KEY MARKET SIGNALS FOR THE DAIRY INDUSTRY

(A presentation to the online meeting of SAMPRO by the CEO of SAMPRO based on research reports of SAMPRO) on

JULY 2023

This presentation is available to any interested party and copies can be obtained from the Office of SAMPRO – telephone number 012 991 4164.
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sampro

South African Milk Processors' Organisation

The voluntary organisation of milk processors for the promotion of the development of the secondary dairy industry to the benefit of the dairy industry, the consumer and the South African society.

Key Market signals for the Dairy Industry are about:

- **CONDITIONS IN THE WORLD**
- **THE INTERNATIONAL MARKETS FOR DAIRY PRODUCTS**
- **THE UNPROCESSED MILK MARKETS IN MAJOR DAIRY COUNTRIES**
- **CONDITIONS IN SOUTH AFRICA**
- **THE UNPROCESSED MILK MARKET IN SOUTH AFRICA**
- **THE SOUTH AFRICAN MARKETS FOR DAIRY PRODUCTS**

Conditions in the world

- **Russian invasion in Ukraine and the reaction of other countries thereon, created a negative impact on:**
  - **Economic growth;**
  - **Energy supply and prices;**
  - **Food supply and prices;**
  - **Wellbeing of millions of humans;**
  - **Trade and political relations between countries;**
  - **International trade and transport; and**
  - **Certainty and predictability.**
- **Conflict about Ukraine intensified since February 2022.**
- **Specific negative consequences of the Russian invasion will be a reality for years, even if conflict stops immediately.**

- **Tension between the West and China about Taiwan, human rights in China and the economic behaviour of China.**
- **Abnormal and wide-spread unfavourable climate conditions.**
- **According to the World Bank in June 2023:**

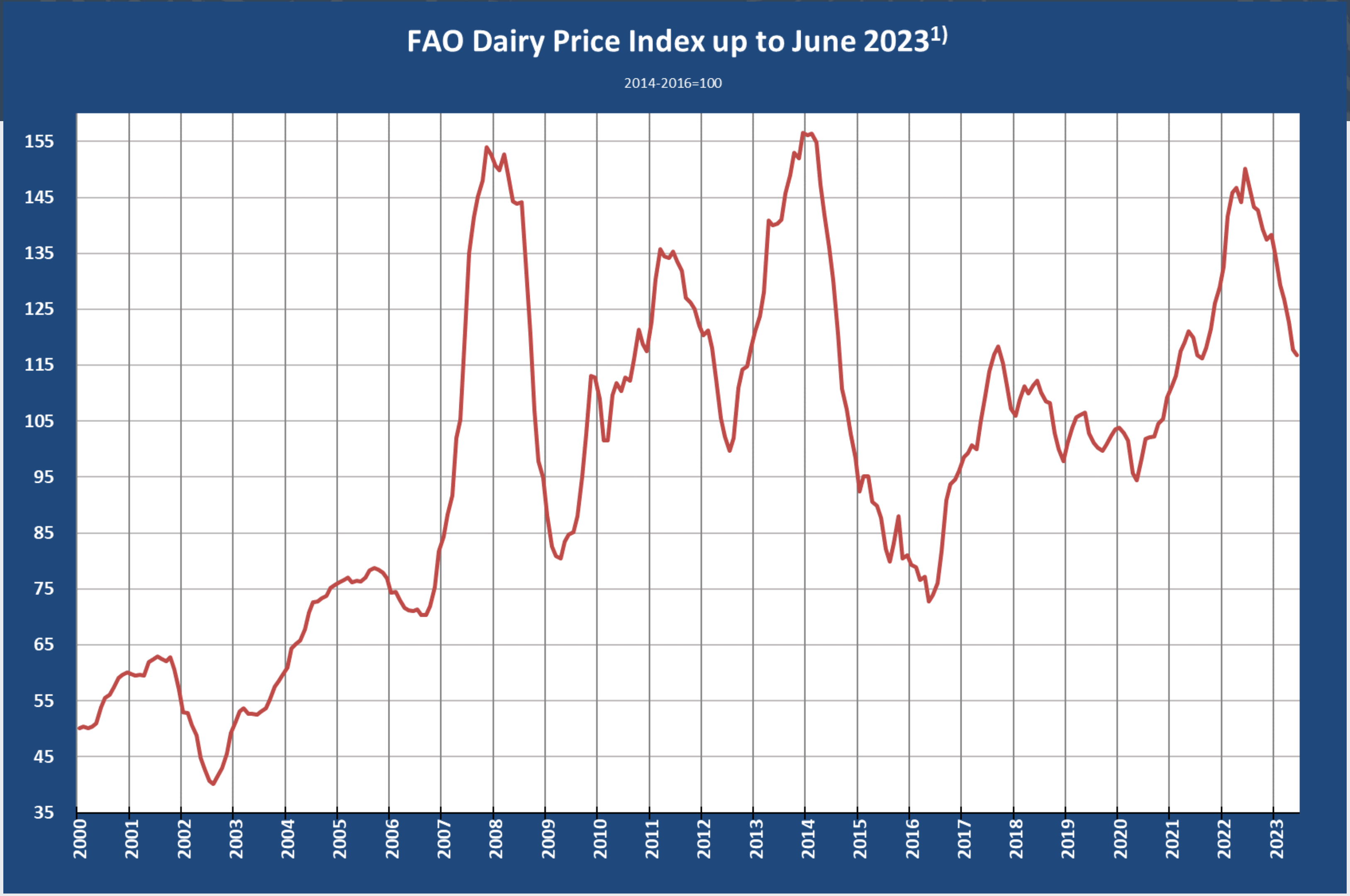
- **World economic growth slowed down from 3.1% in 2022 to 2.1% in 2023;**
- **Major drivers of "global economic growth" are expected to "weaken in the rest of the decade";**
- **Potential sustainable world economic growth "to fall to a three-decade low"; and**
- **"World economy will remain frail, at risk of a deeper downturn" .**

- **Conclusion: Present conditions in the world are not favourable for economic growth, uncertainty about the future is very high and predictability is low.**
- **Downward pressure on unprocessed milk production in especially Europe, due to environmental protection measures and policies with potentially long-term implications for other unprocessed milk producing countries.**
- **Increased development and promotion of plant-based alternatives for dairy and meat products**

The International Markets for dairy products

Graph 1

PRICE INDEX OF DAIRY PRODUCTS TRADED INTERNATIONALY UP TO JUNE 2023



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

Table 1

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

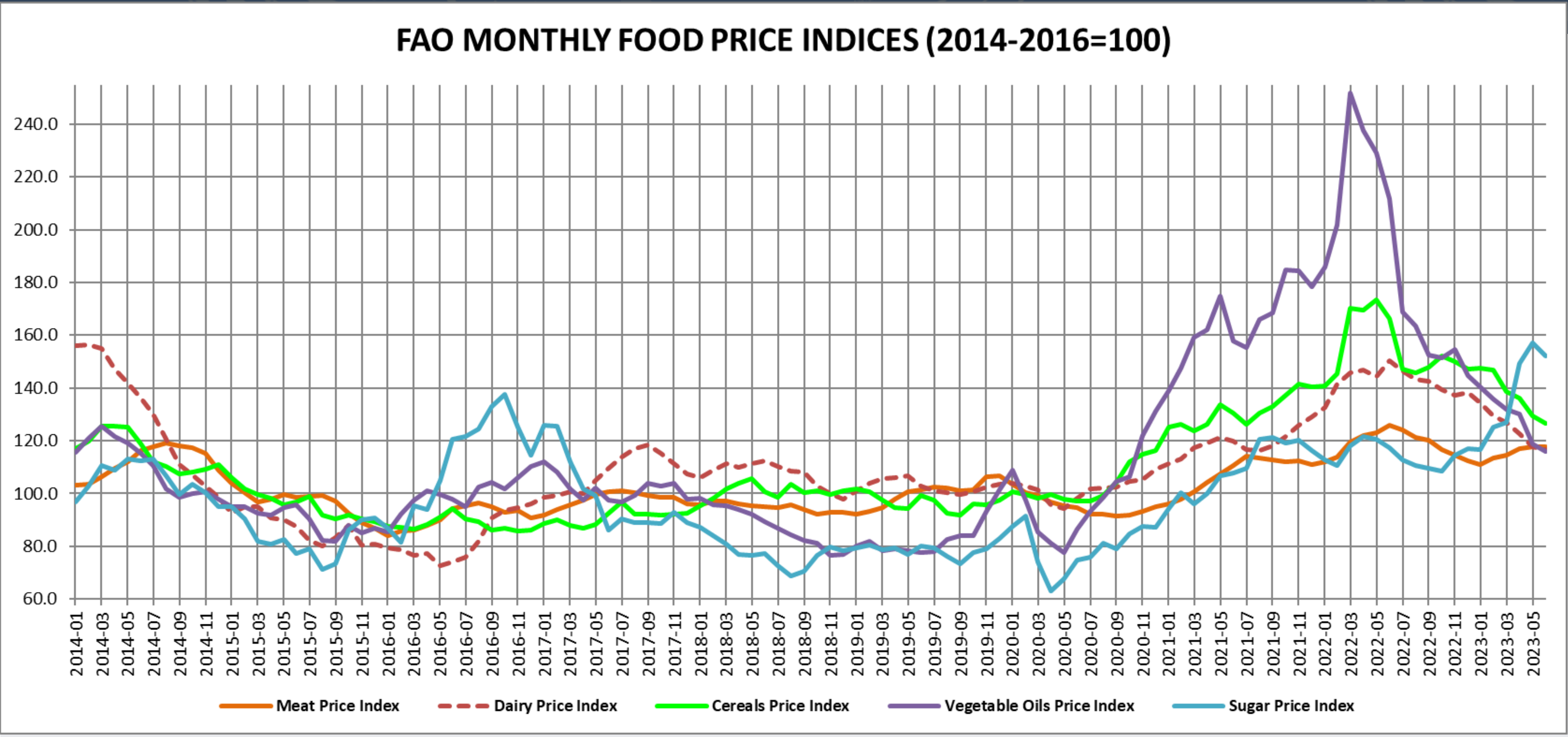
Index: 2014-2016=100

YEAR	A Highest Monthly Index	B Lowest Monthly Index	A Higher than B Percent
2000	60.1	50.1	20.0
2001	62.9	56.9	10.6
2002	53.0	40.1	32.2
2003	59.7	51.3	16.5
2004	75.8	60.9	24.4
2005	78.7	76.2	3.4
2006	81.7	70.3	16.2
2007	154.0	84.2	82.8
2008	152.6	94.9	60.9
2009	113.1	80.4	40.7
2010	121.4	101.6	19.5
2011	135.8	122.0	11.3
2012	121.2	99.7	21.6
2013	156.5	121.0	29.3
2014	156.4	98.5	58.8
2015	95.2	79.9	19.0
2016	96.2	72.7	32.3
2017	118.4	98.6	20.1
2018	112.3	97.8	14.7
2019	106.6	99.6	7.0
2020	109.2	94.4	15.7
2021	129.0	111.2	16.0
2022	150.2	132.6	13.2
Average	108.7	86.7	25.5
2023 (Jan-Jun)	134.5	116.8	15.2

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

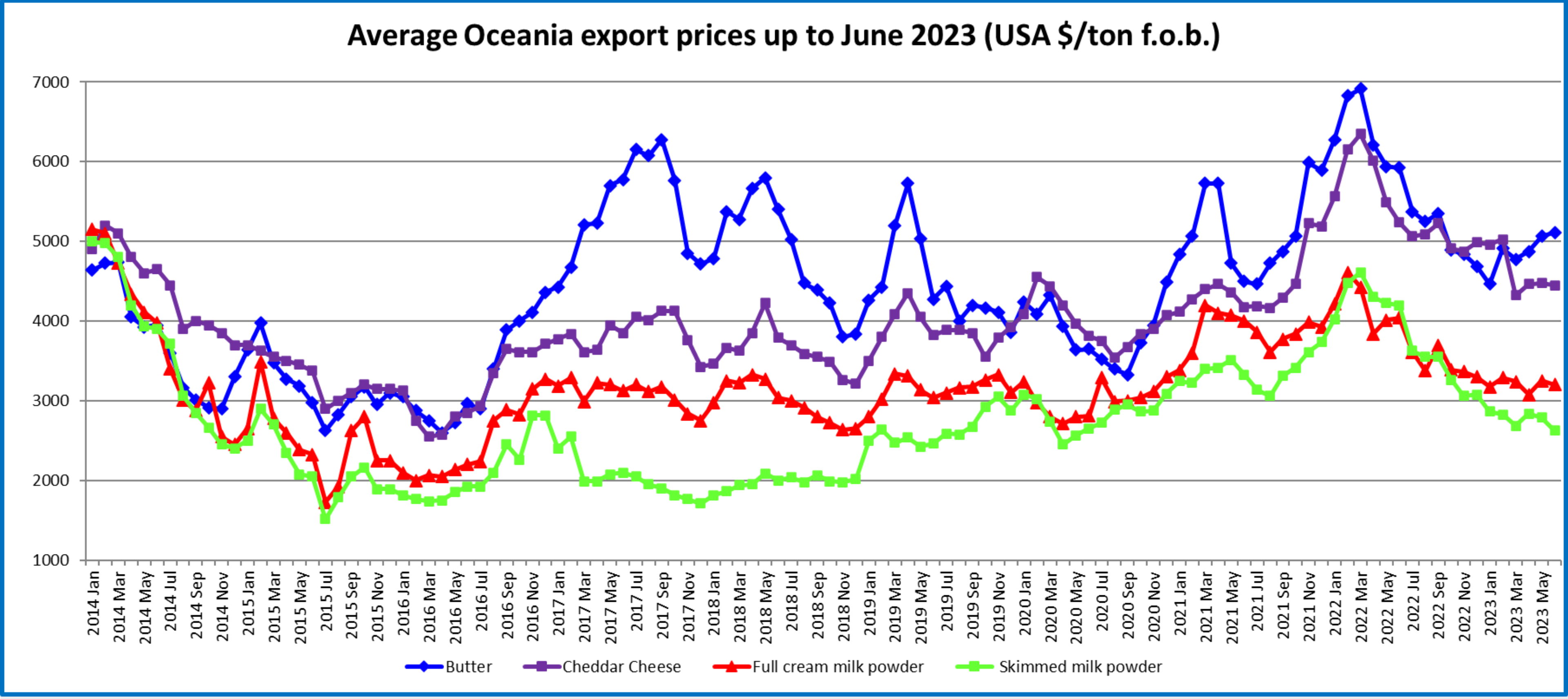
Graph 2

THE PRICE HISTORY OF DIFFERENT FOOD PRODUCTS IN THE INTERNATIONAL MARKET FROM 2014 TO JUNE 2023



Graph prepared by the Office of SAMPRO based on information published by the FAO, in the "Global Food Price Monitor".

