

# Milk Essay

Vol 13 no 4 • October 2022

Tel 012 460 7312 • [www.milk.co.za](http://www.milk.co.za)

## CONTENTS



- 2** Dairy entrepreneurs working their way towards success
- 3** Save the Date: CPD Webinar for Health Professionals Skills & Knowledge Development Advisory Committee
- 4** Tukkies students acknowledged for their research work
- 8** Tackling the challenges with courage and conviction
- 9** Year-on-year changes in inflation for food and non-alcoholic beverages
- 10** Utilization of FoodBev SETA processes and products by the dairy industry
- 11** An explanation of the Dairyman 'family of qualifications'
- 12** Milk SA welcomes Jaco Kruger to the Audit & Risk Committee  
A festive goodbye to an Audit Committee member
- 13** The Dairy Occupational Qualification promoted by the MPO Institute for Dairy Technology
- 14** Need-to-knows about plant-based beverages presented as milk alternatives
- 16** IDF launches the 2022 edition of the World Dairy Situation Report
- 18** National Animal Health Forum: Chairman's Annual Report extracts
- 20** General Standard for the use of Dairy Terms
- 21** Heat treatment publications of IDF
- 22** Role-players registered with Milk SA featuring on the Milk SA website
- 23** Representation of the dairy industry on the National Animal Health Forum (NAHF)
- 24** Organized Dairy Industry of SA supports the "Pathways to Dairy Net Zero" initiative
- 26** Changes in the retail sales quantities
- 27** Finger on the (research) pulse
- 28** Enforcing compliance with the law: The "Flora Plant Butter" case

# DAIRY ENTREPRENEURS WORKING THEIR WAY TOWARDS SUCCESS

Mr Thabang Tsepe invested hard-earned savings from his family trading store business and his taxi business in his dream to become a sustainable large-scale dairy producer. Today, he farms with his son Phutheho in the Eastern Cape's Matatiele area with maize and dairy cows, amongst others. They grew the herd to 74 cows in milk today.

After huge renovations to the parlour at Bon Accord farm, their parlour now has ten points on each side, which will be extended to 19 points a side, as cow numbers increase to the planned goal of 450 cows in milk.

Making use of all assistance possible from commercial producers, Milk SA and Grain SA, the Tsepes approach their farming business in accordance with the best practices possible. As part of its transformation initiatives, Milk SA financially assists existing dairy entrepreneurs to grow their herds, upgrade infrastructure, procure the required production inputs, etc.

The article, which was written by Lloyd Philips and published by African Farming, can be viewed at <https://www.africanfarming.com/black-dairy-farmers-take-the-cream/>



*Mr Thabang Tsepe and his son, Phutheho*  
(Picture: Lloyd Philips, African Farming)



# Save the Date

9 Nov 2022 @ 18:00

## CPD Webinar For Health Professionals

### THE DAIRY MATRIX EXPLAINED



Presented by the  
Consumer Education Project  
of Milk South Africa

### Health benefits beyond the individual nutrients



#### Speakers

##### Prof. Arne Astrup, MD, DMSc

Professor Astrup is currently Program Director at the Novo Nordisk Foundation in Copenhagen and associate editor of the *American Journal of Clinical Nutrition*. His research is internationally recognised, and he is one of the most frequently cited researchers at the University of Copenhagen. His main areas of interest include the physiology and pathophysiology of energy and substrate metabolism, with special emphasis on the aetiology and treatment of obesity.

##### Prof. Renée Blaauw, PhD (Nutritional Sciences)

Prof. Renée Blaauw is a Professor in therapeutic nutrition at the Division of Human Nutrition, Stellenbosch University, South Africa. She is a registered dietitian and has authored/co-authored various articles and chapters in scientific publications and textbooks, presented research papers at international and national congresses, been an invited speaker at various symposiums and workshops and serves as a peer-reviewer for national and international scientific journals. Her main research interests include nutrition support of critically ill patients and nutritional epidemiology.

The event will be CPD accredited.  
Medical doctors, dietitians and nutritionists  
will be able to obtain up to **4 CEUs**  
for participation.

## Skills & Knowledge Development Advisory Committee

The Skills & Knowledge Development Advisory Committee of Milk SA held its second meeting during August 2022 to review progress and to advise the Board on planning for next year in respect of both primary and secondary sectors. Through active involvement of SAMPRO and MPO in the SETAs and other authoritative bodies, the dairy industry can rest assured that the learning dispensation will remain relevant.



Left to right: Alwyn Kraamwinkel,  
Fanie Ferreira, Willie Prinsloo,  
Helene Pheiffer, Gerhard Venter and  
Nico Fouché • Inset: Colin Wellbeloved

# TUKKIE STUDENTS ACKNOWLEDGED FOR THEIR RESEARCH WORK

at a student evening, hosted by the South African Society of Dairy Technology (SASDT) and the University of Pretoria

*On 25 August 2022, four postgraduate students presented their studies at the annual student evening of SASDT. This event presents an opportunity for the dairy industry to be exposed to the work of students in the Department of Consumer and Food Sciences under the supervision of Prof Elna Buys and Dr. Thulani Sibanda.*

The students are supported through a research project funded by Milk SA and were awarded prizes for presenting at the event. The winner of the first prize was Tlaeo Azael Marole, and the first runner up was Ursula Thomashoff. Chrizelda Visser and Olivia Buck were joint runners-up.

After the presentations, the students and SASDT members were treated to a delicious meal prepared by third year Hospitality Management and Culinary Science students of the Department of Consumer and Food Sciences under the supervision of Charmaine Sehoole.

## Abstracts of the student presentations

The abstracts presented herein are addressing some aspects of the Milk SA-yoghurt funded project: **Development of probiotic yoghurt with potential anti-candidal and anti-bacterial activity.** The presentations by the Honours students (Chrizelda Visser and Olivia Buck) were based on their seminar topics which reviewed the causes of poor *Bifidobacterium* species viability in yoghurt and the strategies for optimization. The MSc (Ursula Thomashoff) and PhD (Tlaeo Marole) students presented some of the findings on their respective research topics on oxidative stress adaptation of *Bifidobacterium* spp., as well as probiotic co-culturing and its influence on yoghurt fermentation and physicochemical properties.



