



SUMMARY OF THE KEY MARKET SIGNALS FOR THE DAIRY INDUSTRY

MAY 2023 EDITION

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SYNOPSIS

Following the major changes in the world due to Covid, the situation in the world changed dramatically at the end of February 2022, due to the invasion of Ukraine by Russia and the reactions of other countries to the invasion. These developments and other developments like the increased tension between the Western world and China:

- Dramatically increased the level of uncertainty about future developments in the world; and
- Impacted negatively on economic growth in the world, prices of food, other products and energy, international trade and trade relations between countries.

The duration and outcome of the conflict created by Russia is unknown, and further escalation of the conflict and the negative impact of the conflict on economic growth in the world, is possible. It is known that even when the conflict comes to an end, some of the negative consequences of the conflict, will continue in the medium term and most likely also in the long term.

The price index for dairy products of the Food and Agricultural Organisation (FAO), which measures the price movements of a basket of dairy products in the international market, increased in 2021 to levels higher than in the previous seven years. This increase continued in the first half of 2022, but from June 2022 to May 2023, it decreased by 20.97 percent to a level 17.68 percent lower than May 2022, 1.98 percent lower than in May 2021 and 25.74 percent higher than in May 2020.

According to the FAO, the reduction in the price index of dairy products, is “principally due to ample export availabilities, including from inventories, amid seasonal high milk production in the northern hemisphere”.

The prices of unprocessed milk in the EU, increased sharply in 2022 and in the USA, it increased sharply in the first half of 2022. Following these increases, the prices of unprocessed milk in the EU and the USA, decreased sharply. In May 2023, the average price of unprocessed milk in the EU was 2.91 percent lower than in May 2022.

The performance of the South African economy in recent years, was disappointing and the Gross Domestic Product (GDP) in 2022, was only 0.26 percent higher than the GDP in 2019. If the GDP grows by 0.3 percent in 2023, as expected by the Reserve Bank, the GDP in 2023 will only be 0.56 percent higher than in 2019. This position and the high unemployment rate in South Africa, does not support optimistic views about the demand for consumer products, including dairy products, in the immediate future.

In 2020, in the situation created by COVID and the lockdown measures of Government, the performance (in terms of sales quantity and retail price), in the South African retail market of specific dairy products namely, UHT (long life) milk, yoghurt, maas, pre-packaged cheese, cream cheese, butter and cream, were higher than in 2019, while the opposite was true in respect of fresh and flavoured milk.

SYNOPSIS (Continued)

In the February 2021 edition of the “Summary of the Key Market Signals for the Dairy Industry”, it was stated that it should not be assumed that the good performance of most dairy products as achieved in 2020, will continue as, amongst other, “the lower level in South Africa of economic activity resulting from COVID, and of which the full extent will only be known later”, can impact negatively “on the demand for food products including dairy products”.

The good performance of dairy products in the South African retail market in 2020, did not continue in 2021, in 2022 and in the first quarter of 2023 (the latest available information is in respect of March 2023).

In 2021, the retail sales quantities of eight of the nine dairy products, of which the retail sales are monitored, were lower than in 2020.

In 2022, the retail sales quantities of six of the nine dairy products, namely fresh milk, flavoured milk, yoghurt, cream cheese, butter and cream, were from 2.1 to 7.7 percent lower than in 2021, while the retail sales quantities of three of the dairy products, namely UHT milk, maas and pre-packaged cheese, were from 0.05 to 1.2 percent, higher. The retail sales prices of the nine dairy products increased in the year which ended in December 2022, with from 6.7 percent to 13.2 percent. The price increases of eight of the nine dairy products were higher than the inflation rate of 7.2 percent in the year which ended in December 2022, but lower than the inflation rate of processed food of 15.7 percent in the same period.

The retail sales quantities in the year which ended in March 2023, of eight of the nine dairy products, namely fresh milk, UHT milk, flavoured milk, yoghurt, pre-packaged cheese, cream cheese, butter and cream, were from 0.02 percent to 6.4 percent lower than in the previous year, while the retail sales quantity of maas, was 0.3 percent higher. The retail sales prices of the nine dairy products increased in the year which ended in March 2023, with from 10.9 percent to 24.1 percent. The price increases of four of the nine dairy products, were higher than the inflation rate of processed food of 16.2 percent in the year which ended in March 2023.

The decrease in the retail sales quantities of most dairy products in South Africa, is linked to the erosion of the purchasing power of consumers by widespread increases in the prices of consumer goods and services (including high increases of the prices of dairy products), poor service delivery by the public sector and weak economic growth during the last five years.

The producer price index of dairy products as published by Statistics SA, fluctuated from month to month and:

- In the year which ended in December 2020, it increased by 1.60 percent;*
- In the year which ended in December 2021, it increased by 10.66 percent;*

SYNOPSIS (Continued)

- *In the year which ended in December 2022, it increased by 12.12 percent; and*
- *From December 2022 to April 2023 (the latest information is in respect of April 2023), the producer price index of dairy products, increased with 7.3 percent to a level:*
 - *15.7 percent higher than in April 2022;*
 - *26.7 percent higher than in April 2021; and*
 - *30.3 percent higher than in April 2020.*

According to Milk SA, the mass of production in South Africa of unprocessed milk in 2021, was 0.71 percent lower than in 2020, 0.86 percent lower than in 2019 and 0.21 percent lower than in 2018. The decrease from 2020 to 2021, was due to lower production in seven of the first eight months of 2021. The production in the last four months of 2021, was respectively 1.3 percent, 1.9 percent, 2.8 percent and 1.4 percent higher than in the same months of 2020.

The lower production in South Africa of unprocessed milk in 2021, relative to the production in 2020, should be considered, taking into account:

- *The retail sales quantities in 2021, of most dairy products, were lower than in 2020 and thus the demand for unprocessed milk for the production of these dairy products, was also lower; and*
- *The sharp rise in the prices of feed for dairy cattle in the second half of 2020, of which the impact was limited by the increase in the price of unprocessed milk in the last quarter of 2020 and in the first half of 2021.*

The mass of the production of unprocessed milk in South Africa in 2022, was 1.56 percent lower than in 2021, 2.26 percent lower than in 2020 and 2.41 percent lower than in 2019.

The lower production of unprocessed milk in 2022, relative to 2021, is due to lower production in nine months and only the production in January, July and August 2022, being higher than in the same months of 2021.

In the first five months of 2023, the estimated mass of the production of unprocessed milk, was 1.88 percent lower than in the first five months of 2022, due to lower production in four of the five months (the latest available information is in respect of May 2023).

The lower production of unprocessed milk in 2022 and in the first five months of 2023, is linked to the lower demand for dairy products which determines the demand for unprocessed milk, the high costs of inputs required for the production of unprocessed milk and unfavourable weather in particular periods in major production regions.

SYNOPSIS (Continued)

The production of unprocessed milk in South Africa and in other countries, is seasonal. In South Africa, the highest production per day occurs in October or November and the lowest in April, May or June. The average difference between the highest and lowest production per day in the fourteen years from 2008 to 2022, was 34.4 percent.

The extent of the seasonal decrease in the production of unprocessed milk in South Africa from October 2021 to June 2022, of 30.5 percent, was higher than the average decrease of 23.6 percent in the same periods of the years 2008/2009 to 2021/2022, and also higher than the previous highest decrease of 27.7 percent, which was recorded in the period October 2020 to June 2021.

The seasonal decrease in the production of unprocessed milk, from October 2022 to April 2023, is according to estimated figures 35.4 percent, which is 60.90 percent higher than the average decrease of 22.0 percent in the same periods of the previous fourteen years and 24.1 percent higher than the previous record high decrease of 27.7 percent, which was recorded in the same months of 2021/2022.

The extent of the seasonal increase in the production of unprocessed milk in South Africa, in the fifteen years from 2008 to 2022, from July to October, varied from 24.2 percent in 2010, to 35.8 percent in 2021, while the average increase in the years 2008 to 2021, was 29.2 percent. According to figures of Milk SA, the increase from July to October 2022, was 31.9 percent, which is the fourth highest increase in the fifteen years from 2008 to 2022.

The producer price index of unprocessed milk, as published by Statistics SA, fluctuated from month to month and:

- In the year which ended in December 2020, it increased by 10.57 percent;
- In the year which ended in December 2021, it increased by 10.32 percent;
- In the year which ended in December 2022, it increased by 16.39 percent; and
- From December 2022 to April 2023 (the latest available information is in respect of April 2023), the producer price index of unprocessed milk increased with 15.4 percent to a level:
 - 17.1 percent higher than in April 2022;
 - 32.1 percent higher than in April 2021; and
 - 51.3 percent higher than in April 2020.

The relationship between the producer price index of unprocessed milk and the index of the feed price indicator (feed for dairy cattle), is an important indicator at a macro level, of the level of encouragement for the production of unprocessed milk.

SYNOPSIS (Continued)

In 2022, the index of the feed price indicator moved close to the producer price index of unprocessed milk, but in January 2022 as well as from September 2022 to December 2022, the first mentioned was higher. This position, together with the sharp increases in the prices of other inputs such as fertilizers, fuel and electricity, offered less encouragement for the production of unprocessed milk, than in 2021 and in especially 2017, 2018 and 2019.

In the first four months of 2023, the relationship between the producer price index of unprocessed milk and the index of the feed price indicator, improved significantly due to the following:

- *The sharp decreases of the prices of maize and soya, which commenced in the last quarter of 2022; and*
- *The sharp increase of the price of unprocessed milk in the first four months of 2023.*

In April 2023, the relationship between the producer price index of unprocessed milk and the index of the feed price indicator, was much more favourable than in the previous three months of 2023 as well as in 2022, 2021, 2020 and 2019.

The future prices of yellow maize and soya, achieved in South Africa on 26 May 2023, for delivery from July 2023 to December 2023, indicate slight upward movement of the prices of yellow maize and soya.

In 2018, 2019, and 2020, the producer price index of unprocessed milk was at lower levels than the producer price index of dairy products. In 2021 and 2022, the producer price index of unprocessed milk was, respectively in nine and in ten months higher than the producer price index of dairy products. From January 2023 to April 2023 (the latest available information is in respect of April 2023), the producer price index of unprocessed milk was higher than that of dairy products.

The producer price index of unprocessed milk was, in the eight years from January 2015 to December 2022 and in the first quarter of 2023:

- *With the exception of one month in 2015, higher than the retail price index of UHT milk;*
- *Moved in 2016 and 2017, close to the retail price index of fresh milk, in nine months of 2018, in 2019, in 2020 and in seven months of 2021 it was lower, but from March 2022 to March 2023, the producer price index of unprocessed milk was higher than the retail price index of fresh milk;*
- *Higher than the retail price indices of pre-packaged cheese and maas; and*
- *With the exception of the period August 2018 to September 2018 and in the period November 2018 to February 2019, higher than the retail price index of yoghurt.*

SYNOPSIS (Continued)

The sharp increases in the prices of unprocessed milk and dairy products, should be considered taking into account the following:

Production costs do not determine prices, as prices are determined by the interaction between supply and demand, but production costs determine the quantity which will be supplied at a given price. The sharp price increases in respect of unprocessed milk and dairy products, as described above, were not intended to meet additional demand, as the demand for dairy products, which determine the demand for unprocessed milk, did not increase. Amidst sharp increases in the production costs of unprocessed milk and dairy products, the price increases were motivated by the need to maintain supply at a level close to the demand, which did not increase, as shown by the retail sales quantities for dairy products. It is highly likely that these price increases prevented significant decline in the production capacity of the South African dairy industry. Due to the demanding and complex nature of the dairy industry, it is very difficult to regain production capacity previously lost.

The factual position that the South African dairy industry is confronted with, as shown by the information available up to 19 June 2023, corresponds to a large extent, with the factual position described in the November 2022 and February 2023 editions of “Summary of the Key Market Signals for the Dairy Industry”. Key aspects of the reality in which the South African dairy industry has to operate in the rest of 2023, are:

- *High levels of uncertainty about future economic growth and political developments internationally and in South Africa;*
- *Interrupted supply of electricity which creates higher costs and other disruptions;*
- *Consumer purchasing power eroded by the widespread increases of the prices of consumer goods and services, poor service delivery by the public sector and lack of economic growth;*
- *Lower demand for most dairy products in terms of quantity and the expected growth of the Gross Domestic Product in 2023, does not support optimistic views about the demand for consumer goods, including dairy products, in the immediate future;*
- *Uncertainty about the extent of the negative impact in the next few months of the recent increases of the prices of dairy products, on the demand, in terms of quantity, for dairy products and thus, on the demand for unprocessed milk;*
- *Lower production of unprocessed milk in 2022, than in 2019, 2020 and 2021 and lower production in the first five months of 2023, than in the same months of 2022;*

SYNOPSIS (Continued)

- *In 2022, the relationship between the index of the feed price indicator and the index of the producer price index of unprocessed milk, was very unfavourable. In the first four months of 2023, due to the significant increase of the index of the price of unprocessed milk and the significant decrease of prices of maize and soya, the extent to which the index of the producer price of unprocessed milk exceeded the index of the feed price indicator increased. In April 2023, the extent to which the producer price index of unprocessed milk exceeded the index of the feed price indicator, was higher than in the previous three months of 2023, as well as in 2022, 2021, 2020 and 2019;*
- *The seasonal increase in production of unprocessed milk, from July to October in the last fifteen years, varied from 24.6 percent to 35.8 percent. The seasonal increase from July 2023 to October 2023 of the production of unprocessed milk and thus the increase in the production of dairy products can, amidst the expected weak consumer demand, put downward pressure on the prices of dairy products and unprocessed milk in the coming months.*

CHAPTER 1

Introduction

1. This report is a quarterly publication of SAMPRO and is prepared by the Office of SAMPRO, independently from the commercial interests of role players in the dairy industry.
2. The purpose of this report is, like the other regular reports of SAMPRO, to make market signals available to all interested parties, in order to promote the effective working of the markets for unprocessed milk and the different other dairy products, as envisaged by the Competition Act and which is in the interest of the consumer, the dairy industry and optimum use of national resources.
3. This report is of a macro nature and the position in South Africa of individual unprocessed milk producers, individual producers of processed milk and individual manufacturers of other dairy products, can differ from the macro position due to a variety of factors. In the primary dairy industry (the producers of unprocessed milk), differences are the result of factors like production regime (pasture-based or total mixed ration), sophistication in respect of the management (in respect of issues such as monitoring of individual animals, feeding, animal health, soil health and pastures), weather conditions, geographical location and the extent to which the producer is involved in the production of other agricultural products, which are complementary to the production of unprocessed milk (like the production of maize and lucerne). In the secondary dairy industry (the producers of processed milk and the manufacturers of the other dairy products), differences are the result of factors like product range, the reputation of the brand name, exposure to foreign competition, geographical location, as well as productivity in respect of the collection of unprocessed milk, processing, manufacturing and marketing.
4. As a result of, as described in the previous paragraph, the diverse nature of the South African primary dairy industry and the diverse nature of the South African secondary dairy industry, the reaction of the different members of the primary dairy industry and different members of the secondary dairy industry, to the same set of market signals, can differ.
5. This report presents a summary of information regarding market signals for the South African dairy industry and more comprehensive information is available from the Office of SAMPRO. The information contained in this report, is the information available up to 19 June 2023. The situation in the world, changed dramatically at the end of February 2022, due to the invasion of Ukraine by Russia and the reactions of different countries to the invasion. The duration and the outcome of the conflict is unknown and escalation of the negative impact of the conflict on economic growth in the world, is possible. It is known that:
 - Thus far, the invasion and reactions of countries to the invasion, impacted significantly negatively on economic growth in the world, inflation, international trade and the trade relations between major countries;

- The negative impact will continue in at least the medium term and most likely in the next decade; and it
- Increased to a very high extent, the uncertainty regarding future economic growth in the world, international trade and trade relations between countries. The increased tension between the Western world and China, adds to the uncertainty.

CHAPTER 2

The International Markets for Dairy Products and Unprocessed Milk Markets in Major Dairy Countries

6. The FAO¹⁾ price index for dairy products traded internationally (See Graph 1 of Annexure A), is an important indicator of the macro conditions in international markets for dairy products. This index measures the changes of the prices achieved in the international market in respect of a basket of dairy products consisting of butter, cheese, skimmed milk powder and full cream milk powder. The other dairy products like UHT milk, yoghurt and maas, are not included in the basket, as the international trade of these products is relatively limited.
7. The movements of the FAO Price Index for dairy products in the last four years and in the first five months of 2023, can be summarised as follows:
 - In 2019, the highest monthly index figure of 106.6, exceeded the lowest index figure of 99.6 by 7.0 percent. The index figure in December 2019 of 103.5, was 2.6 percent higher than the index figure of 100.9 in January 2019;
 - In 2020, the highest monthly index figure of 109.2, exceeded the lowest index figure of 94.4 by 15.6 percent. The index figure in December 2020 of 109.2, was 5.2 percent higher than the index figure of 103.8 in January 2020;
 - In 2021, the highest monthly index figure of 129.0, exceeded the lowest index figure of 111.2 by 16.0 percent. The index figure in December 2021, of 116.2 was 4.4 percent higher than the index figure of 111.2 in January 2021;
 - In 2022, the highest index figure of 150.1, which was recorded in June 2022, exceeded the lowest of 132.6 which was recorded in January 2022, with 13.2 percent. The index figure in December 2022 of 138.31, was 4.2 percent higher than the index figure of 132.6 in January 2022; and
 - In the first five months of 2023 (the latest available information is in respect of May 2023), the index decreased and the index in May 2023, was:
 - 17.68 percent lower than in May 2022;
 - 1.98 percent lower than in May 2021; and
 - 25.74 percent higher than in May 2020.

