sompro

SUMMARY OF KEY MARKET SIGNALS FOR THE DAIRY INDUSTRY,

AUGUST 2021 EDITION

No7 9SEPT

| CONTENTS | Page |
|--|------|
| SYNOPSIS | 2 |
| INTRODUCTION | 6 |
| THE INTERNATIONAL MARKETS FOR DAIRY PRODUCTS AND UNPROCESSED MILK MARKETS IN MAJOR DAIRY COUNTRIES | 6 |
| THE SOUTH AFRICAN MARKETS FOR DAIRY PRODUCTS AND UNPROCESSED MILK | 10 |
| ANNEXURE A | 24 |

SYNOPSIS

The low <u>levels of volatility of the dairy price index</u> (the difference between the highest and lowest price index in a year) of the Food and Agricultural Organization (FAO), in 2019, 2020, and in January to August 2021, relative to most previous years, are indicative that in the recent past, the supply of and demand for dairy products in the international market remained to a high extent, in balance amidst changing circumstances.

The FAO dairy price index in August 2021 is 13.6 percent higher than in August 2020, 15.6 percent higher than in August 2019 and 6.9 percent higher than in August 2018.

The <u>future prices</u> of skimmed milk powder and cheddar cheese, recorded at the Global Dairy Auction on 17 August 2021, for delivery in September 2021 to January 2022, show an upward trend and the prices in January 2022 are 3.0 percent higher than in September 2021. The future prices of whole milk powder and butter, decrease from September 2021 to January 2022 with respectively 4.3 percent and 3.0 percent.

Different factors exist which can impact in the coming months, on the international supply of, and demand for, dairy products and thus on the prices of dairy products, such as:

- The developments in respect of COVID-19, which can influence the supply of, and the demand for, dairy products in the world and which can disrupt the international trade in respect of dairy and other products;
- Future weather conditions and its impact on the supply of unprocessed milk and thus on the supply of dairy products. In the next few months, weather conditions in the Southern hemisphere will be very important, as the peak production season of the Southern hemisphere, commences in the third quarter of the year; and
- Developments in respect of international trade and other disputes.

In 2020, in the situation created by COVID-19 and the lockdown measures of the Government, the <u>performance (in terms of sales quantity and retail price), in the South African retail market of specific dairy products</u> namely, UHT (long life) milk, yoghurt, prepackaged cheese, cream cheese, butter and cream were higher than in 2019, while the opposite was true in respect of fresh and flavoured milk.

In the February 2021 edition of the "Summary of 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".

SYNOPSIS (continued)

The good performance of dairy products in the South African retail market in 2020, did not continue in the first half of 2021. Although the retail sales prices of eight of the nine dairy products increased in the first half of 2021, the retail sales quantities of eight of the nine dairy products were lower than in the first half of 2020.

In 2020 in South Africa, the <u>producer price index of dairy products</u> increased in six months and decreased in six months. The net result of these changes was that the index in December 2020, was 1.6 percent higher than in December 2019. From December 2020 to July 2021 (the latest available information is in respect of July 2021), the producer price index of dairy products increased with 10.0 percent. The producer price index of dairy products in July 2021, was 7.6 percent higher than in July 2020 and 10.5 percent higher than in July 2019.

According to Milk SA, the <u>production of unprocessed milk</u> (unprocessed milk purchases) in South Africa in 2020, was 0.16 percent lower than in 2019, 0.49 percent higher than in 2018 and 5.33 percent higher than in 2017. The decrease from 2019 to 2020, was the result of lower production in eight of the twelve months of 2020.

The lower production of unprocessed milk in 2020 in South Africa, relative to the production in 2019, should be seen against the background of especially the following:

- The uncertainty about the impact of COVID-19 on the economy, as well as on the demand for dairy products and thus the demand for unprocessed milk, which existed in 2020. Essentially, this position discouraged at any point in time during 2020, optimistic views about the future demand for dairy products and the future demand for unprocessed milk, and thus the justification for stimulation of production of unprocessed milk through price increases; and
- The unexpected sharp increases of the prices of maize and soya in the second half of 2020, which are the basis of important ingredients of feed for dairy cattle and which eroded the positive impact of the increase of the prices of unprocessed milk which took place.

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 thirteen years from 2008 to 2020, was 33.3 percent.

The <u>extent of the seasonal decrease of the production of unprocessed milk in South Africa</u> from October 2020 to June 2021, (the figure for June 2021 is an estimated figure) namely 28.1 percent, was higher than the average decrease of 22.7 percent in the years 2008/2009 to 2019/2020, and also higher than the previous highest decrease of 26.6 percent, which was recorded in the period October 2019 to June 2020.

SYNOPSIS (continued)

During the first seven months of 2021, the production of unprocessed milk in South Africa was 2.75 percent lower than in the same months of 2020, due to lower production in six of the seven months. Only the production in April 2021, was slightly (0.5 percent) higher than in April 2020. In the three months which ended in July 2021, the production of unprocessed milk was 1.74 percent lower than in the same months of 2020. Note that the figures in respect of June 2021 and July 2021, are estimated figures.

In 2020, the <u>producer price index of unprocessed milk</u> decreased in three months, remained the same in two months and increased in seven months. The net result was that the price index in December 2020 was 10.6 percent higher than in December 2019.

From December 2020 to June 2021, the producer price index of unprocessed milk increased with 20.1 percent, but from June 2021 to July 2021 (the latest available information is in respect of July 2021), it decreased with 1.6 percent. The producer price index in July 2021, was 20.7 percent higher than in July 2020 and 28.1 percent higher than in July 2019.

In the last four months of 2020 and in January 2021, the producer price index of unprocessed milk was lower than the <u>index of the feed price indicator</u>, as the last mentioned increased much more in the second half of 2020 than the producer price index of unprocessed milk. From February 2021 to July 2021, the producer price index of unprocessed milk was higher than the index of the feed price indicator. The extent to which the producer price index of unprocessed milk was higher than the index of the feed price indicator, increased from February 2021 to July 2021 and it indicates increased encouragement for the production of unprocessed milk in South Africa.

In light of the <u>future prices of maize and soya</u>, achieved in South Africa on 24 August 2021, significant lower feed prices should not be expected in the coming months. The relative high prices of maize and soya in South Africa, are the result of conditions in the international grain market. Conditions in the international grain market can develop in such a way that lower maize and soya prices can be the result.

In 2018, 2019, and 2020, the <u>producer price index of unprocessed milk</u> was at lower levels than the <u>producer price index of dairy products</u>, but from January 2021 to July 2021 (the latest available information is in respect of July 2021), it was on higher levels.

SYNOPSIS (continued)

In the last nine months of 2018, as well as in 2019 and 2020, the <u>producer price index of unprocessed milk</u> was lower than the <u>retail price index</u> of fresh milk, but higher than the retail price indices of UHT milk, yoghurt, maas and pre-packaged cheese. This position changed and from January 2021, the producer price index of unprocessed milk was also higher than the retail price index of fresh milk.

In the coming months, the production of unprocessed milk in South Africa will be influenced by especially the demand for South African dairy products, weather conditions and feed prices.

In the next few months, the South African dairy industry will be confronted by:

- The uncertainty regarding the unfolding impact of COVID-19 on human behaviour, service delivery by the public sector and the economy, policy disputes, political conflict including the pushback against attempts to act against corruption, and related social instability;
- The normal sharp seasonal rise in production of unprocessed milk. In the thirteen years 2008 to 2020, the average growth in the production of unprocessed milk from July to October, was 28.7 percent, the lowest increase of 24.6 percent was recorded in 2008, and the highest of 34.3 percent, was recorded in 2017; and
- The impact of the expected low level of economic activity in South Africa on the demand for dairy products. The performance in the first half of 2021 of most dairy products in the retail market does not support optimistic views regarding the demand in the coming months for dairy products. Increased retail sales of dairy products can be the result of greater consumer preference for dairy products due to:
 - lower prices and/or
 - factors other than price and/or
 - higher consumer income.

Lower prices for dairy products seem to be an unlikely scenario, increased preference for dairy products due to other factors than price, most likely played out in 2020 and it will take time before the level of economic activity in South Africa reaches the pre-COVID level.

Obviously, the South African dairy industry does not only face challenges of economic and business economic nature, as issues such as animal health, animal welfare and the impact of the dairy industry on the environment, are also of great importance. Although the individual members of the dairy industry are primarily responsible to deal with these issues, major aspects of these issues can only be dealt with through the collective actions by the South African organised dairy industry (Milk SA, SAMPRO, MPO and Dairy Standard Agency). The work required in future in respect of these issues from individual members of the dairy industry and the organised dairy industry, will be more demanding than in the past.

Introduction

- 1. 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.
- 2. 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.
- 3. 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 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.
- 4. 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 the other dairy products, can differ from the macro position due to a variety of factors. In the primary dairy industry (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 of individual animals, weather conditions and geographical location. In the secondary dairy industry, differences are the result of factors like product range, reputation of brand name, productivity in respect of processing, manufacture and marketing, exposure to foreign competition and geographical location.
- 5. 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 each of the industries to the same set of market signals, can differ.

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 the 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, full cream milk powder and casein, and the other dairy products like UHT milk, yoghurt, maas and whey powder, are not included in the basket.

¹⁾ Food and Agricultural Organization of the United Nations.

7. From May 2020 to May 2021, the FAO dairy price index increased with 28.2 percent from 94.4 to 121.1. The last mentioned level is 13.6 percent higher than in May 2019, and 8.7 percent higher than in May 2018. In respect of the increase from May 2020 to May 2021, of 28.2 percent, the FAO stated on 3 June 2021:

"The FAO Dairy Price Index averaged 120.8 points in May, up to 1.7 points (1.5 percent) from April, marking one year of uninterrupted increases and lifting the value 26.4 points (28 percent) above its level of one year ago. However, the index is still 22.8 percent below its peak value reached in December 2013. In May, international quotations for skim milk powder rose the most, reflecting solid import demand amid limited spot supplies from the European Union, and those for whole milk powder increased on high import purchases, especially by China, despite New Zealand's offer of large sales. Cheese quotations also strengthened, mostly due to lower supplies from the European Union amidst strong demand. By contrast, butter prices fell on increased export supplies from New Zealand, marking the end of an elevenmonth long price rally." (Note that FAO adjust their price index figures previously published, from time to time).

