices were the main reasons for the lower production growth. Lower production in the EU was also encouraged by a European Commission scheme that paid farmers a subsidy of €0.14 (R2.04) per kilogram for undelivered milk. An estimated 48 000 farmers participated

in this scheme and it resulted in an 861 000 t reduction in deliveries to dairies. In the US, a positive milk-to-feed price ratio resulted in robust production growth in 2016. Despite a reduction in producer prices during 2016, production growth remained resilient (Table 2). The increase in milk production continued for the first six months of 2018 as reflected in Table 2, except in New Zealand, where production drifted sideways. The increased production is mainly due to increased producer prices while adverse weather conditions in New Zealand hampered production growth.

## Production of dairy products

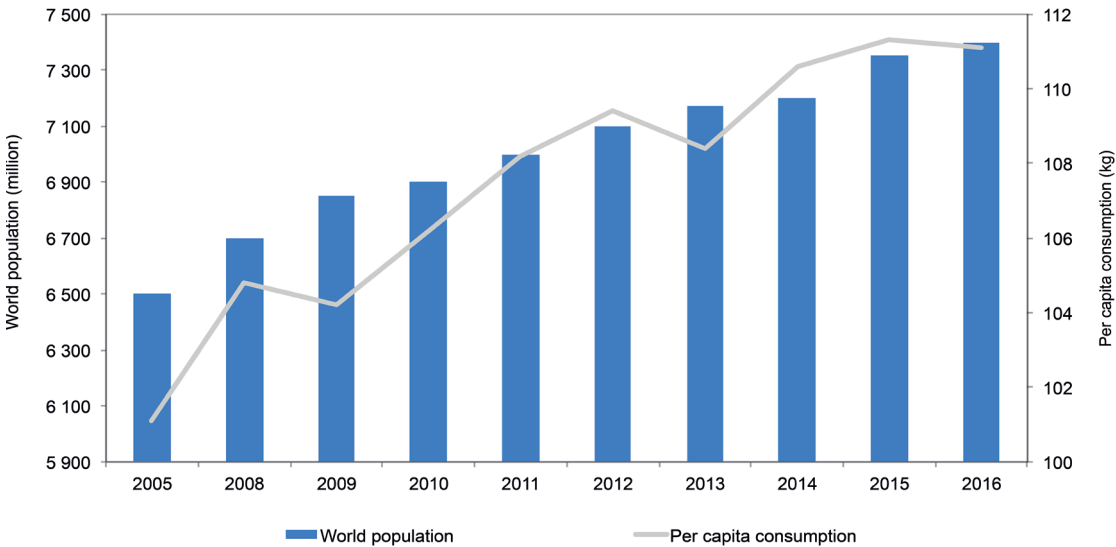
Overall, cow's milk deliveries to dairies decreased by 0.1% in 2016. This is the first decrease in milk deliveries in many years. Sluggish growth in milk production resulted in slow growth in the production of dairy products in 2016 and early 2017. Production recovered later in 2017 and a normal growth rate of about 1.8% in output is expected for 2017. Global production of packaged milk and fermented dairy products increased by 1.0% and 3.2%, respectively. These products are less traded internationally than the concentrated products and usually

**Table 2: Milk production growth: 2015 compared to 2014, 2016 compared to 2015, 2017 compared to 2016, and 2018 compared to 2017 (source: CNIEL, 2018)**

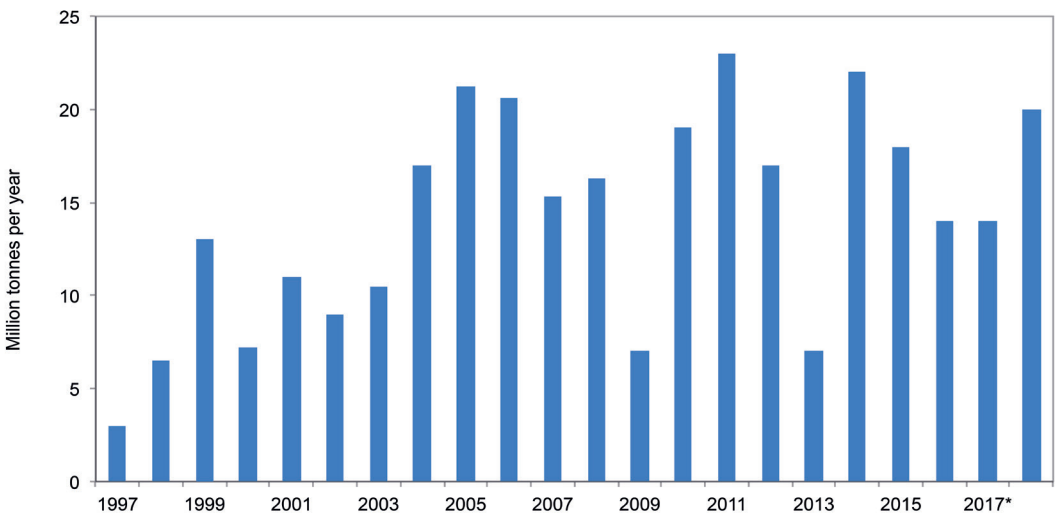
Country	2015/2014	2016/2015	2017/2016	2018/2017*
Australia	+2.2%	-6.2%	+0.0%	+2.7%
European Union	+2.1%	+0.3%	+2.2%	+1.8%
New Zealand	-1.4%	-2.0%	+1.7%	-0.6%
United States	+1.2%	+1.6%	+1.7%	+1.1%
Uruguay	-2.0%	-10.3%	+6.3%	+6.3%
Argentina	+1.5%	-12.8%	-1.6%	+6.8%

\* 6 months

**Figure 6: World population and per capita consumption of dairy products, 2005, 2008-2016** (source: IDF Bull. 489/2017)



**Figure 7: Annual increase in dairy demand, 1997-2018**  
(source: IFCN Conference 2017, \*2017, 2018 IFCN projection)





follow population trends more closely. Globally, cow's milk cheese production amounted to 20,5 million tonnes, an increase of 1,8% from 2015. Total cheese production amounted to about 23 million tonnes. Cheese production grew at a rapid rate in the EU.

Butter and butter-oil production increased by 1,7% from 2015 to 2016 and is estimated at over 11 million tonnes on a butter-equivalent basis. In spite of fast demand growth, butter production only grew by 1,7% compared to the long-term growth of 3,0% per year since 2010. Slow production growth resulted in shortages in late 2016 and in 2017.

New Zealand, the world's biggest producer of FMP, reduced their production in 2016. The same trend was followed by China and the South American countries. This resulted in a sharp decrease (5,7%) in full-cream milk production. Skimmed milk production also decreased as a result of the lower raw milk supply in New Zealand and Europe. In spite of lower production, the intervention stocks in the EU increased to 350 000 t by early 2017 and have remained at that level.

### Consumption of dairy products

The global population continues to grow at about 1,1% per year. The estimated per capita consumption of dairy products decreased marginally from 111,5 kg in 2015 to 111,1 kg in 2016. The decrease was caused by reduced purchasing power in oil-exporting countries, the Russian ban on dairy imports, and the economic downturn in South America.

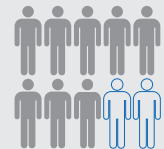
There are major differences between different areas in terms of total annual milk consumption. Consumers in developed markets use up to 270 kg of dairy products per year, whereas

African consumers use less than 50 kg. The informal milk market is estimated at 45%, and the formal market consists of fresh and fermented products (17%), butter (15%), and cheese (13%). Based on data from countries that contributed to the report, *The World Dairy Situation 2016*, consumers in northern Europe and Oceania are the biggest consumers of liquid milk, drinking over 100 kg per capita per year. Europeans have the largest per capita consumption of butter while US, Israeli, and European consumers are the biggest cheese consumers.

“The global demand for dairy will grow by 20 million tonnes in 2018, of which 6 million tonnes will be as a result of population growth and 14 million tonnes as a result of increased per capita consumption.”