Graph 3



Graph prepared by the Office of SAMPRO based on information published by the USDA on 17 July 2023

Table 2

WORLD MARKET PRICES (F.O.B.) OF SPECIFIC DAIRY PRODUCTS IN MID JUNE 2023

Product	Price $ / kg	Price R / kg (R18.04=$)
Butter	4.95 - 5.48	89.30 - 98.86
Whole milk powder	3.68 - 3.95	66.39 - 71.26
Skimmed milk powder	2.58 - 2.85	46.54 - 51.41

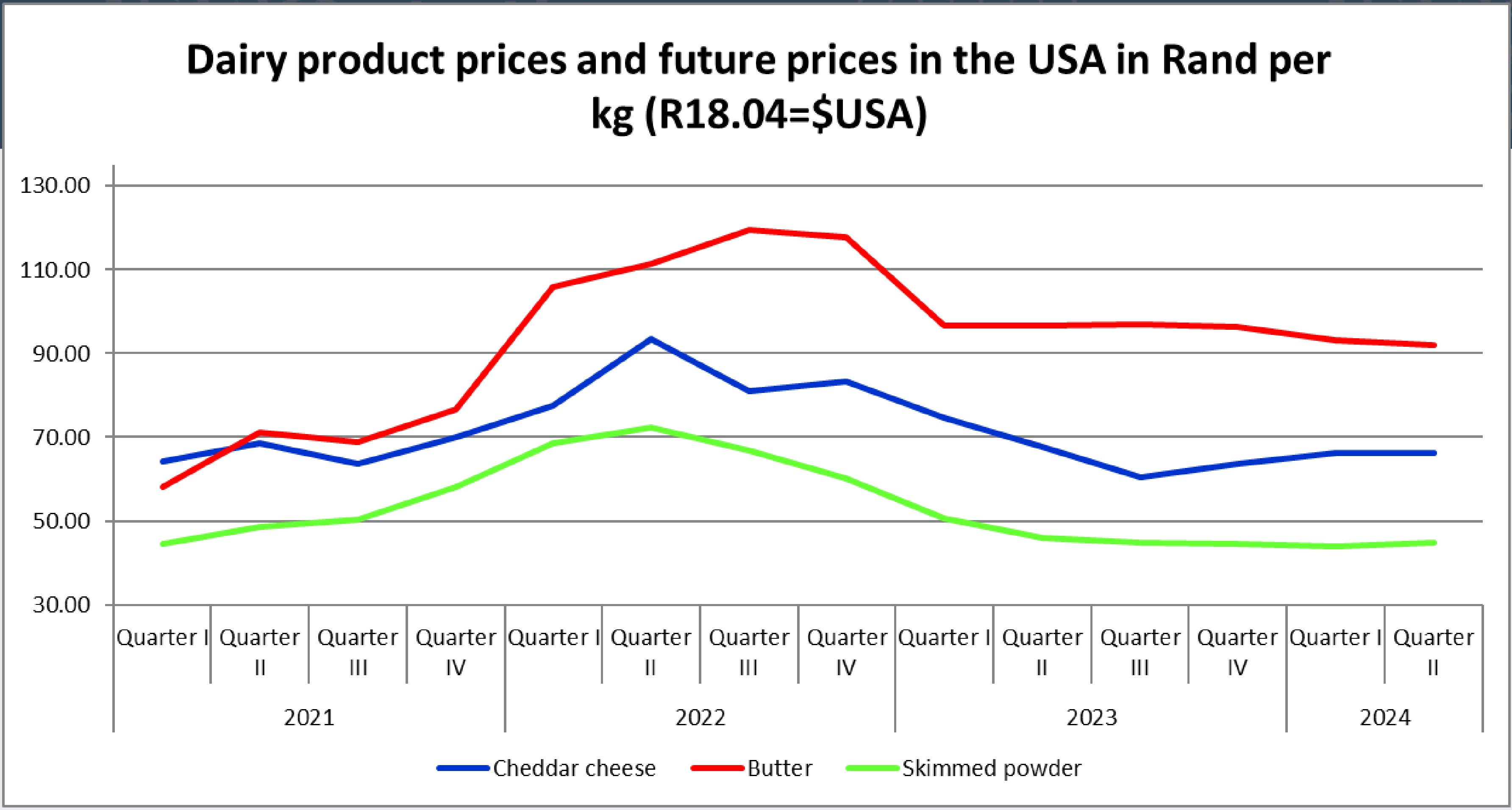
Table 3

PRICES (F.O.B.) OF CERTAIN DAIRY PRODUCTS FROM OCEANIA LATE IN JUNE 2023

Product	Price $ / kg	Price R / kg (R18.04=$)
Butter	4.88 - 5.35	88.04 - 96.51
Whole milk powder	3.08 - 3.33	55.56 - 60.07
Skimmed milk powder	2.50 - 2.75	45.10 - 49.61

Table 2 prepared by the Office of SAMPRO based on information published in the USDA Agricultural Marketing Service. The prices are free on board prices from Western Europe.
Table 3 prepared by the Office of SAMPRO based on information published in the USDA Agricultural Marketing Service. The prices are free on board prices from Oceania.

Graph 4



Graph prepared by the Office of SAMPRO based on information contained in the United States Department of Agriculture, Livestock, Dairy, and Poultry Outlook, 18 July 2023

Table 4

FUTURE PRICES IN USA$ AND RAND ($=R18.04) PER TON ACHIEVED AT GLOBAL DAIRY TRADE AUCTION ON 18 JULY 2023, FOR DELIVERY IN AUGUST 2023 TO DECEMBER 2023

	Aug	Sep	Oct	Nov	Dec
Whole Milk Powder					
PRICE: $	3 420	3 090	3 073	3 103	3 169
PRICE: R	61 697	55 744	55 437	55 978	57 169
Index	100.0	90.4	89.9	90.7	92.7
Skimmed Milk Powder					
PRICE: $	Na	2 430	2 509	2 528	2 625
PRICE: R	Na	43 837	45 262	45 605	47 355
Index	Na	100.0	103.3	104.0	108.0
Cheddar					
PRICE: $	3 815	3 951	3 910	3 954	4 350
PRICE: R	68 823	71 276	70 536	71 330	78 474
Index	100.0	103.6	102.5	103.6	114.0
Butter					
PRICE: $	4 902	4 745	4 680	4 640	4 675
PRICE: R	88 432	85 600	84 427	83 706	84 337
Index	100.0	96.8	95.5	94.7	95.4

Table prepared by the Office of SAMPRO based on prices as published by “Global Dairy Trade” on 18 July 2023.

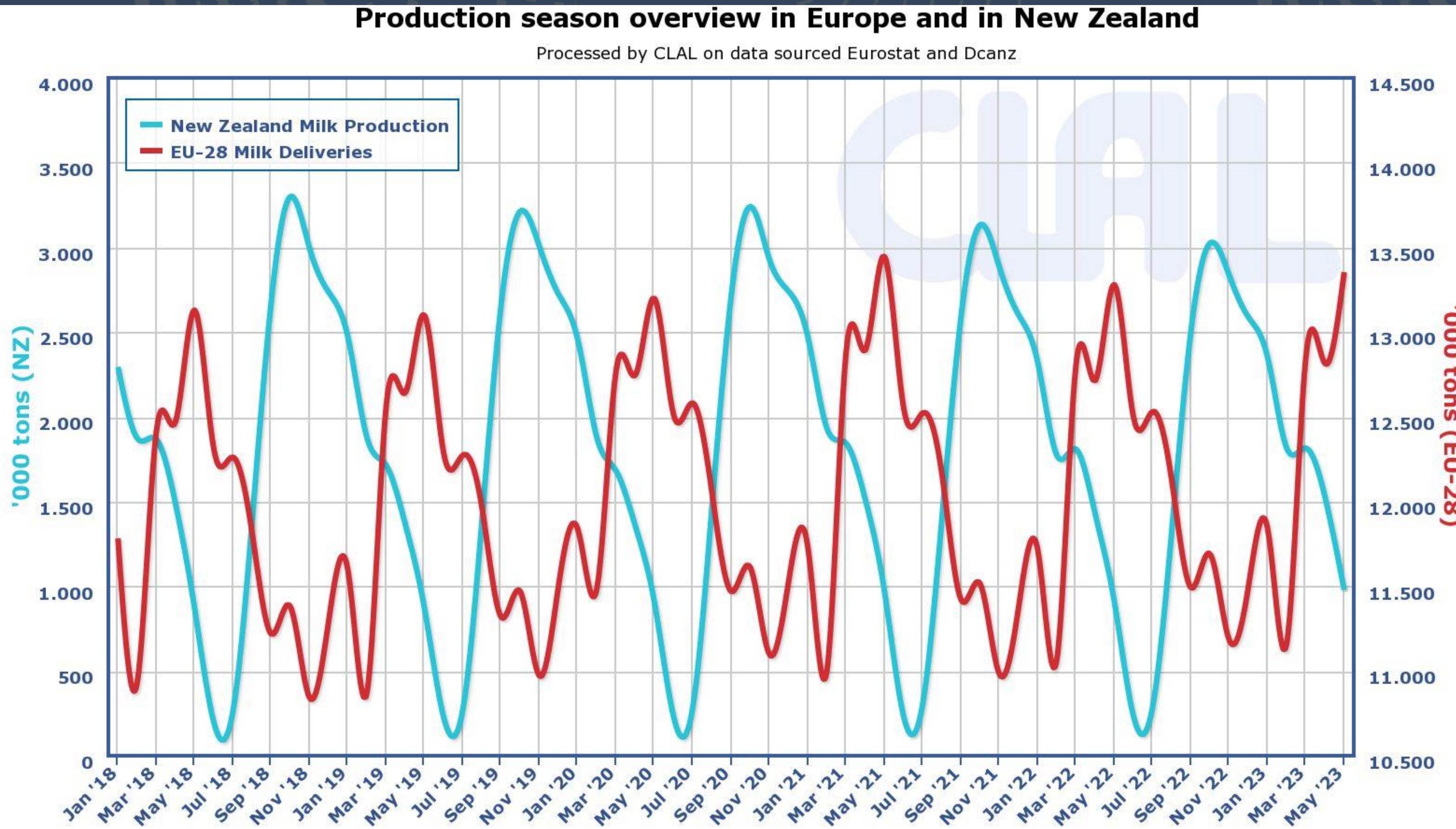
SUMMARY OF CONDITIONS IN THE INTERNATIONAL MARKET FOR THE DAIRY INDUSTRY

- Very high levels of uncertainty and predictions should be viewed with caution
- Prices decreased significantly from very high levels achieved in 2022
- Demand under pressure due to especially inflation and slower economic growth in the world
- FAO and OECD expect 1.5% growth per year in the decade 2023 to 2032. Growth in India, Pakistan, China, North America and Africa and not in the EU. But:
  - EU will remain the main cheese exporter;
  - NZ will remain the main exporter of butter and WMP;
  - USA export will increase especially export of SMP.