8. From May 2021 to August 2021, the FAO dairy price index decreased with 4.2 percent from 121.6 to 116.0, which is 13.6 percent higher than in August 2020 and 15.6 percent higher than in August 2019. The FAO commented as follows in respect of the decrease from May 2021 to August 2021:

"In August, international quotations for milk powders fell, reflecting the continued weakness in global import demand for spot supplies combined with seasonally rising export availabilities in Oceania during the new production season. By contrast, price quotations for cheese rose, underpinned by increased internal demand and tightened supplies in Europe, offset by a slight decline in prices in Oceania on rising production. Butter prices also rose slightly, pressured by high import demand from East Asia for near-term deliveries."

- 9. As shown in the previous two paragraphs, the level of the price index for dairy products of the FAO frequently changed.
- 10. In the last twenty-one years (2000 to 2020) 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 one years was 26.3 percent. (See Table 1 of Annexure A)
- 11. In the last ten years (2011 to 2020) 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 2019 of 7.0 percent, 10.5 percent in 2020, and 8.9 percent in January to August 2021, are indicative that in the recent past, the supply of, and the demand for dairy products in the international market, remained to a high extent, amidst changing circumstances, in balance.

- 12. 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 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.
- 13. From the third quarter of 2020 to March 2021, the price of butter increased the most and from December 2020, when the price of butter moved to higher levels than that of cheese, butter regained its status as the highest priced dairy product. From March 2021 to April 2021, the price of butter moved sideways. From April 2021 to July 2021 (the latest available information is in respect of July 2021), the price of butter decreased sharply, but it maintained its status as the highest priced dairy product. Following a period during which the prices in the international market of whole milk powder, skimmed milk powder and cheddar increased, the price of whole milk powder, decreased from April 2021, the price of skimmed milk powder decreased from June 2021 and the price of cheddar decreased from May 2021. (See Graph 2 of Annexure A).
- 14. The changes of the <u>prices of the dairy products achieved at the Global Dairy Trade Auction</u> on 17 August 2021, for delivery in September 2021 to January 2022, are as follows:
 - The price of whole milk powder decreases with 2.9 percent from September 2021 to October 2021 and from October 2021 to January 2022, it moves sideways within a band of prices of which the highest is 2.3 percent higher than the lowest. The price in January 2022 is 4.2 percent lower than the price in September 2021;
 - The price of skimmed milk powder moves sideways from September 2021 to December 2021, within a band of prices of which the highest is 2.2 percent higher than the lowest. From December 2021 to January 2022, it increases to a level 3.0 percent higher than in September 2021;
 - The price of cheddar cheese decreases with 2.9 percent from September 2021 to October 2021 and from October 2021 to January 2022, it increases to a level 3.0 percent higher than in September 2021; and
 - The price of butter decreases from September 2021 to October 2021 with 1.1 percent and from October 2021 to January 2022, it moves sideways with in a band of which the highest is 2.5 percent higher than the lowest. The price in January 2022 is 2.9 percent lower than in September 2021.
- 15. The expectations of the Department of Agriculture of the USA regarding future prices of dairy products in the USA, published on 18 August 2021, indicates in respect of cheddar cheese, butter and skimmed milk powder, sideways movement from the third quarter of 2021, to the second quarter of 2022. (See Graph 3 of Annexure A).

- 16. Different factors exist which can impact, in the coming months, on the international supply and demand of dairy products and thus on the prices of dairy products, such as:
 - The developments in respect of COVID-19, which can influence the supply and demand for dairy products in the world and which can disrupt the international trade in respect of dairy and other products;
 - Future weather conditions and its impact on the supply of unprocessed milk and thus on the supply of dairy products. The peak production season of the Southern hemisphere, commences in the third quarter of the year; and
 - Developments in respect of international trade and other disputes.
- 17. While uncertainty exists regarding the duration of the COVID-19 pandemic and the extent of its impact on the world, it is at this stage, a certainty that it resulted in a drop in economic activity (reduction in gross domestic product of countries) which can result in lower demand for consumer goods, including the demand for dairy products.
- 18. In light of the previous two paragraphs:
 - Predictions regarding price movements in the near future, should be viewed with great caution; and
 - Information and expectations regarding new developments in respect of the international supply and demand of unprocessed milk and dairy products can, in the coming months, result in volatile price movements in the international dairy market.
- 19. <u>Unprocessed milk production</u> in the world is seasonal, as production in the winter is lower than the production in the 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 4 of Annexure A).
- 20. The <u>prices of unprocessed milk</u> in different member states of the European Union (EU), differ. 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, it moved to higher levels than in 2018, 2019 and 2020. The average price in the EU in July 2021 (the latest available information is in respect of July 2021), was 9.1 percent higher than in July 2020. The price of unprocessed milk in the United States of America, dropped with more than 30 percent from the last quarter of 2019 to more or less the second quarter of 2020, followed by increase and further volatile movements and in the second quarter of 2021, it was lower than the highest level recorded in 2020, but higher than the lowest level recorded in 2020. (See Graph 5 and Graph 6 of Annexure A).

The South African Markets for Dairy Products and Unprocessed Milk

- 21. In respect of 2020, information regarding the import and export of dairy products by South Africa, shows the following:
 - The <u>mass of exports</u> in 2020, was 3.6 percent higher than exports in 2019, due to the higher exports of four of the six types of dairy products, namely milk and cream (0401), whey (0404), butter (0405) and cheese (0406). The products of which the exports were lower, are concentrated milk (0402), and buttermilk and yoghurt (0403);
 - The average f.o.b. <u>export prices</u> in 2020, of five of the six types of dairy products, were higher than in 2019. The products of which the export prices increased are milk and cream (0401), concentrated milk (0402), whey (0404), butter (0405) and cheese (0406), while the average export price of buttermilk and yoghurt (0403) in 2020, was lower than in 2019;
 - The <u>mass of imports</u> in 2020, was 42.7 percent lower than the imports in 2019 due to the lower imports of three of the six types of dairy products, namely milk and cream (0401), whey (0404) and cheese (0406). The products of which the mass of imports were higher, are concentrated milk (0402), buttermilk and yoghurt (0403) and butter (0405);
 - The average f.o.b. <u>import prices</u> in 2020, of five of the six types of dairy products, namely milk and cream (0401), concentrated milk (0402), buttermilk and yoghurt (0403), whey (0404) and cheese (0406), were higher than in 2019, while the import price of butter (0405) was lower; and
 - In terms of mass, South Africa was in 2020, a net exporter of milk and cream (0401) and buttermilk and yoghurt (0403), and a net importer of concentrated milk (0402), whey (0404), butter (0405) and cheese (0406). (See Table 3 and Table 4 of Annexure A).
- 22. Information regarding imports and exports in the first half of 2021, is available and according thereto:
 - The <u>estimated²⁾ mass of exports</u> in 2021, is 5.9 percent higher than in 2020, and 9.9 percent higher than in 2019. This increase is the result of the increase in the estimated mass of exports of five of the six types of dairy products namely, milk and cream (04.01), milk concentrated (04.02), buttermilk and yoghurt (04.03), whey (04.04) and cheese (04.06);
 - The <u>average f.o.b. export prices</u> in the first half of 2021 of four of the six types of dairy products namely, milk and cream (04.01), concentrated milk (04.02), buttermilk and yoghurt (04.03) and cheese (04.06) are higher, while the average f.o.b. export prices of whey (04.04) and butter (04.05) are lower;

²⁾ The estimated figures were calculated on the assumption that the levels of imports and exports in the first half of 2021, will be maintained in the rest of 2021. These estimated figures should be considered with great caution as the patterns of imports and exports (distribution of imports and exports per month during a year), differ significantly from year to year.

- The estimated imports in 2021, is 17.5 percent higher than in 2020, but 5.9 percent lower than in 2019. The increase is the result of the increase in the estimated mass of imports of four of the six types of dairy products namely, milk and cream (04.01), concentrated milk (04.02), whey (04.04) and cheese (04.06). The estimated imports in 2021, of buttermilk and yoghurt (04.03) and butter (04.05) are lower than the imports in 2020;
- The <u>average f.o.b. import price</u> in the first half of 2021, of each of the six types of dairy products, is lower than the average import price in 2020;
- According to the estimated mass of imports and exports, South Africa will, in 2021, be a net exporter of milk and cream (04.01) and buttermilk and yoghurt (04.03).
- 23. The <u>production of unprocessed milk in South Africa is just like in other countries seasonal,</u> with high production in summer and low production in winter. In South Africa, in the thirteen years, 2008 to 2020:
 - The highest production per day per month was in October (eleven years), or November (two years);
 - The lowest production per day per month was in April (three years), May (three years), or June (seven years); and
 - The highest production per day per month was on average 33.0 percent higher than the lowest. The highest difference of 39.5 percent was recorded in 2017, whilst the lowest of 25.2 percent, was recorded in 2015 (See Graph 7 of Annexure A).
- 24. 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
 - 2.26 percent in the twelve years from 2008 to 2020. (See Table 5 of Annexure A).
- 25. From 2008 to 2020, the total unprocessed milk purchases per annum in South Africa increased with 30.59 percent, but the pattern of production of unprocessed milk during each of the last twelve years, 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.

- 26. 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, is 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).
- 27. 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).
- 28. 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 Table 5 and Table 8 of Annexure A).
- 29. The lower production 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-19 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 production of unprocessed milk through price increases; and
 - The unexpected sharp increases of the prices of maize and soya in the second half of 2020, which are the basis of important ingredients³⁾ of feed for dairy cattle and which eroded the positive impact of the increase of the prices of unprocessed milk which occurred.

³⁾ 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.

