

# ANNUAL REPORT 2022-23



**#WeAreDairy**  
Celebrating 120 years of dairy expertise:  
proud to be Dairy



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# 1

## President's introduction *We lead dairy!*

The 2022 – 2023 period has been a very busy one for IDF. After two consecutive periods where we suffered disruptions from the Covid-19 crisis, in 2022 we were able to return to the dynamics we had prior to the pandemic. In effect, we could organise again the IDF World Dairy Summit with full in person participation after a two-year recess, and a very successful one.



The fact that India is the world's largest milk producer and the exemplary, unequalled support that the Indian dairy sector receives from the local government, was determinant to the success and brightness of the IDF World Dairy Summit 2022. Its outstanding performance was not only the result of the

political support it received from high public officers, including the Prime Minister of India's participation at the opening, as well as the presence of 10 other ministers, but also from the quality of its programme and sessions. Moreover, a fully booked exhibition centre and the presence of thousands of dairy farmers, including various delegations of empowered women farmers, contributed to its success and resonance. No wonder all of us who had the privilege to participate felt really proud to be dairy!

Innovation in its multiple forms was one of the main drivers of the period 2022 – 2023. We successfully launched the IDF Dairy Innovation Awards to promote and encourage innovative practices within all the dairy production chain, with a particular focus to those who contribute to the achievement of the United Nations Sustainable Development Goals. Therefore, not only did we acknowledge sustainable approaches at farm, processing and commercialization levels, but we also recognized particular contributions to climate action. This support to innovation in the dairy sector is here to stay, as we have already launched the second edition of the awards.

2023 is not just another year for IDF. It's the year that it celebrates its 120th anniversary of restless and continuous work for the global dairy sector. We want to take this opportunity to celebrate our achievements and our experts for their contribution. We will launch at the IDF World Dairy Summit 2023 an important IDF promotion and celebration campaign to enhance the sense of pride within the global dairy community and to showcase IDF's extraordinary contribution to the development of dairy science and

expertise. It is also the year that IDF celebrates 60 years of collaboration with Codex and ISO, as part of the commitment of our Federation to relevant Intergovernmental organisations and key stakeholders. We look forward to your engagement and participation in this celebration and promotion campaign, with the aim of fostering a stronger and impactful dairy sector.

We are proud to contribute to help nourish the world with safe, nutritious and sustainable dairy. We are the voice of the global dairy sector around the world showcasing the vital role of milk and dairy foods in healthy diets and

sustainable food systems. IDF is an impactful and healthy organisation equipped to support the global dairy sector in its growth and continuous improvement.

I would like to thank our Director General and IDF Team for their support and contribution. I am grateful to our Board and SPCC members and all experts. You are all part of our IDF success.

**Piercristiano Brazzale**

**President of the International Dairy Federation**

# 2

## Message from the Director General *We are dairy!*

For years, I have been called the Dairy Ambassador or the Dairy Queen. One thing for sure, I am a proud member of the global dairy community. I have the privilege to travel around the world representing IDF and the global dairy sector, visiting farms and facilities and meeting incredible persons. I witness regularly the dynamism of our community.



I am supported by an amazing team composed of passionate and devoted professionals that delivers efficiently its mandate, support members and experts and is ready to face the challenges and opportunities that the world

presents to IDF. Our team priorities for this year have been to:

1. Support the delivery of the IDF Programme of Work and the priorities projects, including the UN Food Systems Summit implementation and engagement and the COP Climate 28.
2. Provide technical and scientific support to Intergovernmental Organisations and our members.
3. Manage, support and/or coordinate the organization of IDF events.
4. Improve reach and impact of IDF publications and events.

We have been very actively engaging with our key stakeholders and I would like to thank all of them for their collaboration. For example, IDF's support to FAO's report on integration of environment and nutrition in life cycle assessment of food items and participation to the launch of the FAO document "Contribution of terrestrial animal source food to healthy diets for improved nutrition and health outcomes".