1) *Food and Agricultural Organization of the United Nations.*

8. The views of the FAO regarding the reasons for the decrease in the price index for dairy products, are as follows:
- “The decline in May was led by a steep drop in international cheese prices, principally due to ample export availabilities, including from inventories, amid seasonally high milk production in the northern hemisphere. Following 10 monthly consecutive declines, international price quotations for milk powders rebounded, reflecting an upturn in purchases by North Asian buyers and seasonally falling milk supplies in Oceania. Meanwhile, butter prices rose slightly, as increased price quotations for supplies from Oceania, due to high purchases by Southeast Asian buyers and seasonally falling milk supplies, were almost offset by a decline in European prices on high export availabilities.”*
9. In 2021 and 2022, as well as in the first five months of 2023, the FAO price index for dairy products was lower than the FAO price indices for “cereals”, and “vegetable oils”. As important inputs for the production of unprocessed milk originate from the grain and vegetable oils industries, this position created less encouragement for the production of unprocessed milk. The extent to which the price index of vegetable oils is higher than that of dairy, decreased sharply from 58.9 percent in May 2022, to zero percent in May 2023 and the extent to which the price index of cereals exceeded the price index of dairy products, decreased in the same period from 20.3 percent to 9.2 percent. (See Graph 2 of Annexure A).
10. As shown in paragraph 7, the level of the price index for dairy products of the FAO, frequently changed.
11. In the last twenty-three years (2000 to 2022) the extent to which the highest monthly FAO dairy price index in a year, exceeded the lowest, varied from 3.4 percent in 2005, to 82.8 percent in 2007, and the average difference in the twenty-three years from 2000 to 2022, was 25.5 percent. In 2022, the highest monthly price index for dairy products, which was recorded in June 2022, exceeded the lowest index, which was recorded in January 2022, with 13.2 percent. (See Table 1 of Annexure A).
12. In the last eleven years (2012 to 2022) the extent to which the highest monthly FAO dairy price index in a year, exceeded the lowest, varied from 7.0 percent in 2019, to 58.8 percent in 2014. The low levels of volatility in 2018 of 14.7 percent, 7.0 percent in 2019, 15.7 percent in 2020, 16.0 percent in 2021 and 13.2 percent in 2022, are indicative that in the recent years, the supply of and the demand for dairy products in the international market, remained to a high extent in balance, notwithstanding the very different supply and demand situations in the years concerned. In other words, in the last five years, the international supply of dairy products followed, to a meaningful extent, the international demand for dairy products.

13. The FAO price index for dairy products reflects the changes in the prices of a basket of dairy products traded internationally and thus not the movements of the prices in the international trade of all the individual types of dairy products. Due to different supply and demand situations in respect of the different dairy products, the price movements of the different dairy products, often differ.
14. In 2022 and in the first five months of 2023, the prices of butter and cheddar cheese in the international market, were more or less at the same levels and much higher than the prices of whole milk powder and skimmed milk powder. In 2022 and in the first five months of 2023, the prices of whole milk powder and skimmed milk powder, did not differ much, while in the previous years, the price of whole milk powder was typically significantly higher than the price of skimmed milk powder. (See Graph 3 of Annexure A).
15. In 2022, the prices of butter, cheddar cheese, whole milk powder and skimmed milk powder decreased. From January 2023 to May 2023, the prices of the four products moved up and down and the prices in May 2023 of cheddar cheese, whole milk powder and skimmed milk powder, were lower than in January 2023, while the price of butter was in May 2023, slightly higher than in January 2023. (See Graph 3 of Annexure A)
16. Regarding future developments in respect of the prices of dairy products in the international markets, the future prices achieved at the Global Trade Auctions are good indicators. The changes in the prices of the dairy products achieved at the Global Dairy Trade Auction on 16 May 2023, for delivery from June 2023 to October 2023, are as follows:
 - The price of whole milk powder moves sideways from July 2023 to November 2023;
 - The price of skimmed milk powder decreases from July 2023 to August 2023, with 6.68 percent and from August 2023 to November 2023, it moves sideways within a band of prices of which the highest is 2.67 percent higher than the lowest;
 - The price of cheddar cheese decreases from July 2023 to September 2023, with 18.72 percent and from September 2023 to November 2023, it moves sideways; and
 - The price of butter decreases from July 2023 to November 2023, by 8.55 percent. (See Table 2 of Annexure A).
17. The expectation of the Department of Agriculture of the USA regarding future prices of dairy products in the USA, published on 18 May 2023, indicates in respect of cheddar cheese, butter and skimmed milk powder, sideways movements from the second quarter of 2023 to the first quarter of 2024. (See Graph 4 of Annexure A).

18. The level of uncertainty in respect of future international trade, including the future international trade in dairy products, created by the Russian invasion of Ukraine and the reaction of other countries to it, as well as other developments such as the increased tension between the Western world and China, is the highest since the Second World War and it adds to the uncertainty regarding the future economic growth and the demand for dairy products in the world.

19. Unprocessed milk production in the world is seasonal, as production in the winter is lower than the production in summer. The peak production season of the Northern Hemisphere coincides with the low production season of the Southern Hemisphere. The extent to which unprocessed milk production in different countries is seasonal, differs and, for example, the production in New Zealand is much more seasonal than in the member countries of the EU. (See Graph 5 of Annexure A).

20. The prices of unprocessed milk in different member states of the European Union (EU), differ. In 2020, the average price of unprocessed milk in the EU was from March 2020, lower than in not only the same months of 2019, but from July 2020, also lower than the average price in 2018. In the first two months of 2021, the price of unprocessed milk was lower than in the same months of 2020, but from March 2021, it moved to much higher levels than in 2018, 2019 and 2020. The price increased in each month of 2022, but from December 2022 to May 2023, (the latest available information is in respect of May 2023), it decreased by 20.06 percent. In January 2023, the average price in the EU was 33.25 percent higher than in January 2022, but in May 2023, the price was 2.91 percent lower than in May 2022. (See Graph 6 of Annexure A).

21. The movements of the price of unprocessed milk in the United States of America, in 2020, 2021 and 2022, were very volatile and the highest price exceeded the lowest, by approximately 52.0 percent. The monthly prices in 2022, was much higher than in any of the months of the years, 2015 to 2021. In the second half of 2022 and the first five months of 2023, the price of unprocessed milk decreased sharply, but it remained higher than from 2015 to the second quarter of 2021. (See Graph 7 of Annexure A).

CHAPTER 3

The growth of the Gross domestic product (GDP) of South Africa, the level of Unemployment in South Africa and expectations regarding the demand for consumer goods in South Africa

22. On a macro level, the demand for products in South Africa, including the demand for consumer goods like dairy products, is influenced by the growth of the South African economy as shown by the Gross Domestic Product (GDP) figures of South Africa. This statement does not imply that the quantity of the sales of different products, like dairy products, changes to the same extent as the GDP. Due to many factors, such as climate, imports, price changes and changes in consumer preferences, the percentage change in the quantity of the sales of a particular South African product, can differ significantly from the percentage change in the GDP. Simply said:
- The quantity of the sales of a particular product will only increase more than the GDP, if particular favourable circumstances are applicable to the product concerned, like prices that decreased relative to the prices of other products; and
 - A general increase in the demand for consumer goods in South Africa, is dependent on growth of the GDP of South Africa.
23. Some economic commentators put emphasis mainly on the growth of the GDP in the last quarter versus the previous quarter. It is important not to only take into account the change in the GDP per quarter, but to also take into account the growth in the GDP per year, as indicated in the following table.

The GDP of South Africa at constant 2015 prices ²⁾

	R million	Index
2018	4 570 232	100.0000
2019	4 584 101	100.3034
2020	4 293 356	93.9417
2021	4 504 292	98.5571
2022	4 596 283	100.5700
2023 Estimates		
IMF ³⁾	4 600 879	100.6706
SA Reserve Bank ⁴⁾	4 610 071	100.8717

2) Table prepared by the Office of SAMPRO based on information published in Statistical Release P0441 Gross Domestic Product, Fourth Quarter 2022 of Stats SA in respect of 2018 to 2022.

3) In April 2023, the International Monetary Fund or IMF, published their expectation that the GDP will grow with 0.1 percent in 2023, which is much lower than the 1.2 percent growth rate expected by the IMF in the beginning of 2023.

4) In May 2023, the Reserve Bank published their expectation that the GDP will grow with 0.3 percent in 2023.

24. The following are important observations in respect of the table on the previous page:
- a) The GDP in 2022 was only 0.26 percent higher than in 2019 and 0.57 percent higher than in 2018;
 - b) The growth of the GDP in 2023, as expected by the SA Reserve Bank of 0.3 percent, is higher than the 0.1 percent expected by the IMF; and
 - c) Even if the GDP increases by 0.3 percent from 2022 to 2023, the GDP will only be 0.87 percent higher in 2023 than in 2018 and 0.56 percent higher than in 2019, although it will be 7.37 percent and 2.34 percent higher than in 2020 and 2021, respectively.
25. The expected increase in the GDP in 2023, as shown in the previous paragraph, does not support optimistic views about the demand for consumer goods in South Africa in the immediate future.
26. Factors that can prevent the expected growth in 2023 of the GDP of South Africa, include continuation of high levels of load shedding and poor service delivery by the public sector, as well as possible negative consequences of the position of the South African Government in respect of Russia and other actions by the South African Government, which undermines future economic growth, like the envisage actions in respect of water rights and public health.
27. The level of unemployment in South Africa is due to various reasons important, including the fact that it is one of a number of variables relevant in respect of expectations regarding future sales of consumer goods in South Africa.
28. In the news media the attention is mainly on the comparison of the unemployment level in the last quarter versus the unemployment level in the previous quarter. It is important to not only consider the changes in unemployment in the last two quarters, as attention should also be given to the changes in unemployment during periods longer than the last two quarters.
29. The levels of unemployment in the eight years from 2015 to 2022 and in the first quarter of 2023, are indicated in the next table.

Indices of rate of unemployment ⁵⁾ in South Africa
First quarter 2015 = 100

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average ⁶⁾
2015	100.00	94.64	96.59	92.80	96.00
2016	101.13	100.75	102.65	100.37	101.22
2017	104.92	104.92	104.92	101.13	103.97
2018	101.13	103.03	104.16	102.65	102.74
2019	104.54	109.84	110.22	110.22	108.70
2020	114.01	88.25	116.66	123.10	110.50
2021	123.48	130.30	132.19	133.71	129.92
2022	130.68	128.40	124.62	123.86	126.89
2023	124.62				

30. Major observations in respect of the table above, are as follows:

- a) The average rate of unemployment in 2022 was 2.3 percent lower than in 2021 but:
 - i. 14.83 percent higher than in 2020,
 - ii. 16.73 percent higher than in 2019,
 - iii. 23.50 percent higher than in 2018,
 - iv. 22.04 percent higher than in 2017; and
 - v. 25.36 percent higher than in 2016.

- b) The rate of unemployment in the first quarter of 2023 was 4.6 percent lower than in the first quarter of 2022, but:
 - i. 0.92 percent higher than in the first quarter of 2021,
 - ii. 9.30 percent higher than in the first quarter of 2020,
 - iii. 19.20 percent higher than in the first quarter of 2019,
 - iv. 23.22 percent higher than in the first quarter of 2018,
 - v. 18.77 percent higher than in the first quarter of 2017; and
 - vi. 23.22 percent higher than in the first quarter of 2016.

31. The above information about the level of unemployment in the recent past in South Africa, does not support optimistic views regarding the demand for consumer goods in the immediate future.

5) Table prepared by the Office of SAMPRO based on information published by Statistics South Africa in its STATISTICAL RELEASE P0211 titled "Quarterly Labour Force Survey Quarter 1: 2023."

6) Average calculated by the Office of SAMPRO by dividing the sum of the quarterly figures of the year by four.

CHAPTER 4

The South African Markets for Dairy Products and Unprocessed Milk

32. Regarding the imports and exports of dairy products of South Africa in 2022, the information obtained from SARS showed the following:
- The mass of imports of dairy products in 2022, was 30.0 percent lower than in 2021, and 12.6 percent lower than in 2020. The decrease from 2021 to 2022, is due to the decrease in imports of four of the six categories of dairy products;
 - The average f.o.b. import prices in 2022, of five of the six different categories of dairy products, were higher than in 2021;
 - The mass of exports of dairy products in 2022, was 1.9 percent higher than in 2021, and 11.3 percent higher than in 2020. The increase from 2021 to 2022, is due to the increase in exports of four of the six categories of dairy products;
 - The average f.o.b. export prices in 2022, of the six categories of dairy products, were higher than in 2021;
 - The mass of imports and exports in 2022, showed that South Africa was a net importer of concentrated milk (04.02), whey (04.04), butter (04.05), and cheese (04.06) and a net exporter of milk and cream (04.01), and buttermilk and yoghurt (04.03); and
 - The exposure of the South African dairy industry to foreign competition (that is imports plus exports) in 2022, is the lowest in the eleven years from 2012 to 2022 (See Table 3 and Table 4 of Annexure A).
33. If the levels of import and export recorded in the first four months of 2023, are maintained in the rest of 2023⁷⁾, the position will be as follows:
- The mass of imports will be 15.6 percent lower than in 2022, due to the decrease of imports of five of the six types of dairy products;
 - The mass of exports will be 8.0 percent higher than in 2022, due to the increase in exports of two of the six types of dairy products; and
 - The mass of the imports of milk and cream (04.01), buttermilk and yoghurt (04.03) and cheese (04.06), will be lower than the mass of exports, while the opposite will be true in respect of concentrated milk (04.02), whey (04.04) and butter (04.05).

7) *Estimates regarding future imports and exports based on historic import figures should be viewed with caution as the pattern of imports (distribution per month of total import and export during a year) in different years differ meaningful.*

34. The average f.o.b. import and export prices in the first four months 2023 of the six types of dairy products, were higher than in 2022.
35. The mass of production of unprocessed milk in South Africa is seasonal just like in other countries, with high production in summer and low production in winter. In South Africa, in the fifteen years, 2008 to 2022:
- The highest production per day per month was in October (thirteen years), or November (two years);
 - The lowest production per day per month was in April (three years), May (three years), or June (nine years); and
 - The highest production per day per month was on average 34.4 percent higher than the lowest. The highest difference of 40.9 percent was recorded in 2021, the second highest of 39.7 percent was recorded in 2022, whilst the lowest of 25.2 percent, was recorded in 2015 and the second lowest of 29.0 percent, was recorded in 2012. (See Graph 8 of Annexure A).
36. The mass of the production of unprocessed milk in South Africa, which is indicative of the production of dairy products in South Africa, increased with an average annual growth rate of:
- 1.20 percent in the three years from 2008 to 2011;
 - 3.12 percent in the three years from 2011 to 2014;
 - 2.94 percent in the three years from 2014 to 2017;
 - 1.75 percent in the three years, 2017 to 2020; and
 - 1.76 percent in the fourteen years from 2008 to 2022. (See Table 5 of Annexure A).
37. From 2008 to 2022, the total unprocessed milk purchases per annum in South Africa increased by 27.26 percent, but the pattern of production of unprocessed milk during each of the last fourteen years (2009 to 2022), as measured by the distribution of the total annual unprocessed milk production per quarter and per half year of each year, did not change in any particular direction, as is evident from Table 6 and Table 7 of Annexure A.
38. The mass of the production of unprocessed milk in South Africa in 2018, was 4.82 percent higher than in 2017, and it was the result of the higher production in eleven of the twelve months of 2018. The increase of 4.82 percent from 2017 to 2018, was the second highest year-on-year increase recorded in the eleven years 2008 to 2018. The highest increase of 6.37 percent was recorded in 2015, the third highest of 4.81 percent was recorded in 2010, and the fourth highest of 4.50 percent, was recorded in 2012. (See Table 5 of Annexure A).

39. The mass of the production of unprocessed milk in South Africa in 2019, was 0.65 percent higher than the previous record high production that was recorded in 2018, and 5.5 percent higher than in 2017 (See Table 5 of Annexure A). The lower growth rate of production in 2019, is the result of lower production in five months, namely January, February, April, July and December. (See Table 8 of Annexure A).
40. The mass of the production of unprocessed milk in South Africa in 2020, was 0.16 percent lower than in 2019, 0.49 percent higher than in 2018, and 5.3 percent higher than in 2017. The decrease from 2019 to 2020, is the result of lower production in eight of the twelve months of 2020, but the production in October 2020 was higher than the production in October of the previous ten years. (See Graph 8 of Annexure A).
41. The lower production in South Africa of unprocessed milk in 2020, relative to the production in 2019, should be seen against the background of, especially, the following:
- The uncertainty about the impact of COVID on the demand for dairy products and thus the demand for unprocessed milk, which existed in 2020. Essentially, this position, at any point in time in 2020, discouraged optimistic views about the future demand for dairy products and the demand for unprocessed milk, and thus the justification for stimulation of the production of unprocessed milk through price increases;
 - The unexpected sharp increases in the prices of maize and soya in the second half of 2020, which are the basis of important ingredients⁸⁾ of feed for dairy cattle and which eroded the positive impact of the increase in the prices of unprocessed milk which occurred; and
 - The high increases in the production of unprocessed milk in 2017 and 2018, of respectively 3.02 percent and 4.82 percent, and from 2016 to 2019 of 8.6 percent.
42. The mass of the production of unprocessed milk in South Africa in 2021, was 0.71 percent lower than in 2020, due to lower production in seven of the first eight months of 2021 (See Table 5 and Table 8 of Annexure A). The lower production in South Africa of unprocessed milk in 2021, relative to the production in 2020, should be considered taking into account:
- The retail sales quantities in 2021, of most dairy products, were lower than in 2020, as a result of which the demand for unprocessed milk for the production of these dairy products, was also lower; and
 - The sharp rise in the price of feed for dairy cattle in the second half of 2020 and in the second half of 2021 (See Graph 10 of Annexure A), of which the impact was limited by the increase in the price of unprocessed milk in the last quarter of 2020 and in the first half of 2021 (See Graph 9 and Graph 10 of Annexure A).

8) *Hominy chop and meal originating from maize seed and soya oil cake meal. Other products, originating from grains other than maize meal and soya, are also used and can, to some extent, replace the products originating from maize and soya.*

43. The mass of the production of unprocessed milk in 2022, was 1.56 percent lower than in 2021, due to lower production in nine months of the twelve months of 2022. In January 2023 to May 2023 (the latest available information is in respect of May 2023), the estimated mass of the production of unprocessed milk, was 1.88 percent lower than in the first five months of 2022, due to lower production in four of the first five months of 2023. (See Table 5 and Table 8 of Annexure A).
44. The lower production of unprocessed milk in 2022 and in the first four months of 2023, is linked to the lower demand for major dairy products, high input costs which eroded the impact of higher prices for unprocessed milk and periods of unfavourable weather in major production regions. (See Graph 10 of Annexure A).
45. The seasonal decrease in the mass of the production of unprocessed milk in South Africa from October 2021 to June 2022, was 30.5 percent, which is:
- Higher than the average decrease of 23.6 percent in the same periods of the fourteen years 2008/2009 to 2021/2022; and
 - The highest decrease from October to June, recorded in the thirteen years from 2008/2009 to 2020/2021 (See Table 9 of Annexure A). Note that the production in October 2021, was higher than in October of the previous years (See Graph 8 and Tale 9 of Annexure A).
46. The seasonal decrease in the production of unprocessed milk, from October 2022 to April 2023, is according to estimated figures 35.4 percent, which is 60.90 percent higher than the average decrease of 22.0 percent in the same periods of the previous fourteen years and 24.1 percent higher than the previous record high decrease of 27.7 percent, which was recorded in the same months of 2021/2022 (See Table 9 of Annexure A).
47. Regarding the seasonal increase in the mass of the production of unprocessed milk in South Africa:
- The increase from July 2021 to October 2021, was 35.8 percent, which is the highest increase recorded during the same periods in the fourteen years, from 2008 to 2021; and
 - The increase in the estimated production from July 2022 to October 2022, was 31.9 percent, which is higher than the average increase of 29.2 percent in the fourteen years from 2008 to 2021 and it is, together with the increase in 2020, the third highest increase in the fifteen years 2008 to 2022 (See Table 10 of Annexure A).
48. In 2021, the producer price index of unprocessed milk, increased in eight months and decreased in four months. The net result of the changes, was that the price index in December 2021, was 10.3 percent higher than in December 2020 (See Table 11 of Annexure A).