- 30. During six of the first seven months of 2021, the production of unprocessed milk in South Africa was lower than in the same months of 2020, and only the production in April 2021 was higher than in the same months of 2019. Note that the figures in respect of June and July 2021, are estimated figures. (See Table 8 of Annexure A).
- 31. The seasonal decrease in the production of unprocessed milk in South Africa from October 2020 to June 2021, was 28.1 percent, which is higher than the average decrease of 22.7 percent recorded in the years from 2008/2009 to 2019/2020, and also higher than the previous record high decrease of 26.2 percent, which was recorded in 2019/2020. In this regard, it should be kept in mind, as stated in paragraph 28, that the production in October 2020 was on a record high level relative to the production in October of the previous ten years and that the production in June 2021, was lower than in June 2020, 2019 and 2018, but higher than in June of the previous eight years.
- 32. Regarding the <u>seasonal increase in the production of unprocessed milk in South Africa in 2020</u>, the following:
 - The increase from July 2020 to September 2020, of 27.2 percent, was higher than the average increase of 25.0 percent during the same periods in the thirteen years, 2008 to 2020, and it is together 2016 and 2014, the second highest increase recorded in the years 2008 to 2020; and
 - The increase from July 2020 to October 2020, of 31.9 percent, was higher than the average increase of 28.7 percent during the same periods in the thirteen years, 2008 to 2020, and it is the third highest increase recorded in the thirteen years 2008 to 2020. (See Table 10 of Annexure A).
- 33. In 2019, the <u>producer price index of unprocessed milk</u> did not change in January, July and October, increased in February, March, April, June and December and decreased in May, August, September and November. The net result of the changes is that the producer price index of unprocessed milk in December 2019, was 9.7 percent higher than in December 2018. This increase was from a low level and the index figure in December 2019, is lower than the index figures of the first seven months of 2018, and 6.3 percent lower than in December 2017.
- 34. In 2020 the producer price index of unprocessed milk, increased in January, February, March, April, July, November and December, while it decreased in May and September. The net result of these price movements is that the price index of unprocessed milk in December 2020, was 10.6 percent higher than in December 2019.

- 35. The producer price index of unprocessed milk was in December 2020, 0.69 percent lower than the <u>producer price index of dairy products</u>, while in December 2019, the producer price index of unprocessed milk was 8.7 percent lower than that of dairy products. (See Graph 11 of Annexure A).
- 36. From December 2020 to July 2021 (the latest available information is in respect of July 2021), the producer price index of unprocessed milk increased by 18.2 percent, to a level 20.6 percent higher than in July 2020 and 28.1 percent higher than in July 2019. (See Table 11 of Annexure A). In July 2020, the producer price index of unprocessed milk was 4.8 percent lower than the producer price index of dairy products, and in July 2021, the producer price index of unprocessed milk was 6.6 percent higher than that of dairy products. (See Graph 11 of Annexure A).
- 37. In most months of 2020, and in the first three months of 2021, the producer price index of unprocessed milk was below the <u>producer price index of "cereals and other crops"</u>, but in April 2021 to July 2021 (the latest information is in respect of July), the producer price index of unprocessed milk was higher than the producer price index of "cereals and other crops". (See Graph 8 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 <u>producer price index of unprocessed milk with the indices of the prices of yellow maize and soya</u> and it shows the following:
 - In 2019, and due to the price movements of unprocessed milk, yellow maize and soya, the level of encouragement for the production of 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 <u>index of the feed</u> <u>price indicator</u>, and the feed price indicator is calculated as the sum of 70 percent of the maize price and 30 percent of the soya price;
 - 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. (See Graph 9 of Annexure A); and
 - 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 of the producer price index of unprocessed milk and decrease of 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. (See Graph 9 of Annexure A).

- 38. Regarding the <u>future price movements of yellow maize and soya</u>, the following:
 - The prices of yellow maize achieved on Safex on 24 August 2021, for delivery in September 2021 to May 2022, are from zero percent to 2.5 percent lower than the prices achieved on 3 May 2021;
 - The prices of yellow maize achieved on Safex on 24 August 2021, increase form September 2021 to December 2021 with 2.4 percent and from September 2021 to May 2022, it decreases with 3.1 percent, to a level 3.1 percent lower than in September 2021. (See Table 12 of Annexure A);
 - The prices of soya achieved on Safex on 24 August 2021 for delivery in September 2021 to March 2022, are from 4.2 percent to 4.6 percent higher than the prices achieved on 3 May 2021; and
 - The prices of soya achieved on Safex on 24 August 2021, for delivery in September 2021 to May 2022, increase with 1.6 percent and from September 2021 to March 2022, and it decreases with 3.3 percent from March 2022 to May 2022, to a level of 1.7 percent higher than in September 2021. (See Table 13 of Annexure A).
- 39. From the previous paragraph, it is clear that significant lower feed prices should not be expected in the coming months.
- 40. It should be noted that the relative high prices of maize and soya are not the result of low production in South Africa of these products and that it is the result of the prices in the international market. Potentially, the situation in the international grain market can develop in such a way, that lower maize and soya prices can be the result.
- 41. Regarding the <u>producer price index of dairy products</u>, it should be noted that it measures the changes in the prices of a <u>basket of dairy products</u> consisting of milk, yoghurt, cheddar cheese and ice cream and the <u>basket does not include</u> the other dairy products like milk powder, maas, flavoured milk, butter and cheese, other than cheddar cheese.
- 42. In 2019, the producer price index of dairy products moved within a band of index figures of which the highest, which was recorded in September 2019, was 3.2 percent higher than the lowest, which was recorded in April 2019. The producer price index of dairy products in December 2019, was 0.98 percent higher than in December 2018, and 0.35 percent higher than in December 2017. (See Graph 10 of Annexure A).

- 43. In 2020, the producer price index of dairy products:
 - Decreased in five months and increased in seven months; and
 - The highest index was recorded in May 2020 and it was 4.8 percent higher than the lowest, which was recorded in February 2020;

The net result of the abovementioned movements of the producer price index of dairy products is that the producer price index in December 2020, was 1.6 percent higher than a year ago, namely December 2019.

- 44. From December 2020 to July 2021 (the latest available information is in respect of July 2021), the producer price index of dairy products increased with 10.0 percent to a level 7.6 percent higher than in July 2020, and 10.5 percent higher than in July 2019. The increase in the producer price index of dairy products in the year which ended in July 2021 of 7.6 percent, is much lower than the increase of 20.7 percent, in the same period, of the producer price index unprocessed milk.
- 45. 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.
- 46. 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, influences the quantities sold.
- 47. Key observations in respect of the performance of the nine dairy products of which the performance in the South African retail market is monitored, and which is shown in Table 14, Table 15, and Table 16 of Annexure A, are as follows:
 - a) In the year which ended in June 2021, relative to the year which ended in June 2020:
 - The <u>retail sales quantities</u> of five of the nine dairy products were lower, namely fresh milk (7.7 percent), UHT milk (3.5 percent), flavoured milk (6.1 percent), maas (1.3 percent) and cream cheese (3.9 percent); and
 - The <u>retail sales quantities</u> of four of the nine dairy products were higher, namely yoghurt (1.7 percent), pre-packaged cheese (2.8 percent), butter (0.4 percent) and cream (4.1 percent).
 - b) In the quarter which ended in June 2021, relative to the quarter which ended in June 2020, the retail sales quantities of eight of the nine dairy products, were lower than in the same quarter of the previous year. The changes in the retail sales quantities of the nine dairy products, are the following:

- Fresh milk -4.2 percent;
- UHT milk -15.0 percent;
- Flavoured milk 6.2 percent;
- Yoghurt -7.2 percent;
- Maas -7.4 percent;
- Pre-packaged cheese -6.2 percent;
- Cream cheese -13.2 percent;
- Butter -16.8 percent; and
- Cream -13.3 percent.
- c) The retail sales quantities in June 2021 of three of the nine dairy products, were higher than in June 2020, while the retail sales quantities of the other six dairy products were lower. The changes of the prices were as follows:
 - Fresh milk -2.4 percent;
 - UHT milk -3.6 percent;
 - Flavoured milk 7.0 percent;
 - Yoghurt -5.1 percent;
 - Maas -7.4 percent;
 - Pre-packaged cheese 4.5 percent;
 - Cream cheese -9.0 percent;
 - Butter 0.5 percent; and
 - Cream -7.0 percent.
- d) <u>In the year which ended in June 2021, the retail sales prices</u> of the nine dairy products increased as follows:
 - Fresh milk 6.1 percent;
 - UHT milk 3.5 percent;
 - Flavoured milk 7.0 percent;
 - Yoghurt 6.5 percent;
 - Maas 5.2 percent;
 - Pre-packaged cheese 3.7 percent;
 - Cream cheese 9.3 percent;
 - Butter 1.2 percent; and
 - Cream 3.8 percent.

- e) <u>In the quarter which ended June 2021, the retail sales prices</u> of the nine dairy products, increased. The increases in the retail sales prices of the nine dairy products concerned, were as follows:
 - Fresh milk 2.5 percent;
 - UHT milk 3.7 percent;
 - Flavoured milk 9.5 percent;
 - Yoghurt 2.7 percent;
 - Maas 1.6 percent;
 - Pre-packaged cheese 2.8 percent;
 - Cream cheese 1.6 percent;
 - Butter 2.8 percent; and
 - Cream 2.8 percent.
- f) From May 2021 to June 2021, the retail sales prices of four of the nine dairy products decreased and that of five of the dairy products increased. The changes in the prices were as follows:
 - Fresh milk -0.7 percent;
 - UHT milk 0.4 percent;
 - Flavoured milk 3.5 percent;
 - Yoghurt -1.4 percent;
 - Maas -0.6 percent;
 - Pre-packaged cheese 0.01 percent;
 - Cream cheese 1.3 percent;
 - Butter -0.6 percent; and
 - Cream 1.4 percent.
- The extent to which the average retail price of UHT milk exceeded that of fresh milk, decreased from 10.0 percent in 2014, to 3.9 percent in 2016. In 2017 and 2018, the average retail price of UHT milk was respectively 0.2 percent and 3.7 percent lower than that of fresh milk while 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. In January 2021 to June 2021, the average price of UHT milk was 3.6 percent lower than that of fresh milk. (See Table 17 of Annexure A).