Unprocessed milk markets in major dairy countries :

Graph 5

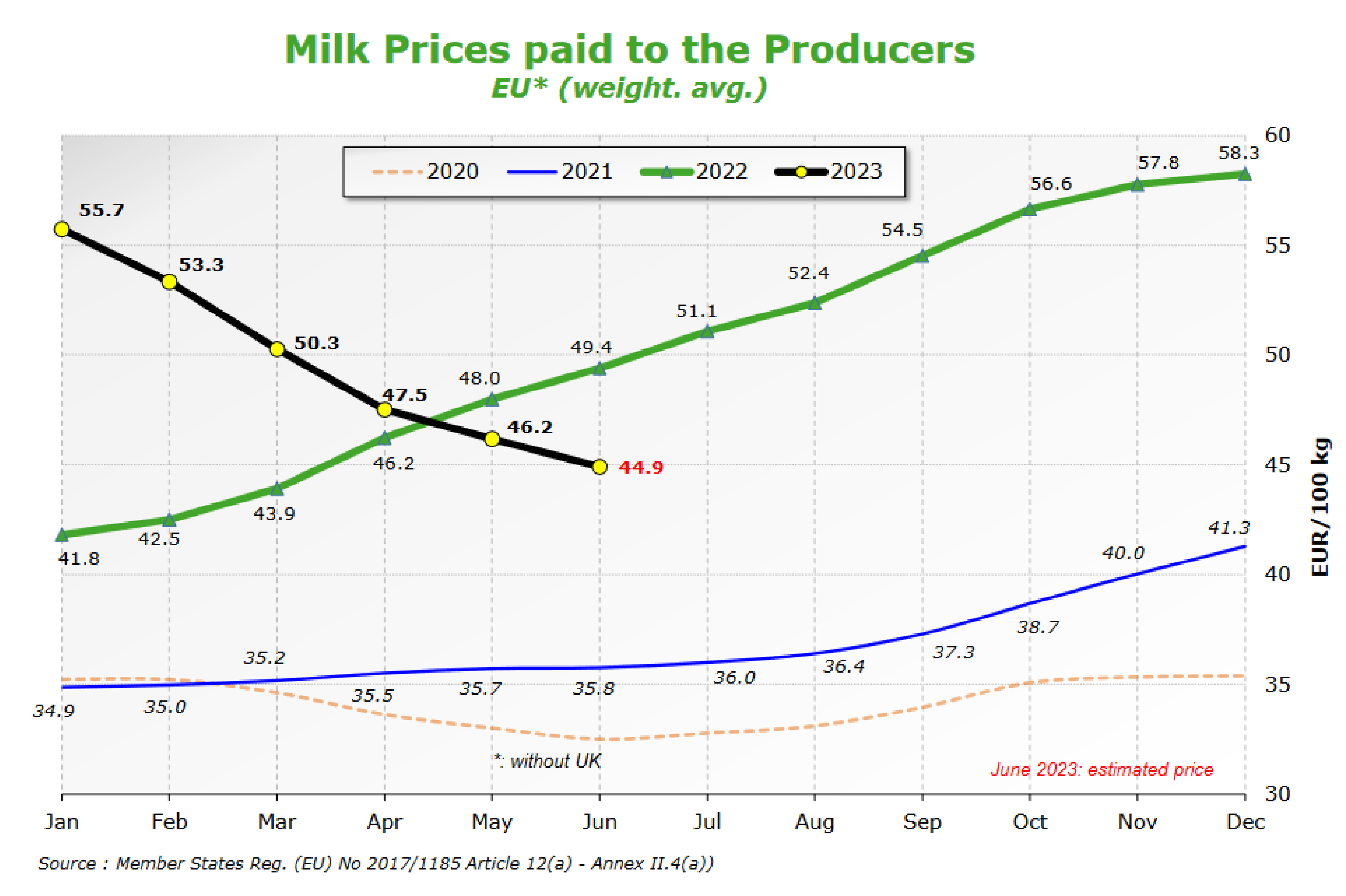
SEASONALITY OF UNPROCESSED MILK PRODUCTION IN NORTHERN AND SOUTHERN HEMISPHERES



Graph published by CLAL.it.

Graph 6

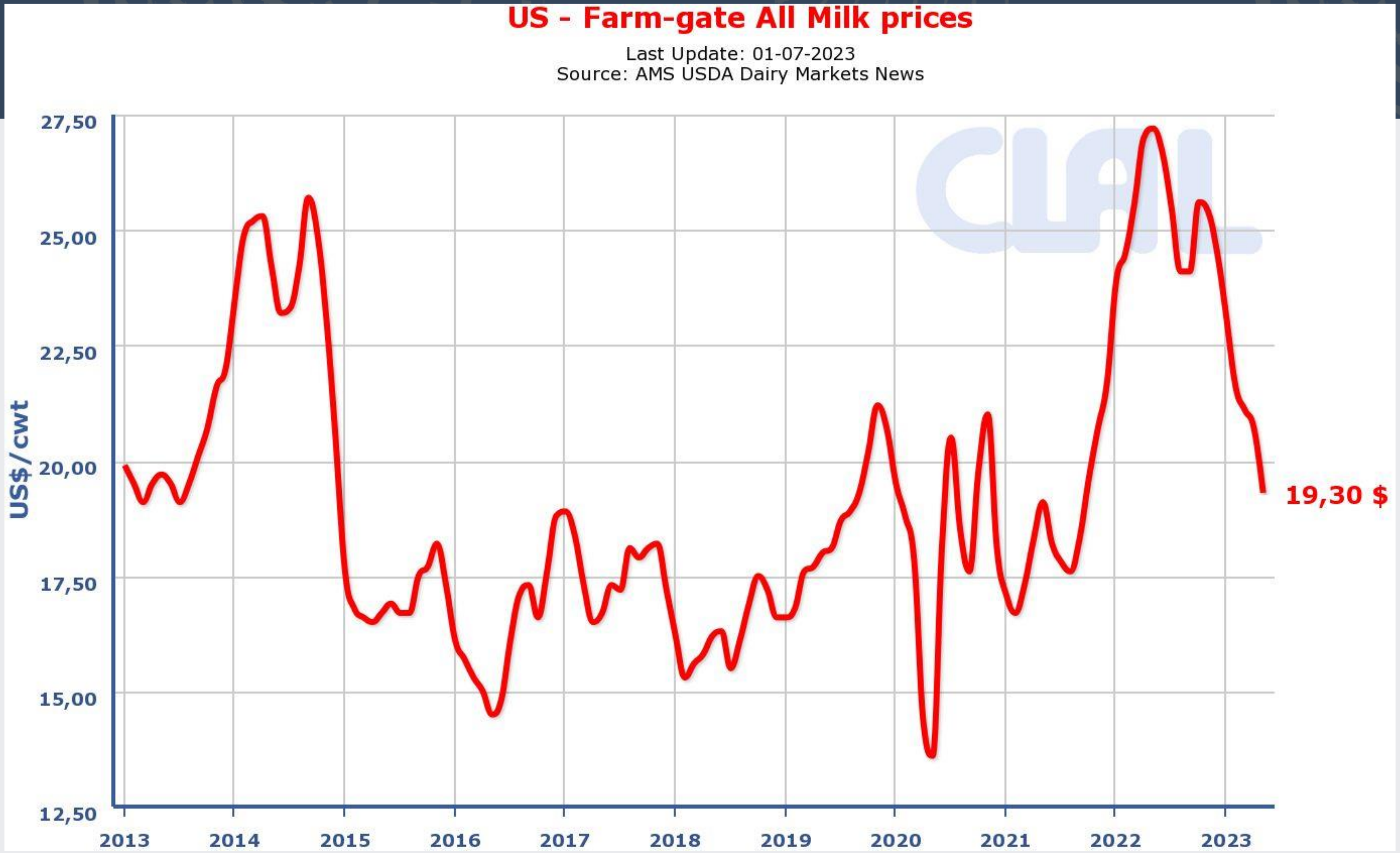
UNPROCESSED MILK PRICES IN THE EUROPEAN UNION



Graph published by CLAL.it.

Graph 7

UNPROCESSED MILK PRICES IN THE USA



Graph published by CLAL.it.

SUMMARY, UNPROCESSED MILK MARKETS IN MAJOR DAIRY COUNTRIES:

- **Production fairly stable**
- **Lower prices**
- **Periods of unfavourable weather especially heat waves and droughts**
- **Negative sentiment in especially Europe in respect of environmental impact of unprocessed milk production and animal products and more measures to limit the impact which put downward pressure on the production of unprocessed milk**
- **In the decade 2023 to 2032:**
  - **Growth in production of unprocessed milk of 1.5% per year expected by OECD/FAO "higher than most other main agricultural commodities";**
  - **Growth in herd size 1.3% per year due to expansion of herds in India, Pakistan and Sub-Sahara Africa. In other countries increase of production per cow is expected.**

Conditions in South Africa

- **Initiatives to promote economic growth undermined by:**
  - **Poor performance of State Enterprises;**
  - **Poor service delivery by the public sector on national, provincial and local authority levels;**
  - **Specific Government Policies and Measures do not support and undermine economic growth;**
  - **Widespread corruption;**
  - **High crime rate and increase in organised crime;**
  - **Social unrest and damage to assets required for economic and social development; and**
  - **High inflation, supports high interest rate.**

- **Position of South Africa versus Russia:**
  - **A major reason for uncertainty; and**
  - **Potentially very damaging to economic growth, and the promotion of human rights.**

Table 5

Poor performance of GDP:

The GDP of South Africa at constant 2015 prices[1)]

	R million	Index
2018	4 570 232	100.0000
2019	4 584 101	100.3034
2020	4 293 356	93.9417
2021	4 504 292	98.5571
2022	4 596 283	100.5700
2023 Estimates		
IMF [2)]	4 600 879	100.6706
SA Reserve Bank[3)]	4 614 668	100.9722

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

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

3) *In July 2023, the Reserve Bank published their expectation that the GDP will grow by 0.4 percent in 2023.*

Table 6

High Unemployment:

Indices of rate of unemployment[4)] in South Africa (First quarter 2015 = 100)

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average[5)]
2015	100.00	94.64	96.59	92.80	96.00
2016	101.13	100.75	102.65	100.37	101.22
2017	104.92	104.92	104.92	101.13	103.97
2018	101.13	103.03	104.16	102.65	102.74
2019	104.54	109.84	110.22	110.22	108.70
2020	114.01	88.25	116.66	123.10	110.50
2021	123.48	130.30	132.19	133.71	129.92
2022	130.68	128.40	124.62	123.86	126.89
2023	124.62				

4) Table prepared by the Office of SAMPRO based on information published by Statistics South Africa in its STATISTICAL RELEASE P0211 titled "Quarterly Labour Force Survey Quarter 1: 2023.
5) Average calculated by the Office of SAMPRO by dividing the sum of the quarterly figures of the year by four.

- The truth that economic growth, lower unemployment and transformation are dependent on improvement of the competitiveness (productivity) of the public and private sectors, does not receive enough attention in the determination of government policies and measures and in public debates.

The unprocessed milk market in South Africa

Table 7

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

YEAR	UNPROCESSED MILK KILOGRAM	PERCENTAGE CHANGE FROM PREVIOUS YEAR	INDEX 2008 = 100
2008	2 624 511 678	2.50	100.00
2009	2 586 868 067	-1.43	98.57
2010	2 711 236 032	4.82	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	3.01	123.97
2018	3 410 535 903	4.82	129.95
2019	3 432 802 396	0.65	130.79
2020	3 427 335 378	-0.16	130.58
2021	3 403 100 413	-0.71	129.67
2022	3 349 861 004	-1.56	127.64

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

Table 8

AVERAGE AGGREGATE COMPOUND GROWTH RATE PER YEAR OF THE MASS OF PRODUCTION OF UNPROCESSED MILK IN SOUTH AFRICA

Years	Average aggregate compound growth rate per year Percent
2008 to 2011 (3 years)	1.20
2011 to 2014 (3 years)	3.12
2014 to 2017 (3 years)	2.94
2017 to 2020 (3 years)	1.75
2008 to 2022 (14 years)	1.76