### Title: Viability of *Bifidobacterium* species in probiotic yoghurt as influenced by reducing agents

Chrizelda's project focuses on the viability of bacterial species in probiotic yoghurt as influenced by reducing agents. The consumption of probiotic yoghurt containing *Bifidobacterium* species could positively influence a person's health if the viability of the probiotic species is above a threshold of  $10^8$  CFU/g in yoghurt. To meet this threshold, the viability of the chosen *Bifidobacterium* species, namely *B. animalis* and *B. bifidum*, needs to be maintained during the shelf-life period of the yoghurt. High oxygen levels threaten the viability; thus reducing the amount of oxygen present in yoghurt by incorporating reducing agents, should assist in maintaining viability. The most suitable reducing agent for bio-yoghurt was found to be ascorbic acid that reacts with molecular oxygen and converts it to water. This lowers the oxygen levels and improves the viability of the *Bifidobacterium* species to the required levels, which should allow consumers to experience health benefits when consuming such a probiotic yoghurt.



**Chrizelda Visser**  
(BSc (Hons) Food Science student)

### Title: *Bifidobacterium* species in Synbiotic Yoghurt: Viability and Health Benefits

*Bifidobacterium* species are probiotic bacteria commonly added to yoghurt, which provide health benefits to humans when consumed in adequate amounts. There should be a concentration of at least  $10^8$  CFU/g viable and active probiotic bacteria present in yoghurt before consumption to exert health benefits to the host. However, there is often not an adequate amount of viable bifidobacteria present in yoghurt products before consumption. The viability of bifidobacteria in yoghurt is affected by factors in yoghurt processing, the yoghurt environment and as yoghurt passes through the gastrointestinal tract. Below a pH of 5, *Bifidobacterium* spp. growth slows down, but yoghurt must have a pH of  $<4.5$  to meet legal requirements. The acidic conditions of the stomach and bile in the intestine also decrease bifidobacteria viability. As anaerobes, oxygen is another major factor affecting viability.



**Olivia Buck**  
(BSc (Hons) Food Science student)

Approaches to improve *Bifidobacterium* spp. viability in yoghurt include prebiotic addition to form synbiotic yoghurt and pre-adaptation

to stress before addition to yoghurt during manufacture. Prebiotics such as lactulose, inulin and oligosaccharides are consumed by probiotics to enhance their growth. When bifidobacteria are exposed to stress, they develop protective responses, which can assist with a greater tolerance to the stresses once in the yoghurt environment, thereby enhancing their viability. Studies have shown that adequate consumption of bifidobacteria

in yoghurt offer many health benefits to humans including antimicrobial activity, preventing gastrointestinal infections, colon cancer and reducing serum cholesterol. It is postulated that although the viability of bifidobacteria is affected by many factors, their viability in yoghurt should be enhanced through prebiotic addition and stress adaptation, which should allow the bifidobacteria in yoghurt to remain viable.

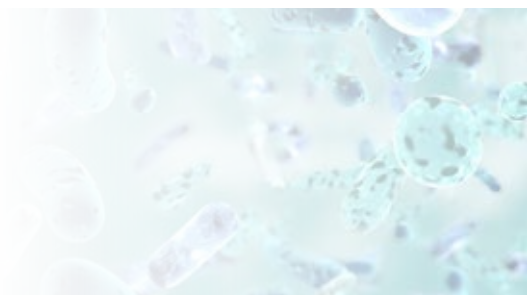
### Title: Oxidative stress adaptation of *Bifidobacterium* spp.



**Ursula Thomashoff**  
(MSc Food Science student)

Bifidobacteria are the dominant inhabitants of the human gastrointestinal tract. The health benefits of *Bifidobacteria* that are part of the gut microbiome make them essential probiotic additions to functional foods, especially fermented dairy products. Oxygen is readily incorporated during yoghurt production and results in toxic and damaging reactive oxygen species that affect the viability of incorporated bifidobacteria cells. A sub-lethal oxidative stress treatment of  $H_2O_2$  (0.01 mM; 30 min) of three *Bifidobacterium* spp. (*B. bifidum*, *B. breve* and *B. animalis*), followed by a lethal oxidative stress treatment of  $H_2O_2$  (1 mM; 30 min) was done to induce aerotolerance and the development of oxidative stress-adapted variants. Flow cytometric measurements were carried out on stress-adapted variants before and

after exposure to lethal stress (1 mM; 30min) using SYTO 9 and Propidium Iodide in a single-parameter analysis of membrane integrity, as well as CellROX Green and Propidium iodide in a multi-parameter analysis of membrane integrity and oxidative cell state. Stress-adapted variants of *B. animalis* were able to retain membrane integrity under the oxidative state, indicating effective stress-adaptation. This is likely due to a genetic predisposition, with the microorganism containing the necessary mechanisms to effectively detoxify  $H_2O_2$ . Genetic expression of detoxification enzymes will be confirmed through qPCR. In future studies, survival within a yoghurt environment of stress-adapted strains will be investigated.



## Title: Co-culturing and point of inoculation influence yoghurt fermentation, physico-chemical properties, and probiotic viability

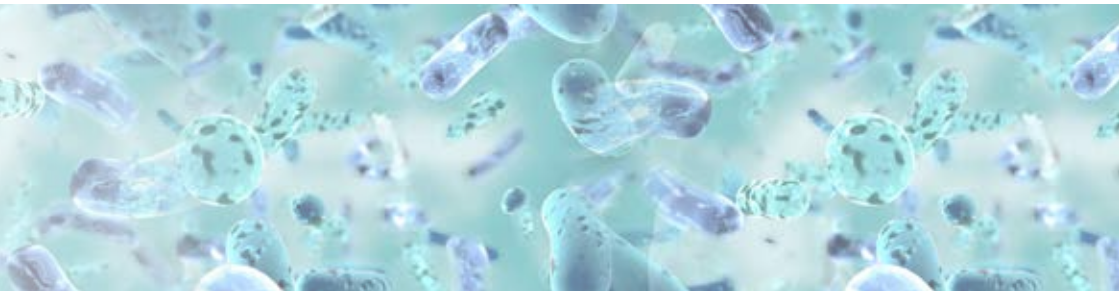



**Tlaleo Azael  
Marole**  
(PhD Food  
Science student)

Consistent ingestion of adequate amounts of viable probiotic organisms is associated with a balanced gut microbiota and other health benefits such as antioxidative improvement, immune system regulation, and anti-carcinogenic properties. Among dairy products, yoghurt is considered an excellent carrier of probiotics due to its wide consumption by people of different age groups. However, the incorporation of probiotics in yoghurt remains technologically challenging due to viability decrease during storage.