49. In 2022, the producer price index of unprocessed milk, increased in eight months, stayed in one month on the same level as in the previous month and decreased in three months. The net result of these changes, was that the price index in December 2022, was 16.3 percent higher than in December 2021.
50. From December 2022 to April 2023 (the latest available information is in respect of April 2023), the producer price index of unprocessed milk increased with 15.4 percent to a level:
- 17.1 percent higher than in April 2022;
 - 32.1 percent higher than in April 2021; and
 - 51.3 percent higher than in April 2020.
51. Production costs do not determine prices, as prices are determined by the interaction between supply and demand, but production costs determine the quantity which will be supplied at a given price. The sharp price increases in respect of unprocessed milk, as described in the previous paragraph, were not intended to meet additional demand, as the demand for dairy products, which determine the demand for unprocessed milk, did not increase. Amidst sharp increases in the production costs of unprocessed milk, the price increases in respect of unprocessed milk, were motivated by the need to maintain supply at a level close to the demand, which did not increase as shown by the retail sales quantities for dairy products, as described in paragraph 72. It is highly likely that these price increases prevented significant decline in the production capacity of the South African dairy industry. Due to the complex and demanding nature of the dairy industry, it is very difficult to regain production capacity previously lost.
52. The producer price index of unprocessed milk was:
- In 2021, with the exception of September, October and December, higher than the producer price index of dairy products.;
 - In 2022, with the exception of October and December, higher than the producer price index of dairy products; and
 - In the first four months of 2023, higher than the producer price index of dairy products. (See Graph 13 of Annexure A)
53. In eight months of 2021, from January to December 2022 and in the first four month of 2023 (the latest available information is in respect of April 2023), the producer price index of unprocessed milk was below the producer price index of “cereals and other crops”. (See Graph 9 of Annexure A). On a macro level, the comparison between these two indices is one of the indicators of the level of encouragement to produce unprocessed milk. More specific and relevant comparisons are the comparisons of the producer price index of unprocessed milk with the indices of the prices of yellow maize, soya and the index of the feed price indicator and it shows the following:

- In 2019, due to the price movements of unprocessed milk, yellow maize and soya, the level of encouragement to produce unprocessed milk, was generally lower than in 2018. The favourable downward movement of the price of maize in 2019, was offset by the increase in the price of soya, resulting in an increase in the index of the feed price indicator. The feed price indicator is calculated as the sum of 70 percent of the maize price and 30 percent of the soya price (See Graph 10 of Annexure A);
- From the second quarter of 2020, the prices of maize and soya increased sharply. As a result, the index of the feed price indicator increased in the last quarter of 2020 to a level higher than the producer price index of unprocessed milk, which previously happened in 2016, when the production of unprocessed milk was 0.45 percent lower than in the previous year;
- In February 2021, the producer price index of unprocessed milk increased to a level higher than the index of the feed price indicator. Due to further increases in the producer price index of unprocessed milk and a decrease in the index of the feed price indicator, the extent to which the producer price index of unprocessed milk exceeded the index of the feed price indicator, increased from February 2021 to July 2021. Due to the decrease in the producer price index of unprocessed milk in July 2021, August 2021 and September 2021 and increases in the prices of maize and soya, the extent to which the producer price index of unprocessed milk exceeded the index of the feed price indicator, decreased sharply from July 2021 to December 2021;
- In the first eight months of 2022, the producer price index of unprocessed milk was, with the exception on one month, higher than the feed price indicator, but in the last four months, the opposite was true. The relationship between the producer price index of unprocessed milk and the index of the feed price indicator in 2022, was much more unfavourable in respect of the encouragement of the production of unprocessed milk, than it was the case in most months of 2021 and in most months of 2020, as well as in 2019, 2018 and 2017; and
- In the first four months of 2023, the relationship between the producer price index of unprocessed milk and the index of the feed price indicator, improved significantly due to the following:
 - The sharp decreases of the prices of maize and soya which commenced in the last quarter of 2022; and
 - The sharp increase of the price of unprocessed milk in the first four months of 2022.

In April 2023, the relationship between the producer price index of unprocessed milk and the index of the feed price indicator was much more favourable than in the previous three months of 2023, as well as in 2022, 2021, 2020 and 2019.

54. Regarding the future price movements of yellow maize and soya, the following:

- The prices of yellow maize achieved on Safex on 26 May 2023, for delivery in July 2023, September 2023 and December 2023, were from 17.9 percent to 19.2 percent lower than the prices achieved on 17 February 2023, for delivery in the same months;
- The prices of yellow maize achieved on Safex on 26 May 2023, for delivery in July 2023, September 2023 and December 2023, increased by 5.0 percent. (See Table 12 of Annexure A);

- The prices of soya achieved on Safex on 26 May 2023, for delivery in July 2023, September 2023 and December 2023, were from 14.6 percent to 15.5 percent lower than the prices achieved on 17 February 2023, for delivery in the same months; and
- The prices of soya achieved on Safex on 26 May 2023, for delivery in July 2023, September 2023 and December 2023, increased by 5.0 percent. (See Table 13 of Annexure A).

55. From the previous paragraph, it is clear that the significant reductions of the prices of maize and soya up to May 2023, are followed by slight upward movement from July 2023 to December 2023. These reductions of the prices of maize and soya up to May 2023, should, in the near future, result in lower prices of concentrated feed.
56. It should be noted that the relatively high prices of maize and soya, are not the result of low production in South Africa of these products, as it is the result of the prices in the international market.
57. The primary agricultural industry, including the primary dairy industry experienced in 2022 very high increases of the prices of inputs. As indicated in Tables 12, 13, 14 and 15, as well as Graph 11 of Annexure A, the price of fertilisers, maize and soya decreased recently.
58. Regarding the producer price index of dairy products, it should be noted that it measures the changes in the prices of a basket of dairy products consisting of milk, yoghurt, cheddar cheese and ice cream and the basket does not include the other dairy products like milk powder, maas, flavoured milk, butter and cheese, other than cheddar cheese.
59. In 2021, the producer price index of dairy products increased in nine months and decreased in three months. The net result of these changes was that the price index in December 2021, was 10.66 percent higher than in December 2020.
60. In 2022, the producer price index of dairy products increased in nine months, stayed the same in one month and decreased in two months, namely in November and December. The net result of these changes was that the price index in December 2022 was 12.1 percent higher than in December 2021.

61. From December 2022 to April 2023 (the latest information is in respect of April 2023), the producer price index of dairy products, increased with 7.3 percent to a level:
- 15.7 percent higher than in April 2022;
 - 26.7 percent higher than in April 2021; and
 - 30.4 percent higher than in April 2020.
62. The agro-processing industry, consisting of the secondary dairy industry and other industries, experienced in the recent past high increases in the prices of important inputs like fuel, electricity, transport, packaging materials, chemicals and capital equipment. (See Table 16 and Table 17 of Annexure A). As is the case with the primary dairy industry, some of these price increases are the result of developments in the international market, while others are linked to events in South Africa, like the damages caused by the riots in July 2021, floods in KZN in 2022 and poor service delivery by the public sector in respect of, for example, electricity, water, maintenance of roads and security. The dairy industry requires uninterrupted supply of electricity. As a result, members of the dairy industry were forced by the interrupted supply of electricity, to invest in electricity generating equipment of which the operating cost, is an additional cost burden. Also, recent weakening of the value of the Rand, impacts negatively on the prices of inputs like capital equipment and packaging material.
63. The performance (quantity sold and price) of the different dairy products in the South African retail market differs, and often changes within a short period.
64. The key characteristics of the markets for the different dairy products differ. Changes in the prices of the different types of dairy products and the level of economic growth of South Africa and other factors, influence the quantities sold.
65. In 2020, in the situation created by COVID-19 and the lockdown measures of the Government, the performance (in terms of sales quantity and retail price), in the South African retail market of specific dairy products namely, UHT (long life) milk, yoghurt, pre-packaged cheese, cream cheese, butter and cream was higher than in 2019, while the opposite was true in respect of fresh and flavoured milk.
66. In the February 2021 edition of the “Summary of the Key Market Signals for the Dairy Industry”, it was stated that it should not be assumed that good performance of most dairy products as achieved in 2020, will continue as, amongst other, “the lower level in South Africa of economic activity resulting from COVID-19, and of which the full extent will only be known later”, can impact negatively “on the demand for food products including dairy products”.

67. In 2021, the retail sales quantities of eight of the nine dairy products, of which the retail sales are monitored, were lower than in 2020.
68. In 2022, the retail sales quantities of six of the nine dairy products were lower than in the previous year, while the opposite is true in respect of three dairy products. The changes in the retail sales quantities of the nine dairy products, were as follows:
- Fresh milk **-7.7** percent;
 - UHT milk 0.05 percent;
 - Flavoured milk **-4.3** percent;
 - Yoghurt **-3.5** percent;
 - Maas 0.5 percent;
 - Pre-packaged cheese 1.2 percent;
 - Cream cheese **-2.8** percent;
 - Butter **-2.1** percent; and
 - Cream **-6.5** percent.
69. This weak performance is linked to erosion of the purchasing power of consumers by widespread increases in the prices of consumer goods (including dairy products) and services, poor service delivery by the public sector and weak economic growth. The gross domestic product (GDP) of South Africa in 2022 was only 0.26 percent higher than in 2019, while the GDP in 2021 and 2020 was lower than in 2018 and 2019. In respect of yoghurt and flavoured milk, the increased sales of dairy snacks is a factor, as dairy snacks are competing with yoghurt and flavoured milk ⁹⁾.

9) *In the regulations regarding the classification, packaging and marketing of dairy products, provision has been made since 1987 (35 years ago) for dairy snacks and in recent years the retail sales of dairy snacks increased.*

The minimum and maximum milk fat content of the different milk fat classes of dairy snacks, are the same as that of the different types of yoghurt, but the minimum milk protein content of yoghurt is 2.7 percent, of drinking yoghurt is 2.5 percent, yoghurt and drinking yoghurt with added foodstuffs or fruit is 2.0 percent and of dairy snacks is 1.5 percent. However, the milk protein content of some dairy snacks offered for sale in the retail market, is higher than the minimum of 1.5 percent and close to that of yoghurt and drinking yoghurt with added foodstuffs or fruit.

The milk fat required to manufacture dairy snacks, is thus the same as required for the manufacture of the different types of yoghurt, of the same fat class, but the minimum milk protein required for the manufacture of dairy snacks, is lower than the minimum protein content of the different types of yoghurt.

70. In the year which ended in December 2022, the retail sales prices of the nine dairy products increased. The increases of the retail sales prices, were as follows:
- Fresh milk 8.6 percent;
 - UHT milk 6.7 percent;
 - Flavoured milk 12.0 percent;
 - Yoghurt 10.4 percent;
 - Maas 13.2 percent;
 - Pre-packaged cheese 8.4 percent;
 - Cream cheese 8.3 percent;
 - Butter 8.3 percent; and
 - Cream 9.0 percent.
71. The information regarding the retail sales of dairy products up to March 2023, received from NielsenIQ, is the subject of discussions and correspondence between the Office of SAMPRO and NielsenIQ. These discussions and correspondence are the result of some discrepancies between the information in respect of the period March 2022 and December 2022, as contained in the latest report of NielsenIQ and the information previously received in respect of the same period from NielsenIQ. Should the interaction with NielsenIQ result in different figures than the figures contained in the latest report of NielsenIQ, readers of this report will be informed accordingly.
72. Key observations in respect of the performance in the South African retail market of the nine dairy products in the year which ended in March 2023, as reported by NielsenIQ, and which are shown in Table 18, Table 19, and Table 20 of Annexure A, are as follows:
- a) In the year which ended in March 2023, the retail sales quantities of eight of the nine dairy products were lower than in the previous year, while the opposite is true in respect of one dairy product. The changes in the retail sales quantities of the nine dairy products, were as follows:
- Fresh milk **-5.9** percent;
 - UHT milk **-3.0** percent;
 - Flavoured milk **-6.1** percent;
 - Yoghurt **-4.3** percent;
 - Maas 0.3 percent;
 - Pre-packaged cheese **-0.02** percent;
 - Cream cheese **-1.4** percent;
 - Butter **-4.3** percent; and
 - Cream **-6.4** percent.

b) In the six months which ended in March 2023, relative to the same six months of 2020/2021, the retail sales quantities of the nine dairy products, were lower. The changes in the retail sales quantities of the nine dairy products, were as follows:

- Fresh milk -4.3 percent;
- UHT milk -4.9 percent;
- Flavoured milk -9.3 percent;
- Yoghurt -5.6 percent;
- Maas -0.9 percent;
- Pre-packaged cheese -0.7 percent;
- Cream cheese -0.1 percent;
- Butter -4.0 percent; and
- Cream -6.7 percent.

c) In the quarter which ended in March 2023, relative to the quarter which ended in September 2021, the retail sales quantities of seven of the nine dairy products, were lower, while the opposite is true in respect of two dairy products. The changes in the retail sales quantities of the nine dairy products, were as follows:

- Fresh milk -2.9 percent;
- UHT milk -11.3 percent;
- Flavoured milk -12.5 percent;
- Yoghurt -6.4 percent;
- Maas 0.7 percent;
- Pre-packaged cheese -2.4 percent;
- Cream cheese 2.0 percent;
- Butter -9.5 percent; and
- Cream -8.5 percent.

d) In the year which ended in March 2023, the retail sales prices of the nine dairy products increased. The increases of the retail sales prices, were as follows:

- Fresh milk 17.5 percent;
- UHT milk 17.1 percent;
- Flavoured milk 19.0 percent;
- Yoghurt 16.0 percent;
- Maas 24.1 percent;
- Pre-packaged cheese 15.6 percent;
- Cream cheese 10.9 percent;
- Butter 11.5 percent; and
- Cream 13.7 percent.

The abovementioned retail price increases of four of the nine dairy products, were higher than the inflation rate of processed food of 16.2 percent in the year which ended in March 2023.

- e) In the six months which ended in March 2023, the retail sales prices of the nine dairy products increased. The increases in the retail sales prices, were as follows:
- Fresh milk 11.8 percent;
 - UHT milk 5.2 percent;
 - Flavoured milk 7.7 percent;
 - Yoghurt 7.9 percent;
 - Maas 14.2 percent;
 - Pre-packaged cheese 7.5 percent;
 - Cream cheese 3.9 percent;
 - Butter 4.1 percent; and
 - Cream 6.7 percent.
- f) In the quarter which ended in March 2023, the retail sales prices of the nine dairy products increased. The increases in the retail sales prices of the nine dairy products concerned, were as follows:
- Fresh milk 9.6 percent;
 - UHT milk 8.3 percent;
 - Flavoured milk 8.4 percent;
 - Yoghurt 7.2 percent;
 - Maas 9.5 percent;
 - Pre-packaged cheese 3.2 percent;
 - Cream cheese 1.5 percent;
 - Butter 2.5 percent; and
 - Cream 3.6 percent.
- g) Regarding the difference between the average retail price per year of UHT milk and the average retail price per year of fresh milk, the following:
- In the years 2012 to 2016, the average retail price per year of UHT milk was from 3.9 percent to 11.4 percent higher than that of fresh milk;
 - In 2017 and 2018, the average retail price per year of UHT milk, was respectively 0.2 percent and 3.7 percent lower than that of fresh milk;
 - In 2019 and 2020, the average retail price of UHT milk was respectively 0.2 percent and 2.3 percent higher than that of fresh milk; and
 - In 2021 and 2022, the average retail price of UHT milk was respectively 3.1 percent and 1.9 percent lower than that of fresh milk.

73. In general, the performance of dairy products in the retail market, as described in the previous paragraph, shows that :
- In the year which ended in March 2023, the retail sales quantities of eight of the nine dairy products were lower than in the previous year while the retail prices of the nine products increased; and
 - In the quarter which ended in March 2023, the retail sales quantities of seven of the nine dairy products, were lower than in the same quarter of the previous year, while retail prices of the nine dairy products increased.
74. The relative movements of the retail prices of particular dairy products in the eight years from 2015 to 2022 and in the first quarter of 2023, are shown in Graph 14 of Annexure A. This graph shows, amongst others, that:
- The retail price index of butter is, since May of 2016, much higher than the retail price indices of the other dairy products. The reason for this increase of the price of butter, is the increased demand for butter fuelled by increased consumer preference for butter, supported by evidence regarding the nutritional and health value of butter, which pushed the previous negative views aside, as well as by the superior taste of butter;
 - The retail price index of fresh milk, was in the years 2015 to 2022, higher than the retail price indices of UHT milk, maas, yoghurt and pre-packaged cheese. In the first seven months of 2015, the retail price index of fresh milk, was higher than that of butter, but in August 2015, the retail price index of butter moved to levels much higher than the retail price index of fresh milk; and
 - In 2019, 2020, 2021, 2022 and the first two months of 2023, the retail price index of maas was notably lower than that of the other dairy products.
75. Regarding the relative movements of the price of unprocessed milk and the prices of the different dairy products¹⁰⁾ it should be taken into account that:
- The production (supply) of unprocessed milk is much more seasonal than is the case with the demand for major dairy products; and
 - The production of unprocessed milk is not only influenced by economic variables and decisions of the producers of unprocessed milk, but also by weather conditions and other factors like animal health issues, which can result in production that is higher or lower than the planned production, as determined by the expectation regarding the demand for unprocessed milk.