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

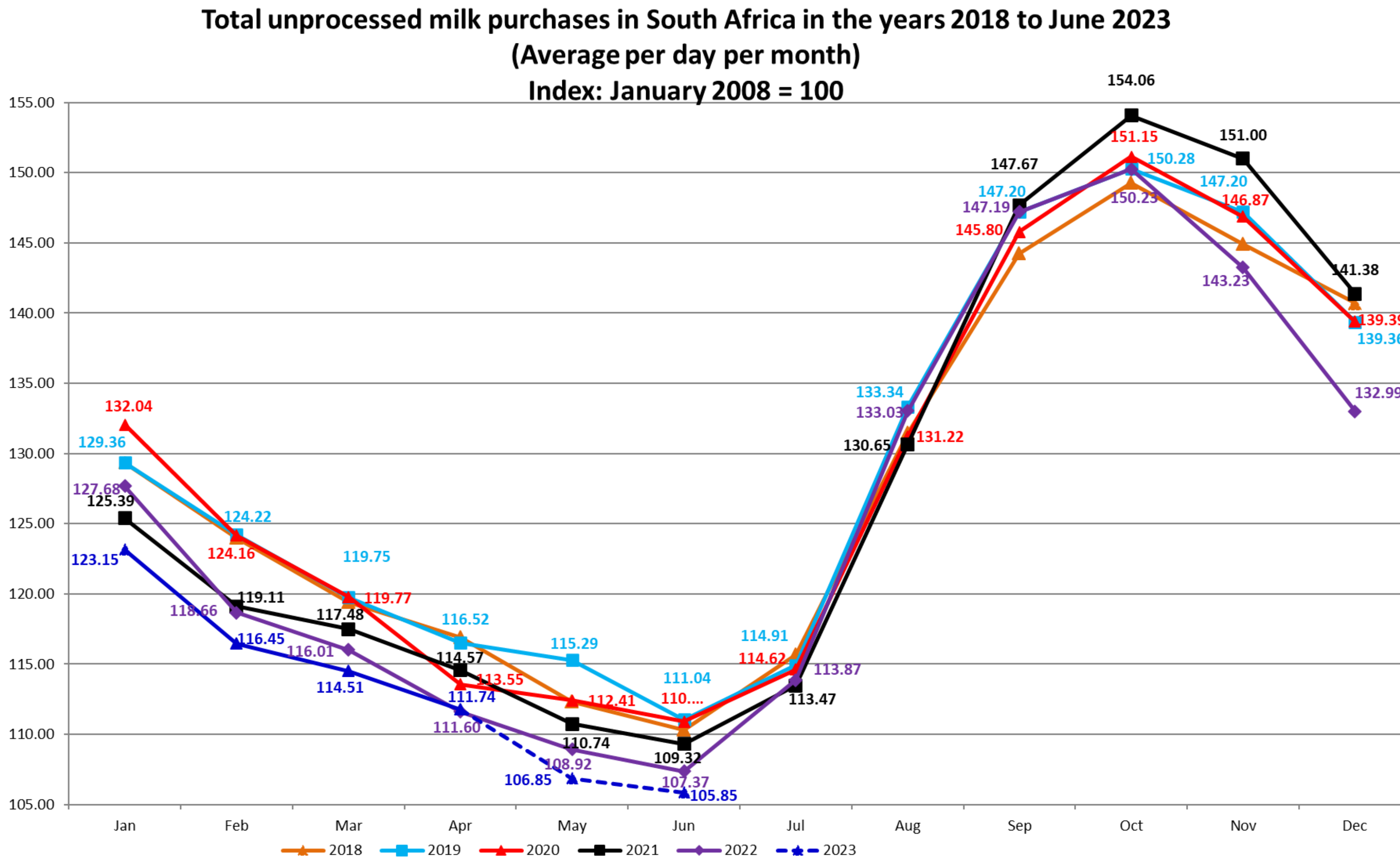
Table 9

DIFFERENCE BETWEEN THE HIGHEST AND LOWEST MASS OF PRODUCTION OF UNPROCESSED MILK PER DAY IN SOUTH AFRICA, IN THE YEARS 2009 TO 2022

Year	Percent
2009	35.3
2010	32.2
2011	32.0
2012	29.0
2013	29.9
2014	37.7
2015	25.2
2016	32.9
2017	39.5
2018	35.3
2019	35.3
2020	36.3
2021	40.9
2022	39.9
Average 2009 to 2022	**34.4**

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

Graph 8



Graph prepared by the Office of SAMPRO based on information obtained from Milk SA and the figures for May and June 2023 are estimates.

Table 10

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

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

Table prepared by the Office of SAMPRO based on information obtained from Milk SA and the figures for May and June 2023 are estimates.

Table 11

UNPROCESSED MILK PURCHASES PER QUARTER OF EACH OF THE YEARS 2009 to 2023

UNPROCESSED MILK PURCHASES PER QUARTER OF EACH OF THE YEARS 2009 to 2023										
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2009	620 043 005	23.969	560 531 455	21.668	658 577 140	25.458	747 716 467	28.904	2 586 868 067	100
2010	640 933 409	23.640	595 998 091	21.983	699 002 502	25.782	775 302 030	28.596	2 711 236 032	100
2011	654 701 438	24.066	597 343 799	21.958	694 671 935	25.536	773 684 975	28.440	2 720 402 147	100
2012	676 129 726	23.784	638 011 059	22.443	725 458 007	25.519	803 211 367	28.254	2 842 810 159	100
2013	683 707 219	23.529	646 811 485	22.259	746 796 407	25.700	828 496 836	28.512	2 905 811 947	100
Total (2009-2013)	3 275 514 797	23.792	3 038 695 889	22.072	3 524 505 991	25.601	3 928 411 675	28.535	13 767 128 352	100
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2014	683 060 914	22.900	650 998 523	21.826	766 083 031	25.684	882 592 129	29.590	2 982 734 597	100
2015	770 769 019	24.294	726 975 249	22.914	799 968 233	25.214	874 943 269	27.578	3 172 655 770	100
2016	752 226 598	23.816	701 859 008	22.222	806 386 965	25.531	897 973 819	28.431	3 158 446 390	100
2017	756 689 792	23.256	703 893 532	21.634	837 867 145	25.751	955 231 612	29.358	3 253 682 081	100
2018	814 831 903	23.892	750 437 490	22.004	873 519 325	25.612	971 747 186	28.493	3 410 535 904	100
Total (2014-2018)	3 777 578 226	23.632	3 534 163 802	22.120	4 083 824 699	25.558	4 582 488 015	28.690	15 978 054 742	100
Year	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	Kg	%	Kg	%	Kg	%	Kg	%	Kg	%
2019	816 208 186	23.777	757 906 127	22.078	882 584 853	25.710	976 103 230	28.435	3 432 802 396	100
2020	831 232 775	24.253	744 621 901	21.726	874 078 494	25.503	977 402 208	28.518	3 427 335 378	100
2021	791 682 285	23.264	739 610 710	21.733	874 291 459	25.691	997 515 959	29.312	3 403 100 413	100
2022	792 616 775	23.661	724 752 937	21.635	879 548 171	26.256	952 943 120	28.448	3 349 861 004	100
Total (2019-2022)	2 439 123 246	23.765	2 242 138 738	21.846	2 630 954 806	25.635	2 951 021 397	28.755	10 263 238 187	100
Total (2009-2022)	9 492 216 269	23.726	8 814 998 429	22.024	10 239 285 496	25.592	11 461 921 087	28.648	40 008 421 281	100
2023	774 464 421		717 060 131							

Table prepared by the Office of SAMPRO based on information obtained from Milk SA. Quarter two in 2023 is an estimate.

Table 12

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

Year	October to December percent	October to February percent	October to April percent	October to June percent
2008/9	3.9	16.9	24.4	25.4
2009/10	5.0	14.6	20.4	21.2
2010/11	5.6	15.6	23.4	23.7
2011/12	6.6	14.5	19.5	18.2
2012/13	5.3	14.9	20.9	20.5
2013/14	4.2	18.0	22.9	21.8
2014/15	7.7	12.9	17.1	19.4
2015/16	7.9	15.9	20.5	22.0
2016/17	4.0	17.8	22.2	24.9
2017/18	5.7	13.8	18.7	23.3
2018/2019	7.3	16.8	21.9	25.6
2019/2020	7.8	17.4	24.4	26.2
2020/2021	7.8	21.2	24.2	27.7
2021/2022	8.2	24.1	27.7	30.5
Average 2008/9 to 2021/2022	6.2	16.7	22.0	23.6
2022/2023	11.5	22.9	25.6	29.5

Table prepared by the Office of SAMPRO on the basis of information obtained from MILK SA. The information in respect of 2008 to 2023 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.

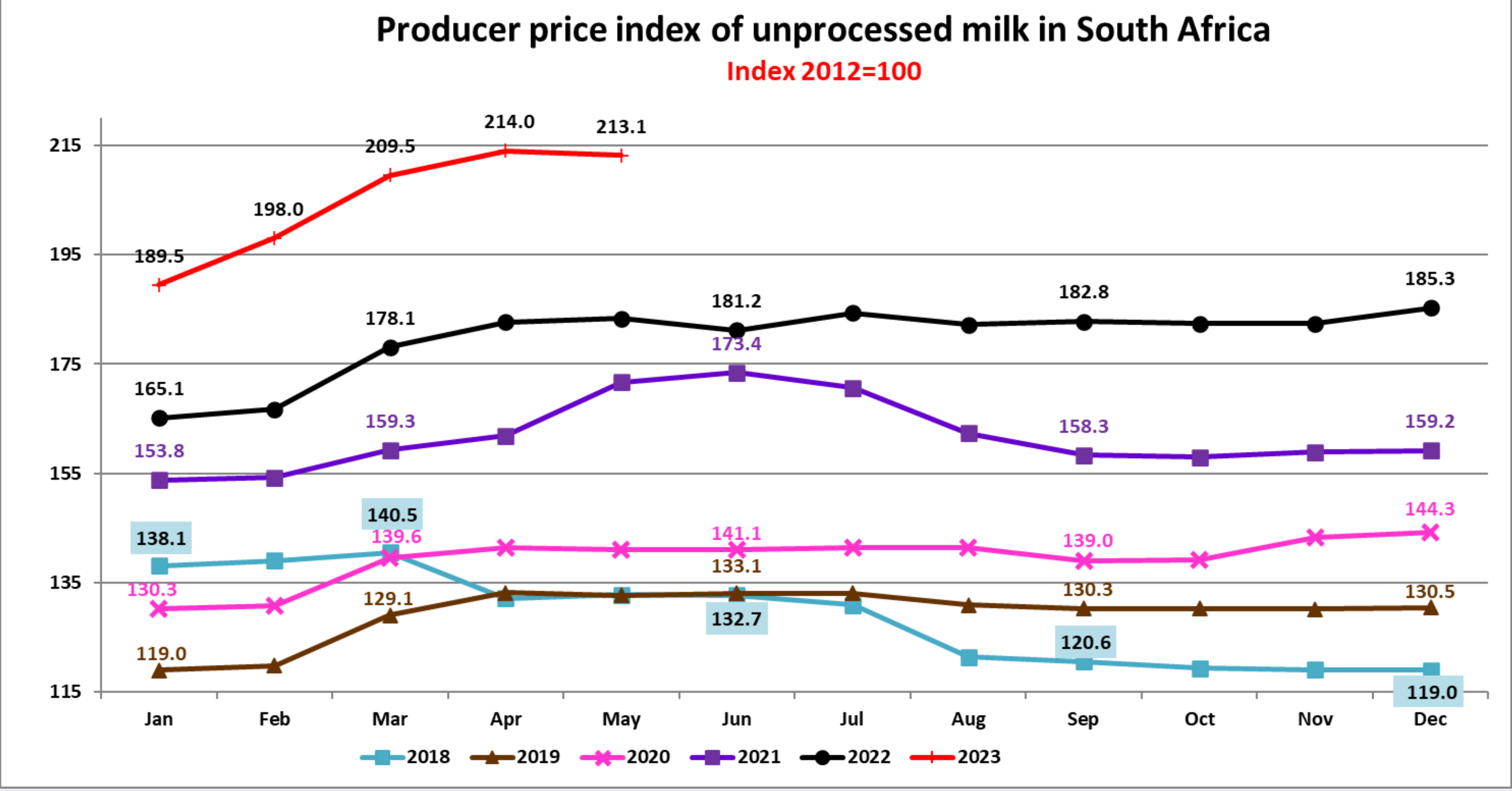
Table 13

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

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

Table prepared by the Office of SAMPRO on the basis of information obtained from MILK SA. The information in respect of 2008 to 2022 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 9



Graph prepared by the Office of SAMPRO and is based on the information as published by Statistics SA.

Table 14

MONTHLY INCREASE IN THE PRODUCER PRICE INDEX OF UNPROCESSED MILK

September 2020 relative to August 2020	-1.70
October 2020 relative to September 2020	0.08
November 2020 relative to October 2020	2.93
December 2020 relative to November 2020	0.78
January 2021 relative to December 2020	6.58
February 2021 relative to January 2021	0.25
March 2021 relative to February 2021	3.33
April 2021 relative to March 2021	1.61
May 2021 relative to April 2021	6.07
June 2021 relative to May 2021	0.98
July 2021 relative to June 2021	-1.60
August 2021 relative to July 2021	-4.85
September 2021 relative to August 2021	-2.48
October 2021 relative to September 2021	-0.21
November 2021 relative to October 2021	0.59
December 2021 relative to November 2021	0.19
January 2022 relative to December 2021	3.72
February 2022 relative to January 2022	0.97
March 2022 relative to February 2022	6.84
April 2022 relative to March 2022	2.58
May 2022 relative to April 2022	0.34
June 2022 relative to May 2022	-1.16
July 2022 relative to June 2022	1.73
August 2022 relative to July 2022	-1.15
September 2022 relative to August 2022	0.34
October 2022 relative to September 2022	-0.22
November 2022 relative to October 2022	0.00
December 2022 relative to November 2022	1.59
January 2023 relative to December 2022	2.26
February 2023 relative to January 2023	4.49
March 2023 relative to February 2023	5.81
April 2023 relative to March 2023	2.15
May 2023 relative to April 2023	-0.42