- 48. The information contained in the previous paragraph shows that the performance of most of the dairy products in the retail market in the first half of 2021, relative to the performance in 2020 as described in the February 2021 edition of "Key Market Signals for the Dairy Industry", concerned weakened considerably. Although the retail prices of eight of the nine dairy products increased in the first half of 2021, the retail sales quantities of eight of the nine dairy products were lower in the first half of 2021 than in the first half of 2020.
- 49. The <u>relative movements of the retail prices of particular dairy products</u> in the six years from 2015 to 2020, and in January 2021 to June 2021, are shown in Graph 12 of Annexure A. This graph shows, amongst other, that:
 - The retail price index of butter is, since the middle 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 fueled 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 is, since the middle of 2016, lower than that of butter, but much higher than the retail price indices of the other dairy products;
 - In 2019, 2020 and in the first quarter of 2021, the retail price index of maas was notably lower than that of the other dairy products; and
 - The retail price index of UHT milk fluctuated more up and down during meaningful periods, than that of the other dairy products.
- 50. Regarding the <u>relative movements of the price of unprocessed milk and the prices of the different dairy products</u>, 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, 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.

Due to the above factors and as unprocessed milk is not the only input⁴⁾ in the manufacturing of dairy products and in respect of the presentation thereof in the retail, the price of unprocessed milk is often subject to higher fluctuations than the prices of dairy products.

⁴⁾ 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.

- 51. The <u>relative movements of the retail price of fresh milk, the retail price of UHT milk and the producer price of unprocessed milk,</u> in the six years, 2015 to 2020 and in January 2021 to June 2021, against the background of the increase in unprocessed milk purchases per annum, are shown in Graph 13 of Annexure A. This graph shows that:
 - The prices concerned typically moved in the same direction but that the magnitude of the changes of the prices concerned, differ;
 - The retail price of fresh milk is less volatile than the retail price of UHT milk and the producer price of unprocessed milk;
 - From the second quarter of 2018 to October 2020, the retail price index of fresh milk
 was higher than the producer price index of unprocessed milk, but from November
 2020, the retail price index of fresh milk is lower than the producer price index of
 unprocessed milk;
 - In the 78 months period from 2015 to June 2021, the retail price index of UHT milk was, with the exception of one month, lower than the producer price index of unprocessed milk; and
 - The movements of the prices concerned are influenced by 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 of a product (including the supply of unprocessed milk), does not determine the price of the product, as prices are the result of the interaction between supply and demand. Typically, change in production (supply), that is not in pace with the change in the demand, results in price movements.
- 52. The <u>relative movements of the retail prices of yoghurt, maas and pre-packaged cheese as</u> well as the price of unprocessed milk, against the background of the increase in the quantity of unprocessed milk purchased per annum, are shown in Graph 14 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 13. In this regard, it should be noted that the contributions of the price of unprocessed milk to the prices of UHT milk and maas, are much higher than the contribution of the price of unprocessed milk to the retail price of yoghurt, due to considerable higher value-adding required by the manufacturing of yoghurt, and also that recombined and reconstituted milk⁵⁾ instead of unprocessed milk, can be used to manufacture maas and yoghurt; and
- In the 78 months from January 2015 to June 2021, the price index of unprocessed milk increased more than the retail price indices of the three dairy products concerned and that the increases in the retail price indices of maas and prepackaged cheese, are lower than that of yoghurt.

⁵⁾ The definitions of recombined milk and reconstituted milk, as stated in Regulation 1510, are as follows:

[&]quot;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

^{• &}quot;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".

- 53. **In summary**, the position of the South African dairy industry is as follows:
 - a) The good performance of dairy products in the South African retail market in 2020, as described in the February 2021 edition of "Key Market Signals for the Dairy Industry", did not continue in the first half of 2021. Although the retail prices of eight of the nine dairy products increased in the first half of 2021, the retail sales quantities of eight of the nine dairy products were lower in the first half of 2021 than in the first half of 2020.
 - This position is an indication of the impact of the lower level of economic activity in South Africa on the consumer demand.
 - b) The production of unprocessed milk in South Africa in 2020, was 0.16 percent lower than in 2019, the relationship between the index of the indicator of feed price and the unprocessed milk price index weakened considerably in the second half of 2020, due to the sharp increases in the prices of maize and soya and the relationship was in the last half of 2020, more or less the same as in 2016, when the production of unprocessed milk was 0.45 percent lower than in 2015. The market reacted to this situation and from October 2020, the producer price index of unprocessed milk increased. In July 2021 the producer price index of unprocessed milk, was 20.6 percent higher than in July 2020 and 28.1 percent higher than in July 2019. In July 2020, the producer price index of unprocessed milk was 4.8 percent lower than the producer price index of dairy products, but in July 2021, the producer price index of unprocessed milk was 6.6 percent higher. From February 2021 to July 2021, the producer price index of unprocessed milk is higher than the index of the feed price indicator, and the future prices of maize and soya, show that significant reduction in feed prices, should not be expected in the coming months. In the coming months, the production of unprocessed milk in South Africa will be influenced by especially the demand for South African dairy products, weather conditions and feed prices.
- 54. In the next few months, the South African dairy industry will be confronted by:
 - The uncertainty regarding the unfolding impact of COVID-19 on human behaviour, service delivery by the public sector and the economy, policy disputes, political conflict including the pushback against attempts to act against corruption and related social instability;
 - The normal sharp seasonal rise in production of unprocessed milk. In the thirteen years 2008 to 2020, the average growth in the production of unprocessed milk from July to October, is 28.7 percent, the lowest increase of 24.6 percent was recorded in 2008, and the highest of 34.3 percent, was recorded in 2017; and

- The impact of the expected low level of economic activity in South Africa on the demand for dairy products. The performance in the first half of 2021, of most dairy products in the retail market does not support optimistic views regarding the demand in the coming months for dairy products. Increased retail sales can be the result of greater consumer preference for dairy products due to:
 - lower prices and/or
 - factors other than price and/or
 - higher consumer income.

Lower prices for dairy products seem to be an unlikely scenario, increased preference for dairy products due to other factors than price, most likely played out in 2020 and it will take time before the level of economic activity in South Africa reaches the pre-COVID level.

55. Obviously, the South African dairy industry does not only face challenges of economic and business economic nature, as issues such as animal health, animal welfare and the impact of the dairy industry on the environment, are also of great importance. Although the individual members of the dairy industry are primarily responsible to deal with these issues, major aspects of these issues can only be dealt with through the collective actions by the South African organised dairy industry (Milk SA, SAMPRO, MPO and Dairy Standard Agency). The work required in future in respect of these issues from individual members of the dairy industry and the organised dairy industry, will be more demanding than in the past.

Alwyn P Kraamwinkel (M.Com) CEO: SAMPRO 9 September 2021

| The following contributions to this report are acknowledge. | owledged: |
|---|---|
| De Wet Jonker (B.Econ/BCom Hons), Jan Theron, (B.Com Economy), and Marietjie le Roux (BCom) | Collecting information, compiling of tables and graphs and assessment of information. |
| Gerhard Venter (M.Sc Agric Food Science) | Dairy Technical advice. |
| Yvonne Steyn and Sonja van Jaarsveld | Typing of draft versions of the report and typing of final report |

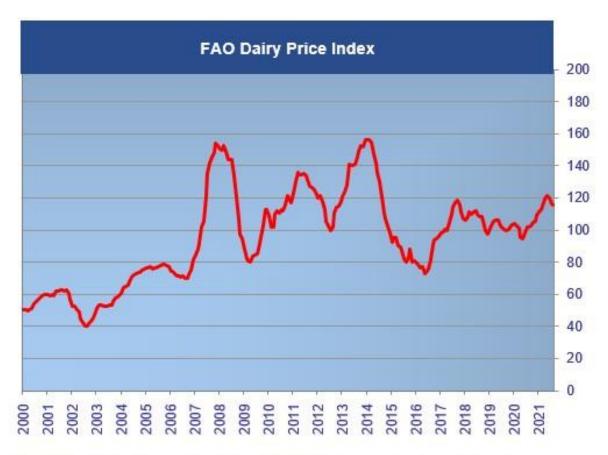
Annexure A

CONTENT

| Graph/Table | Title | | | | | |
|--------------|--|----|--|--|--|--|
| Internationa | l Dairy Industry | | | | | |
| Graph 1 | Price index of dairy products in the international market up to August 2021, as published by the FAO | 26 | | | | |
| Table 1 | Volatility per year of the price index of the FAO of dairy products in the international market | | | | | |
| Graph 2 | Average Oceania export prices up to July 2021 (USA\$ / ton f.o.b.) | 28 | | | | |
| Table 2 | Future prices in US\$ and Rand (\$=R15.10) per ton achieved at global dairy trade auction on 17 August 2021, for delivery in September 2021 to January 2022 | 29 | | | | |
| Graph 3 | Dairy product prices and future prices in the USA in Rand per kg (R15.10=\$USA) | 30 | | | | |
| Graph 4 | Seasonality of unprocessed milk production in the Northern and Southern hemispheres | 31 | | | | |
| Graph 5 | Average price of unprocessed milk in the European Union | 32 | | | | |
| Graph 6 | Unprocessed milk prices in the USA | 33 | | | | |
| South Africa | n Dairy Industry | | | | | |
| Table 3 | 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 2021 | 34 | | | | |
| Table 4 | Mass of imports as percentage of the mass of exports of dairy products by South Africa | 35 | | | | |
| Table 5 | Total quantity of unprocessed milk purchased in South Africa during the years 2008 to 2020 | 36 | | | | |
| Table 6 | Unprocessed milk purchases per quarter of each of the years 2009 to 2021 | 37 | | | | |
| Table 7 | Unprocessed milk purchases per half year in each of the years 2009 to 2020 | 38 | | | | |
| Graph 7 | Average unprocessed milk purchases per day per month in South Africa in the years 2015 to July 2021 | 39 | | | | |
| Table 8 | Mass of unprocessed milk purchases in particular months, relative to the purchases in the same months of particular previous years | 40 | | | | |
| Table 9 | 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 2021 | 41 | | | | |