10) *Inputs other than unprocessed milk, are also required for the manufacture of dairy products and for the presentation of the dairy products in the retail. The total cost of the other inputs, like packaging, electricity, fuel, water, capital and labour, is higher than the cost of the unprocessed milk delivered at dairy factories.*

76. The relative movements of the retail price of fresh milk, the retail price of UHT milk and the producer price of unprocessed milk, in the eight years, 2015 to 2022, as well as in the first quarter of 2023, against the background of the increase in unprocessed milk purchases per annum, are shown in Graph 15 of Annexure A. This graph shows that:

- The prices concerned typically moved in the same direction but the magnitude of the changes of the prices concerned, differ;
- The retail price index of fresh milk is less volatile than the retail price index of UHT milk and the producer price index of unprocessed milk:
 - Moved in 2016 and 2017, close to the retail price index of fresh milk, in nine months of 2018, in 2019, in 2020 and in seven months of 2021 it was lower, but from March 2022 to March 2023, the producer price index of unprocessed milk was higher than the retail price index of fresh milk;
 - In the 99 months period from January 2015 to March 2023, the retail price index of UHT milk was, with the exception of one month in 2015, lower than the producer price index of unprocessed milk; and
- The movements of the prices concerned are influenced by, amongst others, the total unprocessed milk purchases. The impact in the years concerned, of the higher and lower production of unprocessed milk on the prices of unprocessed milk and UHT milk, is more pronounced, than the case in respect of fresh milk. Obviously, the supply (production) of a product (including the supply of unprocessed milk), does not on its own, determine the price of the product, as prices are the result of the interaction between supply and demand. Production cost influences the quantity produced or manufactured at a specific price level, and if that quantity is lower than the demand, the price will increase while, if the opposite is true, the price will decrease. Typically, a change in production (supply), which is not in pace with the change in demand, results in price movements.

77. The relative movements of the retail price indices of yoghurt, maas and pre-packaged cheese, as well as the producer price index of unprocessed milk, against the background of the increase in the quantity of unprocessed milk purchased per annum, are shown in Graph 16 of Annexure A. This Graph shows that:

- The price of unprocessed milk is much more subject to change than the retail prices of the three dairy products concerned;

- The relationship between the movements of the retail prices of the three dairy products concerned and the movements of the price of unprocessed milk, is weaker than is the case in respect of the retail price of UHT milk and the price of unprocessed milk, as shown in Graph 14. In this regard, it should be noted that the contribution of the price of unprocessed milk to the price of maas, is much higher than the contributions of the price of unprocessed milk to the retail prices of yoghurt and pre-packaged cheese, due to the considerably higher value-adding required by the manufacture of the last mentioned two products. It should also be taken into account that recombined and reconstituted milk¹¹⁾ instead of unprocessed milk, can be used to manufacture maas and yoghurt; and
- In the 99 months from January 2015 to March 2023, the price index of unprocessed milk was at higher levels than the retail price indices of the three dairy products, with the exception of the period August 2018 to September 2018 and in the period November 2018 to February 2019, when the producer price index of unprocessed milk was lower than the retail price index of one of the three dairy products, namely yoghurt.

78. *The factual position that the South African dairy industry is confronted with, as shown by the information available up to 19 June 2023, corresponds to a large extent, with the factual position described in the November 2022 and February 2023 editions of “Summary of the Key Market Signals for the Dairy Industry”. Key aspects of the reality in which the South African dairy industry has to operate in the rest of 2023, are:*

- *High levels of uncertainty about future economic growth and political developments internationally and in South Africa;*
- *Interrupted supply of electricity which creates higher costs and other disruptions;*
- *Consumer purchasing power eroded by the widespread increases of the prices of consumer goods and services, poor service delivery by the public sector and lack of economic growth;*
- *Lower demand for most dairy products in terms of quantity and the expected growth of the Gross Domestic Product in 2023, does not support optimistic views about the demand for consumer goods, including dairy products, in the immediate future;*
- *Uncertainty about the extent of the negative impact in the next few months of the recent increases of the prices of dairy products, on the demand, in terms of quantity, for dairy products and thus, on the demand for unprocessed milk;*
- *Lower production of unprocessed milk in 2022, than in 2019, 2020 and 2021 and lower production in the first five months of 2023, than in the same months of 2022;*

11) *The definitions of recombined milk and reconstituted milk, as stated in Regulation 1510, are as follows:*

- *“Recombined milk product” means milk or a milk product resulting from the combination of milk fat and milk-solids-non-fat in their preserved forms with or without the addition of water to achieve the appropriate milk product composition”; and*
- *“Reconstituted milk product” means milk or a milk product resulting from the addition of water to the dried or concentrated form of the product in the amount necessary to re-establish the appropriate water to solid ratio”.*

- *In 2022, the relationship between the index of the feed price indicator and the index of the producer price index of unprocessed milk, was very unfavourable. In the first four months of 2023, due to the significant increase of the index of the price of unprocessed milk and the significant decrease of prices of maize and soya, the extent to which the index of the producer price of unprocessed milk exceeded the index of the feed price indicator increased. In April 2023, the extent to which the producer price index of unprocessed milk exceeded the index of the feed price indicator, was higher than in the previous three months of 2023, as well as in 2022, 2021, 2020 and 2019;*
- *The seasonal increase in production of unprocessed milk, from July to October in the last fifteen years, varied from 24.6 percent to 35.8 percent. The seasonal increase from July 2023 to October 2023 of the production of unprocessed milk and thus the increase in the production of dairy products can, amidst the expected weak consumer demand, put downward pressure on the prices of dairy products and unprocessed milk in the coming months.*

Alwyn P Kraamwinkel (M.Com)
CEO: SAMPRO
22 June 2023

<i>The following contributions to this report are acknowledged:</i>	
<i>De Wet Jonker (B.Econ/BCom Hons) Dr Ndumiso Mazibuko (Bsc Agric Econ, Msc, MBA, PhD) Marietjie le Roux (BCom) Jan Theron, (B.Com Economy)</i>	<i>Collecting information, compiling of tables and graphs and assessment of information.</i>
<i>Gerhard Venter (M.Sc Agric Food Science)</i>	<i>Dairy Technical advice.</i>
<i>Sonja van Jaarsveld</i>	<i>Typing of draft versions of the report and typing of final report</i>

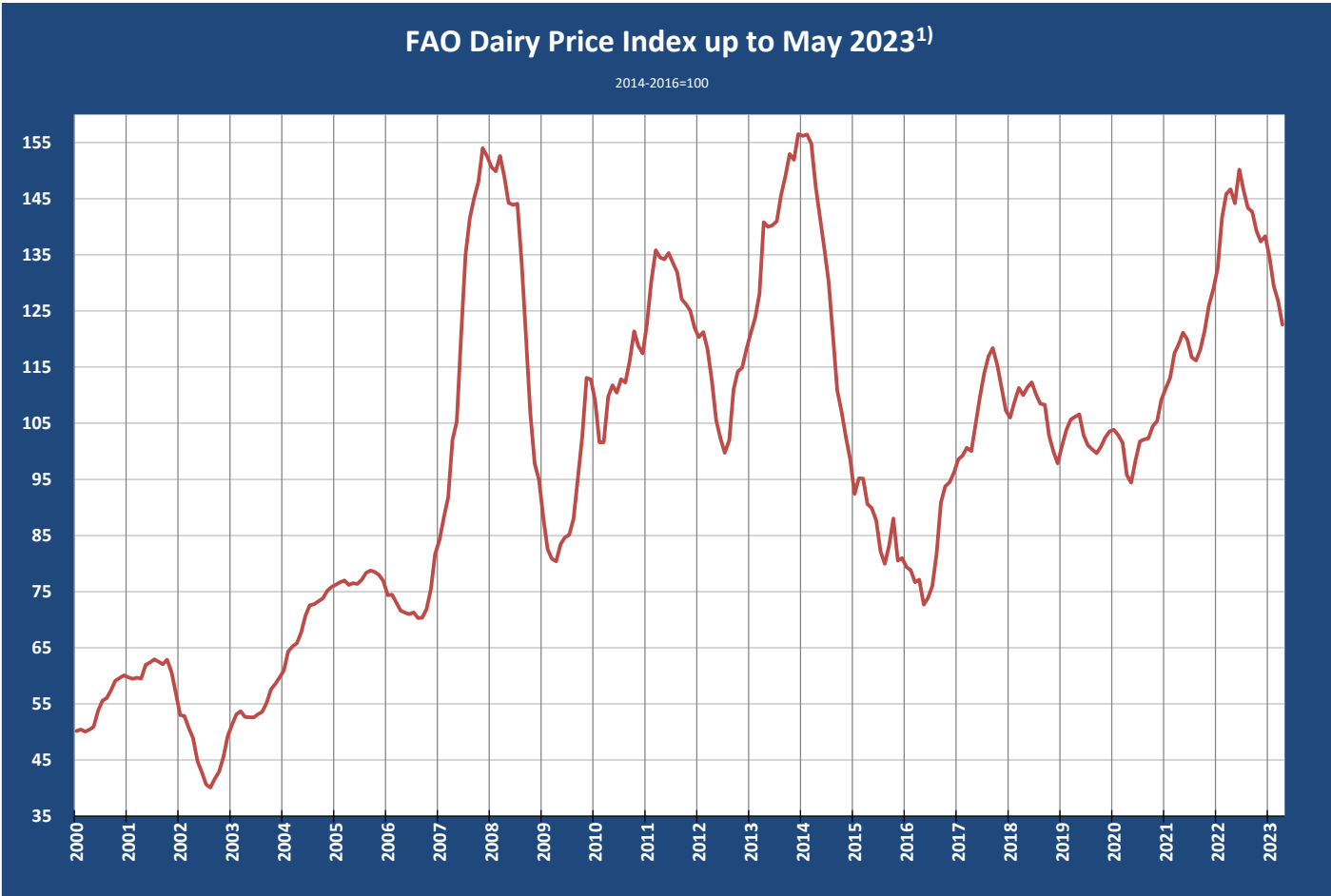
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Graph 1¹⁾

PRICE INDEX OF DAIRY PRODUCTS IN THE INTERNATIONAL MARKET UP TO MAY 2023, AS PUBLISHED BY THE FAO



1) Graph prepared by the Office of SAMPRO based on information published by the FAO Food and Agricultural Organization (FAO) of the United Nations.

Table 1²⁾

VOLATILITY PER YEAR OF THE PRICE INDEX OF THE FAO OF DAIRY PRODUCTS IN THE INTERNATIONAL MARKET

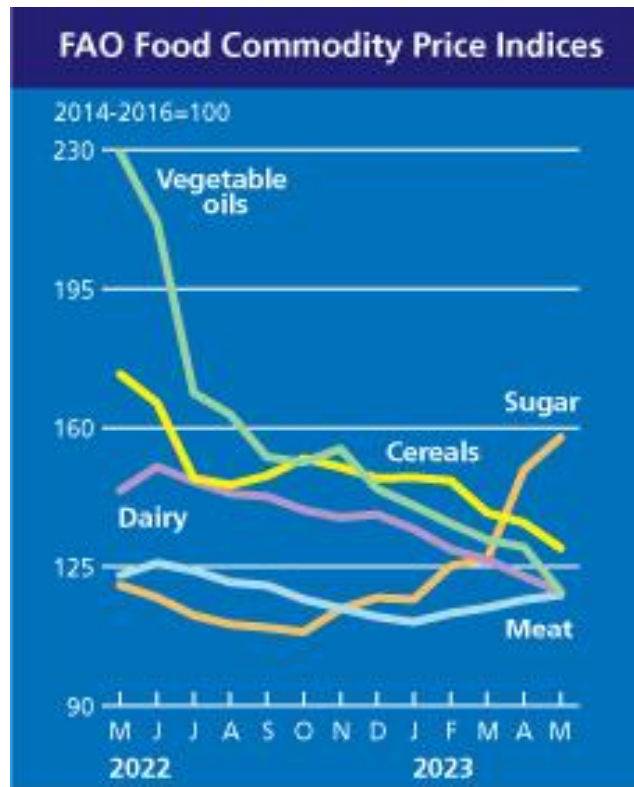
Index: 2014-2016=100

YEAR	A Highest Monthly Index	B Lowest Monthly Index	A Higher than B Percent
2000	60.1	50.1	20.0
2001	62.9	56.9	10.6
2002	53.0	40.1	32.2
2003	59.7	51.3	16.5
2004	75.8	60.9	24.4
2005	78.7	76.2	3.4
2006	81.7	70.3	16.2
2007	154.0	84.2	82.8
2008	152.6	94.9	60.9
2009	113.1	80.4	40.7
2010	121.4	101.6	19.5
2011	135.8	122.0	11.3
2012	121.2	99.7	21.6
2013	156.5	121.0	29.3
2014	156.4	98.5	58.8
2015	95.2	79.9	19.0
2016	96.2	72.7	32.3
2017	118.4	98.6	20.1
2018	112.3	97.8	14.7
2019	106.6	99.6	7.0
2020	109.2	94.4	15.7
2021	129.0	111.2	16.0
2022	150.2	132.6	13.2
Average	108.7	86.7	25.5
2023 (Jan-May)	134.5	118.7	13.4

2) Table prepared by the Office of SAMPRO based on information published by the FAO.

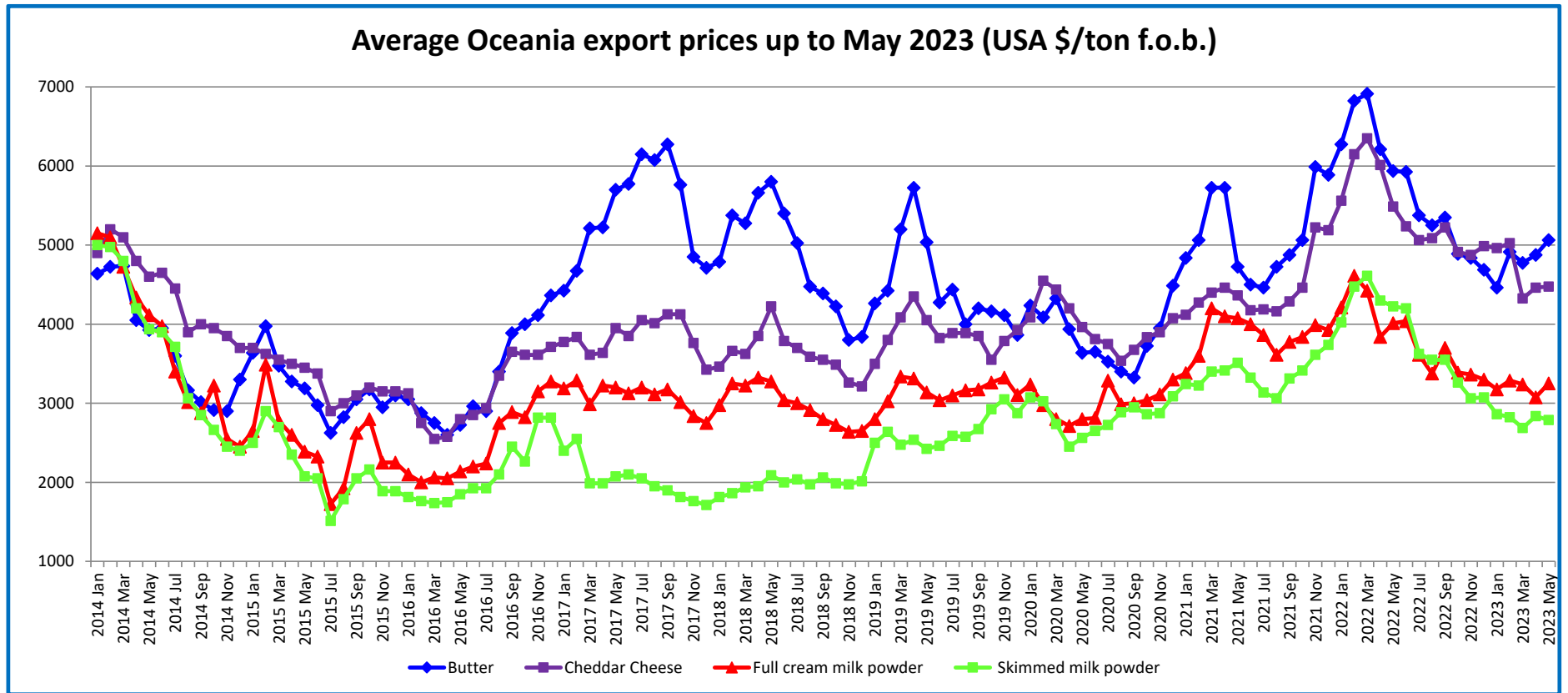
Graph 2³⁾

FAO FOOD COMMODITY PRICE INDICES



3) Graph as published by the FAO

Graph 3⁴⁾



4) Graph prepared by the Office of SAMPRO based on information published by the USDA on 12 June 2023

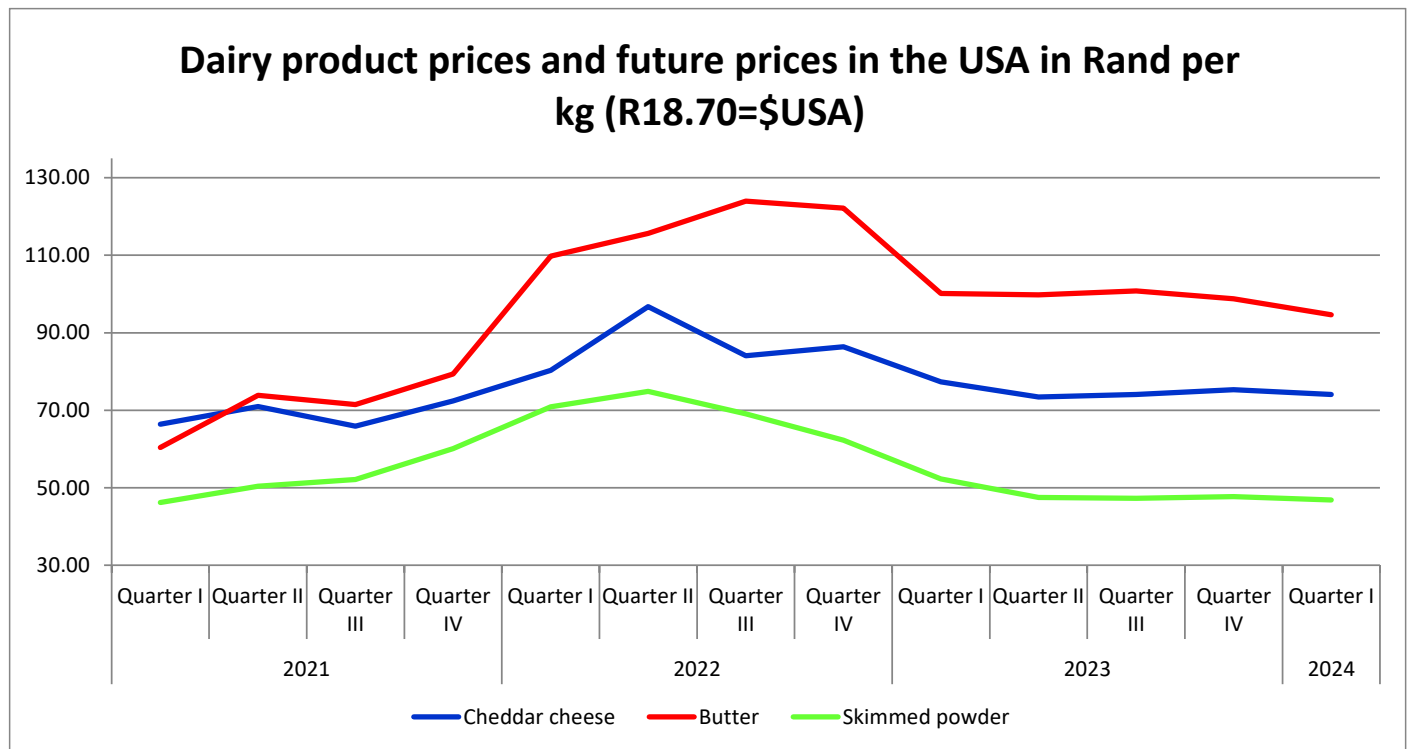
Table 2⁵⁾

FUTURE PRICES IN USA\$ AND RAND (\$=R18.70) PER TON ACHIEVED AT GLOBAL DAIRY TRADE AUCTION ON 6 JUNE 2023, FOR DELIVERY IN JULY 2023 TO NOVEMBER 2023