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

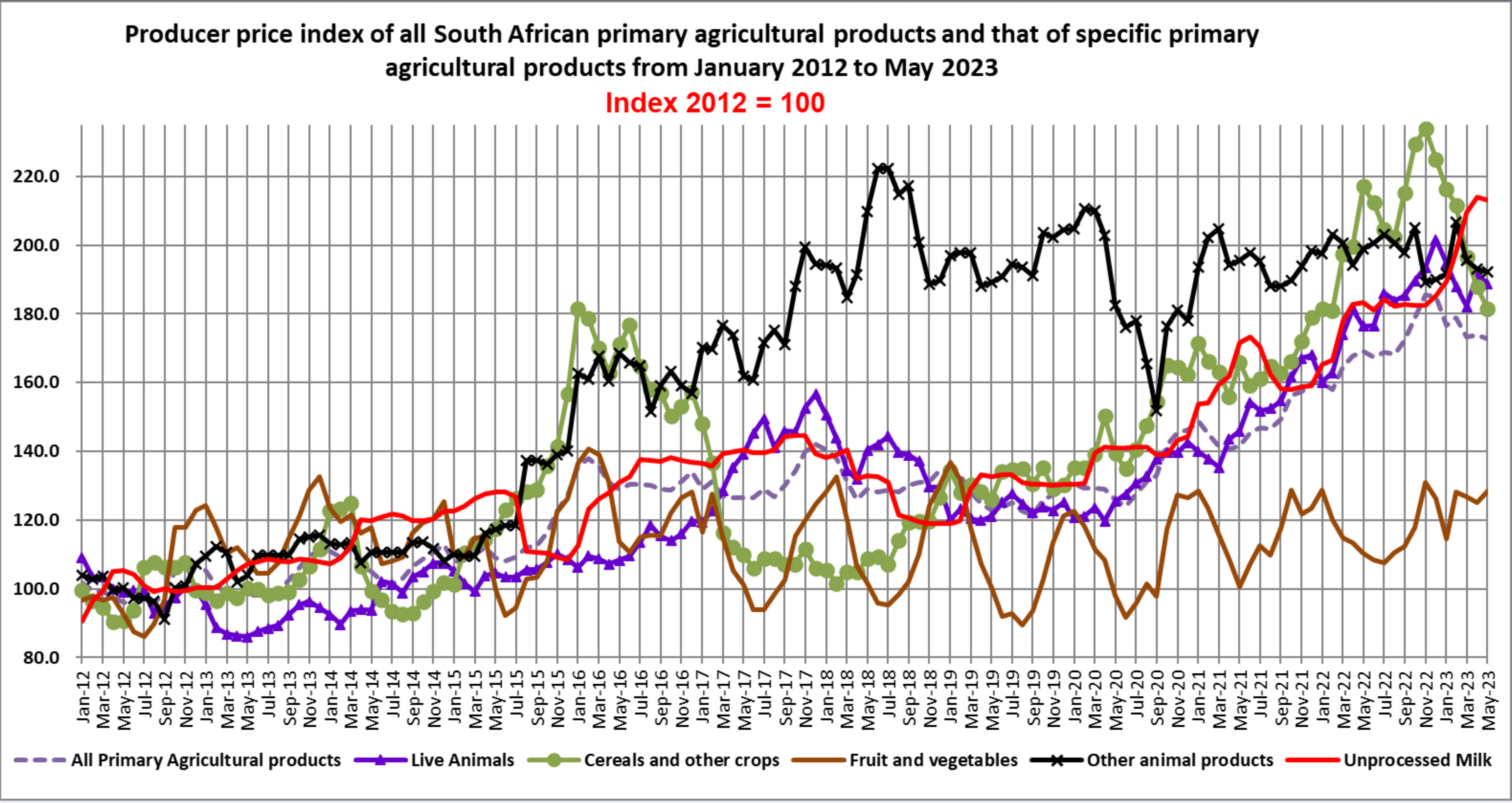
Table 15

THE DIFFERENCE BETWEEN THE HIGHEST AND LOWEST PRODUCER PRICE INDEX OF UNPROCESSED MILK IN SOUTH AFRICA IN EACH OF THE YEARS 2008 TO 2023 (January to May)

Year	Percent
2008 (Highest in June, Lowest in January)	14.3
2009 (Highest in December, Lowest in February)	13.6
2010 (Highest in June, Lowest in October)	14.2
2011 (Highest in December, Lowest in February)	6.9
2012 (Highest in May, Lowest in January)	16.3
2013 (Highest in July and October, Lowest in February)	8.4
2014 (Highest in December, Lowest in January)	14.1
2015 (Highest in May and June, Lowest in December)	18.2
2016 (Highest in October, Lowest in January)	22.5
2017 (Highest in October and November, Lowest in February)	6.5
2018 (Highest in March, Lowest in December)	18.1
2019 (Highest in April, Lowest in January)	11.9
2020 (Highest in December, Lowest in January)	10.7
2021 (Highest in June, Lowest in January)	12.7
2022 (Highest in December, Lowest in January)	12.2
Average	**13.4**
2023 (Jan – May) (Highest in April, Lowest in January)	12.9

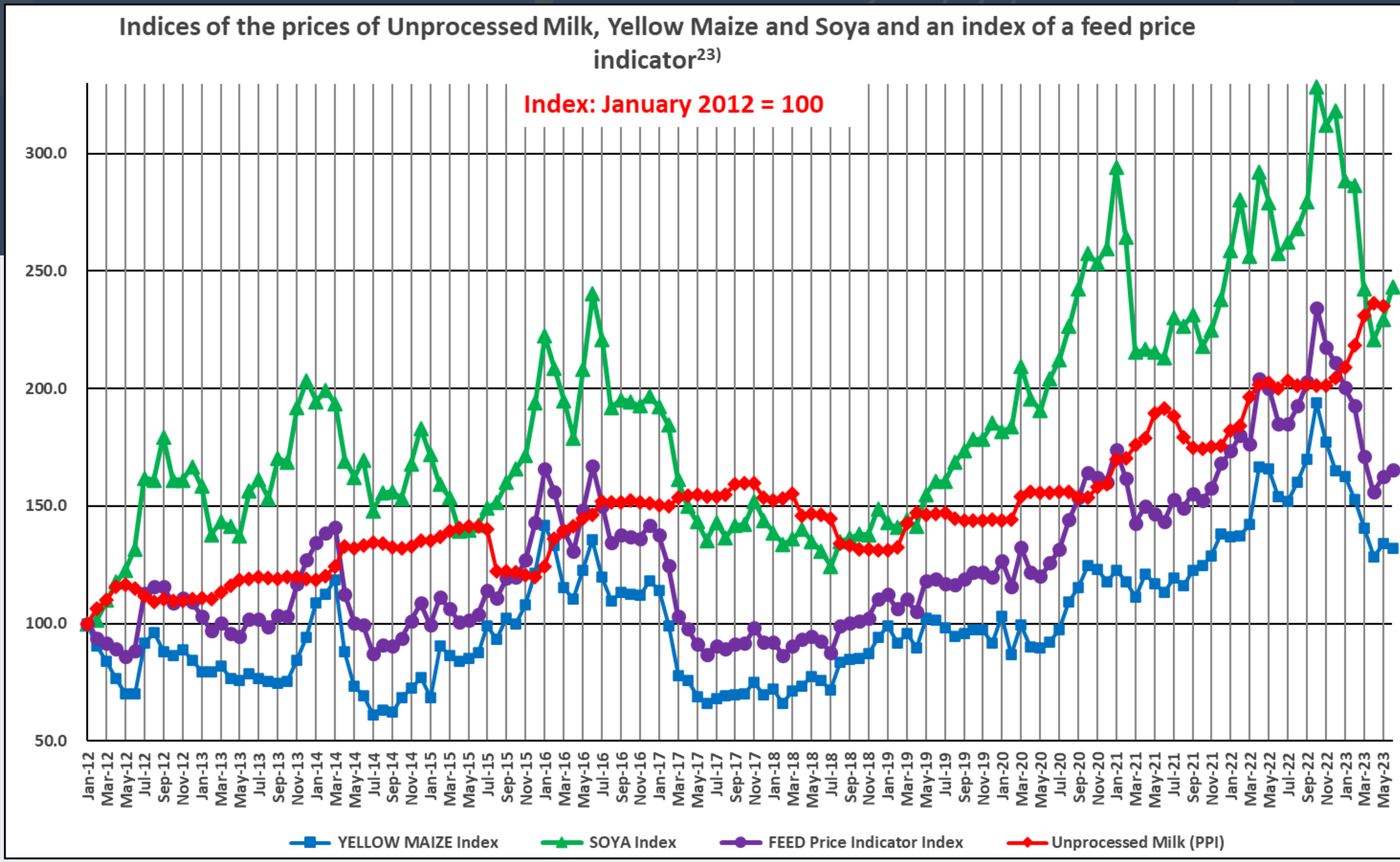
Table prepared by the Office of SAMPRO based on information published by Statistics SA.

Graph 10



Graph prepared by the Office of SAMPRO and is based on the information as published by Statistics SA.

Graph 11



INCREASE IN UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)										
2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4.5	2.22	2.65	6.32	-0.45	3.01	4.82	0.65	-0.16	-0.71	-1.56

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

Table 16

FUTURE PRICES OF YELLOW MAIZE IN SOUTH AFRICA (R/TON) ON 8 JUNE 2023 AND 17 JULY 2023 ACCORDING TO SAFEX

	A CLOSING BID 8 June 2023 R/Ton	B CLOSING BID 17 July 2023 R/Ton	C Percentage change from A to B
September 2023	3 887	3 813	-1.9
December 2023	3 992	3 909	-2.1
March 2024	4 008	3 940	-1.7
May 2024	4 038	3 973	-1.6

Table prepared by the Office of SAMPRO based on information as obtained from the SAFEX website on 17 July 2023

Table 17

FUTURE PRICES OF SOYA IN SOUTH AFRICA (R/TON) ON 8 JUNE 2023 AND 17 JULY 2023 ACCORDING TO SAFEX

	A CLOSING BID 8 June 2023 R/Ton	B CLOSING BID 17 July 2023 R/Ton	C Percentage change from A to B
September 2023	7 924	8 277	4.5
December 2023	8 104	8 512	5.0
March 2024	8 063	8 459	4.9
May 2024	7 808	8 034	2.9

Table prepared by the Office of SAMPRO based on information as obtained from the SAFEX website on 17 July 2023

Table 18

FERTILIZER PRICES IN SOUTH AFRICA

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

Table prepared by the Office of SAMPRO based on information published by Grain SA

Table 19

FERTILIZER PRICES IN SOUTH AFRICA

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

Table prepared by the Office of SAMPRO based on information published by Grain SA

Graph 12

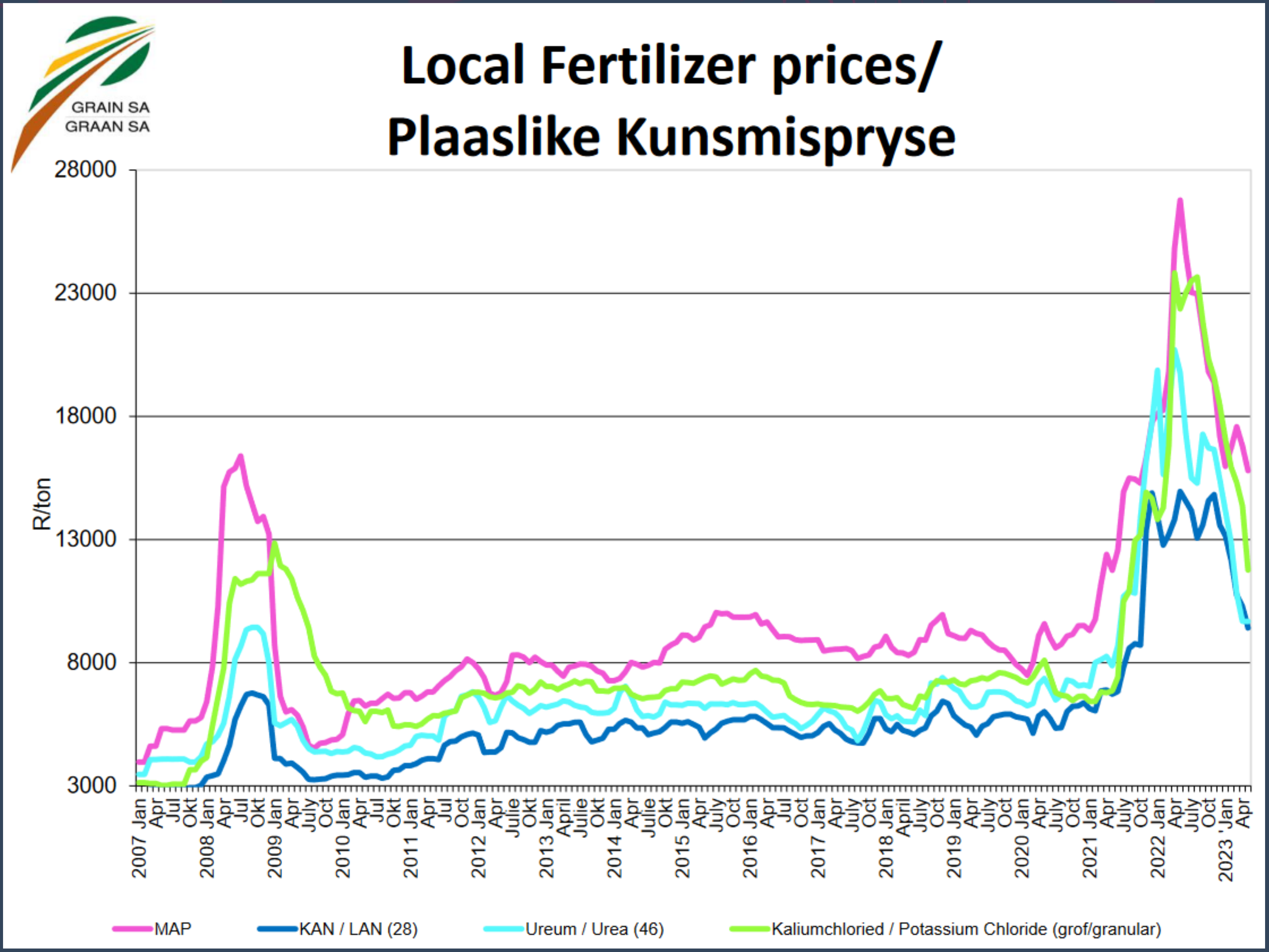


Table prepared by the Office of SAMPRO based on information published by Grain SA