| Table 10 | 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 2020 | 42 |
|----------|---|----|
| Graph 8 | Producer price indices of primary agricultural products in South Africa, from January 2012 to July 2021 | 43 |
| Table 11 | Monthly increase in the producer price index of unprocessed milk | 44 |
| Graph 9 | Indices of the prices of unprocessed milk in the period January 2012 to July 2021 and that of, yellow maize and soya and an index of a feed price indicator in the period January 2012 to July 2021 | 45 |
| Table 12 | Future prices of yellow maize in South Africa (R/ton) on 3 May 2021 and 24 August 2021, according to SAFEX | 46 |
| Table 13 | Future prices of soya beans in South Africa (R/ton) on 3 May 2021 and 24 August 2021, according to SAFEX | 46 |
| Graph 10 | Producer price indices of manufactured food products in South Africa from January 2012 to July 2021 | 47 |
| Graph 11 | Producer price index of unprocessed milk and the producer price index of dairy products in South Africa, from January 2012 to July 2021 | 48 |
| Table 14 | Changes in the retail sales quantities from the year July 2019 to June 2020, to the year July 2020 to June 2021, and changes in the retail prices from June 2020 to June 2021, of specific dairy products | 49 |
| Table 15 | Changes in the quantities of retail sales of specific dairy products in 2019, 2020 and 2021 in South Africa | 50 |
| Table 16 | The average retail prices of specific dairy products in June 2021 in South Africa, compared to the average retail prices of the products concerned in specific months of 2019 to 2021 | 51 |
| Graph 12 | The retail price indices (RPI) of specific dairy products, from January 2015 to June 2021 | 52 |
| Graph 13 | The producer price indices (PPI) of unprocessed milk, from January 2015 to July 2021 and the retail price indices (RPI) of fresh milk and UHT milk, from January 2015 to June 2021 | 53 |
| Graph 14 | The producer price index (PPI) of unprocessed milk from, January 2015 to July 2021 and the retail price indices (RPI) of yoghurt, maas and prepackaged cheese, from January 2015 to June 2021 | 54 |
| Table 17 | 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 2021 | 55 |

Graph 1¹⁾
PRICE INDEX OF DAIRY PRODUCTS IN THE INTERNATIONAL MARKET UP TO AUGUST 2021, AS PUBLISHED BY THE FAO



The FAO Dairy Price Index consists of butter, SMP, WMP, cheese, casein price quotations; the average is weighted by world average export trade shares for 2014-2016.

¹⁾ Graph as published by the Food and Agricultural Organization (FAO) of the United Nations.

Table 1²⁾

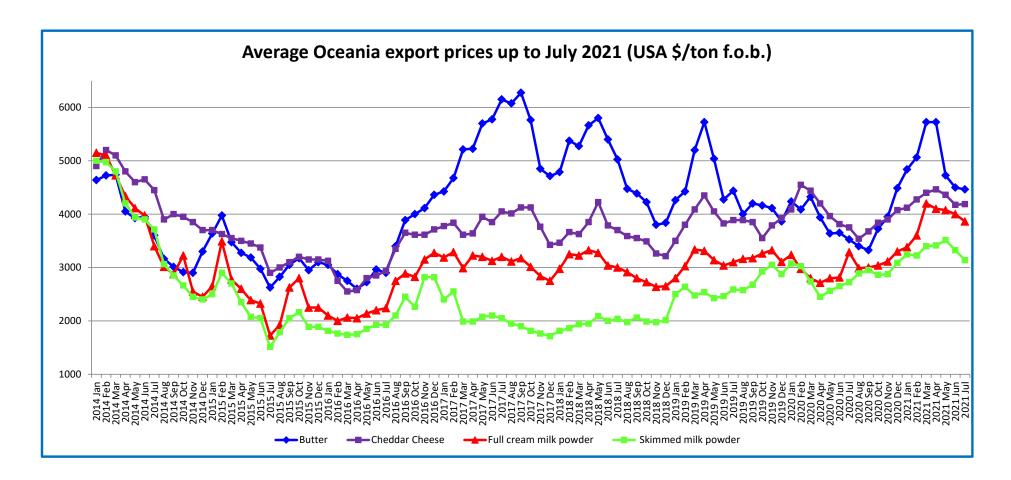
VOLATILITY PER YEAR OF THE PRICE INDEX OF THE FAO OF DAIRY PRODUCTS IN THE INTERNATIONAL MARKET

Index: 2014-2016=100

| 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 | 109.3 | 94.4 | 10.5 | | | | |
| Average | 105.8 | 83.4 | 26.3 | | | | |
| 2021 (Jan – Aug) | 121.1 | 111.2 | 8.9 | | | | |

^{2021 (}Jan – Aug) 121.1
2) Table prepared by the Office of SAMPRO based on information published by the FAO.

Graph 23)



³⁾ Graph prepared by the Office of SAMPRO based on information published by the USDA on 20 August 2021.

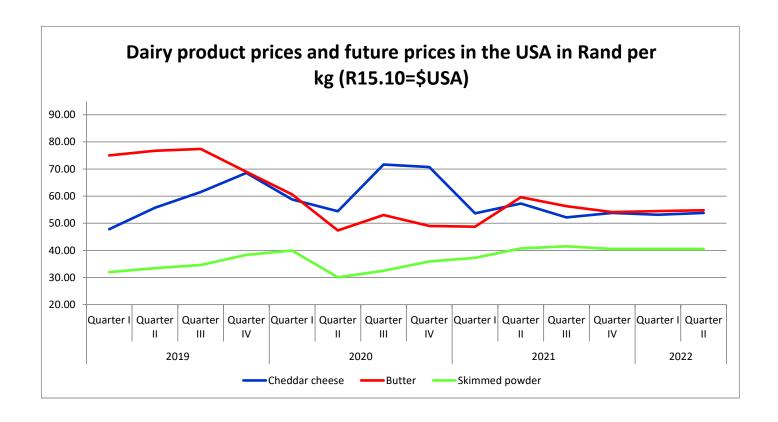
FUTURE PRICES IN US\$ AND RAND (\$=R15.10) PER TON ACHIEVED AT GLOBAL DAIRY TRADE AUCTION ON 17 AUGUST 2021, FOR DELIVERY IN SEPTEMBER 2021 TO JANUARY 2022

Table 24)

| | Sep | Oct | Nov | Dec | Jan |
|---------------------|--------|--------|--------|--------|--------|
| Whole Milk Powder | | | | | |
| PRICE: \$ | 3 670 | 3 561 | 3 573 | 3 489 | 3 513 |
| PRICE: R | 55 417 | 53 771 | 53 952 | 52 684 | 53 046 |
| Index | 100.0 | 97.0 | 97.4 | 95.1 | 95.7 |
| Skimmed Milk Powder | | | | | |
| PRICE: \$ | 3 035 | 3 006 | 3 074 | 3 072 | 3 127 |
| PRICE: R | 45 829 | 45 391 | 46 417 | 46 387 | 47 218 |
| Index | 100.0 | 99.0 | 101.3 | 101.2 | 103.0 |
| Cheddar | | | | | |
| PRICE: \$ | 4 150 | 4 030 | 4 218 | 4 255 | 4 273 |
| PRICE: R | 62 665 | 60 853 | 63 692 | 64 251 | 64 522 |
| Index | 100.0 | 97.1 | 101.6 | 102.5 | 103.0 |
| Butter | | | | | |
| PRICE: \$ | 4 835 | 4 781 | 4 805 | 4 815 | 4 690 |
| PRICE: R | 73 009 | 72 193 | 72 556 | 72 707 | 70 819 |
| Index | 100.0 | 98.9 | 99.4 | 99.6 | 97.0 |

⁴⁾ Table prepared by the Office of SAMPRO based on the prices as published by "Global Dairy Trade" on 17 August 2021

Graph 3⁵⁾

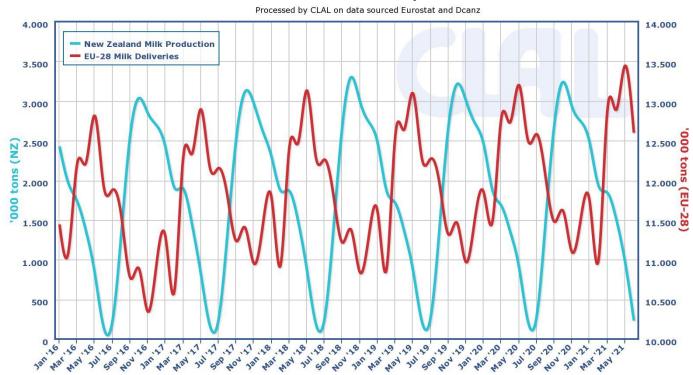


⁵⁾ Graph prepared by the Office of SAMPRO based on information contained in the United States Department of Agriculture, Livestock, Dairy, and Poultry Outlook, 18 August 2021

Graph 46)

SEASONALITY OF UNPROCESSED MILK PRODUCTION IN THE NORTHERN AND SOUTHERN HEMISPHERES

Production season overview in Europe and in New Zealand



⁶⁾ Graph as published by CLAL.it

Graph 57)

AVERAGE PRICE OF UNPROCESSED MILK IN THE EUROPEAN UNION

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



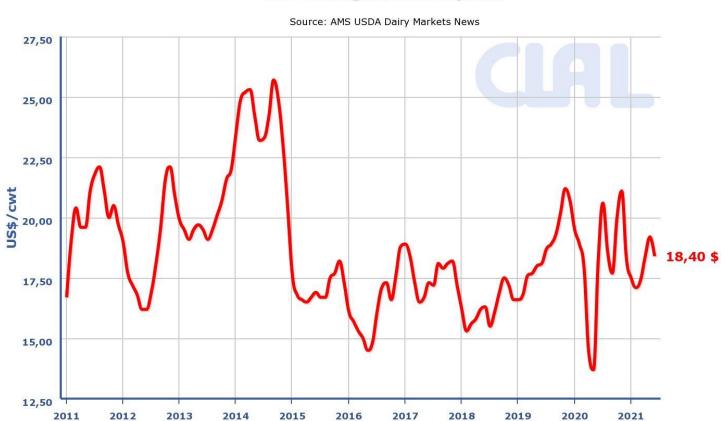
Source: Member States Reg. (EU) No 2017/1185 Article 12(a) - Annex II.4(a))

⁷⁾ Graph as published by CLAL.it

Graph 68)

UNPROCESSED MILK PRICES IN THE USA

US - Farm-gate All Milk prices



⁸⁾ Graph as published by CLAL.it

Table 39)

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 2021

Index: 2002 = 100)

| YEAR | IMPORT | 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 Est | 71 104.39 | 288.8 | 49 456.82 | 144.1 | 120 561.21 | 204.5 | | |

⁹⁾ Table prepared by the Office of SAMPRO on the basis of information obtained from SARS. The estimated import quantities in 2021, are calculated on the assumption that the levels of import in the first six months of 2021, will be maintained during the rest of 2021.