In yoghurts made with cultures of *Lactocaseibacillus rhamnosus* strains and *Bifidobacterium bifidum*, the probiotic viability, fermentation kinetics, and physicochemical properties of the yoghurt were influenced by the point of inoculation and co-culturing. Post-fermentation inoculation of the probiotics resulted in lower viability at the

beginning of storage. However, the viable counts were able to stabilize during storage to levels above minimum therapeutic limits ( $\geq 7 \log \text{CFU/g}$ ). When inoculated post-fermentation, probiotic strains probably experience acid shock and require time to adapt to the low pH. In contrast, pre-fermentation inoculation results in a gradual adaptation to the decreasing pH during fermentation. Regardless of co-culturing, fermentation was quicker in yoghurts incorporating *L. rhamnosus* leading to products with higher acidity and increased firmness. This influence of *L. rhamnosus* on yoghurt quality could be due to the additional utilization of galactose, which leads to increased acidity that promotes casein micelle aggregation that increases firmness. In conclusion, inoculation of probiotics pre-fermentation is a better technique for retaining their viability during storage. Probiotic co-culturing influences yoghurt fermentation and physicochemical properties, especially in the presence of *L. rhamnosus* strains. Due to limitations in the method of quantification, there was insufficient evidence to conclude the effect of co-culturing on probiotic viability, particularly on *B. bifidum*. Therefore, an alternative method of quantification based on molecular techniques will be essential.





# Tackling the challenges with courage and conviction



**The South African commercial farming sector which has about 32 000 commercial farmers, is the back-bone of South Africa's agricultural economy and outperformed all other economic sectors in 2020, with a growth rate of 13,1 per cent. Only 5 000 to 7 000 farmers produce around 80 per cent of agricultural output.**

The farming sector's achievements are almost a miracle, considering the factors impacting on the industry – including land reform concerns, the poor exchange rate, ongoing weather concerns, the COVID-19 pandemic, input cost hikes resulting from the Russian invasion of Ukraine, land reform policies, labour policies, farm attacks, dilapidated infrastructure and utterly poor public services, from local to national government. The unsustainably high unemployment rate of 33,9% in the second quarter of 2022 is synonymous with the high population growth of 25% over the past twenty years and increasing criminal activity.

On top of this, consumers will continue to tighten their belts because of a contracted economy and higher inflation. It is therefore an anomaly that government - under the above circumstances - continues to expect of the agricultural and agro-processing sectors to improve food security, create jobs and reduce poverty.

According to Alexforbes chief economist Isaaah Mhlanga, Eskom's prolonged stage 6 load shedding has wiped out over R4 billion from the GDP for each day it continues. Dr Francois Stofberg, senior economist at the Efficient Group, has previously estimated that the country's economy is between 8% and 10% smaller than it could have been if we were not plagued by load shedding. In 2001, Eskom was named the Financial Times Power Company of the Year at the Global Energy Awards Ceremony in New York. Today, the company's debt level of R430 bn represents about 15% of the state's total debt, while it is still being strangled by corruption, fraud and incompetency.

Milk SA salutes South Africa's farmers and agro-processors who tackle the challenges head on with a great amount of courage and vocation.

---

**by Nico Fouché**





# YEAR-ON-YEAR CHANGES IN INFLATION FOR FOOD AND NON-ALCOHOLIC BEVERAGES



**Inflation for Food and Non-Alcoholic beverages reached 9.7% in July. This is comparable to levels last recorded in 2016/17 – which was due to the widespread drought in South Africa.**

Continued high grain prices are also affecting prices in the meat complex, where feed is a major cost driver, with inflation recorded at 9.4% for meat.

BFAP's view is that food inflation is close to peaking - if the July 2022 figures were not already at the peak. The reason for this view is that commodity prices were higher in the latter half of 2021, which would result in lower base effects. This, combined with easing global commodity prices, and short-term outlooks for the exchange rate suggesting that the rand could trade at average levels of around R16.50, could result in food prices losing momentum.

The upside risk is the ban on cattle transport in an attempt to curb the spread of Foot and Mouth Disease (FMD), which was instituted in the third week of August 2022. Any extension of the initial three-week period could limit red meat availability towards the end of the year and during the festive season. If this is the case, meat prices would likely be

a key contributor to food inflation during November and December 2022 and we could see food inflation figures gaining momentum again.

	Year-on-year % change
Oils and fats	36,2%
Bread and cereals	13,7%
Fish	9,7%
Meat	9,4%
Vegetables	8,3%
Sugar and sugar-rich foods	7,5%
Non-alcoholic beverages	6,3%
Milk, cheese and eggs	5,5%

BFAP also measures the cost of basic healthy eating for low-income households in the South African context by way of the Thrifty Healthy Food Basket (THFB). For June 2022, the information is as follows:

- In June 2022, the cost of a THFB was R3 261, which represents a change of:
  - +R76 / +2,4% month-on-month; and
  - +R329 / +11% year-on-year.