	Jul	Aug	Sep	Oct	Nov
Whole Milk Powder					
PRICE: \$	3 145	3 194	3 189	3 196	3 153
PRICE: R	58 812	59 728	59 634	59 765	58 961
Index	100.0	101.6	101.4	101.6	100.3
Skimmed Milk Powder					
PRICE: \$	2 919	2 724	2 797	2 737	2 752
PRICE: R	54 585	50 939	52 304	51 182	51 462
Index	100.0	93.3	95.8	93.8	94.3
Cheddar					
PRICE: \$	5 660	Na	4 600	4 590	4 590
PRICE: R	105 842	Na	86 020	85 833	85 833
Index	100.0	Na	81.3	81.1	81.1
Butter					
PRICE: \$	5 345	5 255	5 055	4 920	4 888
PRICE: R	99 952	98 269	94 529	92 004	91 406
Index	100.0	98.3	94.6	92.0	91.4

5) Table prepared by the Office of SAMPRO based on the prices as published by "Global Dairy Trade" on 6 June 2023 and exchange rate on 12 June 2023, the index is based on the USA \$ prices

Graph 4⁶⁾



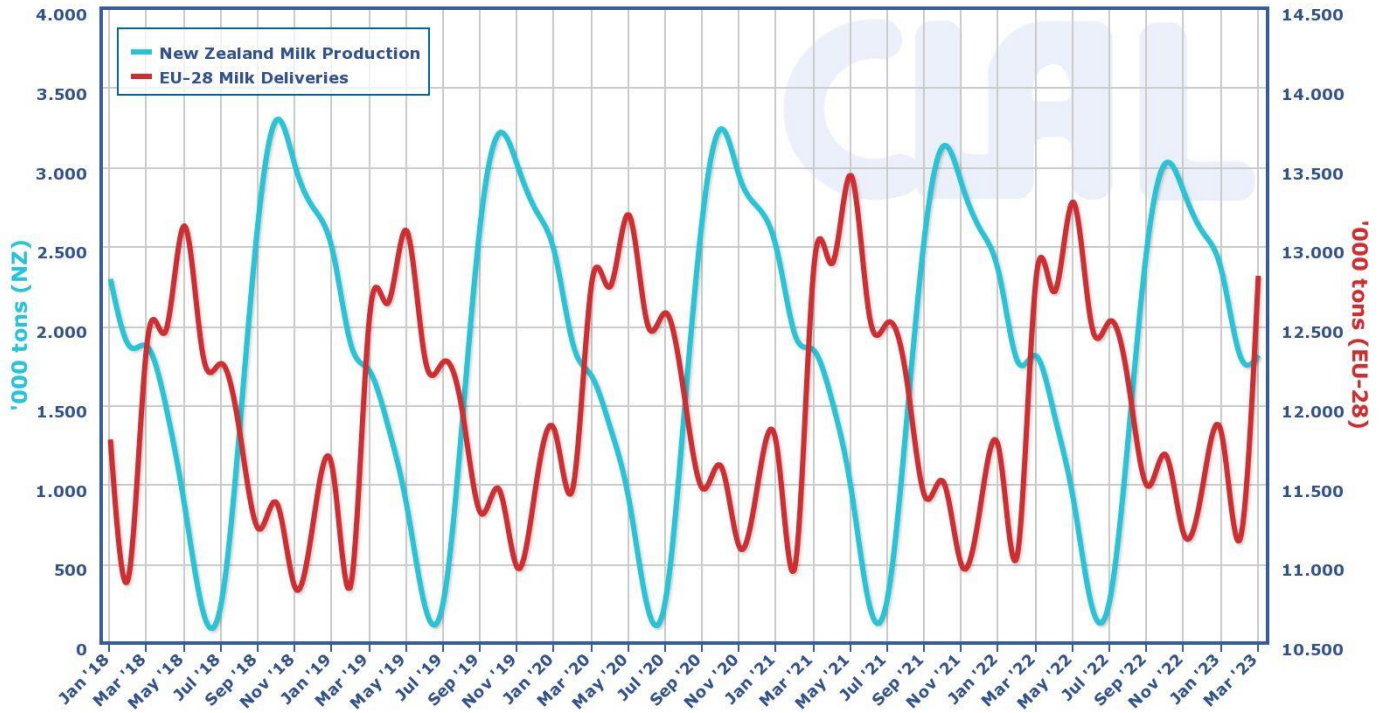
6) Graph prepared by the Office of SAMPRO based on information contained in the United States Department of Agriculture, Livestock, Dairy, and Poultry Outlook, 18 May 2023 and exchange rate on 12 June 2023

Graph 5⁷⁾

SEASONALITY OF UNPROCESSED MILK PRODUCTION IN THE NORTHERN AND SOUTHERN HEMISPHERES

Production season overview in Europe and in New Zealand

Processed by CLAL on data sourced Eurostat and Dcanz

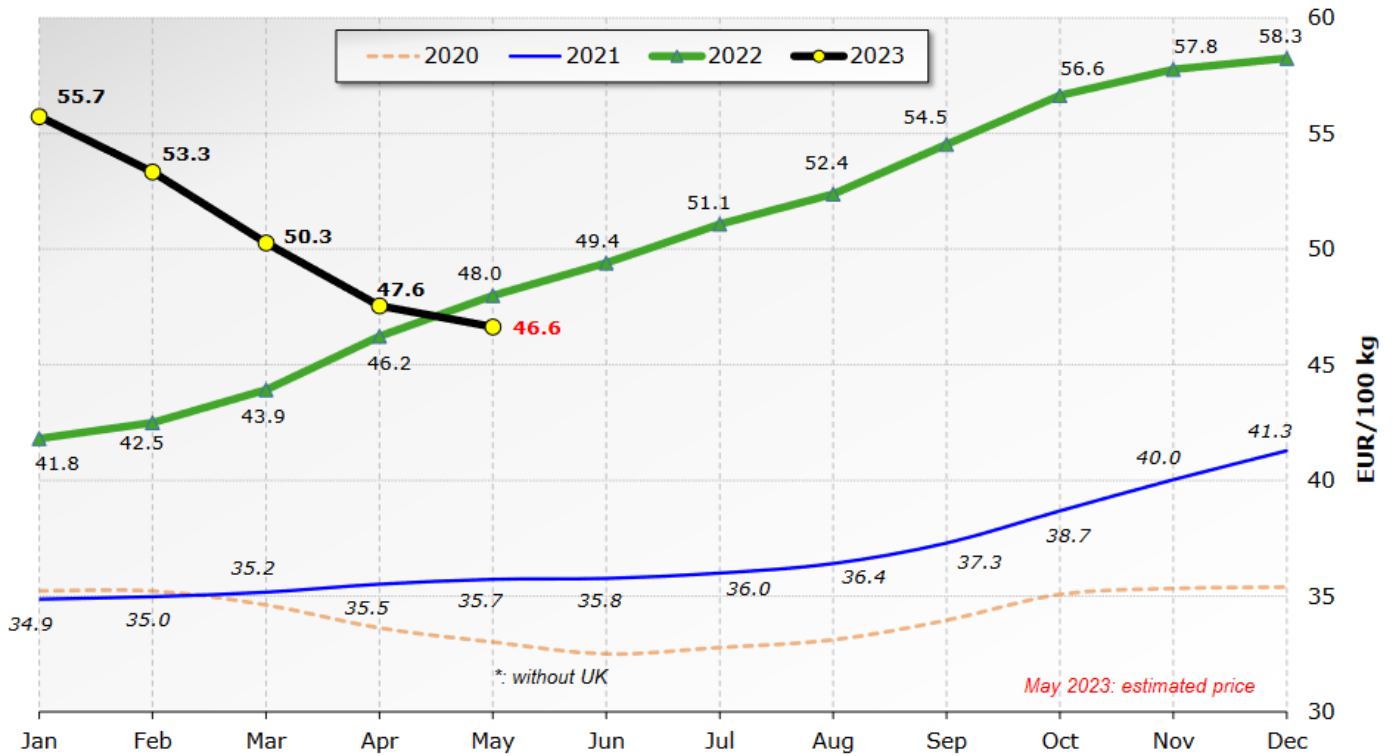


7) Graph as published by CLAL.it

Graph 6⁸⁾

AVERAGE PRICE OF UNPROCESSED MILK IN THE EUROPEAN UNION

Milk Prices paid to the Producers
EU (weight. avg.)*



Source : Member States Reg. (EU) No 2017/1185 Article 12(a) - Annex II.4(a))

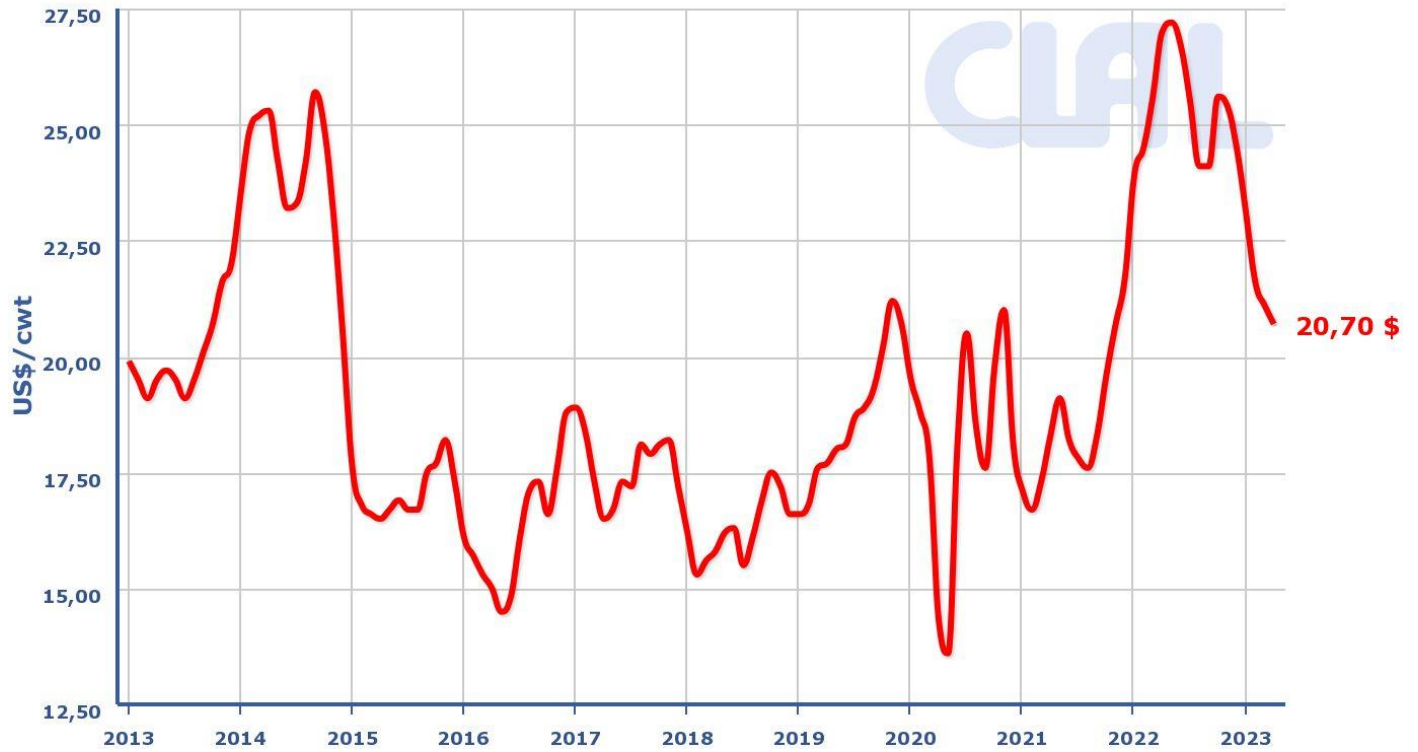
8) Graph as published by CLAL.it

Graph 7⁹⁾

UNPROCESSED MILK PRICES IN THE USA

US - Farm-gate All Milk prices

Last Update: 01-06-2023
Source: AMS USDA Dairy Markets News



9) Graph as published by CLAL.it

Table 3¹⁰⁾

TOTAL IMPORTS AND EXPORTS OF DAIRY PRODUCTS BY SOUTH AFRICA AND THE EXPOSURE OF THE SOUTH AFRICAN DAIRY INDUSTRY TO INTERNATIONAL COMPETITION (*THE SUM OF THE MASS OF IMPORTS AND EXPORTS*), IN THE YEARS 2002 TO 2023 ESTIMATE

Index: 2002 = 100)

YEAR	IMPORT		EXPORT		IMPORT PLUS EXPORT	
	TON	INDEX	TON	INDEX	TON	INDEX
2002	24 617.40	100.0	34 328.20	100.0	58 945.60	100.0
2003	24 458.80	99.4	22 905.20	66.7	47 364.00	80.4
2004	18 289.50	74.3	23 508.10	68.5	41 797.60	70.9
2005	30 771.40	125.0	17 216.00	50.2	47 987.40	81.4
2006	30 878.60	125.4	26 543.30	77.3	57 421.90	97.4
2007	44 313.00	180.0	18 516.50	53.9	62 829.50	106.6
2008	34 009.40	138.2	42 781.00	124.6	76 790.40	130.3
2009	32 373.40	131.5	41 770.70	121.7	74 144.10	125.8
2010	35 061.20	142.4	33 950.60	98.9	69 011.80	117.1
2011	37 714.40	153.2	41 817.10	121.8	79 531.50	134.9
2012	59 012.55	239.7	52 500.96	152.9	111 513.49	189.2
2013	35 673.76	144.9	70 481.90	205.3	106 155.66	180.1
2014	40 199.03	163.3	71 098.95	207.1	111 297.98	188.8
2015	69 353.98	281.7	61 296.87	178.6	130 650.85	221.6
2016	58 000.35	235.6	50 247.54	146.4	108 247.89	183.6
2017	83 504.44	339.2	48 626.69	141.7	132 131.13	224.2
2018	68 652.58	278.9	45 257.49	131.8	113 910.08	193.2
2019	75 596.08	307.1	45 051.75	131.2	120 647.83	204.7
2020	60 579.33	246.1	46 695.39	136.0	107 274.72	182.0
2021	75 618.94	307.2	50 990.95	148.5	126 609.89	214.8
2022	52 917.65	215.0	51 944.67	151.4	104 862.32	177.9
2023 Est	44 253.88	179.8	52 351.93	152.5	96 605.81	163.9

10) Table prepared by the Office of SAMPRO on the basis of information obtained from SARS

Table 4¹¹⁾**MASS OF IMPORTS AS PERCENTAGE OF THE MASS OF EXPORTS OF DAIRY PRODUCTS
BY SOUTH AFRICA**

Heading	Description	2015	2016	2017	2018	2019	2020	2021	2022	2023 Est
04.01	Milk and cream, unsweetened	92.5	84.3	217.1	103.7	90.2	26.4	95.2	18.4	7.3
04.02	Milk, concentrated	197.7	196.3	146.4	159.5	227.9	252.8	257.6	153.4	241.1
04.03	Buttermilk powder, yoghurt	16.5	19.7	28.4	27.9	31.7	40.3	32.6	32.3	28.5
04.04	Whey, whey powder, etc	221.3	185.9	192.9	1 741.3	2 917.9	1 257.6	888.3	954.9	806.1
04.05	Butter, butter spreads and butter oil	344.1	396.7	491.2	735.1	355.5	540.6	340.4	293.9	180.6
04.06	Cheese and curd	314.2	330.3	338.7	272.5	252.7	141.7	144.6	118.7	66.3
TOTAL		56.5	115.4	171.7	151.7	167.8	129.7	148.3	101.9	84.5

11) Table prepared by the Office of SAMPRO on the basis of information obtained from SARS and the estimated figures calculated on the basis of the assumption that the levels of import and export in the first 4 months of 2023, will be maintained during the rest of 2023.