Estimates regarding future imports 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 meaningfully.

Table 4¹⁰⁾

MASS OF IMPORTS AS PERCENTAGE OF THE MASS OF EXPORTS OF DAIRY PRODUCTS BY SOUTH AFRICA

| Heading | Description | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 Est |
|---------|---------------------------------------|-------|-------|-------|-------|-------|---------|---------|---------|-------------|
| 04.01 | Milk and cream, unsweetened | 14.7 | 21.4 | 92.5 | 84.3 | 217.1 | 103.7 | 90.2 | 26.4 | 60.1 |
| 04.02 | Milk, concentrated | 46.5 | 117.3 | 197.7 | 196.3 | 146.4 | 159.5 | 227.9 | 252.8 | 284.4 |
| 04.03 | Buttermilk powder, yoghurt | 8.2 | 9.2 | 16.5 | 19.7 | 28.4 | 27.9 | 31.7 | 40.3 | 30.3 |
| 04.04 | Whey, whey powder, etc | 452.7 | 507.4 | 221.3 | 185.9 | 192.9 | 1 741.3 | 2 917.9 | 1 257.6 | 828.2 |
| 04.05 | Butter, butter spreads and butter oil | 266.7 | 111.4 | 344.1 | 396.7 | 491.2 | 735.1 | 355.5 | 540.6 | 300.4 |
| 04.06 | Cheese and curd | 286.6 | 281.2 | 314.2 | 330.3 | 338.7 | 272.5 | 252.7 | 141.7 | 150.8 |
| | TOTAL | 112.6 | 50.6 | 56.5 | 115.4 | 171.7 | 151.7 | 167.8 | 129.7 | 143.8 |

¹⁰⁾ Table prepared by the Office of SAMPRO on the basis of information obtained from SARS.
The estimated import and export quantities in 2021, are calculated on the assumption that the levels of import and export in the first six months of 2021, will be maintained during the rest of 2021.
Estimates regarding future imports 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 meaningfully.

TOTAL QUANTITY OF UNPROCESSED MILK PURCHASED IN SOUTH AFRICA DURING THE YEARS 2008 TO 2020¹¹⁾

Table 5¹¹⁾

| 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 | 130.59 |

¹¹⁾ Table prepared by the Office of SAMPRO based on information obtained from Milk SA

Table 6¹²⁾

UNPROCESSED MILK PURCHASES PER QUARTER OF EACH OF THE YEARS 2009 to 2021 12)

| 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 |
| 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 |
| Total (2014-2019) | 4 593 786 412 | 23.666 | 4 292 069 929 | 22.112 | 4 966 409 552 | 25.586 | 5 558 591 245 | 28.637 | 19 410 857 138 | 100 |

| Year | Quarter 1 Quarte | | Quarter | 2 Quarter | | · 3 | Quarter 4 | | Total | |
|---------------------|------------------|--------|-------------|-----------|-------------|--------|-------------|--------|---------------|-----|
| | Kg | % | Kg | % | Kg | % | Kg % | | Kg | % |
| 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 ¹³⁾ | 792 708 521 | | 735 560 336 | | | | | | | |

¹²⁾ 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 green

¹³⁾ The figure in respect of the first seven months of 2021, is an estimated figure.

Table 7¹⁴⁾ UNPROCESSED MILK PURCHASES PER HALF YEAR IN EACH OF THE YEARS 2009 TO 2021

| | First Half | | Second H | lalf | Total | | |
|-------------------|---------------|--------|---------------|--------|----------------|--------|--|
| Year | 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 | |

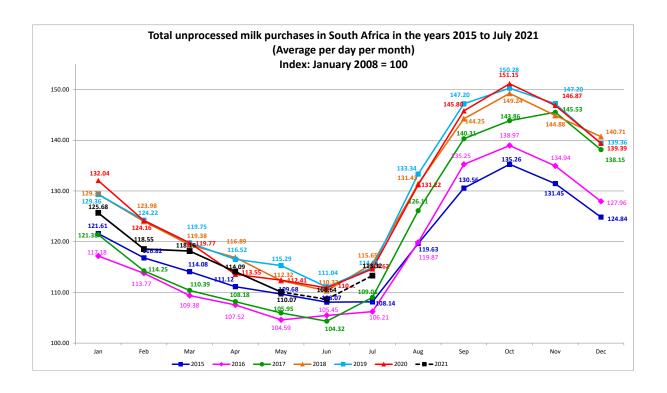
| | First Half | | Second H | lalf | Total | |
|---------------------------|----------------|--------|----------------|--------|----------------|--------|
| Year | Kg | % | Kg | % | Kg | % |
| 2014 | 1 334 059 437 | 44.726 | 1 648 675 160 | 55.274 | 2 982 734 597 | 100.00 |
| 2015 | 1 497 744 268 | 47.208 | 1 674 911 502 | 52.792 | 3 172 655 770 | 100.00 |
| 2016 | 1 454 085 606 | 46.038 | 1 704 360 784 | 53.962 | 3 158 446 390 | 100.00 |
| 2017 | 1 460 583 324 | 44.890 | 1 793 098 757 | 55.110 | 3 253 682 081 | 100.00 |
| 2018 | 1 565 269 393 | 45.895 | 1 845 266 511 | 54.105 | 3 410 535 904 | 100.00 |
| 2019 | 1 574 114 313 | 45.855 | 1 858 688 083 | 54.145 | 3 432 802 396 | 100.00 |
| Total (2014-2019) | 8 885 856 341 | 45.778 | 10 525 000 797 | 54.222 | 19 410 857 138 | 100.00 |
| Total (2009-2019) | 13 625 952 714 | 45.809 | 16 119 230 380 | 54.191 | 29 745 183 094 | 100.00 |
| 2020 | 1 575 854 676 | 45.979 | 1 851 480 702 | 54.021 | 3 427 335 378 | 100.00 |
| 2021 (Est) ¹⁵⁾ | 1 528 268 857 | | | | | |

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.

15) The figure in respect of the first half of 2021, is an estimated figure.

Graph 7¹⁶⁾

AVERAGE UNPROCESSED MILK PURCHASES PER DAY PER MONTH IN SOUTH AFRICA IN THE YEARS 2015 TO JULY 2021



¹⁶⁾ 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 2012 to July 2021 is in respect of the total unprocessed milk purchased by all registered milk buyers declared in terms of Regulation 1396 of the Marketing of Agricultural Products Act and previous similar regulations. The figures for June 2021 and July 2021 are estimated figures.

Table 8¹⁷⁾
MASS OF UNPROCESSED MILK PURCHASES IN PARTICULAR MONTHS, RELATIVE TO THE PURCHASES IN THE SAME MONTHS OF PARTICULAR PREVIOUS YEARS

| | Percentage increase |
|--|---------------------|
| April 2018 relative to April 2017 | 8.1 |
| May 2018 relative to May 2017 | 6.0 |
| June 2018 relative to June 2017 | 5.7 |
| July 2018 relative to July 2017 | 6.1 |
| August 2018 relative to August 2017 | 4.2 |
| September 2018 relative to September 2017 | 2.8 |
| October 2018 relative to October 2017 | 3.7 |
| November 2018 relative to November 2017 | -0.4 |
| December 2018 relative to December 2017 | 1.9 |
| January 2019 relative to January 2018 | -0.1 |
| February 2019 relative to February 2018 | -2.2 |
| March 2019 relative to March 2018 | 0.1 |
| April 2019 relative to April 2018 | -0,8 |
| May 2019 relative to May 2018 | 2.3 |
| 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 | -4.8 |
| February 2021 relative to February 2020 | -4.5 |
| March 2021 relative to Testidary 2020 | -1.3 |
| April 2021 relative to April 2020 | 0.5 |
| May 2021 relative to May 2020 | -2.1 |
| June 2021 relative to May 2020 [Superson of the content of the co | -2.1 |
| July 2021 relative to July 2020 (est) | -1.1 |
| זמוץ בטבד וכומנועכ נט זמוץ בטבט (כזנ) | -1.1 |

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

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 2021

Table 9¹⁸⁾

| Year | October to December percent | October to February percent | October to April percent | October to June percent |
|---------------------------|-----------------------------------|-----------------------------------|-----------------------------|----------------------------|
| 2008/9 | 5.5 | 16.9 | 24.4 | 25.4 |
| 2009/10 | 3.9 | 14.6 | 20.4 | 21.2 |
| 2010/11 | 5.0 | 15.6 | 23.4 | 23.7 |
| 2011/12 | 5.6 | 14.5 | 19.5 | 18.2 |
| 2012/13 | 6.6 | 14.9 | 20.9 | 20.5 |
| 2013/14 | 5.3 | 18.0 | 22.9 | 21.8 |
| 2014/15 | 4.2 | 12.9 | 17.1 | 19.4 |
| 2015/16 | 7.7 | 15.9 | 20.5 | 22.0 |
| 2016/17 | 7.9 | 17.8 | 22.2 | 24.9 |
| 2017/18 | 4.0 | 13.8 | 18.7 | 23.3 |
| 2018/2019 | 5.7 | 16.8 | 21.9 | 25.6 |
| 2019/2020 | 7.3 | 17.4 | 24.4 | 26.2 |
| Average 2008/9 to 2019/20 | 5.7 | 15.8 | 21.4 | 22.7 |
| 2020/2021 ¹⁹⁾ | 7.7 | 21.5 | 24.5 | 28.1 |

¹⁸⁾ Table prepared by the Office of SAMPRO based on information obtained from MILK SA.