*Source: Bureau for Food and Agricultural Policy (BFAP)*

# UTILIZATION OF FOODBEV SETA PROCESSES AND PRODUCTS BY THE DAIRY INDUSTRY



**By Gerhard Venter**

*Project Manager: Skills & Knowledge Development, Secondary Dairy Industry Sector*

Data was recently received from FoodBev SETA regarding the utilization of skills development processes and products of which the SETA is the custodian, from which the following could be composed without undue manipulation:

- 21 Enterprises are indicated as actively participating in the skills development dispensation more than just paying the levy, two of which are very small and fairly unknown players;
- Since 2019 up to the present (data for 2022 is incomplete as the year is still in progress),

approximately 1500 learnerships in total have been entered into by learners from the above, of which more than 900 are dairy and general food processing-related, the remainder being support skills;

- Unfortunately there is a low completion rate, which can be partially attributed to the COVID-19 pandemic, but also to non-certification of learners who had long ago actually completed the programmes;
- It is estimated that the active enterprises process in excess of 85% of the raw milk produced in South Africa. This would also be a fair indication that these enterprises employ the majority of workers in the secondary dairy industry;
- The employees in the secondary dairy industry represent approximately 11% of the total workforce of the Food and Beverages Manufacturing Industries, but the dairy sub-sector utilizes approximately 30% of the grant funding expended by the SETA.



# An explanation of the DAIRYMAN 'family of qualifications'

The Dairyman family of qualifications actually consists of 10 discreet, separately-registered qualifications. There is an overlap of roughly 30% in the theory component, but the practical and workplace experience learning components are specific to the product range covered per qualification. The following indicates some specifications in respect of the Dairyman qualifications:



Title	Products covered	Current credits	New credits	Duration (recommended)
Fresh Dairy Products Maker	All versions fresh drinking milk, cream, fruit juice, fruit-milk mixtures	136	185	1.5 – 2.0 years
Liquid Condensed Dairy Products Maker	Evaporated milk, sweetened condensed milk	189	245	2.5 – 3.0 years
Fermented Dairy Products Maker	All version yoghurt, yoghurt-based snacks; maas, cultured buttermilk, cultured cream	168	230	2 years at least
Cottage Cheese Maker	Smooth/quarg, chunky, creamed	190	236	2 years at least
Ripened Cheese Maker	Semi-hard and semi-soft types (e.g Gouda types, Cheddar types, Feta, Mozzarella, etc.) some unripened but made like ripened	201	241	2.5 – 3.0 years
Processed Cheese Maker	Blocks, spread, wedges, slices	135	178	1.5 – 2.0 years
Butter Maker	Butter and modified butter	174	242	2 years at least
Dried Dairy Products Maker	All versions of powder, milk and whey and could be extended to creamers and whiteners	353	360	3 years
Liquid Long Life Dairy Products Maker	Both steri and UHT	190	238	2 years at least
Ice Cream Maker	All versions dairy containing	156	230	2 years at least

# MILK SA WELCOMES JACO KRUGER to the Audit & Risk Committee



Jaco Kruger CA(SA) joined the Audit & Risk Committee in September as a member, nominated by the Milk Producers' Organisation. He replaces Mr Kobus Scheepers, who was a member since 2018. Jaco has experience in external auditing and financial accounting together with other disciplines, including financial management, group restructurings and taxation. He is also involved in the preparation of annual financial statements in terms of IFRS and IFRS for SMEs.

# A FESTIVE GOODBYE

## to Audit Committee member

Mr Kobus Scheepers retired from the Milk SA Audit & Risk Committee due to health reasons. He served as a member of the Committee since 2018 and previously also as Chairman of MPO's Audit Committee. He obtained his CA(SA) in 1967 and enjoyed a rich career, serving on quite a number of professional associations and audit committees. He will be remembered for his "unconventional mindset, out-of-the-box questions and positive contributions" said the Chairman, Danie du Plessis.



***Kobus Scheepers is flanked by Nicolette Teichmann (Minutes Secretary) and Andrea Rademan (Operations Officer) and "backed" by Danie du Plessis (Committee Chairman), Nico Fouché (CEO), Philip Potgieter (Internal Auditor) and Prof Don Fürstenburg (Committee member)***

# The Dairy Occupational Qualification promoted by the MPO Institute for Dairy Technology



The Dairy Occupational Qualification which was developed by MPO in partnership with AgriSeta, is regulated by the Quality Council for Trade and Occupations (QCTO), and covers Levels 1–5 of the National Qualifications Framework (NQF). The qualification covers three part-qualifications (levels):

- Dairy farm worker,
- Dairy supervisor and
- Dairy herd manager.

The full qualification requires completion of both the dairy supervisor and dairy herd manager levels. The accreditation of the farm worker as part-qualification is, however, still outstanding from QCTO.

Training gives dairy employees the opportunity to achieve an occupational qualification and the MPO Institute for Dairy Technology was recently accredited by QCTO as a Skills Development Provider (SDP) to be able to present this qualification. Dairy farms who wish to present this qualification to employees should conclude an memorandum of understanding with MPO for completion of the practical and work experience components of the qualification.

The first modules for the Dairy Occupational Qualification were published in 2015 and the next step is to revise the qualification, which includes the adjustment of credit allocation, incorporating

additional modules to the dairy herd manager qualification and adjustment of the quality assessment standard documentation. In June 2022 the Institute submitted such a revision proposal to QCTO and was awaiting approval.

There is a huge demand for the Dairy Occupational Qualification which led to the setting up in 2022, of an online e-learning platform by the Institute, to make the training more accessible to all individuals. From this platform, students can download the learning material and assessments for offline use in cases where internet connection is weak, such as in rural areas. A need for high school students to complete their matriculation with an additional part-qualification is also being addressed by this e-learning platform.