Table 5¹²⁾

TOTAL QUANTITY OF UNPROCESSED MILK PURCHASED IN SOUTH AFRICA DURING THE YEARS 2008 TO 2022

YEAR	UNPROCESSED MILK KILOGRAM	PERCENTAGE CHANGE FROM PREVIOUS YEAR	INDEX 2008 = 100
2008	2 624 511 678	2.50	100.00
2009	2 586 868 067	-1.43	98.57
2010	2 711 236 032	4.81	103.30
2011	2 720 402 147	0.34	103.65
2012	2 842 810 159	4.50	108.32
2013	2 905 811 947	2.22	110.72
2014	2 982 734 569	2.65	113.65
2015	3 172 655 770	6.37	120.89
2016	3 158 466 390	-0.45	120.34
2017	3 253 682 081	3.02	123.97
2018	3 410 535 904	4.82	129.95
2019	3 432 802 396	0.65	130.80
2020	3 427 335 378	-0.16	130.56
2021	3 403 100 413	-0.71	129.67
2022	3 349 861 004	-1.56	127.64

12) Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 6¹³⁾

UNPROCESSED MILK PURCHASES PER QUARTER OF EACH OF THE YEARS 2009 to 2023										
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2009	620 043 005	23.969	560 531 455	21.668	658 577 140	25.458	747 716 467	28.904	2 586 868 067	100
2010	640 933 409	23.640	595 998 091	21.983	699 002 502	25.782	775 302 030	28.596	2 711 236 032	100
2011	654 701 438	24.066	597 343 799	21.958	694 671 935	25.536	773 684 975	28.440	2 720 402 147	100
2012	676 129 726	23.784	638 011 059	22.443	725 458 007	25.519	803 211 367	28.254	2 842 810 159	100
2013	683 707 219	23.529	646 811 485	22.259	746 796 407	25.700	828 496 836	28.512	2 905 811 947	100
Total (2009-2013)	3 275 514 797	23.792	3 038 695 889	22.072	3 524 505 991	25.601	3 928 411 675	28.535	13 767 128 352	100
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2014	683 060 914	22.900	650 998 523	21.826	766 083 031	25.684	882 592 129	29.590	2 982 734 597	100
2015	770 769 019	24.294	726 975 249	22.914	799 968 233	25.214	874 943 269	27.578	3 172 655 770	100
2016	752 226 598	23.816	701 859 008	22.222	806 386 965	25.531	897 973 819	28.431	3 158 446 390	100
2017	756 689 792	23.256	703 893 532	21.634	837 867 145	25.751	955 231 612	29.358	3 253 682 081	100
2018	814 831 903	23.892	750 437 490	22.004	873 519 325	25.612	971 747 186	28.493	3 410 535 904	100
Total (2014-2018)	3 777 578 226	23.632	3 534 163 802	22.120	4 083 824 699	25.558	4 582 488 015	28.690	15 978 054 742	100
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2019	816 208 186	23.777	757 906 127	22.078	882 584 853	25.710	976 103 230	28.435	3 432 802 396	100
2020	831 232 775	24.253	744 621 901	21.726	874 078 494	25.503	977 402 208	28.518	3 427 335 378	100
2021	791 682 285	23.264	739 610 710	21.733	874 291 459	25.691	997 515 959	29.312	3 403 100 413	100
2022	792 616 775	23.661	724 752 937	21.635	879 548 171	26.256	952 943 120	28.448	3 349 861 004	100
Total (2019-2022)	2 439 123 246	23.765	2 242 138 738	21.846	2 630 954 806	25.635	2 951 021 397	28.755	10 263 238 187	100
Total (2009-2022)	9 492 216 269	23.726	8 814 998 429	22.024	10 239 285 496	25.592	11 461 921 087	28.648	40 008 421 281	100
2023	774 464 421									

13) Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Quarters of which the percentage contribution to the total unprocessed milk purchases in the specific year were the highest relative to the contributions of the same quarters of the other years, are printed in red and the quarters with the lowest contributions, are printed in blue.

Table 7¹⁴⁾

UNPROCESSED MILK PURCHASES PER HALF YEAR IN EACH OF THE YEARS 2009 TO 2022

Year	First Half		Second Half		Total	
	Kg	%	Kg	%	Kg	%
2009	1 180 574 460	45.637	1 406 293 607	54.363	2 586 868 067	100.00
2010	1 236 931 500	45.622	1 474 304 532	54.378	2 711 236 032	100.00
2011	1 252 045 237	46.024	1 468 356 910	53.976	2 720 402 147	100.00
2012	1 314 140 785	46.227	1 528 669 374	53.773	2 842 810 159	100.00
2013	1 330 518 704	45.788	1 575 293 243	54.212	2 905 811 947	100.00
Total (2009-2013)	6 314 210 686	45.864	7 452 917 666	54.136	13 767 128 352	100.00

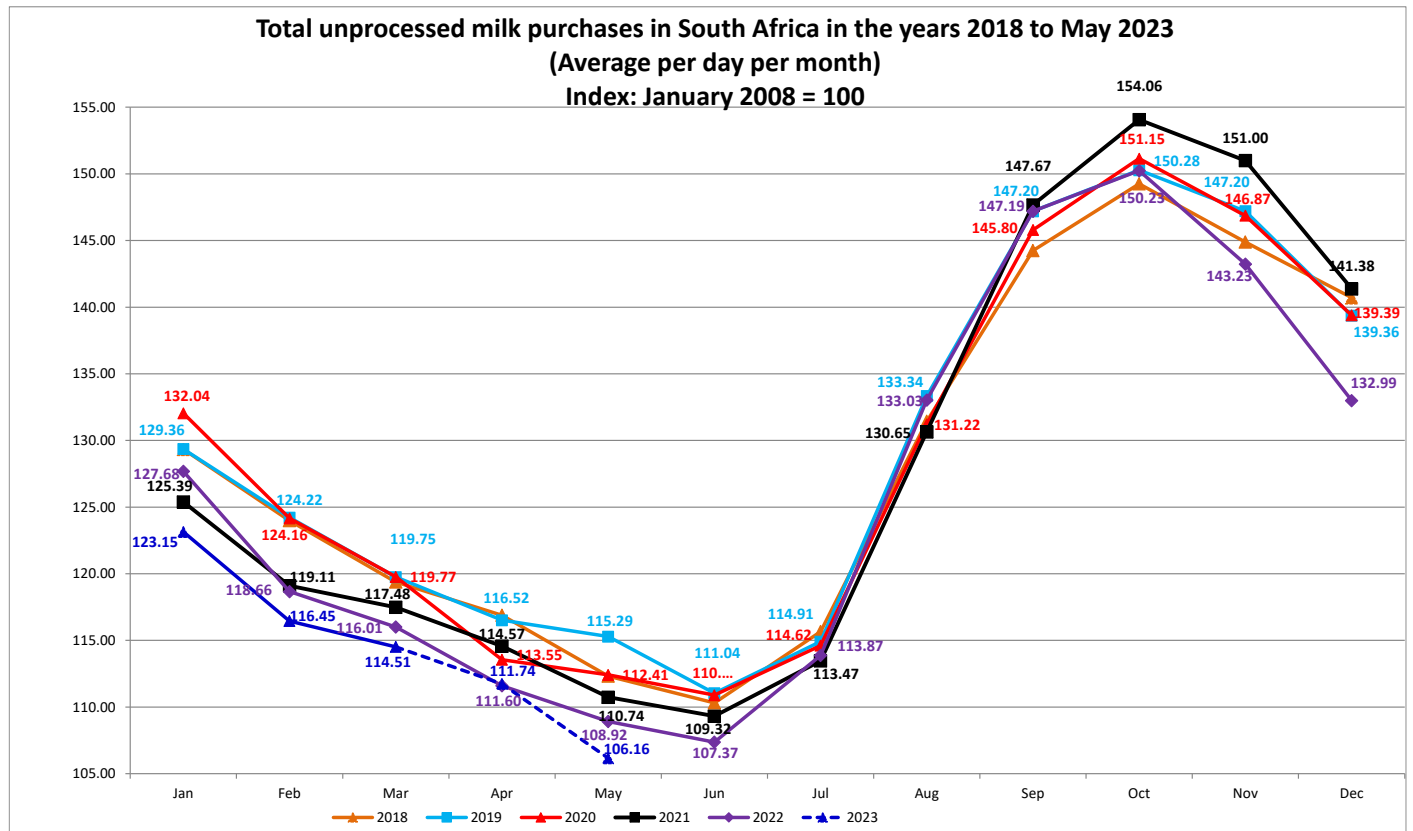
Year	First Half		Second Half		Total	
	Kg	%	Kg	%	Kg	%
2014	1 334 059 437	44.726	1 648 675 160	55.274	2 982 734 597	100
2015	1 497 744 268	47.208	1 674 911 502	52.792	3 172 655 770	100
2016	1 454 085 606	46.038	1 704 360 784	53.962	3 158 446 390	100
2017	1 460 583 324	44.890	1 793 098 757	55.110	3 253 682 081	100
2018	1 565 269 393	45.895	1 845 266 511	54.105	3 410 535 904	100
Total (2014-2018)	7 311 742 028	45.761	8 666 312 714	54.238	15 978 054 742	100

Year	First Half		Second Half		Total	
	Kg	%	Kg	%	Kg	%
2019	1 574 114 313	45.855	1 858 688 083	54.145	3 432 802 396	100
2020	1 575 854 676	45.979	1 851 480 702	54.021	3 427 335 378	100
2021	1 531 292 994	44.997	1 871 807 417	55.003	3 403 100 411	100
2022	1 517 369 712	45.296	1 832 491 291	54.704	3 349 861 004	100
Total (2009-2022)	19 824 584 409	45.723	23 533 697 873	54.277	43 358 282 283	100

14) Table prepared by the Office of SAMPRO based on information obtained from Milk SA. Half years of which the percentage contribution to the total unprocessed milk purchases in the specific year, were the highest relative to the contributions of the same half years of the other years, are printed in red and the half years, with the lowest contributions, are printed in green.

Graph 8¹⁵⁾

AVERAGE UNPROCESSED MILK PURCHASES PER DAY PER MONTH IN SOUTH AFRICA IN THE YEARS 2018 TO MAY 2023



15) Table 4 and Graph 7 prepared by the Office of SAMPRO on the basis of information obtained from MILK SA. The information in respect of 2018 to April 2023 is in respect of the total unprocessed milk purchased by all registered milk buyers declared in terms of Regulation 1652 of the Marketing of Agricultural Products Act and previous similar regulations. The figures for April 2023 and May 2023 are estimated figures.

Table 8¹⁶⁾

MASS OF UNPROCESSED MILK PURCHASES IN PARTICULAR MONTHS, RELATIVE TO THE PURCHASES IN THE SAME MONTHS OF PARTICULAR PREVIOUS YEARS

	Percentage increase
June 2019 relative to June 2018	0.5
July 2019 relative to Jul 2018	-0.8
August 2019 relative to August 2018	1.2
September 2019 relative to September 2018	1.8
October 2019 relative to October 2018	0.5
November 2019 relative to November 2018	1.6
December 2019 relative to December 2018	-1.0
January 2020 relative to January 2019	2.1
February 2020 relative to February 2019	-0.05
March 2020 relative to March 2019	0.01
April 2020 relative to April 2019	-2.5
May 2020 relative to May 2019	-2.5
June 2020 relative to June 2019	-0.1
July 2020 relative to July 2019	-0.3
August 2020 relative to August 2019	-1.6
September 2020 relative to September 2019	-1.0
October 2020 relative to October 2019	0.6
November 2020 relative to November 2019	-0.2
December 2020 relative to December 2019	0.02
January 2021 relative to January 2020	-5.0
February 2021 relative to February 2020	-4.1
March 2021 relative to March 2020	-1.9
April 2021 relative to April 2020	0.9
May 2021 relative to May 2020	-1.5
June 2021 relative to June 2020	-1.4
July 2021 relative to July 2020	-1.0
August 2021 relative to August 2020	-0.4
September 2021 relative to September 2020	1.3
October 2021 relative to October 2020	1.9
November 2021 relative to November 2020	2.8
December 2021 relative to December 2020	1.4
January 2022 relative to January 2021	1.8
February 2022 relative to February 2021	-0.4
March 2022 relative to March 2021	-1.3
April 2022 relative to April 2021	-2.6
May 2022 relative to May 2021	-1.6
June 2022 relative to June 2021	-1.8
July 2022 relative to July 2021	0.4
August 2022 relative to August 2021	1.8
September 2022 relative to September 2021	-0.3
October 2022 relative to October 2021	-2.5
November 2022 relative to November 2021	-5.1
December 2022 relative to December 2021	-5.9
January 2023 relative to January 2022	-3.6
February 2023 relative to February 2022	-1.9
March 2023 relative to March 2022	-1.3
April 2023 relative to April 2022 (est)	0.1
May 2023 relative to May 2022 (est)	-2.5

16) Table prepared by the Office of SAMPRO based on information obtained from Milk SA

Table 9¹⁷⁾

DECREASE IN THE MASS OF MONTHLY UNPROCESSED MILK PURCHASES IN SOUTH AFRICA, FROM OCTOBER TO DECEMBER, OCTOBER TO FEBRUARY, OCTOBER TO APRIL AND OCTOBER TO JUNE, IN THE YEARS 2008 TO 2023

Year	October to December percent	October to February percent	October to April percent	October to June percent
2008/9	3.9	16.9	24.4	25.4
2009/10	5.0	14.6	20.4	21.2
2010/11	5.6	15.6	23.4	23.7
2011/12	6.6	14.5	19.5	18.2
2012/13	5.3	14.9	20.9	20.5
2013/14	4.2	18.0	22.9	21.8
2014/15	7.7	12.9	17.1	19.4
2015/16	7.9	15.9	20.5	22.0
2016/17	4.0	17.8	22.2	24.9
2017/18	5.7	13.8	18.7	23.3
2018/2019	7.3	16.8	21.9	25.6
2019/2020	7.8	17.4	24.4	26.2
2020/2021	7.8	21.2	24.2	27.7
2021/2022	8.2	24.1	27.7	30.5
Average 2008/9 to 2021/2022	6.2	16.7	22.0	23.6
2022/2023	11.5	29.0	35.4	

17) Table prepared by the Office of SAMPRO based on information obtained from MILK SA.

Table 10¹⁸⁾

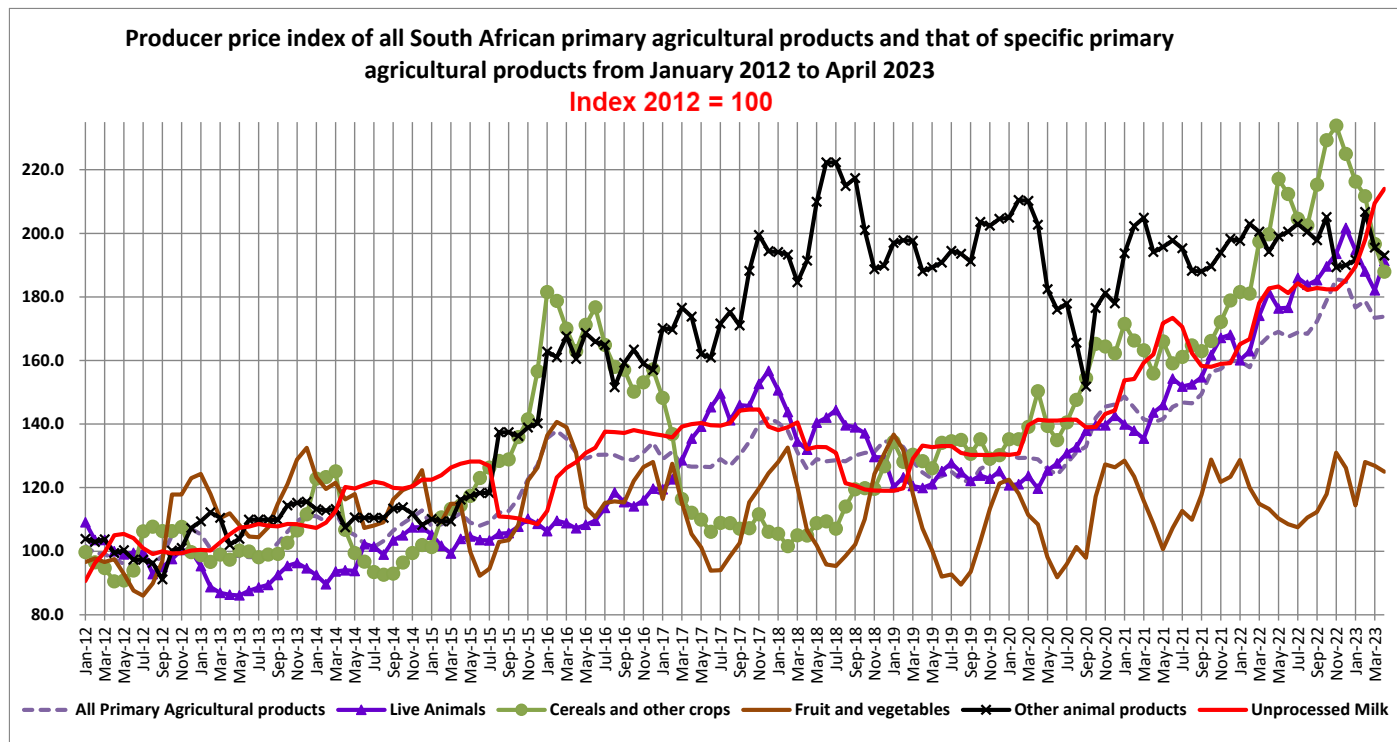
INCREASE IN THE MASS OF MONTHLY UNPROCESSED MILK PURCHASES IN SOUTH AFRICA, FROM JULY TO AUGUST, JULY TO SEPTEMBER AND JULY TO OCTOBER IN EACH OF THE YEARS 2008 TO 2022

Year	July to August Percent	July to September Percent	July to October Percent
2008	10.7	22.2	24.6
2009	12.4	24.5	29.3
2010	9.7	19.8	24.2
2011	10.6	26.3	28.2
2012	10.3	21.8	25.6
2013	11.4	23.0	26.3
2014	13.0	27.2	32.9
2015	10.6	20.7	25.1
2016	12.7	27.2	30.7
2017	15.9	31.7	34.3
2018	13.7	24.7	29.0
2019	16.0	28.1	30.8
2020	14.5	27.2	31.9
2021	15.1	30.1	35.8
Average 2008 to 2021	12.6	25.3	29.2
2022	16.8	29.3	31.9

18) Table prepared by the Office of SAMPRO on the basis of information obtained from MILK SA. The information in respect of 2008 to 2020 is in respect of the total unprocessed milk purchased by all registered milk buyers declared in terms of Regulation 1652 of the Marketing of Agricultural Products Act and previous similar regulations.