### NEED TO KNOW

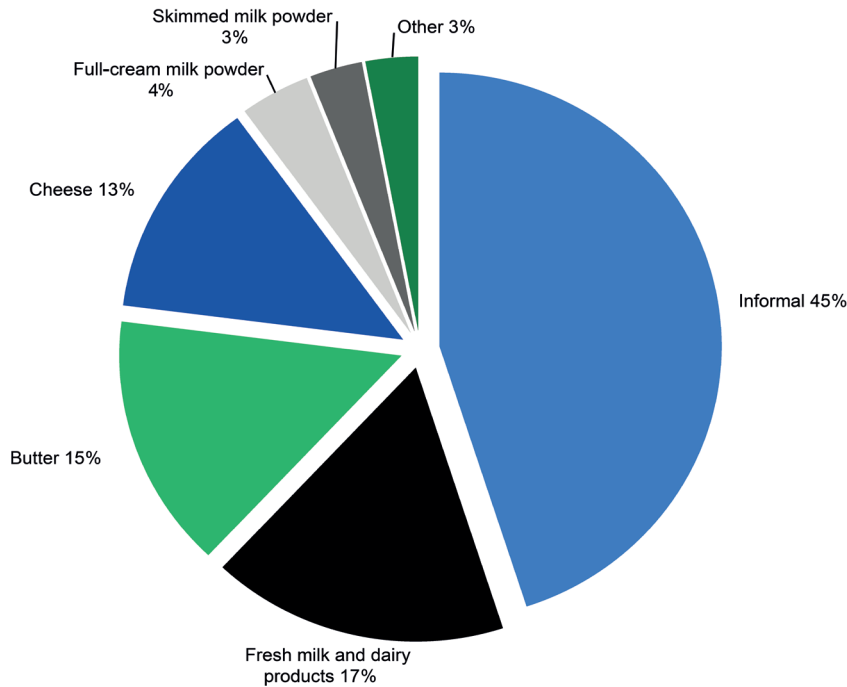
>7,4 billion  
people - still  
increasing



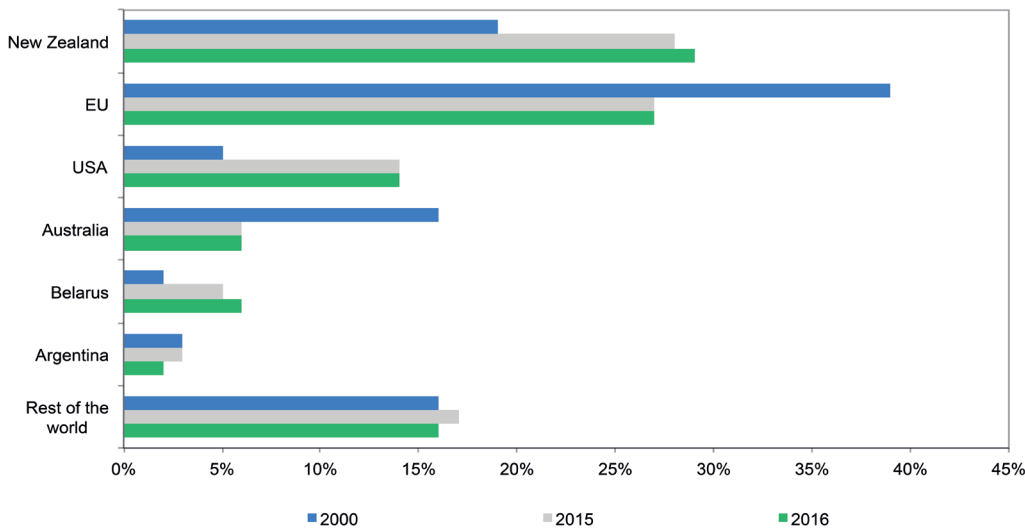
avg per capita consumption  
**111,1** kg per  
capita  
per year  
[up from 101 kg in 2005]



**Figure 8: Percentage breakdown of global dairy consumption, 2016**  
(source: IDF Bull. 489/2017)



**Figure 9: Share of key exporting countries in total trade in dairy products, 2000, 2015, 2016** (source: IDF Bull. 489/2017)



## International dairy trade

In 2016 there was strong demand for butterfat with resulting increases in cheese and butter exports, which grew by 5.9% and 2.0%, respectively. The slower growth of the butter trade was caused by shortages as local demand exceeded local supply, thus limiting quantities available for export. The lower SMP prices also limited processors' ability to convert milk into cream and skimmed milk powder. This growth succeeded in clearing stocks built up in 2014 and 2015. The protein

market deteriorated, with decreases in the skimmed and full-cream milk powder trade of 3.1% and 2.5%, respectively. New Zealand remains the top supplier of dairy products, followed by the EU. The US export trade did not grow significantly, as production was largely used in the domestic market. The global secondary industry consists of several large multinational companies and many smaller companies operating in one or a few countries. Major international dairy companies are shown in Table 3.

**Table 3: Major dairy companies, 2016 (source: IFCN, 2017)**

Rank	Company name	Country	Milk intake (million tonnes)	Market share (%)
1	Dairy Farmers of America	United States (US)	28,1	3,6%
2	Fonterra	New Zealand	22,1	2,8%
3	Groupe Lactalis	France	15,1	1,9%
4	Arla Foods	Denmark/Sweden	14,2	1,8%
5	Nestlé	Switzerland	14,0	1,8%
6	Friesland Campina	The Netherlands	12,6	1,6%
7	Dean Foods	US	10,3	1,3%
8	DMK	Germany	7,8	1,0%
9	Saputo	Canada	7,7	1,0%
10	California Dairies	US	7,5	1,0%
11	Danone	France	7,5	1,0%
12	Yli Group	China	6,8	0,9%
13	Amul	India	6,5	0,8%
14	Muller	Germany	6,3	0,8%
15	Glanbia Group	Ireland	6,1	0,7%
16	Agropur	Canada	5,8	0,7%
17	Land O Lakes	US	5,8	0,7%
18	Mengjui	China	5,8	0,7%
19	Groupe Sodiaal	France	5,2	0,7%
20	Schreiber Foods	US	4,5	0,6%



**Table 4: Average herd size, selected countries, 2016** (source: IFCN 2017 for international data, MPO survey 2016 for South Africa data)

Country	Average number of cows in herd (cows in herd = cows in milk plus dry cows)
Saudi Arabia	6 924
New Zealand	419
South Africa	354
Australia	283
Czech Republic	207
US	203
Denmark	185
Israel	171
Argentina	168
United Kingdom	143
Uruguay	115
Canada	85
Uganda	2
Kenya	3

**Table 5: Milk production for the top 10 milk-producing countries and South Africa, 2016** (source: IFCN, 2017)

	Country	Milk produced (million tonnes)
1	India	170,9
2	US	92,3
3	Pakistan	45,8
4	Brazil	34,2
5	Germany	33,5
6	China	32,1
7	Russian Federation	28,5
8	France	25,2
9	New Zealand	24,2
10	Turkey	15,6
	South Africa	3,3

## International primary sector

There are 120 million dairy farms globally, with more than 60% of these in South Asia. With an average per farm population of five, this implies that 600 million people live on dairy farms. Globally, the average dairy farmer milks three cows. Larger dairy farms are found in Saudi Arabia, New Zealand, South Africa, Argentina, the US, and Canada. In South Africa the average number of cows in a herd was 354 in 2016. 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. Dairy farms can be divided into three categories:

- household farms with between one and three cows, selling some milk and with dairy as one of a number of income sources;
- family farms with between 10 and 300 cows, where labour is mainly supplied by the farming family; and
- larger commercial farms with more than 300 cows, where the work is mainly done by employees.

“

Globally, the average dairy farmer milks three cows.

Larger dairy farms are found in Saudi Arabia, New Zealand, South Africa, Argentina, the US, and Canada.”

In 2016, 63% of all dairy animals were kept by household farms, family farms kept 21%, and 16% were kept on larger commercial farms. Household farms are the dominant type in South Asia and Africa. In Latin

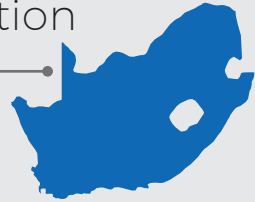
## MORE INFO

World production  
**826 million tonnes**






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



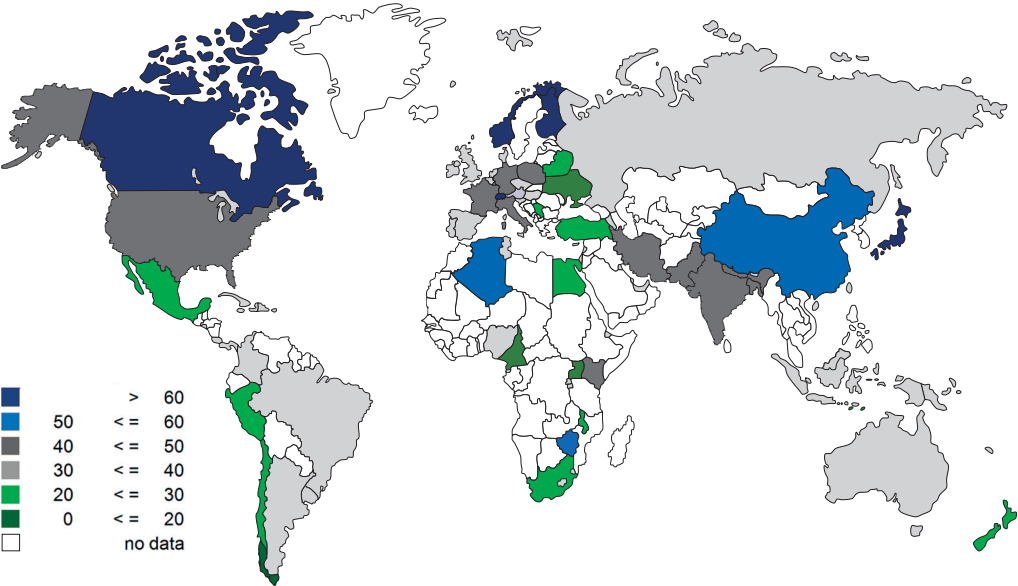
SA produces  
**0,5%** of  
global milk  
production