The Dairy Standard Agency (DSA) Code of Practice for Milk Producers is one of the modules of the Dairy Occupational Qualification. DSA and the MPO Institute for Dairy Technology, in collaboration with milk processors, will be presenting this module to all dairy producers. This initiative is supported by Regulation R961 of 23 November 2013, which requires initial and on-going training for compliance in food safety regulations and standards at producer level. This training should be provided by an accredited service provider (SDP) and records of such training must be made available to an inspector on request.

by Helene Pheiffer

*Project manager: Skills & Knowledge Development in the Primary Dairy Industry Sector*



# Need-to-knows about plant-based beverages presented as milk alternatives

*Milk SA's Consumer Education Project issued a newsletter about the above topic, which is available from the RediscoverDAIRY website. Here are a few take-outs from the brochure:*

## A word on plant-based dairy alternatives in South Africa

The demand for plant-based milk alternatives has increased over the past few years owing to a rise in **vegan, vegetarian** and **flexitarian diets** and a rising awareness regarding dairy allergy, lactose intolerance, consumer movement towards animal-friendly options, and emphasis on healthy eating and plant-based diet regimes. Increased competition is expected as more companies will expand their portfolios, although local production remains low and thus this beverage category relies on imports. The lactose-free milk offerings have grown in popularity and have become more available across South Africa. Research by the Consumer Education Project of Milk SA showed that the most popular types of plant-based milk alternatives consumed in South Africa are **almond, soy** and **oat** milk. Most of the participants that consumed plant-based milks did so only occasionally and were also consumers of cow's milk.

## Plant-based beverages in the retail market: Read the label

The nutritional composition of plant-based dairy alternatives is not consistent (see Table 1). Some are sweetened while others are not. Furthermore, fewer than half ( $n = 31$ ) of the products sampled were fortified, of which:

- 17 brands were fortified with minerals only (mostly calcium);
- 3 brands were fortified with vitamins only; and
- 11 brands were fortified with both minerals and vitamins

At the moment, there is no regulation stipulating the nutritional requirements for plant-based beverages and as a result, within a specific category, the number of ingredients and micronutrients added may vary. However, all categories of plant-based beverages contain stabilizers.



## Consumers choose plant-based milk alternatives in the belief that they are healthier: Setting the record straight

A strong body of scientific evidence supports the **health benefits of milk and other dairy products**, whereas limited evidence is available on the health benefits of plant-based beverages and the bioavailability of their nutrients in the body. Owing to the difference in nutritional composition, replacing milk with plant-based beverages can lead to nutritional deficiencies, which could negatively affect growth and development in children and adolescents.

## Consumers choose plant-based milk alternatives based on the misperception that they are healthier for the environment

All food production – whether of plant-based or animal based foods – has an impact on the environment. Reducing the environmental impacts of the food system is more complex than considering only whether the

food is derived from plant or animal sources. Understanding the food system needs a **multidimensional approach**, as plants and animals work best as an **integrated system**.

As most plant foods have a lower carbon footprint than most animal foods, there is a common perception that plant-based beverages are a more environmentally responsible option than milk. This idea is often used in the marketing of plant-based beverages. Although GHG emissions from milk would appear to be higher than those from plant-based beverages when expressed per kilogram, this is not true, as one would have to drink a larger amount of a plant-based beverage for the equivalent nutritional value offered by cow's milk. The production and processing steps needed to deliver these higher volumes of plant-based beverages have a direct impact on various environmental factors decreasing the environmental sustainability of plant based beverages.

For the full news letter, please visit our website [www.rediscoverdairy.co.za](http://www.rediscoverdairy.co.za)



# IDF LAUNCHES THE 2022 EDITION OF THE WORLD DAIRY SITUATION REPORT

The well-expected 2022 edition of the **IDF World Dairy Situation Report** is now available from the link mentioned here below, at a price of 350 euro. Role-players (levy-payers) who are registered with Milk SA as levy payers qualify for a 15% discount.

The Report this year again provides all actors and stakeholders of the dairy chain with relevant data and analysis on the global production, processing, trade, prices and consumption of milk and dairy products. The report was launched during the IDF World Dairy Summit in New Delhi, India held in September 2022.

A full auditorium composed of world dairy leaders, experts, businessmen and journalists was able to attend a live presentation on the highlights of this 13<sup>th</sup> edition of one of IDF's flagship publications.

Thanks to these international collaborative efforts, the IDF World Dairy Situation Report includes interesting findings and takeaways:

"2021 was the second COVID-19 pandemic year, but again this year this disruption had only a limited impact on the global dairy sector", state the authors on the publication's summary, providing proof of the resilience of the global dairy sector. As IDF Director General, Caroline Emond, and Kirsten Holm Svendsen, Chair of IDF Standing Committee on Dairy Policies and Economics say in their foreword, "Regardless of how hard the difficulties and challenges were during the past years, the global dairy sector never lost its ability to anticipate and adapt to changes". The global milk production (for all species) grew by 2.1% in 2021 in line with past years' growth. The

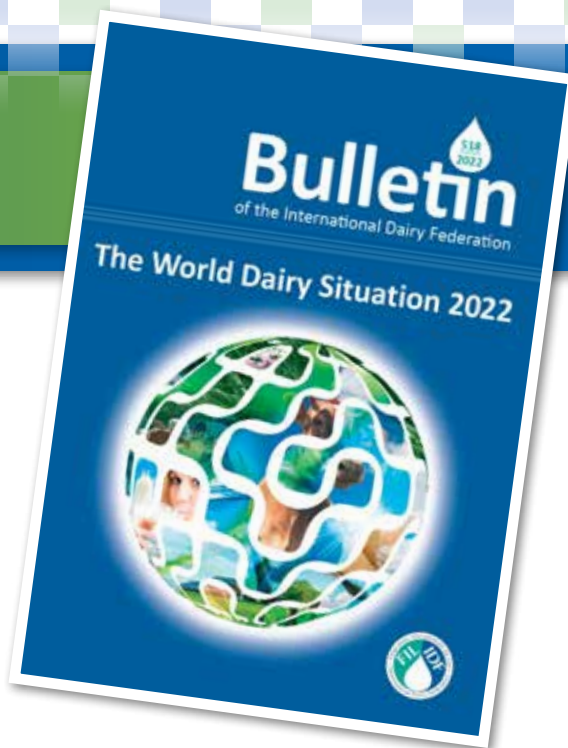




share of world trade in global milk production still lies around 10%.

“Global per capita consumption increased by 1.4% to 118.2 kg in milk equivalents in 2021. Milk is not only the main source of high-quality nutrients for all ages (particularly for children and ageing populations), but also a socio-economic activity that ensures a living to millions of families and communities in all regions of the globe. This World Dairy Situation Report is condensation in data and figures of all the activity that is taking place worldwide as you read these lines. Prepared by dairy experts from around the world, the report is a well-trusted source for dairy enthusiasts., Ms. Emond and Ms Holm Svendsen conclude.