Graph 9¹⁹⁾

PRODUCER PRICE INDICES OF PRIMARY AGRICULTURAL PRODUCTS IN SOUTH AFRICA FROM JANUARY 2012 TO APRIL 2023



19) Graph prepared by the Office of SAMPRO based on information published by Statistics SA

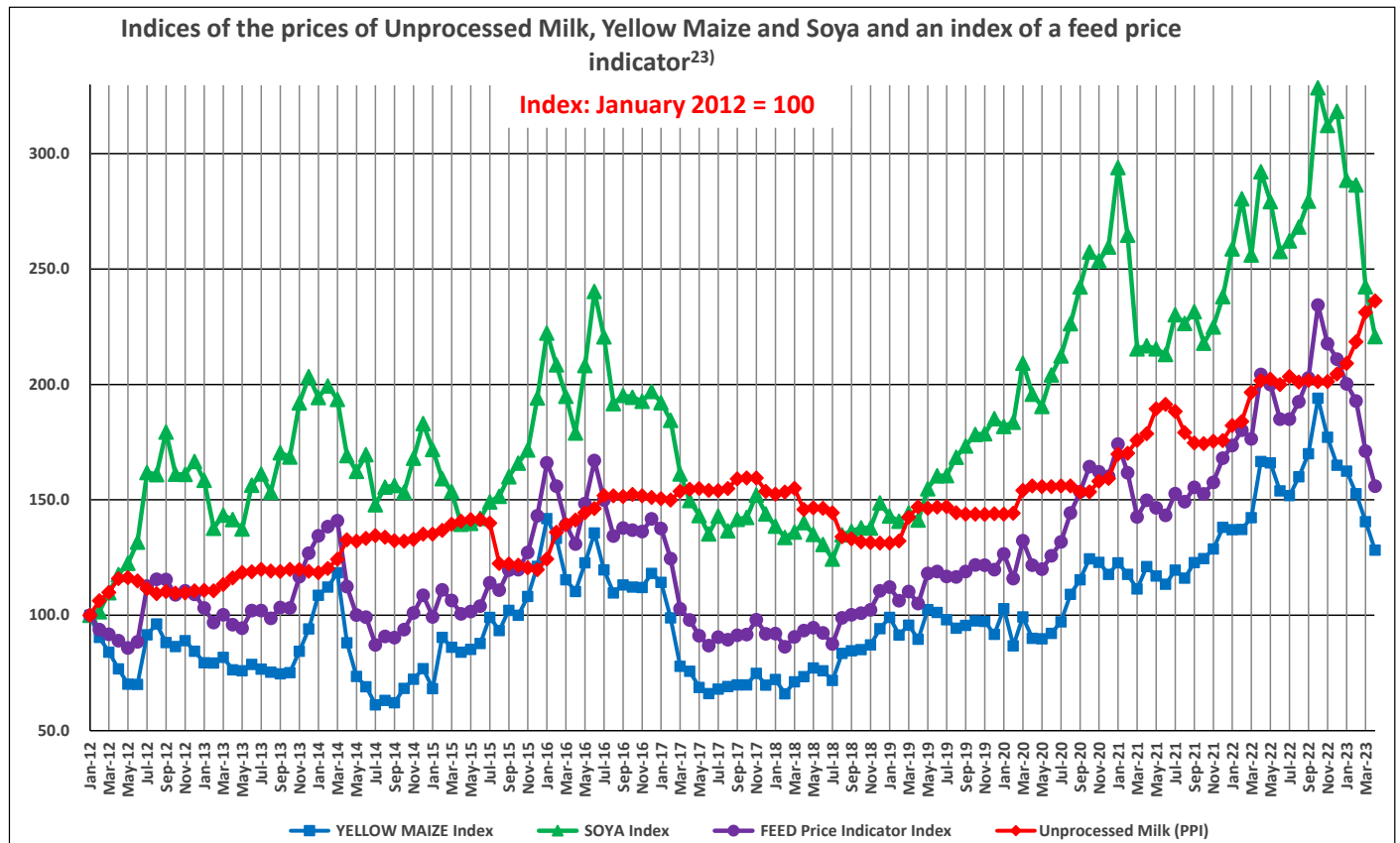
Table 11²⁰⁾**MONTHLY INCREASE IN THE PRODUCER PRICE INDEX OF UNPROCESSED MILK**

	Percentage increase
August 2019 relative to July 2019	-1.64
September 2019 relative to August 2019	-0.46
October 2019 relative to September 2019	0.00
November 2019 relative to October 2019	-0.08
December 2019 relative to November 2019	0.24
January 2020 relative to December 2019	-0.16
February 2020 relative to January 2020	0.31
March 2020 relative to February 2020	6.81
April 2020 relative to March 2020	1.29
May 2020 relative to April 2020	-0.21
June 2020 relative to May 2020	0.00
July 2020 relative to June 2020	0.21
August 2020 relative to July 2020	0.00
September 2020 relative to August 2020	-1.70
October 2020 relative to September 2020	0.08
November 2020 relative to October 2020	2.93
December 2020 relative to November 2020	0.78
January 2021 relative to December 2020	6.58
February 2021 relative to January 2021	0.25
March 2021 relative to February 2021	3.33
April 2021 relative to March 2021	1.61
May 2021 relative to April 2021	6.07
June 2021 relative to May 2021	0.98
July 2021 relative to June 2021	-1.60
August 2021 relative to July 2021	-4.85
September 2021 relative to August 2021	-2.48
October 2021 relative to September 2021	-0.21
November 2021 relative to October 2021	0.59
December 2021 relative to November 2021	0.19
January 2022 relative to December 2021	3.72
February 2022 relative to January 2022	0.97
March 2022 relative to February 2022	6.84
April 2022 relative to March 2022	2.58
May 2022 relative to April 2022	0.34
June 2022 relative to May 2022	-1.16
July 2022 relative to June 2022	1.73
August 2022 relative to July 2022	-1.15
September 2022 relative to August 2022	0.34
October 2022 relative to September 2022	-0.22
November 2022 relative to October 2022	0.00
December 2022 relative to November 2022	1.59
January 2023 relative to December 2022	2.26
February 2023 relative to January 2023	4.49
March 2023 relative to February 2023	5.81
April 2023 relative to March 2023	2.15

20) Table prepared by the Office of SAMPRO based on information published by Statistics SA

Graph 10²¹⁾

INDICES OF THE PRICES OF UNPROCESSED MILK IN THE PERIOD JANUARY 2012 TO APRIL 2023 AND THAT OF, YELLOW MAIZE AND SOYA AND AN INDEX OF A FEED PRICE INDICATOR²²⁾ IN THE PERIOD JANUARY 2012 TO APRIL 2023



INCREASE IN UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)²³⁾

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4.5	2.22	2.65	6.32	-0.45	3.02	4.82	0.65	-0.16	-0.71	-1.56

21) Graph prepared by the Office of SAMPRO based on information obtained from Statistics SA and SAFEX middle of the month prices.

22) The Feed price indicator index is an index of prices equal to 70 percent of the maize price, plus 30 percent of the soya price.

23) Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 12²⁴⁾

FUTURE PRICES OF YELLOW MAIZE IN SOUTH AFRICA (R/TON) ON 26 MAY 2023 AND 8 JUNE 2023 ACCORDING TO SAFEX

	A CLOSING BID 26 May 2023 R/Ton	B CLOSING BID 8 June 2023 R/Ton	C Percentage change from A to B
September 2023	3 732	3 887	-4.0
December 2023	3 835	3 992	-3.9
March 2024	3 841	4 008	-4.2
May 2024		4 038	

Table 13²⁵⁾

FUTURE PRICES OF SOYA BEANS IN SOUTH AFRICA (R/TON) ON 26 MAY 2023 AND 8 JUNE 2023 ACCORDING TO SAFEX

	A CLOSING BID 26 May 2023 R/Ton	B CLOSING BID 8 June 2023 R/Ton	C Percentage change from A to B
September 2023	7 695	7 924	-2.9
December 2023	7 860	8 104	-3.0
March 2024	7 913	8 063	-1.9
May 2024		7 808	

24 & 25) Tables prepared by the Office of SAMPRO based on information as obtained from the SAFEX website on 8 June 2023

Table 14²⁶⁾

FERTILIZER PRICES IN SOUTH AFRICA IN MAY 2021 AND MAY 2023

Fertilizer	May 2021 Rand / Ton	May 2023 Rand / Ton	Percentage change from May 2021 to May 2023
LAN (28)	6 724	9 414	40.0
Urea (46)	7 880	9 678	22.8
MAP	11 753	15 803	34.5
KCL	6 856	11 764	71.6

Table 15²⁷⁾

FERTILIZER PRICES IN SOUTH AFRICA IN APRIL AND MAY 2023

Fertilizer	April 2023 Rand / Ton	May 2023 Rand / Ton	Percentage change from April 2023 to May 2023
LAN (28)	10 290	9 414	-8.5
Urea (46)	9 684	9 678	-0.1
MAP	16 800	15 803	-5.9
KCL	14 371	11 764	-18.1

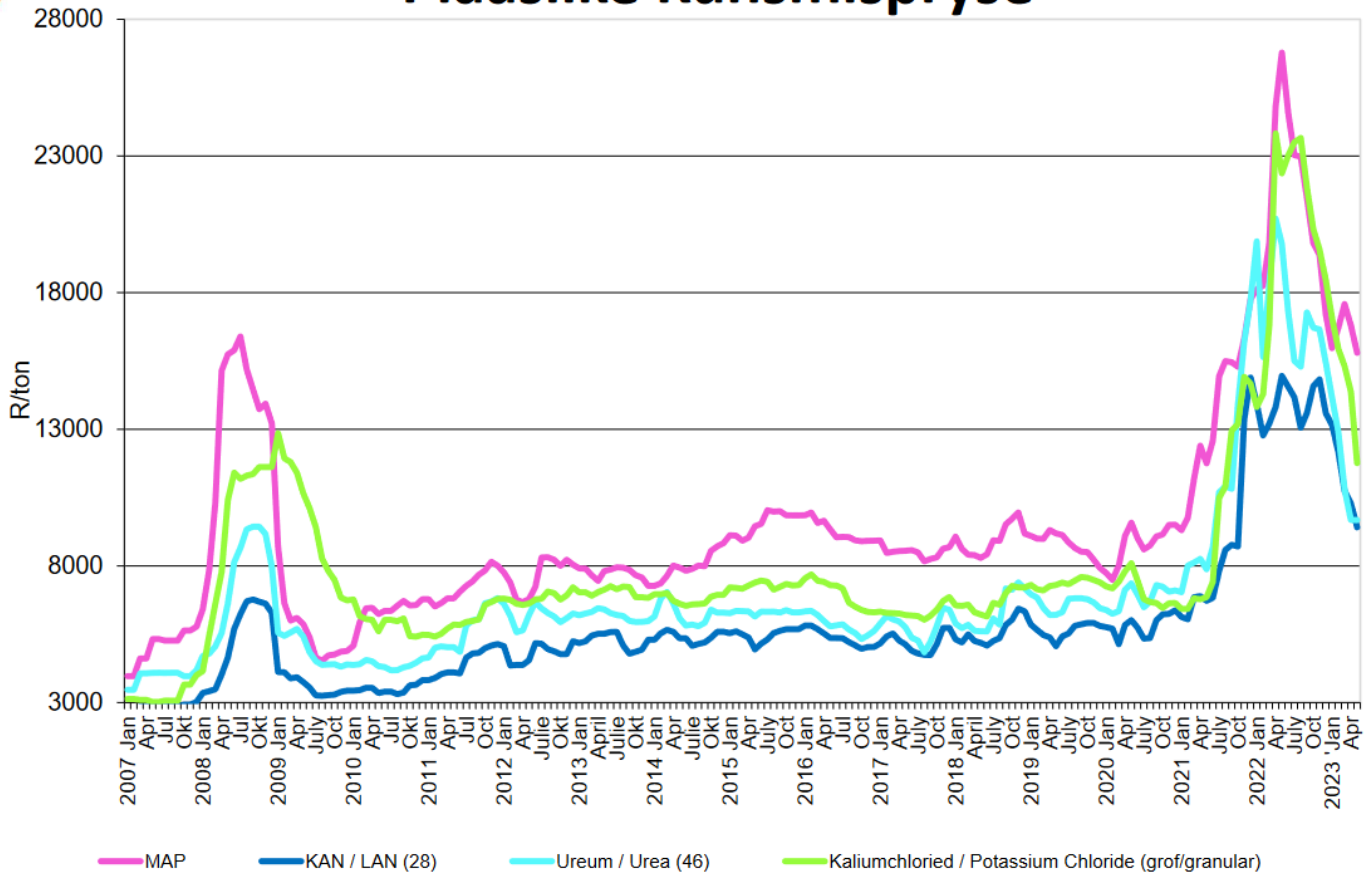
26 & 27) Table prepared by the Office of SAMPRO based on information published by Grain SA.

Graph 1128)

FERTILIZER PRICES IN SOUTH AFRICA FROM JANUARY 2007 TO MAY 2023



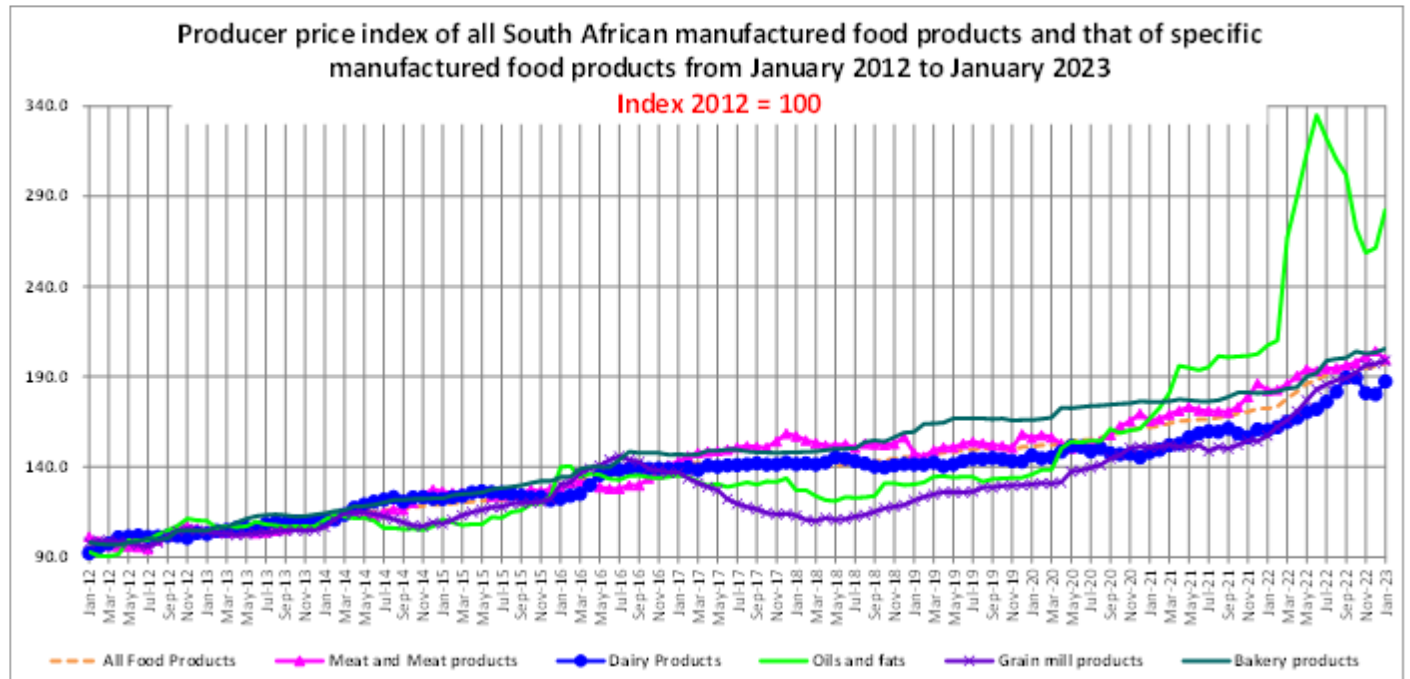
Local Fertilizer prices/ Plaaslike Kunsmispryse



28) Graph published by Grain SA.

Graph 12²⁹⁾

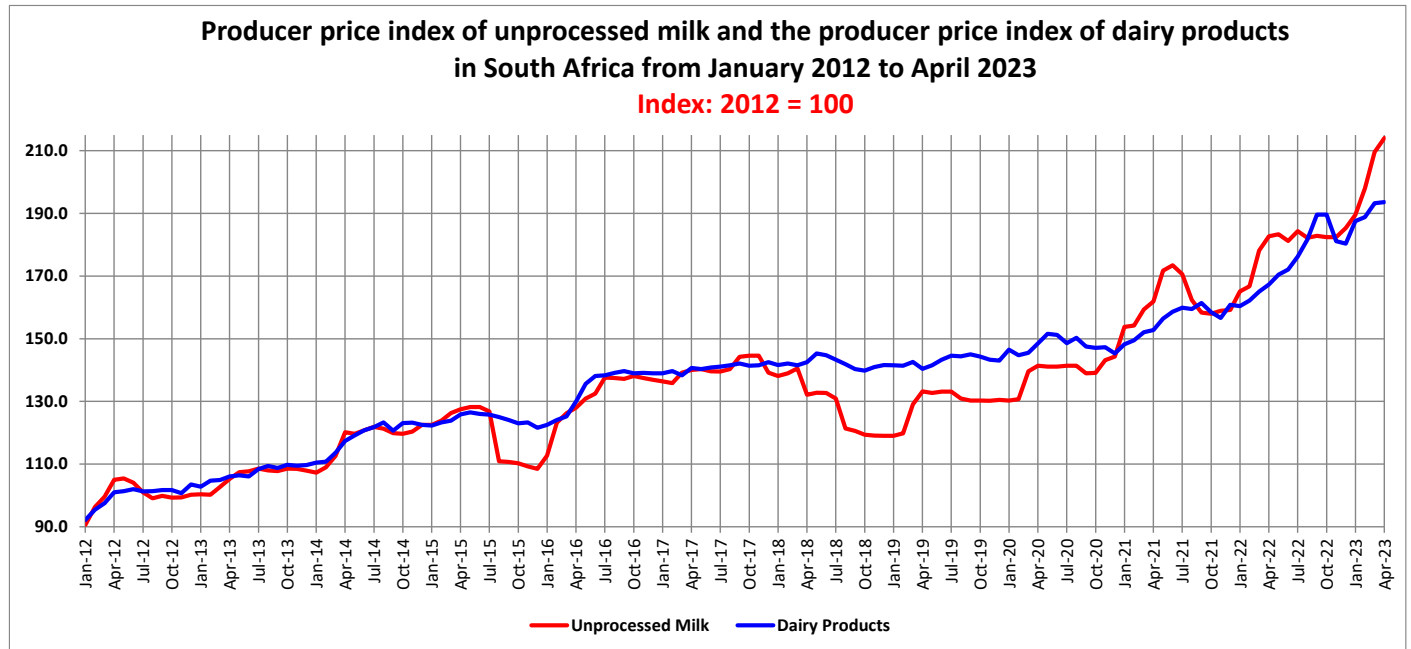
PRODUCER PRICE INDICES OF MANUFACTURED FOOD PRODUCTS IN SOUTH AFRICA FROM JANUARY 2012 TO APRIL 2023



29. Graph prepared by the Office of SAMPRO based on information obtained from Statistics SA. Note that the producer price index of dairy products measures the changes of the prices of a basket of dairy products consisting of fresh milk, UHT milk, yoghurt, cheddar cheese and ice cream and products like cheese other than cheddar, maas, butter and milk powder are not included.

Graph 13³⁰⁾

PRODUCER PRICE INDEX OF UNPROCESSED MILK AND THE PRODUCER PRICE INDEX OF DAIRY PRODUCTS IN SOUTH AFRICA, FROM JANUARY 2012 TO APRIL 2023



30) Graph prepared by the Office of SAMPRO based on information obtained from Statistics SA. Note that the producer price index of dairy products measures the changes of the prices of a basket of dairy products consisting of fresh milk, UHT milk, yoghurt, cheddar cheese and ice cream and products like cheese other than cheddar, maas, butter and milk powder are not included.