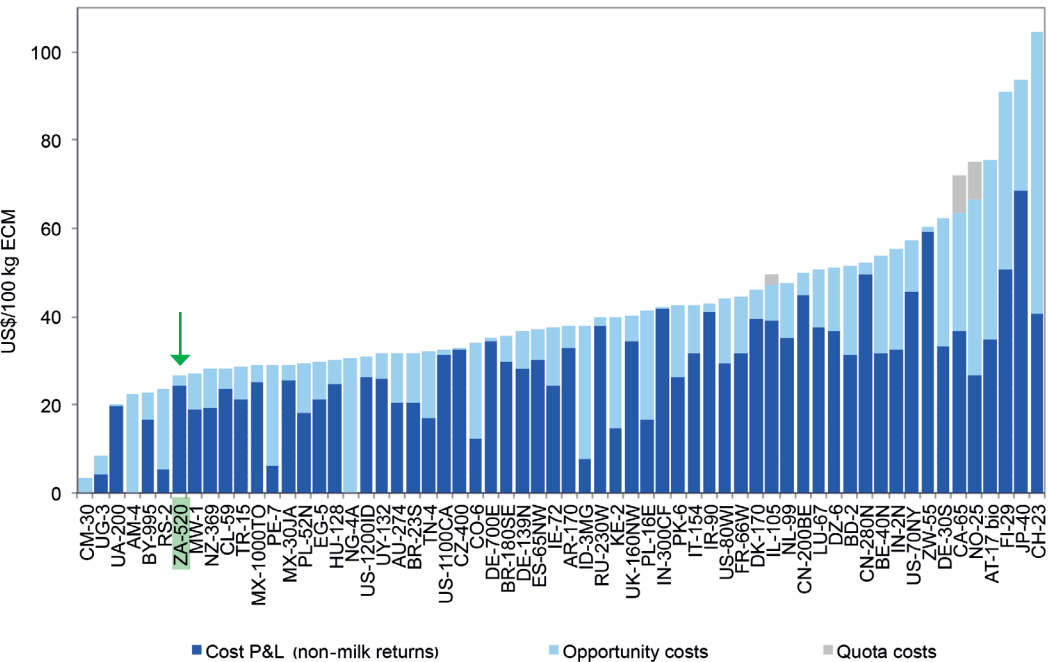
## Main producing countries (2016 change)

-  **INDIA** (↑ by 5,5%)
-  **US** (↑ by 1,8%)
-  **PAKISTAN** (↑ by 3,8%)
-  **BRAZIL** (↓ by 3,5%)
-  **GERMANY** (↑ by 0,0%)

**Figure 10: Estimated milk production cost (US\$/100 kg ECM) per average farm in participating countries, 2016 (source: IFCN, 2017)**



**Figure 11: Estimated cost of milk production per farm in US\$/100 kg ECM for average farms in IFCN analysis, 2016 (source: IFCN, 2017)**





America, East Asia, and the EU, family farms predominate, with the larger commercial farms the dominant type in Oceanic countries and the US. South African dairy farms also fall into the commercial farm category.

### Cost of milk production

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 105 countries contributed to the work of the IFCN in 2017. It analysed the production and cost of 159 typical dairy farms in 52 countries and published the results in the *IFCN Dairy Report 2017*. The comparison of farms is based on the actual income and cost figures for 2016. The MPO's participation in the work of the IFCN is partially sponsored by Milk SA.

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

The average cost level of the 159 farms evaluated by the IFCN in 2016 stood at US\$38,4 per 100 kilograms of energy-corrected milk (100kg ECM), which is US\$3 below the 2015 level. Dairy farms in Africa, Latin America, the Central and Eastern European (CEEC) countries, Oceania, and the Middle East were able to produce milk at below-average

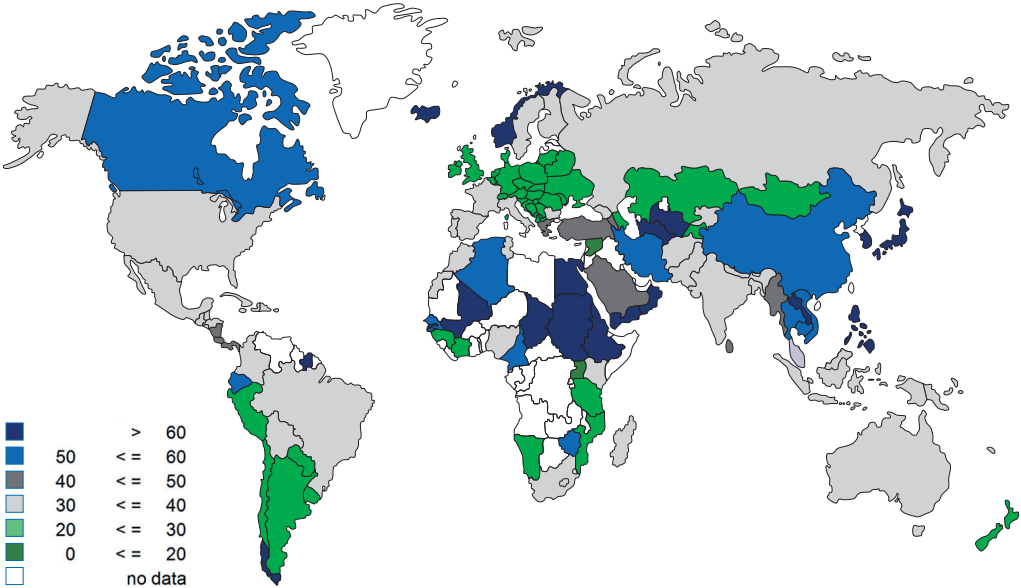
cost levels. Cost levels for dairy farms in Western Europe, North America, and Asia were significantly above the global average. Cost reductions in Africa, North America, and the Middle East of more than US\$4 per 100 kg ECM were achieved through currency devaluation and, in some cases, through improved production efficiency. In Western Europe, a marginal cost reduction of US\$1 per 100 kg ECM was achieved. Within the different regions there is a huge variation between lowest and highest cost values. In Western Europe, cost levels range from US\$30 to US\$104 per 100 kg ECM, with an average of US\$50 per 100 kg ECM. In Oceania, the range is from US\$28 to US\$33 per 100 kg ECM, with an average of US\$30 per 100 kg ECM.

Feed is the highest single cost component, contributing about 64% 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.

“In most cases, countries with very low milk production costs produce milk mainly for home consumption or direct sales to neighbours.”

**Figure 12: Estimated producer milk prices in various regions (US\$/100 kg ECM), 2016 (source: IFCN, 2017)**



## Producer milk prices

The key drivers of milk prices are the total milk supply, increased trade in dairy products between countries, growing demand for milk and, in the case of prices in individual countries, the exchange rates.

The IFCN World Milk Price Indicator, based on the weighted prices of major internationally traded dairy products, reached a low of US\$25 per 100 kg ECM in mid-2016 and increased to US\$36 per 100 kg ECM by June 2017. The average price decreased from US\$42 per 100 kg ECM in 2014 to US\$27 per 100 kg ECM in 2016.

Prices remain extremely volatile. The IFCN World Milk Price Indicator, based on the weighted prices of major internationally traded dairy products, stood at US\$33 per 100 kg ECM in December 2014. Prices trended between US\$22 and US\$27 per 100 kg ECM in 2015. Prices recovered after June 2016 and showed a steady upwards trend until February 2017. The main driver was a decrease in milk production, especially in major exporting countries. The rising trend was interrupted in March 2017 as markets reacted to record butterfat prices, and production increased. Prices increased again to reach a record US\$38,40 per 100 kg ECM in June 2017. The global milk supply, the impact of the higher butterfat prices, and developments regarding the EU's skimmed milk powder stocks will determine future price movements.