We thank our editing team composed of the French Centre National Interprofessionnel de l'Economie Laitière (CNIEL) and the Dutch Dairy Inter-branch organisation



ZuivelNL, the OECD and Rabobank for their contributions as well as our Platinum sponsor Mengniu.”

The IDF World Dairy Situation Report 2022 can be bought at the publication section of the IDF corporate website: **Bulletin of the IDF N°518/2022: The World Dairy Situation Report 2022 – FIL-IDF**



# National Animal Health Forum: Chairman's Annual Report extracts



**By Gerhard Schutte**  
*Chairman of the  
National Animal  
Health Forum*

Milk SA is one of 11 members of the Animal Health Forum. Gerhard Schutte, Chairman of the Forum, delivered his report at the recent Annual General Meeting, from which we took a few extracts:

"NAHF management has committed to continue with better communication, information sharing, and circulation of relevant animal health matters to all members and stakeholders.

The membership of the NAHF has been able to grow over the past year with four new members, while it has access to a minimum of resources, namely:

- One permanently employed National Coordinator,
- Nine Provincial Animal Health Forums – supported by provincial RPOs,
- Eleven functional committees chaired by member organisation experts,
- An annual membership fee to support the total budget, and
- The total budget of the NAHF is R600 000 per annum.

Our achievements would not have been possible if we did not have support from our member organisations. We now have 11 full members, including the 4 new members.

Strong relationships have been built by the NAHF with the officials at DALRRD Directorates of Animal Health, Veterinary Public Health, Import Export Policy Unit, and Animal Production, as well as the nine provincial departments of agriculture.

We have made strides in the past year by supplying collective recommendations to the report by the Ministerial Animal Biosecurity Technical Task Team.

The Minister of Agriculture, Land Reform, and Rural Development, Thoko Didiza, engages with and recognizes the NAHF as the industry representative for animal health. Various meetings have been called by her to address issues regarding disease outbreaks. We are also regularly engaging with the Director-General.

The NAHF management drives the secretariat and has a seat on the Livestock Identification and Traceability System SA Committee (LITS SA).





## The following have been identified as the current focus areas of the NAHF as informed by the Veterinary Strategy:

### Foot and Mouth Disease

During the reporting period, FMD further spread to within Limpopo, Gauteng, North West, and the Free State. Joint Operational Committees (JOC) were established in most of these provinces to deal with the problem and the NAHF was very involved in the process.

It is now clear that South Africa's FMD-free disease status has to be re-evaluated to improve relationships with our trade partners.

The principle of broader selective vaccination should receive attention, as well as producing our FMD vaccines.

Market access in the controlled zone needs further attention.

With the support of the NAHF, a technical task team has been established to advise on the current FMD crisis.

### Vaccines

During the reporting period, serious shortages of some vaccines produced by only Onderstepoort Biological Products (OBP) have been experienced. The NAHF tried to address this situation, informed by a legal opinion. Private sector involvement was scaled up and several Act 36, 35, and 101 registrations came through, which is very encouraging.

During the reporting period, the NAHF was approached by the World Bank (IFS) as well as The Technology Innovation Agency (TIA) for collaboration. The board approved a memorandum of cooperation with TIA.

It is the NAHF's view that it is important for South Africa to produce its own FMD vaccine.

During the reporting period, the NAHF has pushed for authorisation for private vets to do state work. The NAHF is also involved in the LITS SA –Pilot Projects and SALT, as well as running the secretariat.

Liaison on animal health issues with neighbouring countries will be conducted in the near future, specifically with Botswana and Namibia.

The Agricultural and Agro-processing Masterplan (AAMP) indicates huge potential within the livestock industries representing 50% of agricultural GDP. Animal health management is regarded as of critical importance in this plan and it is now clear that the solutions can be found in private-public partnerships."



## General Standard for the use of Dairy Terms

*“One of the highlights of IDF’s programme of work on Standards is the continuous support and promotion of the General Standard for the Use of Dairy Terms (GSUDT). The general principle laid down in the GSUDT is that dairy terms are reserved to milk and milk products and that the consumer should not be misled.”*

The GSUDT is an international standard on how dairy terms should be used. Established in 1999 by the CAC, it was developed by the Codex Committee on Milk and Milk Products (CCMMP) with the help of IDF. Its predecessor was the CAC Code of Principles concerning Milk and Milk Products, published as early as 1958.

The CAC has currently 189 members: 188 countries and the European Union (EU). All members are committed to acknowledge and implement the numerous Codex Standards, including a wide range of standards within the dairy sector, inter alia the GSUDT.

Given the high number of members of the CAC, the GSUDT is accepted nearly worldwide. The content of the GSUDT plays an important role in the extensive global trade with dairy products, as well as in marketing dairy products within the single countries, especially to the consumer.

The GSUDT is explained in depth in the Bulletin n°507/2020, and a new Bulletin is on its way deep diving into the national regulations to safeguard the protection of dairy terms. The goal of this corresponding Bulletin is to give a detailed picture of how the GSUDT has been translated and is implemented in the various national legislations.

As a concrete example of the safeguarding of the GSUDT, IDF is currently participating in the ISO working group on Plant-based foods -Terms and definitions (ISO/TC 34 W26). The scope of the work is to define the characteristics and terms of plant-based products. IDF involvement aims to ensure there is no misuse of the dairy terms.

With this and more actions, IDF is on the mission to protect the provisions of the Codex GSUDT.”

*Source: Extract from the IDF Annual Report, 2021-2022 which is available from <https://shop.fil-idf.org/collections/publications>*



# Heat treatment publications of IDF



**“IDF has its own set of publications in the field of Food Safety, from straightforward field proof documents to scientific publications in peer review journals accessible from the academic institutes to the farmers and food workers.**

The most recent example of this is the Bulletin of the IDF n°516 on Heat Treatment of Milk.

Heat treatment is the most widely used processing technology in the dairy sector to guarantee product safety and longer shelf-life.