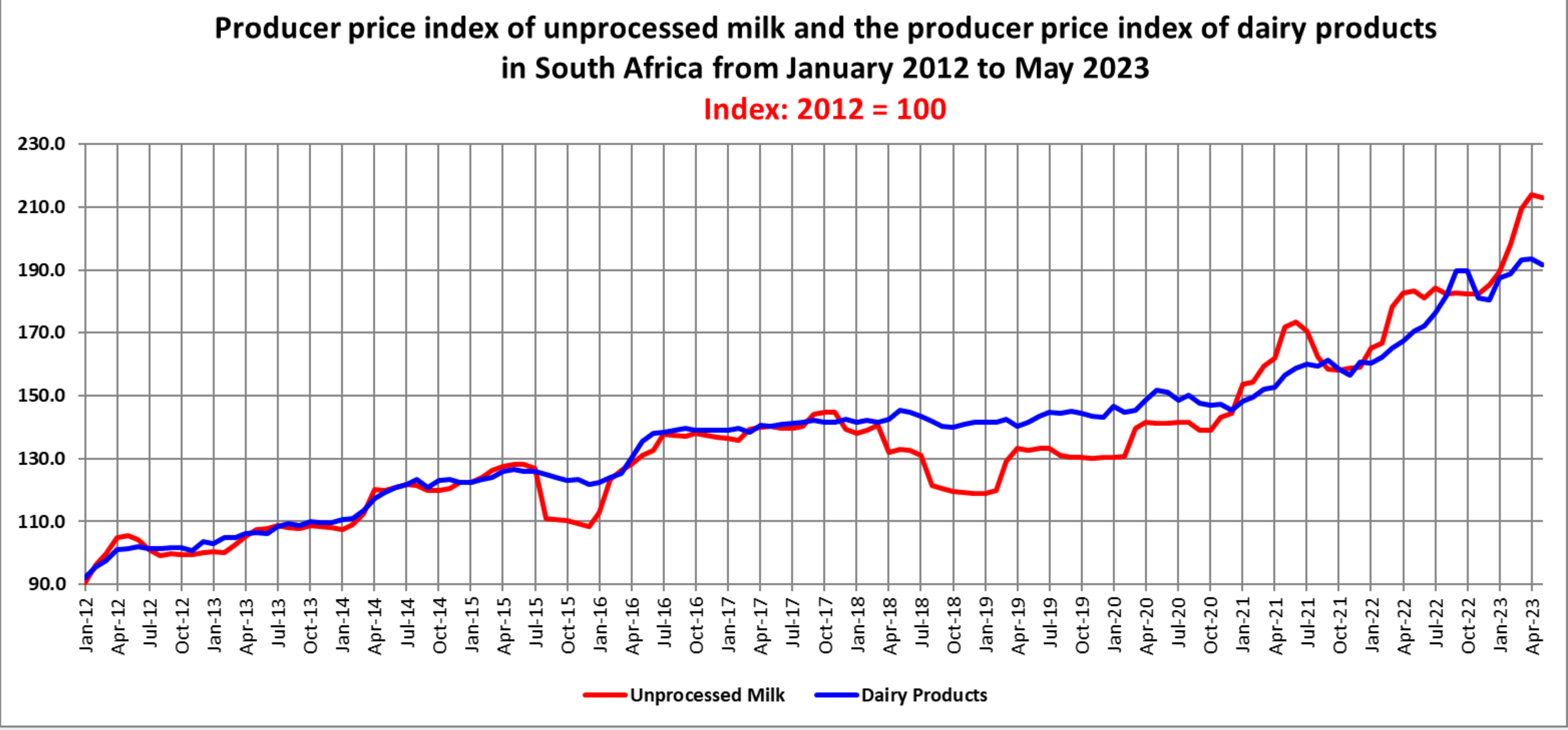
Table 20

INCREASE IN THE PRODUCER PRICE INDICES OF UNPROCESSED MILK AND DAIRY PRODUCTS INDEX 2012 = 100

	Unprocessed milk Percentage increase	Dairy Products Percentage increase
April to May 2023	-0.4	-1.1
February to May 2023 (3-month period)	7.6	1.5
November 2022 to May 2023 (6-month period)	16.8	5.8
May 2022 to May 2023 (12-month period)	16.3	12.4
May 2021 to May 2023 (24-month period)	24.1	22.5
May 2020 to May 2023 (36-month period)	51.0	26.4
May 2019 to May 2023 (48-month period)	60.6	35.4
January 2012 to May 2023 (136-month period)	135.2	107.8

The producer price index of dairy products reflects the changes of the producer prices of pasteurised and UHT milk, yoghurt, cheddar cheese and ice cream and not that of the other dairy products like maas, cheese other than cheddar cheese and milk powder.
Table prepared by the Office of SAMPRO based on information published by Statistics SA.

Graph 13



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

SUMMARY OF UNPROCESSED MILK MARKET IN SA

- **Production of unprocessed milk**
  - **In 2022 lower than in previous 4 years;**
  - **In first 6 months of 2023, 1.70% lower than in same months of 2022**

- **Producer price index of unprocessed milk increased:**
  - **In the year which ended in May 2023, by 16.8%;**
  - **In the 2 years which ended in May 2023, by 24.1%;**
  - **In the 3 years which ended in May 2023, by 51.0%.**

- **Prices of maize, soya and fertilizers decreased from record high levels but remained high.**
- **Ratio between producer price index of unprocessed milk and the index of the feed price indicator, increased. The ratio in the 3 months up to May 2023, is more supportive of production of unprocessed milk than in the years 2019 to 2022.**
- **Seasonal increase in production of unprocessed milk from July to October, varied in the last 15 years from 24.6% to 35.8%.**
- **Future demand for unprocessed milk will be determined by future sales of dairy products.**
- **Uncertainty about future weather conditions and future prices of feed.**

South African markets for dairy products

Table 21

MASS OF IMPORT IN 2021, 2022 AND 2023 (EST)

Product	A 2021 ton	B 2022 ton	B higher/lower than A %	C 2023 (est) Ton
04.01 Milk and cream	22 918	3 965	-82.7	1 675
04.02 Concentrated milk	19 393	15 988	-17.6	21 824
04.03 Buttermilk and yoghurt	3 362	3 387	0.7	2 894
04.04 Whey	17 056	18 436	8.1	10 899
04.05 Butter	4 419	3 602	-18.5	1 763
04.06 Cheese	8 471	7 540	-11.0	5 199

Table prepared by the Office of SAMPRO based on information published by SARS and estimated figures calculated by the office of SAMPRO.

Table 22

MASS OF EXPORT IN 2021, 2022 AND 2023 (EST)

Product	A 2021 ton	B 2022 ton	B higher/lower than A %	C 2023 (est) Ton
04.01 Milk and cream	24 062	21 544	-10.5	22 973
04.02 Concentrated milk	7 528	10 422	38.4	9 051
04.03 Buttermilk and yoghurt	10 325	10 472	1.4	10 154
04.04 Whey	1 920	1 931	0.6	1 352
04.05 Butter	1 298	1 226	-5.6	976
04.06 Cheese	5 857	6 349	8.4	7 846

Table prepared by the Office of SAMPRO based on information published by SARS and estimated figures calculated by the office of SAMPRO.

Table 23

AVERAGE IMPORT AND EXPORT PRICES (F.O.B.) OF THE DIFFERENT TYPES OF DAIRY PRODUCTS, BY SOUTH AFRICA, IN 2022 AND 2023 (JANUARY TO APRIL)

PRODUCT	Import Price (f.o.b) R/kg		Export Price (f.o.b.) R/kg	
	2022	2023 (Jan – Apr)	2022	2023 (Jan – Apr)
(04.01) Milk and Cream	13.78	14.56	15.49	18.44
(04.02) Concentrated Milk	63.22	65.45	63.53	65.88
(04.03) Buttermilk and Yoghurt	60.42	53.34	22.54	23.98
(04.04) Whey	36.14	46.34	38.93	43.37
(04.05) Butter and Oils	87.18	114.20	79.68	95.54
(04.06) Cheese	88.67	111.42	70.75	78.52

Table prepared by the Office of SAMPRO based on information published by SARS

Table 24

TOTAL IMPORT AND EXPORT OF DAIRY PRODUCTS BY SOUTH AFRICA AND THE EXPOSURE OF THE SOUTH AFRICAN DAIRY INDUSTRY TO INTERNATIONAL COMPETITION

(INDEX OF THE SUM OF THE MASS OF IMPORTS AND EXPORTS)

INDEX: 2002 = 100

YEAR	IMPORT		EXPORT		IMPORT PLUS EXPORT	
	TON	INDEX	TON	INDEX	TON	INDEX
2002	24 617.40	100.0	34 328.20	100.0	58 945.60	100.0
2003	24 458.80	99.4	22 905.20	66.7	47 364.00	80.4
2004	18 289.50	74.3	23 508.10	68.5	41 797.60	70.9
2005	30 771.40	125.0	17 216.00	50.2	47 987.40	81.4
2006	30 878.60	125.4	26 543.30	77.3	57 421.90	97.4
2007	44 313.00	180.0	18 516.50	53.9	62 829.50	106.6
2008	34 009.40	138.2	42 781.00	124.6	76 790.40	130.3
2009	32 373.40	131.5	41 770.70	121.7	74 144.10	125.8
2010	35 061.20	142.4	33 950.60	98.9	69 011.80	117.1
2011	37 714.40	153.2	41 817.10	121.8	79 531.50	134.9
2012	59 012.55	239.7	52 500.96	152.9	111 513.49	189.2
2013	35 673.76	144.9	70 481.90	205.3	106 155.66	180.1
2014	40 199.03	163.3	71 098.95	207.1	111 297.98	188.8
2015	69 353.98	281.7	61 296.87	178.6	130 650.85	221.6
2016	58 000.35	235.6	50 247.54	146.4	108 247.89	183.6
2017	83 504.44	339.2	48 626.69	141.7	132 131.13	224.2
2018	68 652.58	278.9	45 257.49	131.8	113 910.08	193.2
2019	75 596.08	307,1	45 051.75	131.2	120 647.83	204.7
2020	60 579.33	246.1	46 695.39	136.0	107 274.72	182.0
2021	75 618.94	307.2	50 990.95	148.5	126 609.89	214.8
2022	52 917.65	215.0	51 944.67	151.4	104 862.32	177.9
2023 Est	44 253.88	179.8	52 351.93	152.5	96 605.81	163.9

Table prepared by the Office of SAMPRO based on information published by SARS and estimated figures calculated by the office of SAMPRO.

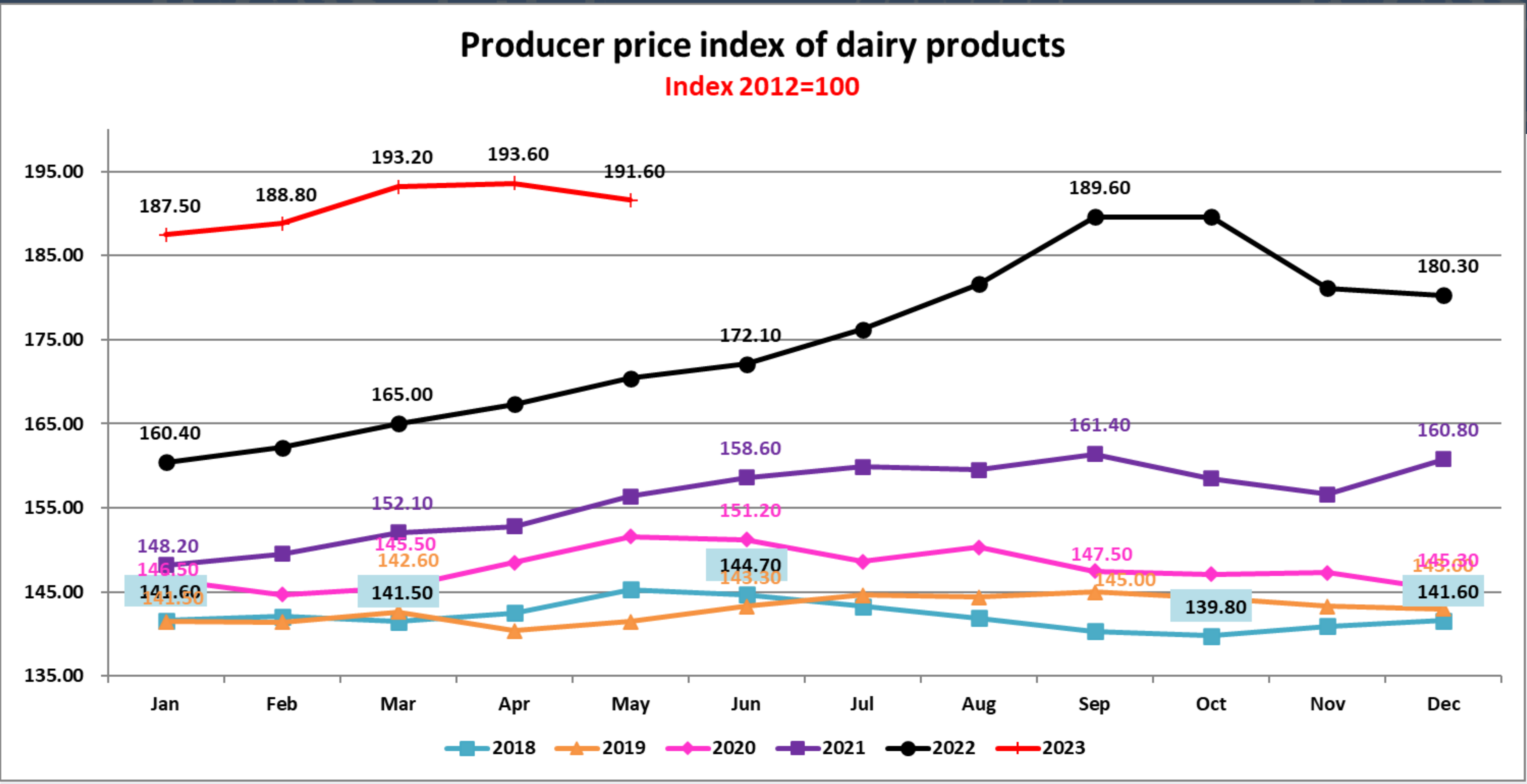
Table 25

MASS OF IMPORT AS PERCENTAGE OF THE MASS OF EXPORT, OF THE DIFFERENT TYPES OF DAIRY PRODUCTS BY SOUTH AFRICA

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

Table prepared by the Office of SAMPRO based on information published by SARS and estimated figures calculated by the office of SAMPRO.