Producer prices in the countries analysed by the IFCN ranged from US\$17,70 per 100 kg ECM in Uganda to US\$150 per 100 kg ECM in Sudan. In 2016, 80% of countries reflected the declining trend in producer prices. In the EU, a declining trend was experienced

by all EU member states, but it was less marked than in 2015. The lowest prices were observed in Belgium. Prices also decreased in North and South America, except in Brazil, where prices increased. The highest prices were observed in Canada at US\$61 per 100 kg ECM, and the lowest in Uruguay at US\$29,10 per 100 kg ECM. Prices increased in New Zealand to a level of US\$26,90 per 100 kg ECM, marginally below the global average price.

### MORE INFO

#### Lowest and highest cost countries in the world

##### Top 5 lowest cost

CAMEROON



UGANDA



UKRAINE



ARMENIA



BELARUS



##### Top 5 highest cost

SWITZERLAND



JAPAN



NORWAY



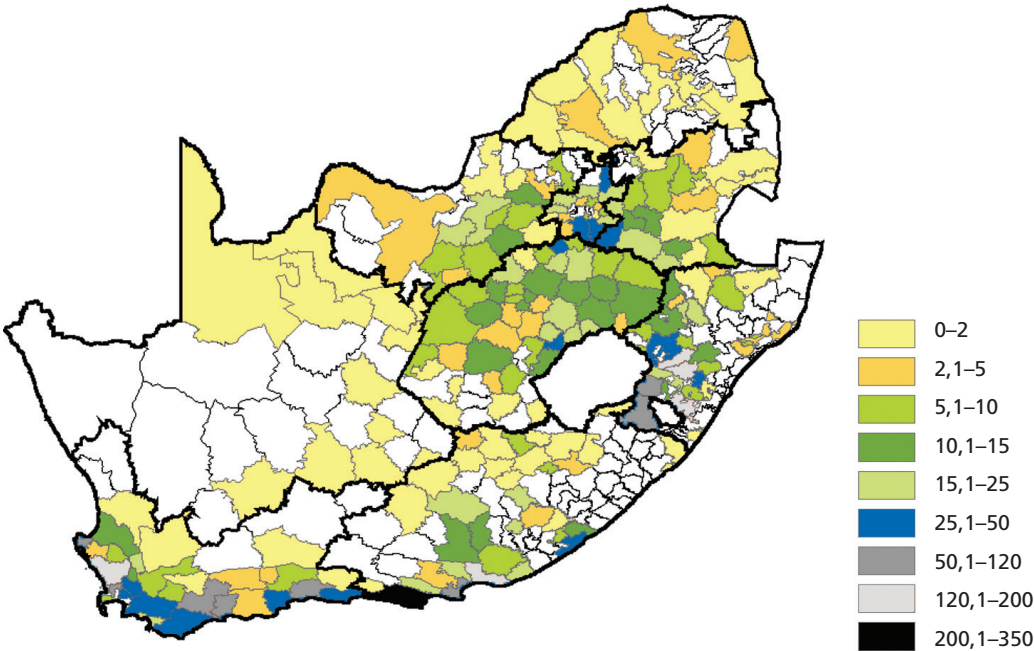
FINLAND



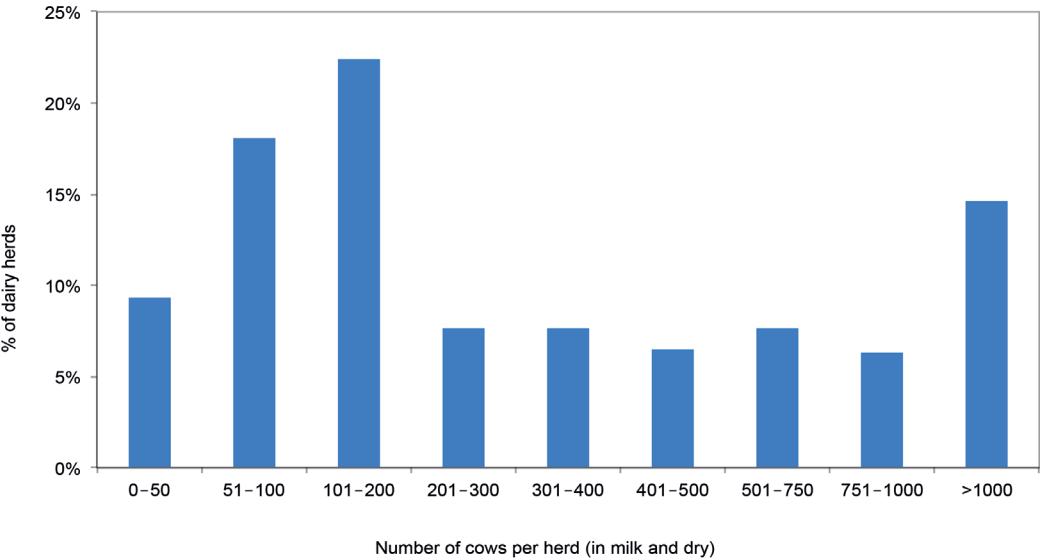
CANADA



**Figure 13: Milk production density (l/km<sup>2</sup>) per district, 2016** (source: MPO estimates from October 2016 statutory survey)



**Figure 14: Size distribution of dairy cows per herd, 2017** (source: MPO estimates from October 2017 statutory survey)



# SOUTH AFRICAN SITUATION



## South African primary dairy sector

### Structure of the primary dairy sector

The number of milk producers in South Africa decreased from 3 551 in January 2009 to 1 364 January 2018. The number of producers per province is shown in Table 6. Since 2009, the number of producers has decreased by 62%. The largest percentage decrease in producer numbers occurred in the Free State.

The trend towards higher production in the pasture-based areas has continued. The concentration of milk production per district is shown in Figure 13. Milk production per province, according to MPO estimates, taking into account the results of the October 2017 statutory survey, is shown in Table 7.

The number of cows varies widely among producers. The percentage distribution of herd size is shown in Figure 14.

## NEED TO KNOW



### Number of producers

(↓62%)

Jan 2009

3 551

Jan 2018

1 364

### Milk production

(↑26%)



2009

2 587 000 t

2017

3 253 000 t

### Milk production per producer

(↑191%)