¹⁹⁾ The figure in respect of October 2020 to June 2021, is an estimated figure.

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 2020

Table 10²⁰⁾

| 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 |
| Average 2008 to 2020 | 12.4 | 25.0 | 28.7 |

²⁰⁾ 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 1396 of the Marketing of Agricultural Products Act and previous similar regulations.

Graph 8²¹⁾

PRODUCER PRICE INDICES OF PRIMARY AGRICULTURAL PRODUCTS IN SOUTH AFRICA FROM JANUARY 2012 TO JUNE 2021

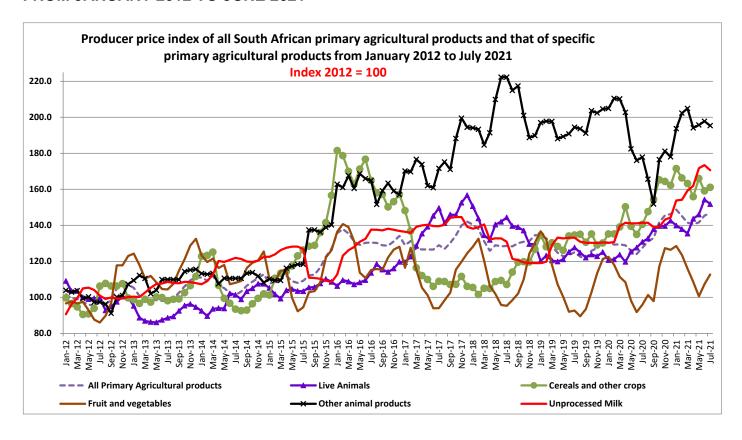


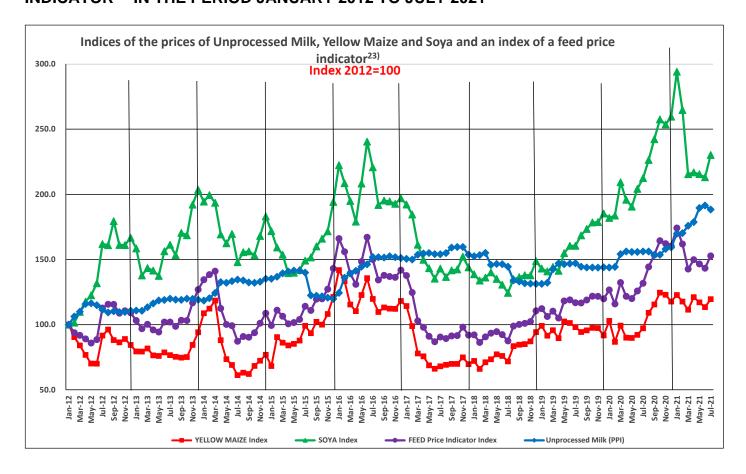
Table 11²²⁾
MONTHLY INCREASE IN THE PRODUCER PRICE INDEX OF UNPROCESSED MILK

| | Percentage increase |
|---|---------------------|
| April 2018 relative to March 2018 | -5.96 |
| May 2018 relative to April 2018 | 0.51 |
| June 2018 relative to May 2018 | -0.08 |
| July 2018 relative to June 2018 | -1.35 |
| August 2018 relative to July 2018 | -7.25 |
| September 2018 relative to August 2018 | -0.67 |
| October 2018 relative to September 2018 | -0.99 |
| November 2018 relative to October 2018 | -0.25 |
| December 2018 relative to November 2018 | -0.07 |
| January 2019 relative to December 2018 | 0 |
| February 2019 relative to January 2019 | 0.66 |
| March 2019 relative to February 2019 | 7.78 |
| April 2019 relative to March 2019 | 3.16 |
| May 2019 relative to April 2019 | -0.38 |
| June 2019 relative to May 2019 | 0.29 |
| July 2019 relative to June 2019 | 0 |
| August 2019 relative to July 2019 | -1.64 |
| September 2019 relative to August 2019 | -0.46 |
| October 2019 relative to September 2019 | 0 |
| 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 |
| July 2020 relative to June 2020 | 0.21 |
| August 2020 relative to July 2020 | 0 |
| 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 |

²²⁾ Table prepared by the Office of SAMPRO based on information published by Statistics SA

Graph 9²³⁾

INDICES OF THE PRICES OF UNPROCESSED MILK IN THE PERIOD JANUARY 2012 TO JULY 2021 AND THAT OF, YELLOW MAIZE AND SOYA AND AN INDEX OF A FEED PRICE INDICATOR²⁴⁾ IN THE PERIOD JANUARY 2012 TO JULY 2021



INCREASE IN UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)²⁵⁾

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------|------|------|------|-------|------|------|------|-------|
| 4.5 | 2.22 | 2.65 | 6.32 | -0.45 | 3.02 | 4.82 | 0.65 | -0.16 |

²³⁾ Graph prepared by the Office of SAMPRO based on information obtained from Statistics SA and SAFEX middle of the month prices.

²⁴⁾ 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.

²⁵⁾ Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 12²⁶⁾
FUTURE PRICES OF YELLOW MAIZE IN SOUTH AFRICA (R/TON) ON 3 MAY 2021 AND 24 AUGUST 2021, ACCORDING TO SAFEX

| | A CLOSING BID 3 May 2021 R/Ton | B CLOSING BID 24 August 2021 R/Ton | C Percentage increase from A to B |
|----------------|---|---|---|
| September 2021 | 3 494 | 3 409 | -2.4 |
| December 2021 | 3 566 | 3 491 | -2.1 |
| March 2022 | 3 527 | 3 470 | -1.6 |
| May 2022 | 3 300 | 3 300 | 0.0 |

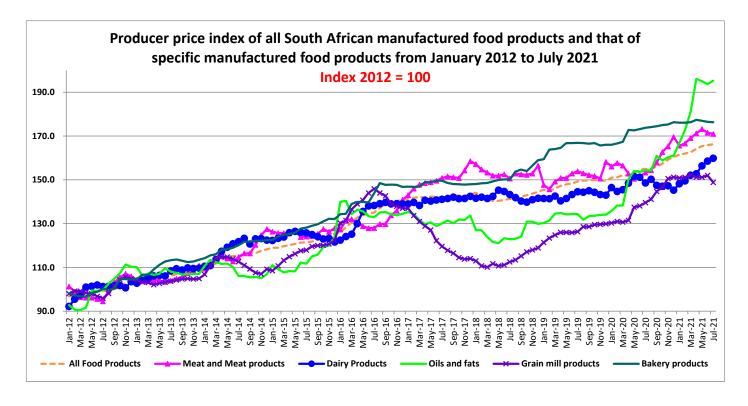
Table 13²⁶⁾
FUTURE PRICES OF SOYA BEANS IN SOUTH AFRICA (R/TON) ON 3 MAY 2021 AND 24 AUGUST 2021, ACCORDING TO SAFEX

| | A CLOSING BID 3 May 2021 R/Ton | B CLOSING BID 24 August 2021 R/Ton | C Percentage increase from A to B |
|----------------|---|---|---|
| September 2021 | 7 412 | 7 732 | 4.3 |
| December 2021 | 7 518 | 7 838 | 4.2 |
| March 2022 | 7 513 | 7 860 | 4.6 |
| May 2022 | | 7 600 | |

²⁶⁾ Table prepared by the Office of SAMPRO based on information as obtained from the SAFEX website on 24 August 2021.

Graph 10²⁷⁾

PRODUCER PRICE INDICES OF MANUFACTURED FOOD PRODUCTS IN SOUTH AFRICA FROM JANUARY 2012 TO JUNE 2021

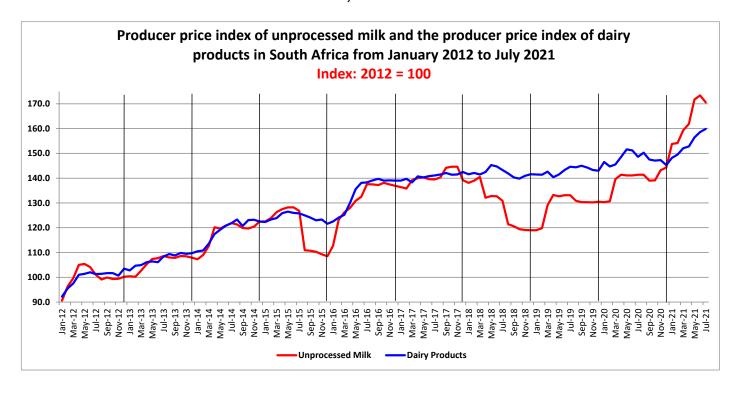


²⁷⁾ Graph prepared by the Office of SAMPRO based on information obtained from Statistics SA.

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 and cheddar cheese and products like cheese other than cheddar, maas, butter and milk powder are not included.

Graph 11²⁸⁾

PRODUCER PRICE INDEX OF UNPROCESSED MILK AND THE PRODUCER PRICE INDEX OF DAIRY PRODUCTS IN SOUTH AFRICA, FROM JANUARY 2012 TO JUNE 2021



²⁸⁾ 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 and cheddar cheese and products like cheese other than cheddar, maas, butter and milk powder are not included.