Graph 14



The producer price index of dairy products reflects the changes of the producer prices of pasteurised and UHT milk, yoghurt, cheddar cheese and ice cream and not that of the other dairy products like maas, cheese other than cheddar cheese and milk powder.

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

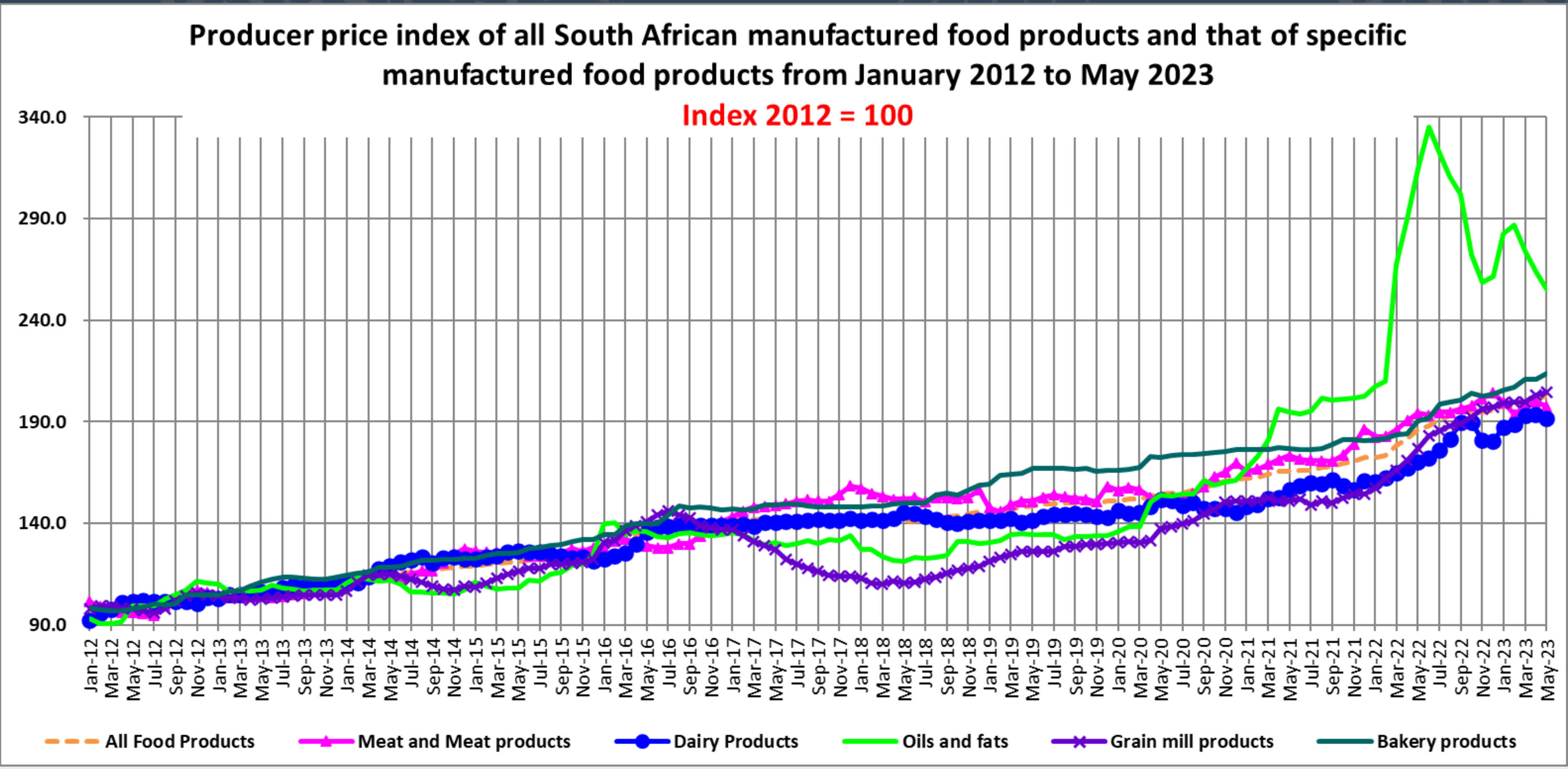
Table 26

THE DIFFERENCES BETWEEN THE HIGHEST AND LOWEST PRODUCER PRICE INDEX OF DAIRY PRODUCTS IN SOUTH AFRICA, IN EACH OF THE YEARS 2009 TO 2023 (January to May)

Year	Percent difference
2009 (Highest in November, Lowest in February)	4.1
2010 (Highest in May, Lowest in December)	1.6
2011 (Highest in December, Lowest in January to March)	4.4
2012 (Highest in June, Lowest in January)	9.4
2013 (Highest in October, Lowest in January)	6.7
2014 (Highest in August, Lowest in January)	11.5
2015 (Highest in May, Lowest in January)	3.6
2016 (Highest in September, Lowest in January)	14.0
2017 (Highest in December, Lowest in March)	2.7
2018 (Highest in May, Lowest in October)	3.9
2019 (Highest in September, Lowest in April)	3.3
2020 (Highest in May, Lowest in February)	4.8
2021 (Highest in September, Lowest in January)	8.9
2022 (Highest in October, Lowest in January)	18.2
Average	6.9
2023 (Jan-May) (Highest in April, Lowest in January)	3.3

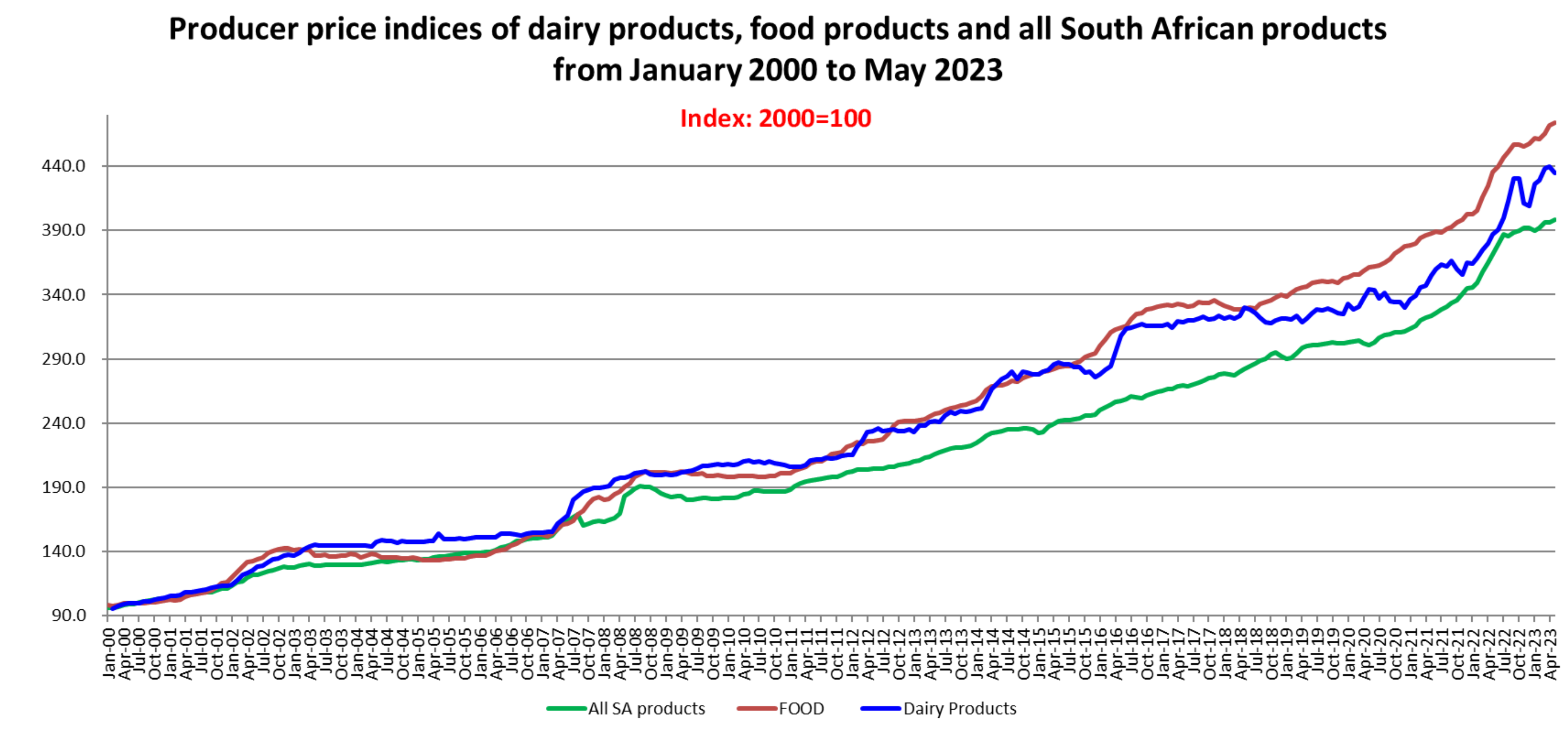
Table prepared by the Office of SAMPRO based on information published by SARS

Graph 15



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

Graph 16



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

Table 27

INCREASE IN PRODUCER PRICE INDICES OF PARTICULAR CATEGORIES OF PRODUCTS WHICH INCLUDE INPUTS OF THE DAIRY INDUSTRY, IN THE YEARS WHICH ENDED IN JANUARY 2023 AND MAY 2023

GROUP OF PRODUCTS	PERCENTAGE INCREASE IN THE YEAR WHICH ENDED IN MAY 2023	PERCENTAGE INCREASE IN THE YEAR WHICH ENDED IN JANUARY 2023
Textiles, clothing and footwear	7.0	7.4
Textiles	6.2	
Clothing	6.9	
Footwear	10.5	
Paper and printed products	15.5	15.8
Coke, petroleum, chemical, rubber and plastic products	3.6	19.6
Coal and petroleum products	1.7	
Petrol	7.2	
Diesel	-8.2	
Other	8.4	
Chemical products	8.5	
Rubber and plastic products	1.9	
Metals, machinery, equipment and computing equipment	6.1	10.7
Structural and fabricated metal products	-1.9	
General and special purpose machinery	12.6	
Household appliances and office machinery	12.3	
Electrical machinery and communication and metering equipment	4.8	7.0
Electricity and water	15.5	9.8
Electricity	16.8	
Water	8.1	