2009

728 t

2017

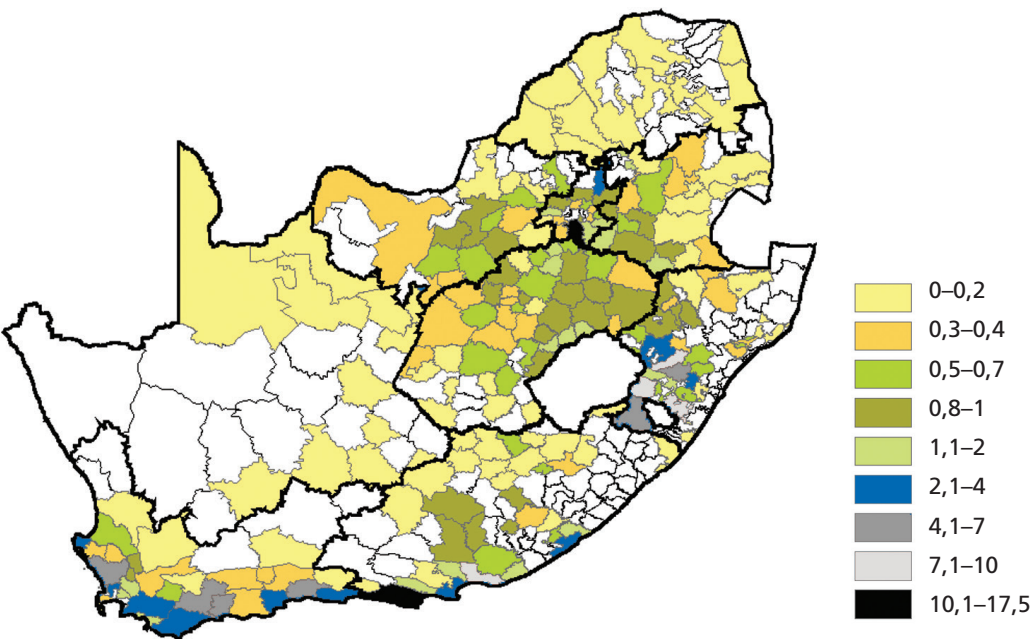
2 042 t

**Table 6: Number of milk producers per province, 2009–2018 (source: MPO)**

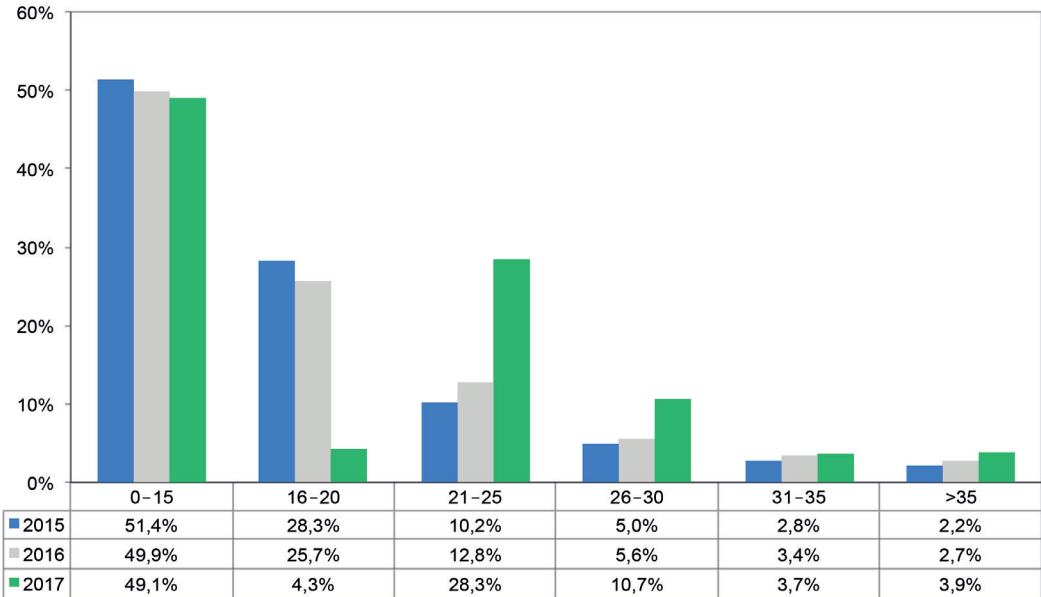
Province	Jan '09	Jan '11	Jan '12	Jan '14	Jan '15	Jan '16	Jan '17	Jan '18	Aug '18
Western Cape	795	683	647	529	533	502	481	419	412
Eastern Cape	387	314	283	264	262	251	244	212	209
Northern Cape	37	28	21	25	14	14	7	7	7
KwaZulu-Natal	373	323	322	281	267	253	247	221	223
Free State	884	601	535	389	328	280	249	206	185
North West	540	386	352	233	222	181	165	135	127
Gauteng	217	127	126	109	100	97	98	84	83
Mpumalanga	286	201	164	117	94	93	87	69	63
Limpopo	32	23	24	14	14	12	15	12	12
<b>TOTAL</b>	<b>3 551</b>	<b>2 686</b>	<b>2 474</b>	<b>1 961</b>	<b>1 834</b>	<b>1 683</b>	<b>1 593</b>	<b>1 364</b>	<b>1 321</b>



**Figure 15: Cow density per district (cows/km<sup>2</sup>), 2016** (source: MPO estimates from October 2016 statutory survey)



**Figure 16: Distribution of herds based on daily production per cow in herd, 2015–2017** (source: MPO estimates from statutory surveys)



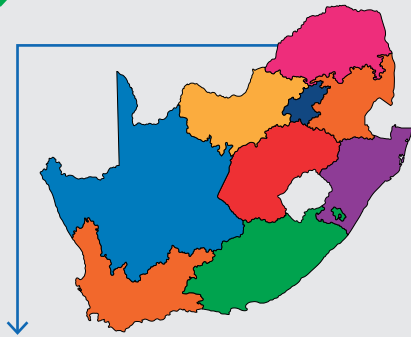
The average number of cows in milk per producer in the different provinces is shown in Table 7, and the concentration of cows per district in Figure 15.

Average milk production per cow per day was 20,0 l in 2017. A total of 98,5% of 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 16.

“

The number of milk producers has decreased from 3 551 in January 2009 to 1 364 in January 2018. Since 2009, the number of producers has decreased by 62%.”

### NEED TO KNOW



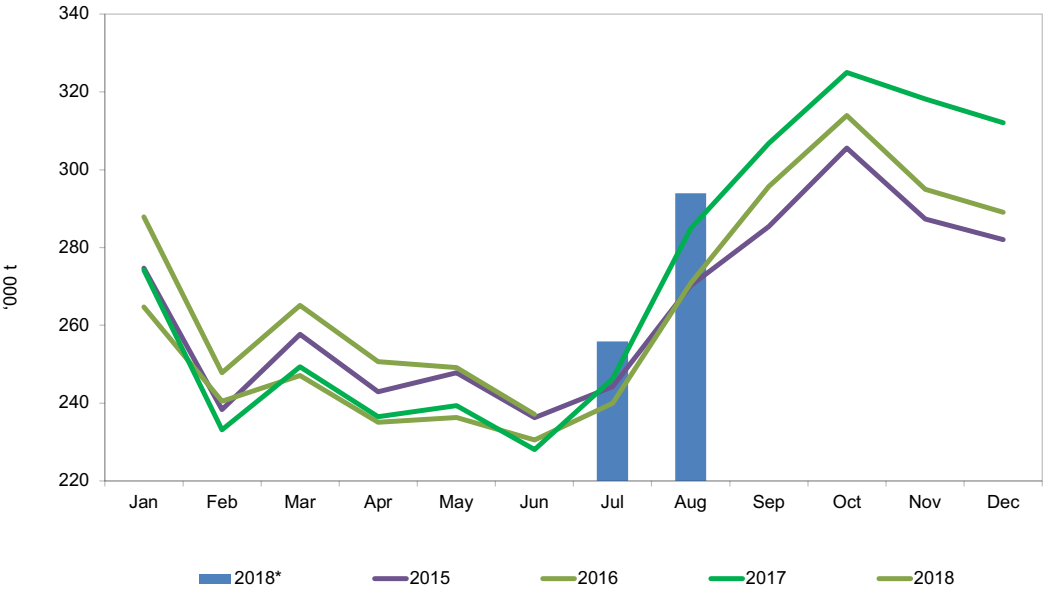
#### Change in total production per province (1997-2017)

Western Cape	+75%
Eastern Cape	+221%
Northern Cape	-13%
KwaZulu-Natal	+168%
Free State	-54%
North West	-72%
Gauteng	+25%
Mpumalanga	-66%
Limpopo	+49%

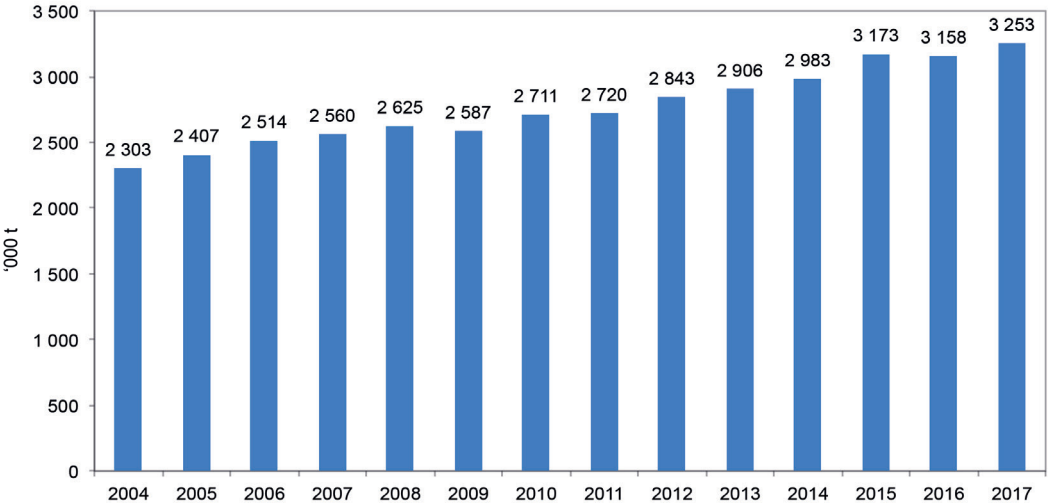
**Table 7: Milk production per province, and cows in milk per producer, specific years** (source: MPO estimates from October 2017 statutory survey)

Province	Percentage distribution of milk production		Number of cows in milk per producer, 2017
	Dec '97	Oct '17	
Western Cape	22,9	26,8	268
Eastern Cape	13,8	29,7	606
Northern Cape	1,2	0,7	398
KwaZulu-Natal	15,7	28,2	594
Free State	18,0	5,6	117
North West	12,6	2,4	87
Gauteng	4,4	3,7	188
Mpumalanga	11,0	2,5	139
Limpopo	0,4	0,4	191
<b>TOTAL</b>	<b>100,0</b>	<b>100,0</b>	<b>332</b>

**Figure 17: South African monthly raw milk purchases, Jan 2015–Aug 2018**  
 (source: Milk SA Statistics and 2018\* estimate based on Milk SA sample)



**Figure 18: Annual raw milk purchases, 2004–2017** (source: 2004–2005 MPO, SAMO, Milk Board, 2006–2017 Milk SA)



## Milk production

Annual milk production shows a steady linear upward trend over time. The total milk to market for 2017 is 3 253 000 t.