The main purpose of this treatment is to destroy microorganisms, both pathogenic and spoilage, to ensure the milk is safe and has a reasonable shelf-life.

Due to the potential impact of heat on taste, odour, colour and nutritional value, it is advantageous to process as little as possible, while achieving adequate food safety and desired shelf life, so it is important to determine the appropriate type of heat treatment for a specific food product.

This publication provides an overview of the different heat treatments applied to milk for direct consumption or prior to further

processing, and their verification procedures, and is aimed at professionals in the dairy sector, those working in the field of processing or those interested in it. It can help choose the most appropriate treatment and in implementing legal requirements for heat treatment.

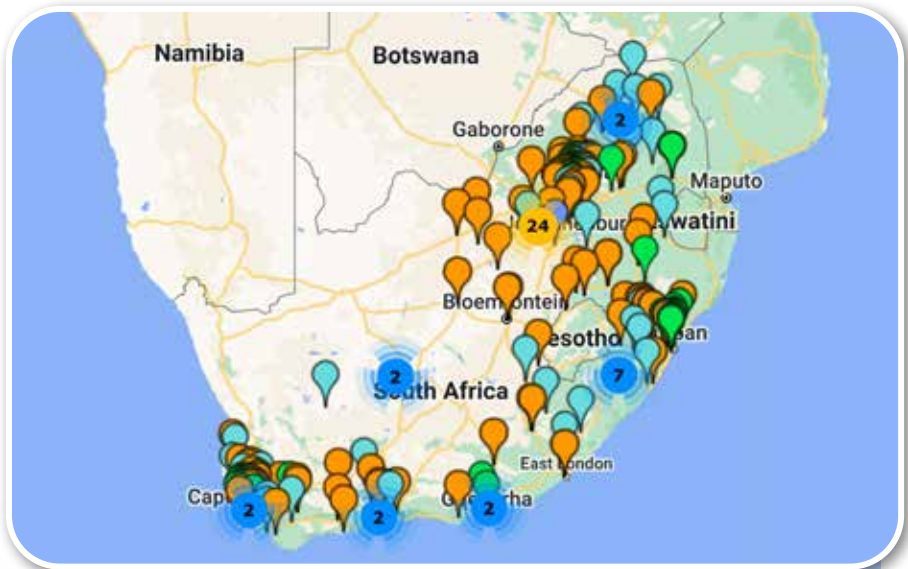
This Bulletin complements the recently published Bulletin of the IDF n°496/2019 on The technology of pasteurisation and its effect on the microbiological and nutritional aspects of milk.”



*Source: Extract from the IDF Annual Report, 2021-2022 which is available from <https://shop.fil-idf.org/collections/publications>*

# Role-players registered with Milk SA featuring on the Milk SA website

Persons / role-players registerable in terms of the current regulations under the Marketing of Agricultural Products Act of 1996, are now plotted on the Google Maps application which features on our website.



One can filter for the registration categories individually, which are:

- Importers of dairy products
- Milk producers who sell or process raw milk produced by themselves
- Processors of raw milk
- Exporters of raw milk

The next phase will result in filtering according to products manufactured by the processors and producers.



# Representation of the dairy industry on the National Animal Health Forum (NAHF)

Milk SA is a co-founder of NAHF which was established in 2006 to partner - as agricultural and agro-processing industries - with Government in addressing animal health challenges. MPO nominated Fanie Ferreira as NAHF Council member after the resignation of Dr Theo Kotzé, which was approved by the Milk SA Board.

Due to the scientific and technical challenges regarding animal health issues, the Board also nominated Dr Mark Chimes (a veterinarian involved in the Dairy Standard Agency's farm audits) as a specialist for NAHF's various animal health projects.

De Wet Jonker, a trade specialist employed by SAMPRO, is the second member on the Forum's Council, nominated by Milk SA. His responsibility is to determine the impact that certain animal diseases (could) have on trade in South Africa and internationally and to make recommendations to promote local and international trade.



**Fanie Ferreira**



**Dr Mark Chimes**



**De Wet Jonker**

# Organized Dairy Industry of SA supports the “Pathways to Dairy Net Zero” initiative



***Pathways to Dairy Net Zero, the first climate initiative of its kind in the world, will accelerate dairy's climate action by reducing the sector's greenhouse gas (GHG) emissions over the next 30 years. It is driven by the global dairy sector and supported by leading scientific and research organizations.***

The Organized Dairy Industry of South Africa supported this initiative by way of a detailed declaration, signed by the Chairpersons of the Milk Producers' Organisation, SA Milk Processors' Organisation, Milk South Africa and the Managing Director of the Dairy Standard Agency.

The Organized Dairy Industry of SA can only deal with actions in terms of this initiative insofar as they are of collective interest, while the milk producers (farmers) and processors / manufacturers of dairy products are responsible for the actual implementation of initiatives to improve environmental health.

The Organized Dairy Industry of SA not only supports the initiative, but also provided the Global Dairy Platform with factual information about the SA dairy industry's contribution to a healthier environment, which supports the six principles set by the Platform. Some of the factual information provided was the following:

- ***Improvement of production efficiency:***  
Since 1990, the number of cows in South Africa has declined by 24 %, while total milk production has increased by 56 %.







**From Left to right:**  
**Dr Bonile Jack-Pama**  
(Chairman: Milk SA)  
**Melt Loubser** (Chairman: SAMPRO)  
**Colin Wellbeloved** (Chairman: MPO)  
**Jompie Burger** (MD: DSA)

This implies that efficiency has improved, whereas GHG emissions, waste and water use per unit product have declined. Methane emissions (Tier 2 calculated) declined from 179 Gg/annum in 2010 to 123 Gg/annum in 2017.