Table 16³¹⁾

INCREASE IN PRODUCER PRICE INDICES OF PARTICULAR CATEGORIES OF PRODUCTS WHICH INCLUDE INPUTS OF THE DAIRY INDUSTRY, IN THE YEAR WHICH ENDED IN APRIL 2023

GROUP OF PRODUCTS	PERCENTAGE INCREASE
Textiles, clothing and footwear	8.1
Textiles	10.2
Clothing	6.9
Footwear	10.5
Paper and printed products	16.1
Coke, petroleum, chemical, rubber and plastic products	6.0
Coal and petroleum products	5.8
Petrol	4.5
Diesel	-1.2
Other	16.7
Chemical products	7.4
Rubber and plastic products	5.0
Metals, machinery, equipment and computing equipment	6.9
Structural and fabricated metal products	0.2
General and special purpose machinery	12.3
Household appliances and office machinery	12.3
Electrical machinery and communication and metering equipment	4.1
Electricity and water	13.1
Electricity	14.1
Water	8.1

31) Table prepared by the Office of SAMPRO based on information published by Statistics SA

Table 17³²⁾

INCREASE IN PRODUCER PRICE INDICES OF PARTICULAR INTERMEDIATE MANUFACTURED PRODUCTS, IN THE YEAR WHICH ENDED IN APRIL 2023

GROUP OF PRODUCTS	PERCENTAGE INCREASE
Intermediate manufactured goods	4.6
Textiles and leather goods	26.7
Sawmilling and wood	7.3
Chemicals, rubber and plastic products	3.4
Basic and other chemical	5.1
Plastic products	-3.4
Rubber products	11.2
Glass and glass products	14.6
Basic and fabricated metals	3.4
Basic iron and steel	-6.0
Basic precious and non-ferrous metals and castings	13.5
Recycling and manufacturing n.e.c.	5.6

32) Table prepared by the Office of SAMPRO based on information published by Statistics SA

Table 18³³⁾

CHANGES IN THE RETAIL SALES QUANTITIES FROM THE YEAR APRIL 2021 TO MARCH 2022, TO THE YEAR APRIL 2022 TO MARCH 2023, AND CHANGES IN THE RETAIL PRICES FROM MARCH 2022 TO MARCH 2023 OF SPECIFIC DAIRY PRODUCTS

PRODUCT	CHANGE IN DEMAND (QUANTITY)	CHANGE IN RETAIL PRICES
	PERCENT	PERCENT
FRESH MILK	-5.9	17.5
LONG LIFE MILK (UHT MILK)	-3.0	17.1
FLAVOURED MILK	-6.1	19.0
YOGHURT	-4.3	16.0
MAAS	0.3	24.1
PRE-PACKAGED CHEESE	-0.02	15.6
CREAM CHEESE	-1.4	10.9
BUTTER	-4.3	11.5
CREAM	-6.4	13.7

33) Table prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ". Non-retail sales such as sales to industrial buyers are not part of the surveys.

Table 19³⁴⁾

CHANGES IN THE QUANTITIES OF RETAIL SALES OF SPECIFIC DAIRY PRODUCTS IN THE PERIOD APRIL 2021 TO MARCH 2023

PRODUCT	Sales in the month of March 2023 versus the sales in the month of March 2022	Sales in the 3 months from January to March 2023 versus the sales in the 3 months from January to March 2022	Sales in the 6 months from October 2022 to March 2023 versus the sales in the 6 months from October 2021 to March 2022	Sales in the 9 months from June 2022 to March 2023 versus the sales in the 9 months from June 2021 to March 2022	Sales in the 12 months from April 2022 to March 2023 versus the sales in the 12 months from April 2021 to March 2022
	percent	percent	percent	percent	percent
Fresh Milk	-2.3	-2.9	-4.3	-4.7	-5.9
UHT milk	-7.3	-11.3	-4.9	-5.0	-3.0
Flavoured milk	-15.3	-12.5	-9.3	-6.6	-6.1
Yoghurt	-4.2	-6.4	-5.6	-4.9	-4.3
Maas	-1.6	0.7	-0.9	0.7	0.3
Pre-packaged cheese	-2.9	-2.4	-0.7	0.1	-0.02
Cream cheese	7.7	2.0	-0.1	-1.7	-1.4
Butter	2.8	-9.5	-4.0	-6.1	-4.3
Cream	0.6	-8.5	-6.7	-6.8	-6.4

34) Table prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ".
Non-retail sales such as sales to industrial buyers, are not part of the surveys.

Table 20³⁵⁾

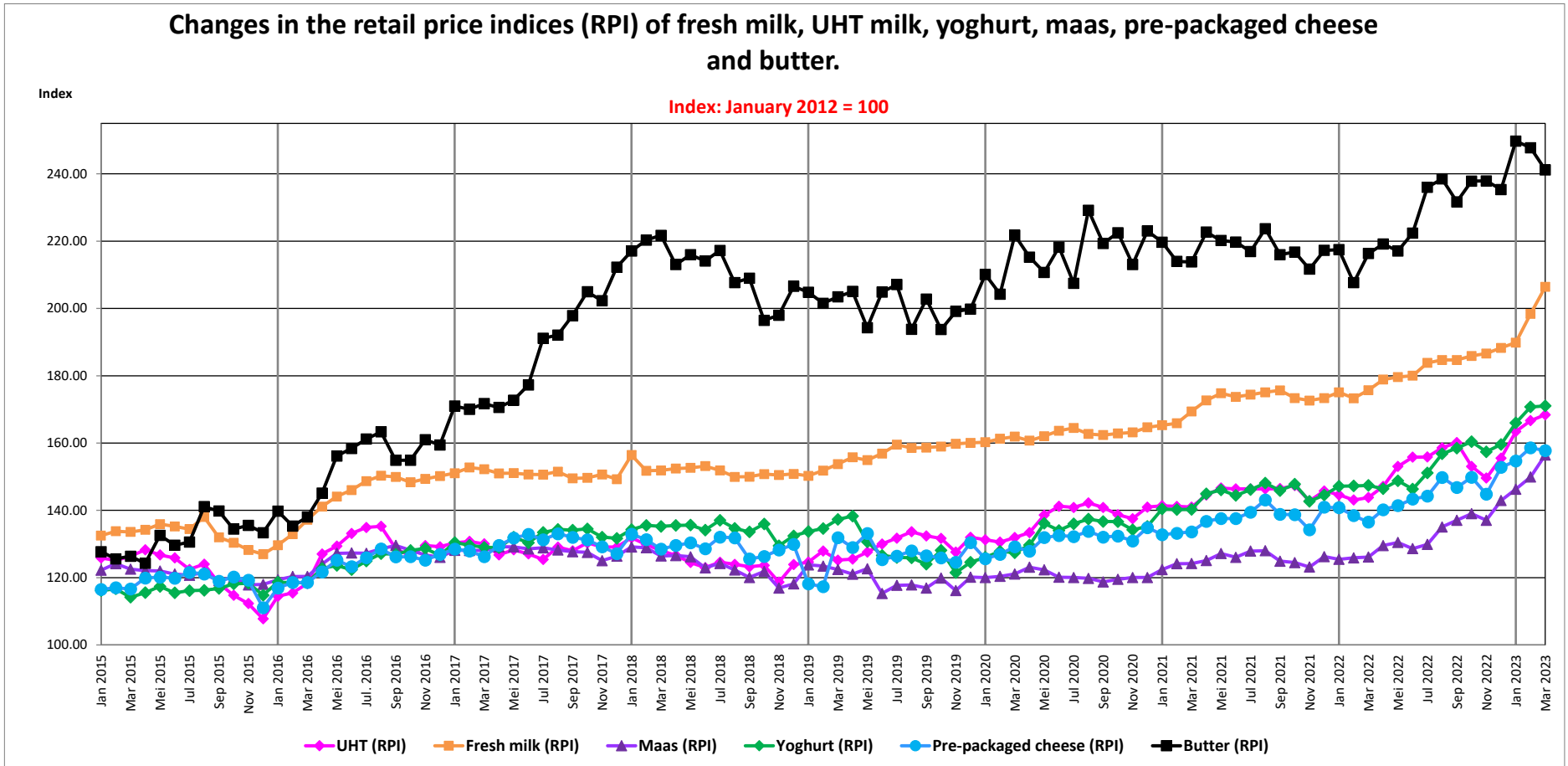
**THE AVERAGE RETAIL PRICES OF SPECIFIC DAIRY PRODUCTS IN MARCH 2023,
COMPARED TO THE AVERAGE RETAIL PRICES OF THE PRODUCTS CONCERNED
IN SPECIFIC PREVIOUS MONTHS OF 2022 AND 2021**

PRODUCT	March 2023 versus February 2023 (1 month ago)	March 2023 versus December 2022 (3 months ago)	March 2023 versus September 2022 (6 months ago)	March 2023 versus June 2022 (9 months ago)	March 2023 versus March 2022 (12 months ago)	March 2023 versus September 2021 (18 months ago)	March 2023 versus March 2021 (24 months ago)
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
FRESH MILK	4.0	9.6	11.8	14.7	17.5	17.5	21.8
UHT MILK	1.0	8.3	5.2	8.1	17.1	15.0	19.5
FLAVOURED MILK	1.6	8.4	7.7	12.2	19.0	17.1	28.5
YOGHURT	0.18	7.2	7.9	16.9	16.0	17.2	21.9
MAAS	4.4	9.5	14.2	21.6	24.1	25.3	26.0
PRE-PACKAGED CHEESE	-0.5	3.2	7.5	10.1	15.6	13.6	18.1
CREAM CHEESE	2.8	1.5	3.9	6.7	10.9	12.7	14.0
BUTTER	-2.6	2.5	4.1	8.4	11.5	11.7	12.8
CREAM	2.4	3.6	6.7	10.7	13.7	16.2	20.1

35) Table prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ".
Non-retail sales such as sales to industrial buyers, are not part of the surveys.

Graph 14³⁶⁾

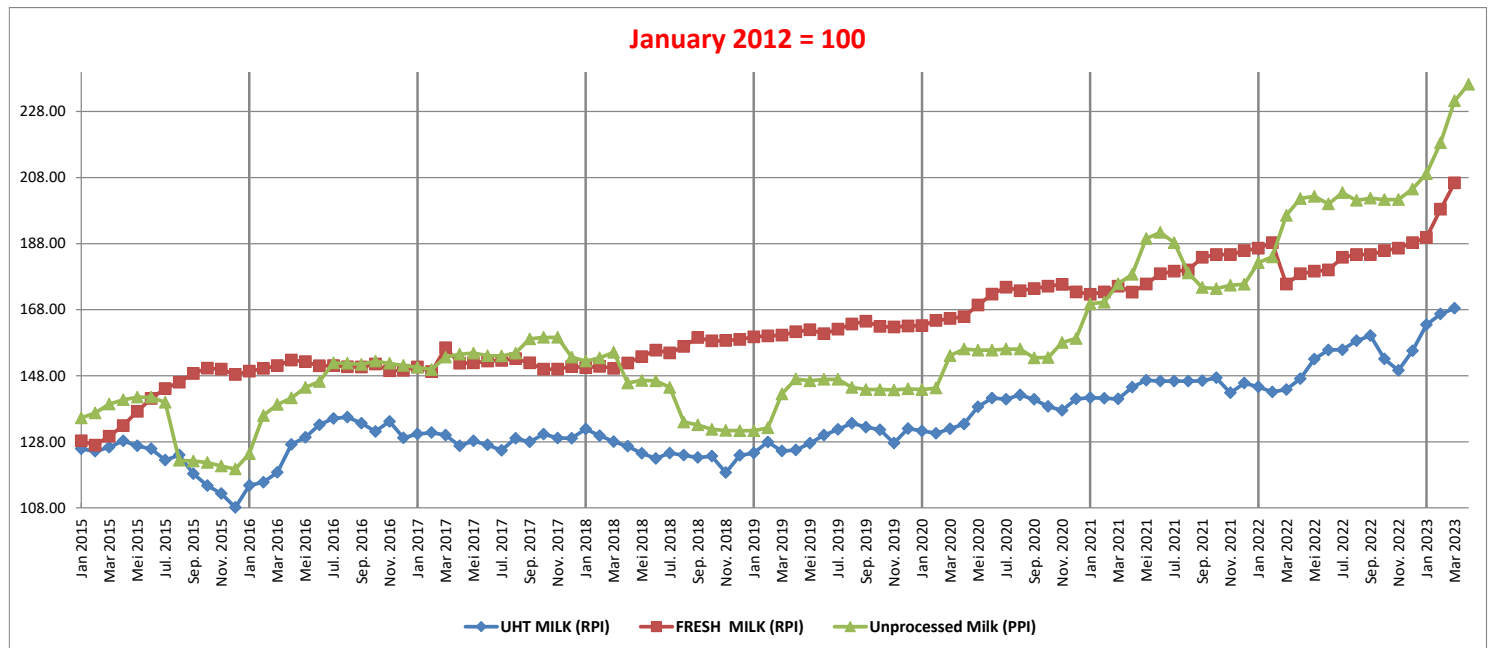
THE RETAIL PRICE INDICES (RPI) OF SPECIFIC DAIRY PRODUCTS, FROM JANUARY 2015 TO MARCH 2023



36) Graph prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ". Non-retail sales such as sales to industrial buyers, are not part of the surveys.

Graph 15³⁷⁾

THE PRODUCER PRICE INDEX (PPI) OF UNPROCESSED MILK, FROM JANUARY 2015 TO APRIL 2023 AND THE RETAIL PRICE INDICES (RPI) OF FRESH MILK AND UHT MILK, FROM JANUARY 2015 TO MARCH 2023



INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)³⁸⁾

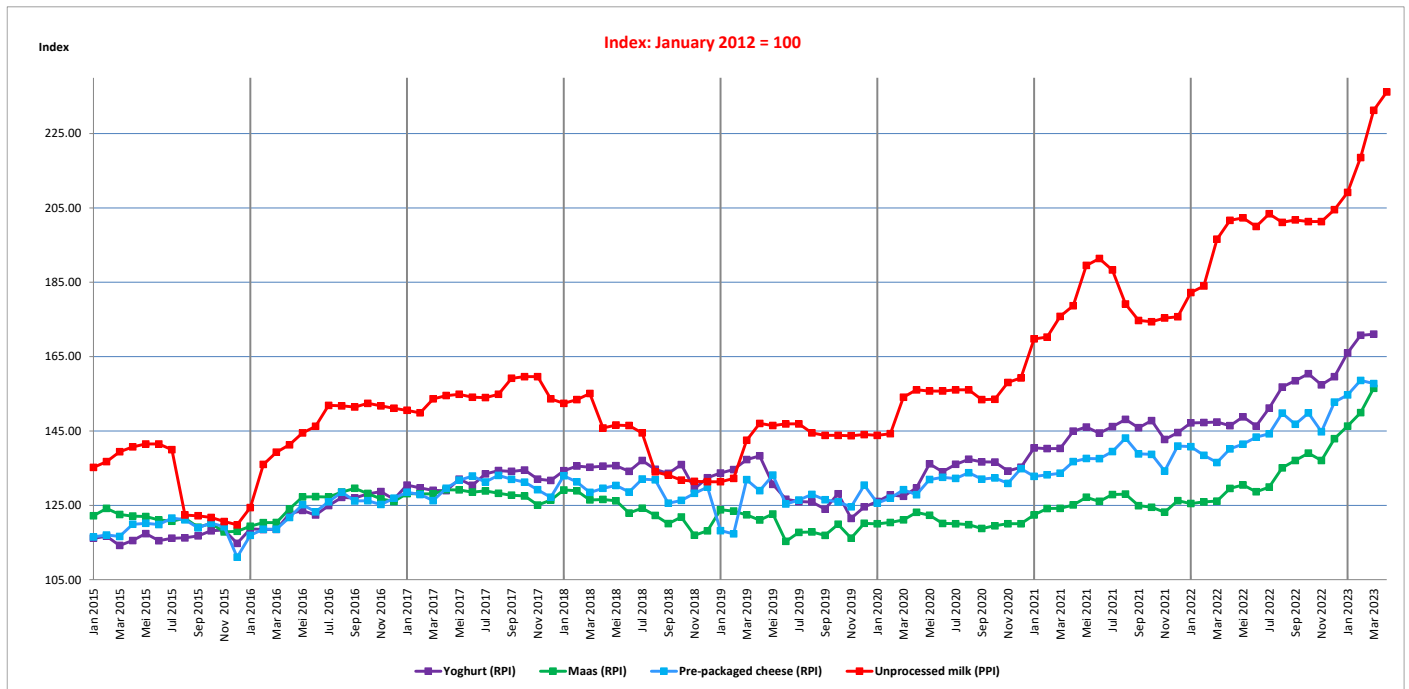
2015	2016	2017	2018	2019	2020	2021	2022
6.37	-0.45	3.02	4.82	0.65	-0.16	-0.71	-1.56

37) Graph prepared by the Office of SAMPRO based on information obtained from NielsenIQ and Statistics South Africa

38) Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Graph 16³⁹⁾

THE PRODUCER PRICE INDEX (PPI) OF UNPROCESSED MILK, FROM JANUARY 2015 TO APRIL 2023 AND THE RETAIL PRICE INDICES (RPI) OF YOGHURT, MAAS AND PRE-PACKAGED CHEESE, FROM JANUARY 2015 TO MARCH 2023



**INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES
RELATIVE TO PREVIOUS YEAR (PERCENT)⁴⁰⁾**

2015	2016	2017	2018	2019	2020	2021	2022
6.37	-0.45	3.02	4.82	0.65	-0.16	-0.71	-1.56

39) Graph prepared by the Office of SAMPRO based on information obtained from NielsenIQ and Statistics South Africa

40) Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 21⁴¹⁾

THE HIGHEST AND LOWEST DIFFERENCES RECORDED BETWEEN THE AVERAGE MONTHLY RETAIL PRICES OF UHT MILK AND FRESH MILK AND THE DIFFERENCES BETWEEN THE AVERAGE ANNUAL RETAIL PRICES OF UHT MILK AND FRESH MILK, IN THE YEARS 2012 TO 2022

YEAR	Percentage difference ⁴²⁾		
	Highest monthly	Lowest monthly	Average annual
2012	17.1	0.7	11.4
2013	8.9	2.8	6.1
2014	12.5	5.8	10.0
2015	11.9	-0.7	7.0
2016	6.9	0.7	3.9
2017	1.8	-2.6	-0.2
2018	0.0	-7.9	-3.7
2019	3.8	-3.8	0.2
2020	4.3	0.4	2.3
2021	-3.8	-2.4	-3.1
2022	-0.4	-3.3	-1.9
Average	5.7	-0.9	2.9

41) Table prepared by the Office of SAMPRO based on the results of surveys by NielsenIQ. Non-retail sales such as sales to industrial buyers are not part of the surveys.

42) The percentages indicated are the percentages which the average retail prices of UHT milk were higher than that of fresh milk