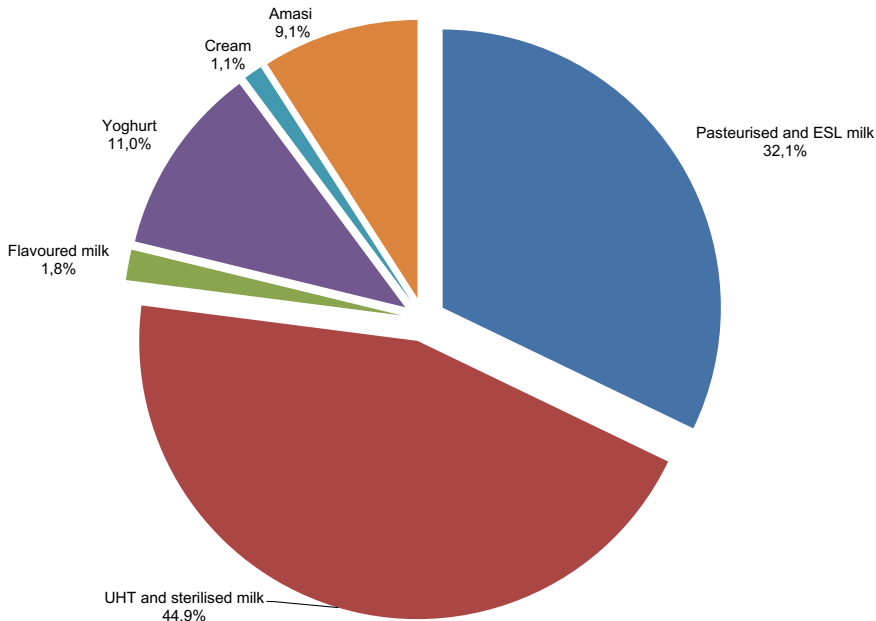
3,0% up on the previous year. Monthly milk purchases in 2015 to 2018 are shown in Figure 17.

**Table 8: Farm requisite price indices, base 2010 = 100 (source: DAFF)**

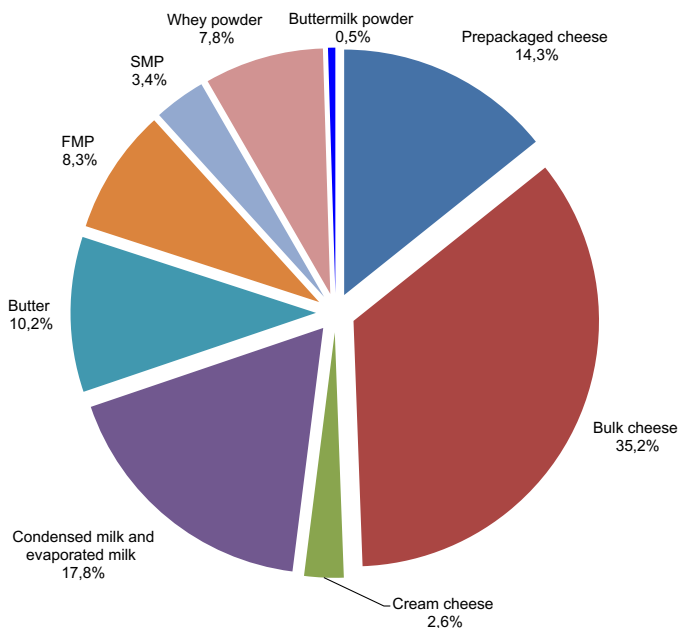
Period	Machinery & implements	Material for fixed improvements	Intermediate goods and services	All farming requisites
2012	123,0	115,5	126,3	125,4
2013	132,2	122,5	132,7	134,1
2014	143,2	129,5	138,9	142,4
2015	151,7	138,9	147,4	147,4
2016	162,6	149,1	155,7	156,2
2017	169,1	155,6	162,4	162,9
<b>CAGR 2012–2017*</b>	<b>6,6%</b>	<b>6,1 %</b>	<b>5,2 %</b>	<b>5,4 %</b>
Jan '14	135,6	132,0	139,2	138,4
Apr '14	141,1	132,2	144,1	143,1
Jul '14	147,5	124,3	146,3	145,4
Oct '14	148,7	129,5	142,7	142,8
Jan '15	145,9	137,9	144,2	144,1
Apr '15	148,7	146,7	146,1	146,5
Jul '15	150,4	138,5	148,5	147,9
Oct '15	159,4	138,9	149,8	150,4
Jan '16	157,8	144,5	152,0	152,0
Apr '16	161,2	154,5	154,5	155,3
Jul '16	161,8	148,7	156,9	157,1
Oct '16	171,8	148,7	159,3	160,3
Jan '17	164,8	150,0	160,0	160,1
Apr '17	166,1	163,7	158,7	159,8
Jul '17	166,7	154,1	163,1	163,1
Oct '17	178,9	154,8	168,2	168,8
Jan '18	171,0	156,9	165,8	166,0
Apr '18	170,6	170,0	162,3	163,6
<b>CAGR Jan '14–Apr '18*</b>	<b>5,4%</b>	<b>6,1%</b>	<b>3,7%</b>	<b>4,0%</b>

\*CAGR = compound annual growth rate

**Figure 19: Composition of the South African liquid products market on a volume basis, 2017** (source: industry estimate supplied by Sampro)



**Figure 20: Composition of the South African concentrated products market on a mass basis, 2017** (source: industry estimate supplied by Sampro)



## 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 per province is shown in Table 9.

**The number of producer-distributors decreased by 60% from January 2009 to September 2018. Milk buyers decreased by 34% over the same period.**

### Production and consumption

The South African dairy market in 2017 is divided into 62% liquid and 38%

concentrate products. Pasteurised liquid milk and ultra-high temperature (UHT) milk are the major liquid products, while hard cheese is the major concentrated product. The estimated composition of the markets for liquid and concentrated products is shown in Figure 19 and Figure 20.

### Imports and exports

Total dairy product imports and exports are shown in Figure 21 and Figure 22. In 2017, 83 504 t of products were imported. Total exports during 2017 were 48 627 t.

The total composition of imports and exports in 2017 is shown in Figures 23 and 24. On a mass basis, milk and cream were the most important products imported and exported.

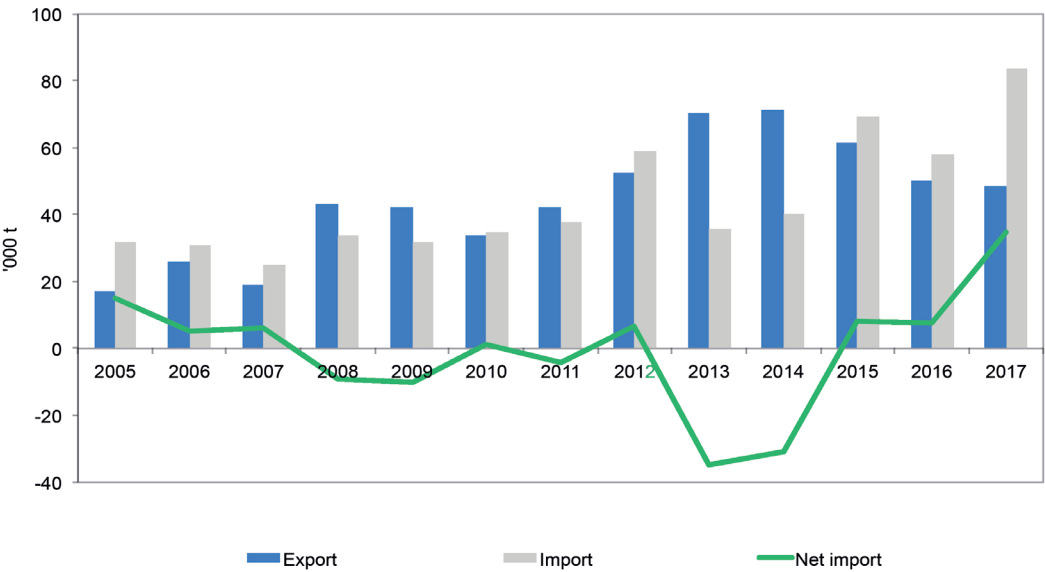
**Table 9: Number of producer-distributors (PDs) and milk buyers per province (indicated according to position of head office), as registered with Milk SA, Apr '16–Sep '18 (source: Milk SA)**