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

Table 28

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

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

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 29

CHANGES IN THE QUANTITIES OF RETAIL SALES OF SPECIFIC DAIRY PRODUCTS IN SOUTH AFRICA

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

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

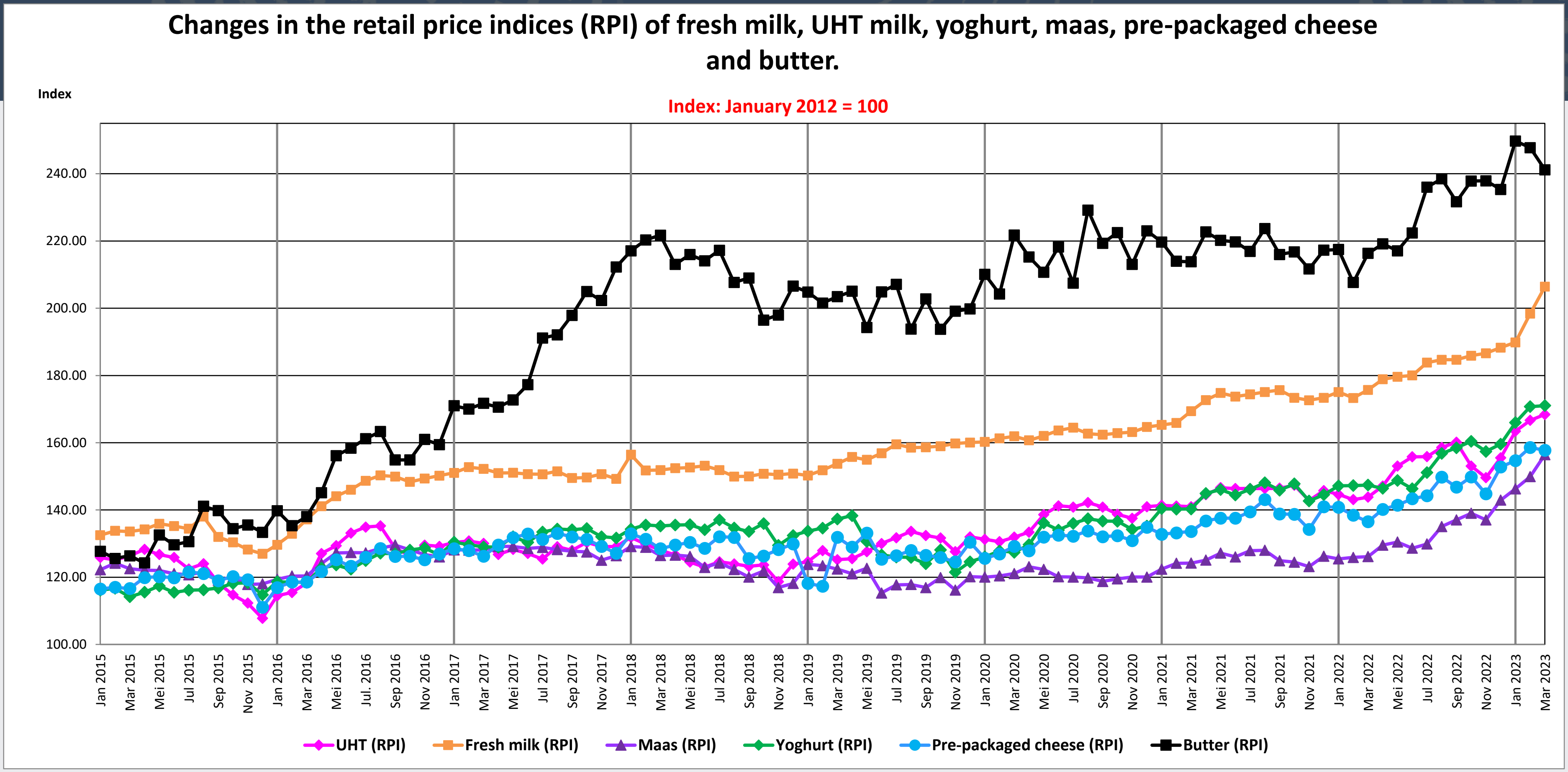
Table 30

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

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

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 17



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 18

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

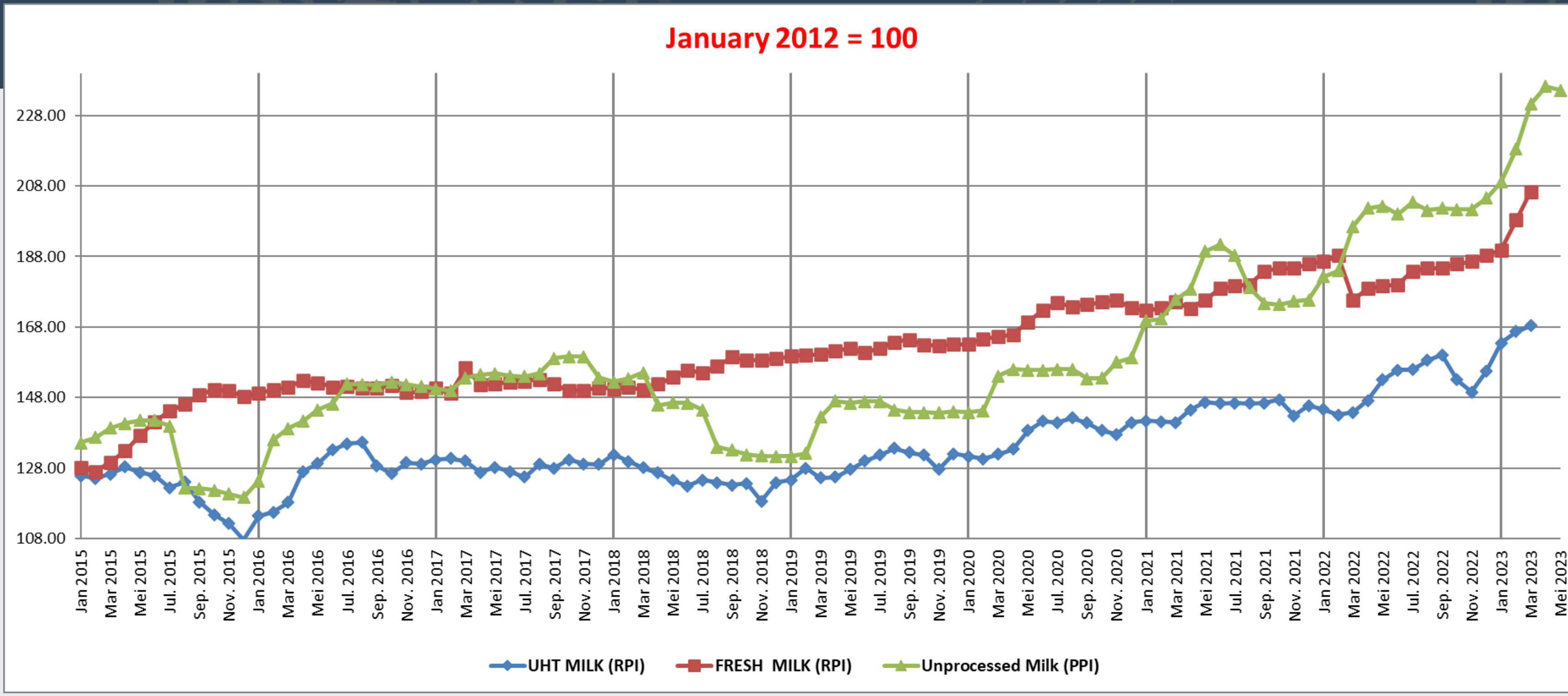


Table 31

INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)							
2015	2016	2017	2018	2019	2020	2021	2022
6.37	-0.45	3.01	4.82	0.65	-0.16	-0.71	-1.56

Graph prepared by the Office of SAMPRO based on information obtained from “NielsenIQ” and Statistics South Africa.
Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Graph 19

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

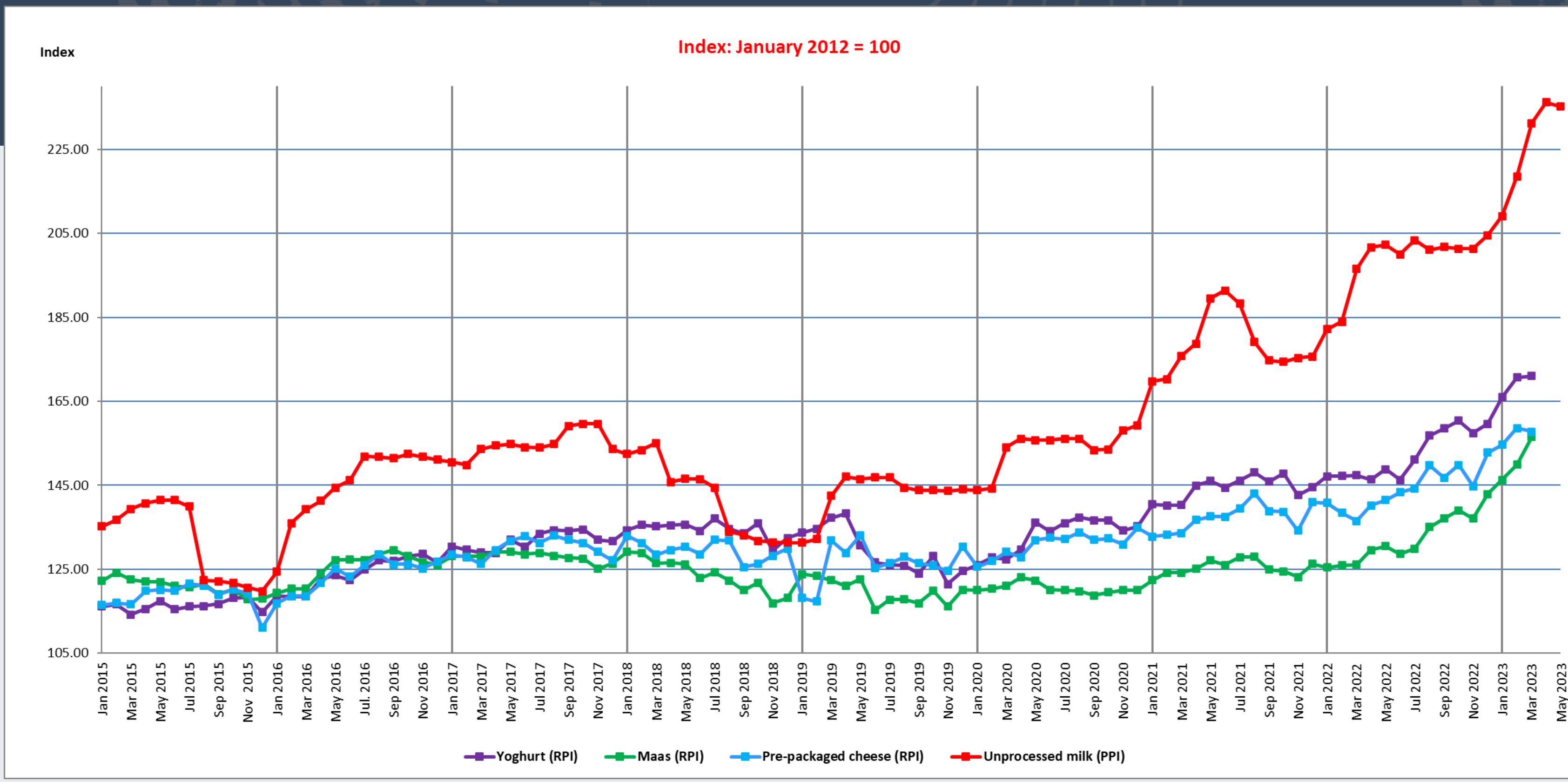


Table 32

INCREASE IN THE QUANTITY OF UNPROCESSED MILK PURCHASES RELATIVE TO PREVIOUS YEAR (PERCENT)							
2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
6.37	-0.45	3.01	4.82	0.65	-0.16	-0.71	-1.56

Graph prepared by the Office of SAMPRO based on information obtained from “NielsenIQ” and Statistics South Africa.
Table prepared by the Office of SAMPRO based on information obtained from Milk SA.

Table 33

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

YEAR	Percentage difference [1]		
	Highest monthly	Lowest monthly	Average annual
2012	17.1	0.7	11.4
2013	8.9	2.8	6.1
2014	12.5	5.8	10.0
2015	11.9	-0.7	7.0
2016	6.9	0.7	3.9
2017	1.8	-2.6	-0.2
2018	0.0	-7.9	-3.7
2019	3.8	-3.8	0.2
2020	4.3	0.4	2.3
2021	-3.8	-2.4	-3.1
2022	-0.4	-3.3	-1.9
Average	5.7	-0.9	2.9

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

Summary and Conclusion:

- **In 2021 and 2022, the demand (in terms of quantity) for dairy products and thus the demand for unprocessed milk in South Africa, decreased;**

- **The Gross Domestic Product (GDP) of South Africa in 2020 and 2021, was lower than in 2019 and 2018 and the GDP in 2022, was only 0.26 percent higher than in 2019;**

- **The expected GDP of South Africa in 2023, does not support optimistic expectations about greater demand for consumer goods (including dairy products) and continuation of loadshedding can render the expectation of the Reserve Bank, that the GDP will grow in 2023 by 0.4 percent, invalid;**

- Consumer purchasing power is undermined by:
  - General increases in prices of consumer goods and services;
  - Poor service delivery by the public sector; and
  - Weak performance of the South African economy;

- High increases in the prices of unprocessed milk and dairy products in recent past, were, amidst sharp increases in production cost, intended to maintain a level of supply close to the level of demand, (which decreased) and not to meet additional demand. (Production costs do not determine prices, but it determine the quantity of supply at a specific price level. Prices are determined by interaction between supply and demand). It is highly likely that these price increases prevented a significant decline in the production capacity of the South African dairy industry;

- **The full impact of recent price increases on the supply and demand of unprocessed milk and dairy products, will be visible in the coming months;**

- **Recent significant reductions in the prices of maize and soya should, in the coming months, result in lower feed prices of dairy cattle, but developments in the international market, loadshedding and future weather conditions, can limit or prevent feed price reductions;**

- **It is likely that the demand for dairy products in 2023, does not require higher production of unprocessed milk and dairy products than in 2022 and it is possible that the typical seasonal increase in the production of unprocessed milk and dairy products from June to October, can result in higher supply and lower prices;**

- **The uncertainty about the performance of the South African dairy industry in the immediate future, is very high due to the numerous factors which can influence it and in respect of which changes can occur unexpectedly and in a short period of time. Frequent assessment of the factors are necessary in order to ensure that supply of unprocessed milk and dairy products, follows the demand as closely as possible.**

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