- **Dairy quality and safety:** DSA promotes compliance with quality and safety regulations and standards through advisory services, a Code of Practice for Producers, an Animal Welfare Audit Programme and laboratory services in terms of standards development (being the reference laboratory for the industry) and doing routine analyses.
- **Direct GHG emission reduction initiatives:** Dairy farmers are advised and supported by the Organized Dairy Industry of SA and several associated companies to change to regenerative agriculture (RA) practices emphasizing minimum or no-till practices, minimum chemical fertilizers and pesticides, cover crops and carbon sequestration promoting pasture establishments. The same applies to crop production of especially maize, sunflower and soya which are used in dairy feeds.
- **Combating animal diseases:** Sick animals produce sub-optimally and increase GHG emissions. The organized dairy industry of SA participates in the National Animal Health Forum of SA and through this

channel in O.I.E directives, and supports dairy farmers with R&D on mastitis, fasciolosis, sporidesmin toxicity (facial eczema), lameness and others.

- **Market signals:** Marketing of unprocessed milk and dairy products is supported by providing market signals so as to synchronize supply and demand in a free market where production is not subsidized and to limit wastage.
- **Wastage:** Accordingly, consumers are educated and informed about the appropriate handling, storage and consumption of dairy products in order to limit wastage.
- **Status and Progress report:** A document titled "Sustainability in the Dairy Industry: A status and progress report" is updated annually to inform and encourage the local dairy industry on all sustainability matters which affect the industry.
- **Production practices that complement natural ecosystems:** Practices are monitored and supported by R&D projects on water stewardship, buffer zone and wetland protection, biodiversity enhancement zones, and effluent from dairy parlour purification.
- **Improvement of practices such as feed, manure, fertilizer and energy management:** Practices are monitored and supported by R&D projects on water stewardship, buffer zone and wetland protection, biodiversity enhancement zones, and effluent from

dairy parlour purification.

- **Improving practices such as feed, manure, fertilizer and energy management:** Feed is formulated by technologists using international guidelines. Manure is mostly managed in slurry ponds and thereafter used on pasture as fertilizer taking cognisance of effluent quality. Chemical fertilizer is progressively reduced by employing RA technologies, and utilizing pasture species and grazing strategies to maximize carbon sequestration. Energy management can improve and is guided since it is a significant cost factor. For example, eco-friendly electricity generation could be prioritized in all sectors and, where applicable, high transport costs per litre of milk should be addressed.
- **Alternative, credible reduction options:** These are investigated, but costs and practicality are significant stumbling blocks. Development of methane incubators on farms for example require major investments, but one of the processing companies uses whey fermentation to methane to support electricity use from the grid. Wind and solar power are used on a limited scale.
- **Measuring greenhouse gas emissions to plan mitigation and monitor progress:** This is done on pilot sites, also as a service by processing companies for their farmer clients. In a R&D project, a systems dynamic model has been developed where farmers can introduce their own system and production numbers to calculate emissions and run scenarios to identify opportunities to improve sustainability.

## Changes in the retail sales quantities

from the year July 2020 to June 2021, to the year July 2021 to June 2022, and changes in the retail prices from June 2021 to June 2022 of specific dairy products.

Product	Change in demand (quantity) percent	Change in retail prices percent
Fresh Milk	-7.7	4.1
Long Life Milk (UHT Milk)	1.9	6.8
Flavoured Milk	-0.7	4.9
Yoghurt	-5.5	2.6
Maas	-1.9	2.2
Prepackaged Cheese	1.5	4.4
Cream Cheese	-2.6	5.3
Butter	0.7	1.6
Cream	-5.0	6.7

*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.*



## Finger on the (research) pulse



**Members of the DRDC: L-R: Dr Heinz Meissner (R&D Programme Manager), Edu Roux (Secretary), Alwyn Kraamwinkel, Chris Fourie, Prof Theuns Erasmus, Hannes Neethling and Nico Fouché**  
**Inset: Fanie Ferreira and Nigel Lok**

Milk SA, through its well-structured R&D programme, has its finger on the pulse when it comes to research in the SA dairy industry.

The Dairy R&D Committee is an important instrument in respect of the identification, prioritization and harmonization of research, as well as knowledge transfer and facilitation of resources.

At the meeting held in August, attention was given to amongst others awareness of the R&D programme amongst the dairy industry role-players; giving more prominence to animal health, animal welfare and environmental sustainability; expansion of the current project regarding sporidesmin induced liver disease (facial eczema); and registration of the brucellosis vaccine project in collaboration with the red meat industry.

# ENFORCING COMPLIANCE WITH THE LAW: THE “FLORA PLANT BUTTER” CASE

*The responsibility of the enforcement of regulations in terms of the Agricultural Product Standards Act (No 190 of 1990) lies with the Department of Agriculture, Land Reform and Rural Development (hereinafter named “Department”).*

In July 2021, the Dairy Standard Agency (DSA) lodged a complaint with the Department regarding the sale of a product under the name “FLORA PLANT BUTTER” and requested that steps be taken to enforce the removal of the product from the market.

Although the Department acknowledged receipt of correspondence and followed up with further correspondence, no action was taken by the Department. In fact, officials from the Department engaged with the manufacturer, and Milk SA’s requests fell on deaf ears.

Jompie Burger (Project Manager: Dairy Regulations & Standards and MD: DSA) and Nico Fouché (CEO: Milk SA) gave an ultimatum to the Department, saying that in the absence of steps taken against the manufacturer within seven days from their letter (which was 31 August 2022), Milk SA would approach the High Court.

As we all know by now, the Department assigned its responsibilities in respect of the enforcement of the regulations to “Assignees” and furthermore, that many agricultural and agro-processing sectors have contested their assignments for various reasons, as is the case with Nejahmogul (responsible for dairy products, imitation dairy products and edible ices) and Impumelelo Agribusiness (responsible for i.a. fruit juices and fat spreads).

The Executive Officer: Agricultural Product Standards responded promptly to the letter of Messrs Burger and Fouché, apologizing for the delay and pledging his urgent attention. He said that the Department “should in due course be in a position to bring the industry into confidence as to what measures will be taken to ensure consistent and effective application of the provisions of the Act.”

Milk SA and DSA will continue to monitor products that ride on the back of dairy and which are in default with the APS Act and regulations; and to act swiftly.

In a separate action from the above, Milk SA also lodged an opposition with the Registrar of Trade Marks against the trade mark application for “FLORA PLANT BUTTER”.