CHANGES IN THE RETAIL SALES QUANTITIES FROM THE YEAR JULY 2019 TO JUNE 2020, TO THE YEAR JULY 2020 TO JUNE 2021, AND CHANGES IN THE RETAIL PRICES FROM JUNE 2020 TO JUNE 2021, OF SPECIFIC DAIRY PRODUCTS

Table 14²⁹⁾

| PRODUCT | CHANGE IN DEMAND (QUANTITY) | CHANGE IN RETAIL PRICES |
|---------------------------|-----------------------------------|-------------------------------|
| | PERCENT | PERCENT |
| FRESH MILK | -7.7 | 6.1 |
| LONG LIFE MILK (UHT MILK) | -3.5 | 3.5 |
| FLAVOURED MILK | -6.1 | 7.0 |
| YOGHURT | 1.7 | 6.5 |
| MAAS | -1.3 | 5.2 |
| PRE-PACKAGED CHEESE | 2.8 | 3.7 |
| CREAM CHEESE | -3.9 | 9.3 |
| BUTTER | 0.4 | 1.2 |
| CREAM | 4.1 | 3.8 |

²⁹⁾ 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 15³⁰⁾
CHANGES IN THE QUANTITIES OF RETAIL SALES OF SPECIFIC DAIRY PRODUCTS IN 2019, 2020 AND 2021 IN SOUTH AFRICA

| PRODUCT | Sales in the month of June 2021 versus the sales in the month of June 2020 | Sales in the 3 months from April 2021 to June 2021 versus the sales in the 3 months from April 2020 to June 2020 | Sales in the 6 months from January 2021 to June 2021 versus the sales in the 6 months from January 2020 to June 2020 | Sales in the 9 months from October 2020 to June 2021 versus the sales in the 9 months from October 2019 to June 2020 | Sales in the 12 months from July 2020 to June 2021 versus the sales in the 12 months from July 2019 to June 2020 |
|---------------------|--|--|--|--|--|
| | percent | | percent | | percent |
| Fresh Milk | -2.4 | -4.2 | -6.2 | -7.3 | -7.7 |
| UHT milk | -3.6 | -15.0 | -10.8 | -6.2 | -3.5 |
| Flavoured milk | 7.0 | 6.2 | 3.2 | -2.1 | -6.1 |
| Yoghurt | -5.1 | -7.2 | -3.4 | 0.5 | 1.7 |
| Maas | -7.4 | -7.4 | -5.3 | -2.4 | -1.3 |
| Pre-packaged cheese | 4.5 | -6.2 | -3.6 | 0.6 | 2.8 |
| Cream cheese | -9.0 | -13.2 | -7.1 | -4.9 | -3.9 |
| Butter | 0.5 | -16.8 | -5.4 | -3.1 | 0.4 |
| Cream | -7.0 | -13.3 | -2.5 | 1.0 | 4.1 |

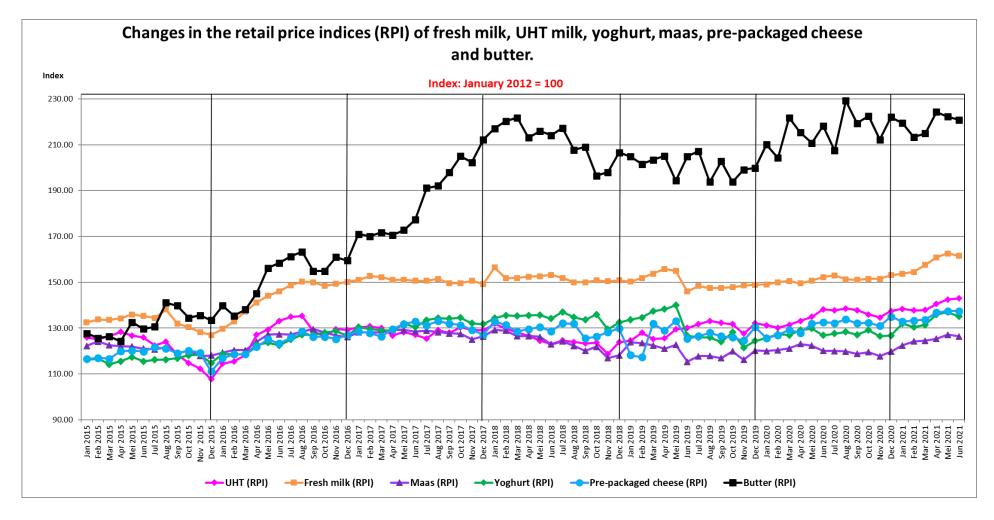
³⁰⁾ Table prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ". Non-retail sales such as sales to industrial buyers, are not part of the surveys.

Table 16³¹⁾
THE AVERAGE RETAIL PRICES OF SPECIFIC DAIRY PRODUCTS IN JUNE 2021 IN SOUTH AFRICA, COMPARED TO THE AVERAGE RETAIL PRICES OF THE PRODUCTS CONCERNED IN SPECIFIC MONTHS OF 2019 TO 2021.

| PRODUCT | June 2021 versus May 2021 | June 2021 versus March 2021 | June 2021 versus December 2020 | June 2021 versus September 2020 | June 2021 versus June 2020 | June 2021 versus December 2019 | June 2021 versus June 2019 |
|------------------------|---------------------------------|-----------------------------------|---|--|----------------------------------|---|----------------------------------|
| | (1 month ago) | (3 months ago) | (6 months ago) | (9 months ago) | (12 months ago) | (18 months ago) | (24 months ago) |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| FRESH MILK | -0.7 | 2.5 | 5.5 | 6.9 | 6.1 | 8.5 | 10.7 |
| UHT MILK | 0.4 | 3.7 | 4.1 | 3.7 | 3.5 | 8.3 | 10.0 |
| FLAVOURED MILK | 3.5 | 9.5 | 7.5 | 9.0 | 7.0 | 12.4 | 14.0 |
| YOGHURT | -1.4 | 2.7 | 6.5 | 6.2 | 6.5 | 8.5 | 6.6 |
| MAAS | -0.6 | 1.6 | 5.6 | 6.4 | 5.2 | 5.2 | 9.6 |
| PRE-PACKAGED CHEESE | 0.01 | 2.8 | 1.8 | 4.1 | 3.7 | 5.4 | 9.6 |
| CREAM CHEESE | 1.3 | 1.6 | 5.5 | 9.5 | 9.3 | 15.5 | 17.7 |
| BUTTER | -0.6 | 2.8 | -0.5 | 0.7 | 1.2 | 10.5 | 7.8 |
| CREAM | 1.4 | 2.8 | 1.0 | 3.9 | 3.8 | 3.2 | 9.0 |

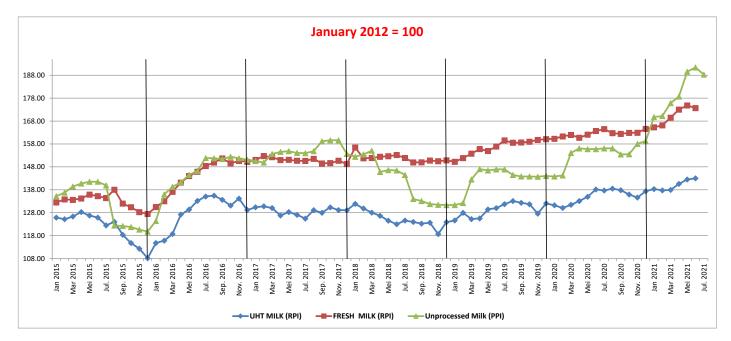
³¹⁾ Table prepared by the Office of SAMPRO based on the results of surveys by "NielsenIQ". Non-retail sales such as sales to industrial buyers, are not part of the surveys.

Graph 12³²⁾
THE RETAIL PRICE INDICES (RPI) OF SPECIFIC DAIRY PRODUCTS, FROM JANUARY 2015 TO JUNE 2021



³²⁾ 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 13³³⁾
THE PRODUCER PRICE INDEX (PPI) OF UNPROCESSED MILK, FROM JANUARY 2015 TO JULY 2021 AND THE RETAIL PRICE INDICES (RPI) OF FRESH MILK AND UHT MILK, FROM JANUARY 2015 TO JUNE 2021



INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)³⁴⁾

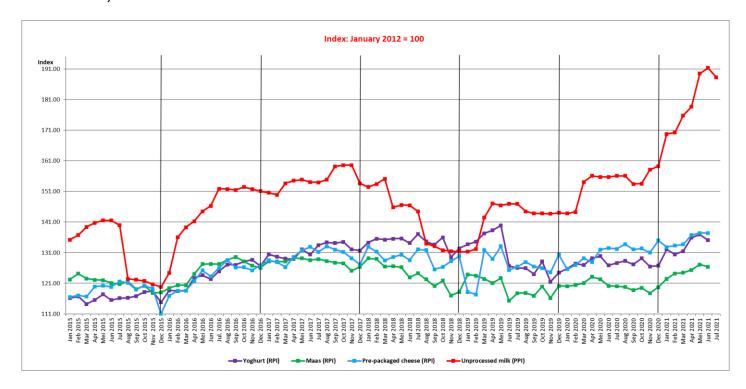
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------|-------|------|------|------|-------|
| 6.37 | -0.45 | 3.02 | 4.82 | 0.65 | -0.16 |

³³⁾ Graph prepared by the Office of SAMPRO based on information obtained from NielsenIQ and Statistics South Africa

³⁴⁾ Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Graph 14³⁵⁾

THE PRODUCER PRICE INDEX (PPI) OF UNPROCESSED MILK, JANUARY 2015 TO JULY 2021 AND THE RETAIL PRICE INDICES (RPI) OF YOGHURT, MAAS AND PRE-PACKAGED CHEESE, FROM JANUARY 2015 TO JUNE 2021



INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)³⁶⁾

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------|-------|------|------|------|-------|
| 6.37 | -0.45 | 3.02 | 4.82 | 0.65 | -0.16 |

³⁵⁾ Graph prepared by the Office of SAMPRO based on information obtained from NielsenIQ and Statistics South Africa

³⁶⁾ Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 17³⁷⁾
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 2021

| V=1.5 | Percentage difference ³⁸⁾ | | | | | |
|------------------|--------------------------------------|----------------|-------------------|--|--|--|
| YEAR | 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 | | | |
| Average | 7.5 | -0.5 | 4.1 | | | |
| 2021 (Jan – Jun) | -4.2 | -3.0 | -3.6 | | | |

³⁷⁾ 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.

³⁸⁾ The percentages indicated are the percentages which the average retail prices of UHT milk were higher than that of fresh milk