Province	Number of PDs						Number of milk buyers					
	Apr '16	Aug '16	Apr '17	Jul '17	Mar '18	Sep '18	Apr '16	Aug '16	Apr '17	Jul '17	Mar '18	Sep '18
Western Cape	24	23	22	19	19	8	37	37	36	36	34	27
Eastern Cape	14	15	12	11	10	3	14	12	9	9	8	6
Northern Cape	9	9	9	8	7	6	2	2	1	1	1	2
KwaZulu-Natal	11	10	10	9	9	7	22	23	24	23	19	20
Free State	11	10	10	9	7	6	12	12	12	11	12	13
North West	4	3	3	3	2	3	14	15	14	13	12	11
Gauteng	25	25	21	20	19	18	38	38	38	37	37	39
Mpumalanga	10	9	8	8	10	7	7	7	6	6	6	5
Limpopo	7	7	8	8	9	10	4	4	4	4	4	3
<b>Total</b>	<b>115</b>	<b>111</b>	<b>103</b>	<b>95</b>	<b>92</b>	<b>68</b>	<b>150</b>	<b>150</b>	<b>144</b>	<b>140</b>	<b>133</b>	<b>126</b>

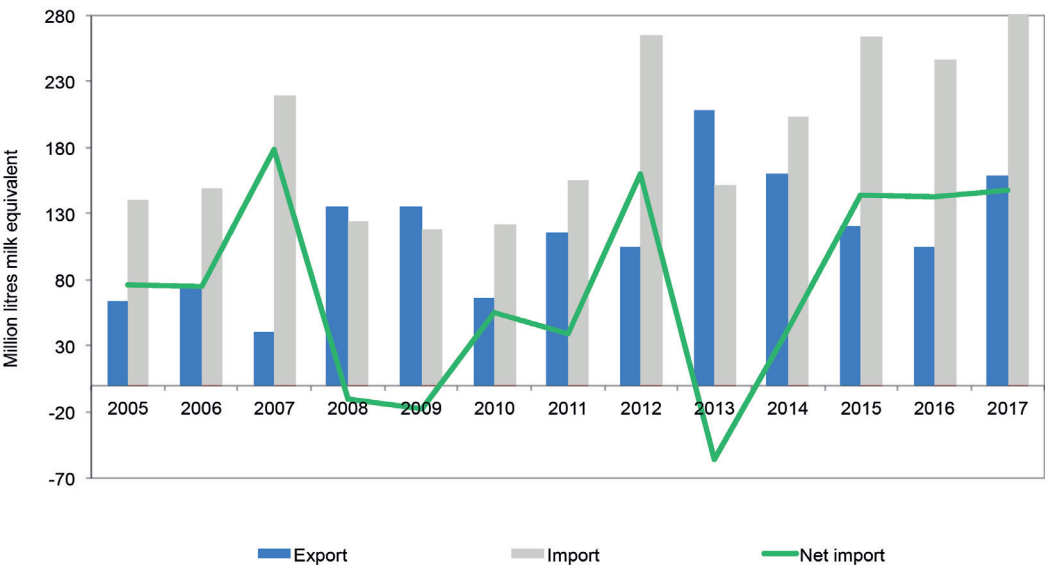


**Figure 21: Dairy product imports and exports, 2005-2017**

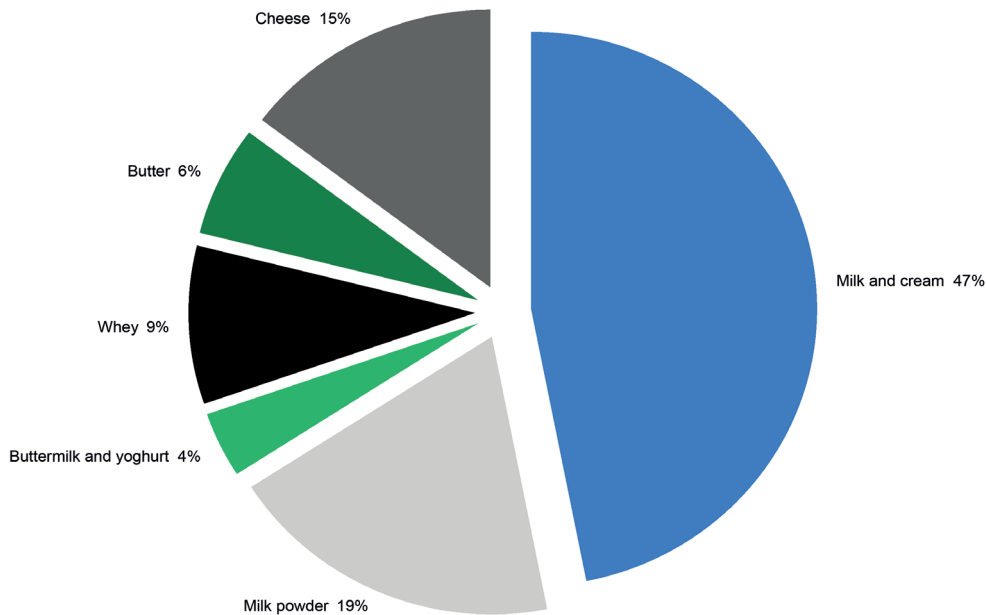
(source: Sars data, as supplied by Sampro)



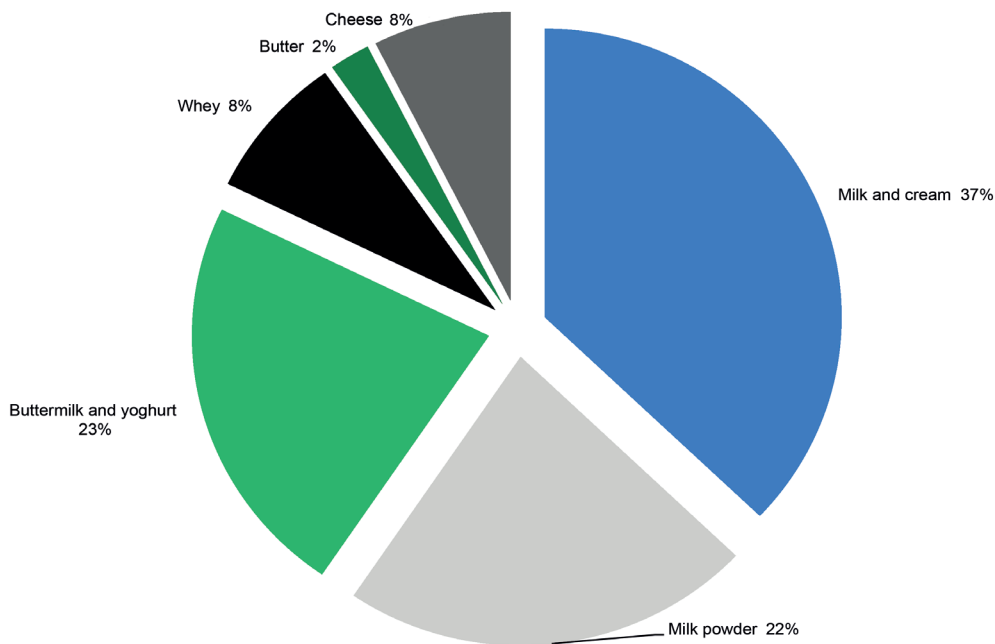
**Figure 22: Dairy product imports and exports on a milk-equivalent basis, 2005-2017** (source: Sars data, as supplied by Sampro)



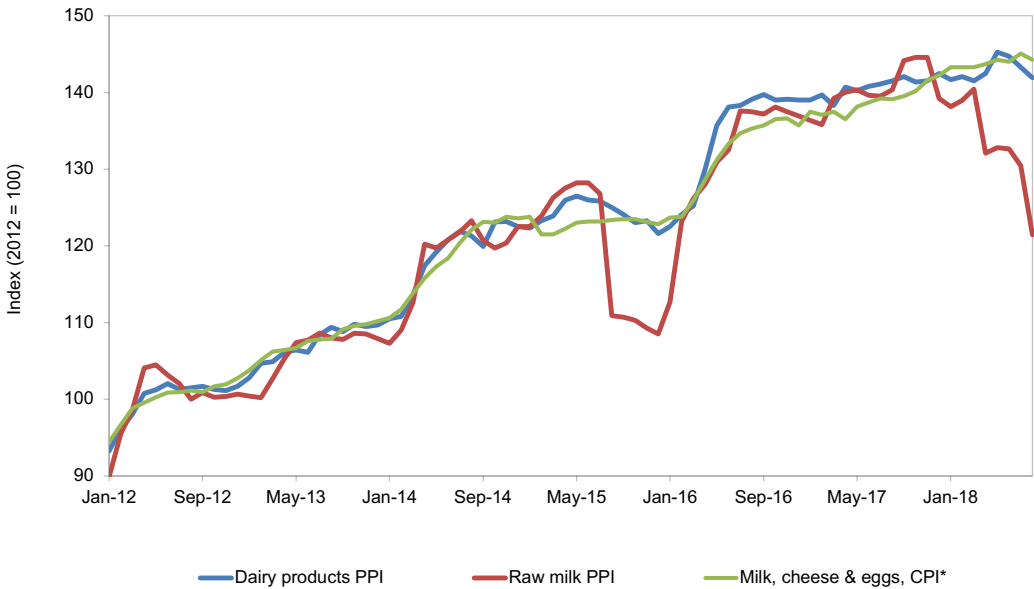
**Figure 23: Percentage composition of imports on a mass basis, 2017**  
(source: Sars data, as supplied by Sampro)



**Figure 24: Percentage composition of exports on a mass basis, 2017**  
(source: Sars data, as supplied by Sampro)



**Figure 25: Price index of raw milk on farm level, dairy products at processor level, and milk and eggs at consumer level, Jan 2012-Aug 2018 (source: Stats SA)**



The South African dairy market is growing. Table 10 indicates changes in the size of the formal market for South African products, and changes in retail prices, as reported by Nielsen SA and collated by Sampro.

The sales quantities of all products, with the exception of fresh milk, yoghurt, butter, cream cheese, cream, tea, and short-life juice, increased in the period. Total estimated liquid milk sales quantities (fresh and UHT) decreased by an estimated 1,3% during this period.

The change in sales in a 12-month period for any product does not imply that quantities or prices changed at a uniform rate during the period.

The average retail prices of five of the nine dairy products of which the performance in the retail market is monitored increased from June 2017 to June 2018. For two of these five products, the price increases were higher than the inflation rate of 4,6%

in the year ended in June 2018. In June 2018, the average retail price of four of the eight other food products was higher than a year ago, and the price increase of two of these four food products exceeded the inflation rate. The average retail sales price of nine of the 17 food products (dairy and other) covered in Table 10 increased from June 2017 to June 2018, and five of these nine products are dairy products.

Figure 25 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. Except for a period in 2015 when producer prices decreased relative to the other prices, prices follow the same general trend.

**The South African dairy market**

**IS GROWING.**

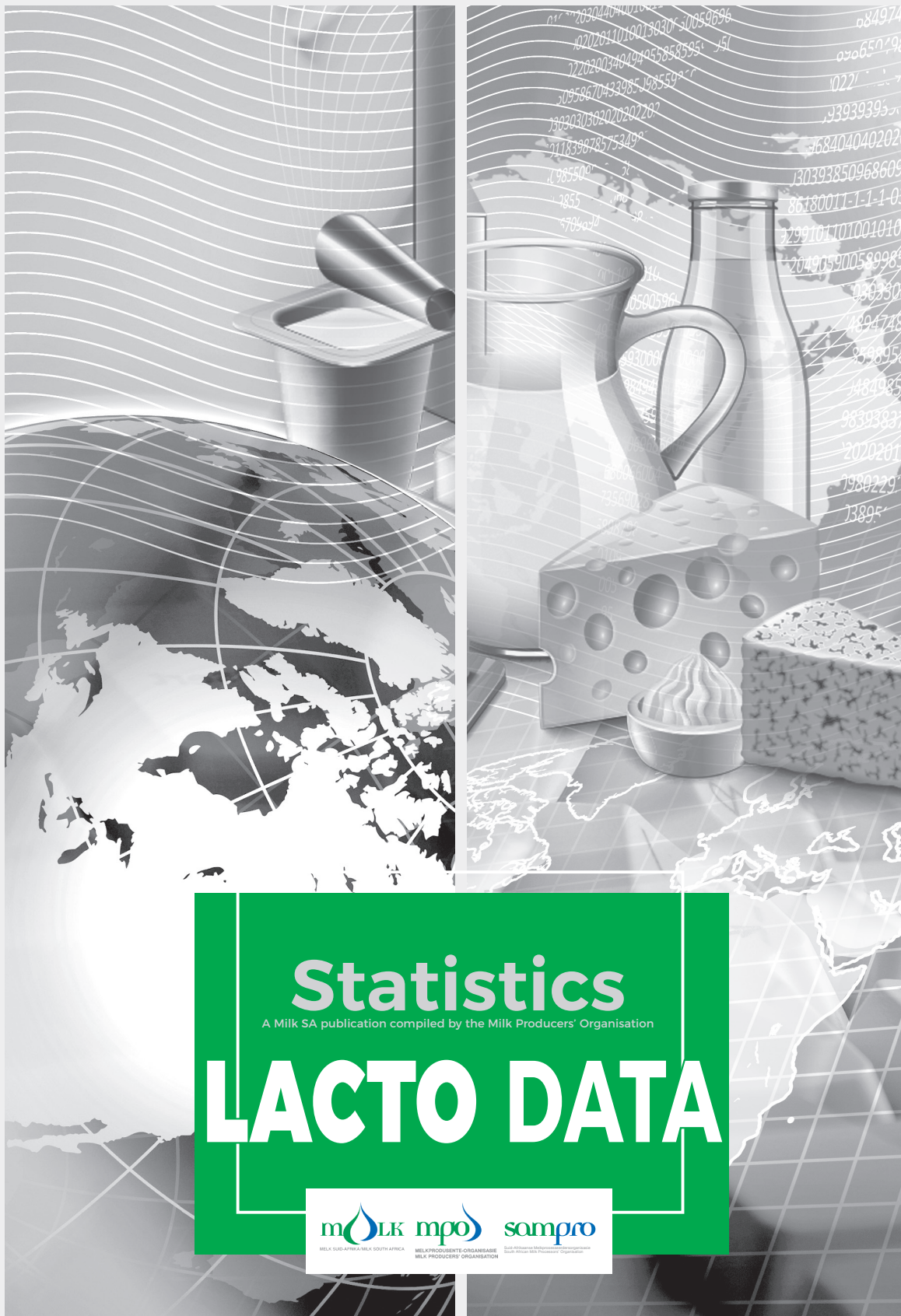
**Table 10: Year-on-year change in retail demand and prices of dairy and other food products** (source: Nielsen as supplied by Sampro)

Product	Change in demand (quantity) per cent July '16-June '17 vs July '17-June '18	Change in retail prices per cent June '18 vs June '17
Fresh milk	-3,2	-0,8
Long-life milk (UHT milk)	9,6	-3,5
Flavoured milk	1,3	2,5
Yoghurt	-1,8	2,8
Maas	8,8	-4,4
Pre-packaged cheese	9,7	-3,4
Cream cheese	-8,8	3,6
Butter	-4,7	20,8
Cream	-0,9	9,7
Instant cereals	8,2	0,2
Bread	10,4	-1,6
Rice	3,8	1,8
Maize meal	26,5	-28,8
Margarine	2,2	-1,3
Tea	-2,0	8,6
Coffee	7,1	-0,4
Short-life juice	-1,9	5,7

## ACRONYMS AND ABBREVIATIONS

<b>CAGR</b>	compound average growth rate
<b>CNIEL</b>	<i>Centre National Interprofessionnel de l'Economie Laitière</i>
<b>CPI</b>	consumer price index
<b>DAFF</b>	Department of Agriculture, Forestry and Fisheries
<b>ECM</b>	energy-corrected milk
<b>EU</b>	European Union
<b>FAO</b>	Food and Agricultural Organization of the United Nations
<b>FMP</b>	full-cream milk powder
<b>FOB</b>	free on board
<b>IDF</b>	International Dairy Federation
<b>IFCN</b>	International Farm Comparison Network

<b>IMF</b>	International Monetary Fund
<b>Milk SA</b>	Milk South Africa
<b>MPO</b>	Milk Producers' Organisation
<b>PD</b>	producer-distributor
<b>PPI</b>	producer price index
<b>Sampro</b>	South African Milk Processors' Organisation
<b>Sars</b>	South African Revenue Service
<b>SMP</b>	skimmed milk powder
<b>UHT</b>	ultra-high temperature
<b>UK</b>	United Kingdom
<b>US</b>	United States
<b>USDA</b>	United States Department of Agriculture



# Statistics

A Milk SA publication compiled by the Milk Producers' Organisation

## LACTO DATA

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MILKPRODUCENTE-ORGANISASIE

MILK PRODUCERS' ORGANISATION

South African Milk Producers' Organisation