As we celebrate the 60<sup>th</sup> anniversary of our collaboration with Codex, we built on the joint work on the General Standard for the Use of Dairy Terms (GSUDT) by publishing a bulletin with the outcomes of the survey we conducted within our membership about its implementation at a national level.

Honouring our commitment to Women in Dairy, that led to the creation of a Task Force in early

2022, we organised the webinar “Celebrating women in dairy” through engaging case studies for the International Women’s Day, and we released a factsheet on “Dairy in the nutritional empowerment of women”.

A good example of engagement with our stakeholders is the IDF Dairy Innovation Awards with the support of Tetra Pak. In the 2023 edition two new major categories were introduced:

- Innovation in Women empowerment in the dairy sector
- Innovation in Marketing & Communication initiative building dairy category

The 2023 edition ended up receiving 173 entries from 26 countries, an increase of 20% from last year’s edition.

Also in this period, the IDF Intranet underwent a transformative revamp. To enhance productivity, a hybrid solution was adopted, seamlessly integrating open-source and SAS web platforms, and featuring a customized user interface reflecting IDF’s brand identity.

We are happy to see the IDF family growing with new members and additional experts. We are welcoming Rwanda as a new Full Member and Zimbabwe is moving from Associate to Full Member. We expect to add new members and experts in the upcoming months.

IDF is a modern and resilient organization which is doing impactful work, having meaningful collaborations with its stakeholders and presenting credible publications, key learning events and prestigious awards and prizes. IDF has consistently demonstrated its expertise and its ability to collect data, information and good practices and the capacity to develop useful communication and advocacy tools to help members being impactful in their countries.

As you can see, the period 2022 -2023 has been one of harvesting what we had been sowing over the previous years despite the big challenges that the pandemic and the global recession imposed on us. We look at the future with optimism based on our resilience and adaptation capacity, and we invite all of you to join and engage in our work and deliverance to the global dairy sector.

My sincere thank you to our Board members for their support, for the SPCC members’ commitment, the National Committee Secretaries engagement and for the IDF Head Office Team contribution. You all made the IDF achievements possible.

**Caroline Emond**

**Director General, International Dairy Federation**

# 3

## Words from the Chair of the SPCC

### *We know dairy!*

About 150 items, the current Programme of Work spans the activities of all IDF 17 Standing Committees and 5 Task Forces tackling topics relevant to the global dairy sector along the entire dairy chain. This number changes as work is added to monitor developments from other organisations or to bring new guidance for the dairy sector. In the past 12 months, 28 new items were added to the IDF programme of work, while 25 items have been concluded. This dynamic work programme is possible due to the extensive network of IDF experts.



Nearly halfway through the IDF Strategic Work Plan 2022 – 2025, many actions have been completed, such as the provisions of additional guidance and tools to the experts to help with

their contribution. An important action for this year has been a mapping of expertise available as well as the review of the objectives of the IDF Standing Committees. The aim is to know what we have, identify possible gaps, and to ensure our working structure fits the evolving needs of the sector.

IDF's pillars remain Standards, Sustainability, Nutrition and Health, and Safety and Quality.

Standards have been a pillar of IDF work for decades. In 2023, we celebrated 60 years of our collaboration with Codex, exactly half of IDF's existence, and the entirety of Codex's existence. We resumed participation in person to the Codex Alimentarius Commission and several Codex Committees and have made an impressive amount of 32 submissions on 18 topics. Our collaboration with ISO also reaches 60 years for our joint programme for standard for methods of analysis and sampling, seeing 9 standards published the past 12 months. This work really highlights the needs and benefits of broad collaboration.

Safety and Quality remain high on our agenda, whether providing guidance for the sector for preventing chlorates in the dairy chain, developing standardized methods of analysis on aflatoxin and microorganisms of interest, or contributing to work of international organisation such as Codex on the use and reuse of water to ensure dairy products are safe. While there is a high level of safety culture in the sector, food safety remains essential by all stakeholders involved. This year, some of



our key experts provided examples of IDF work to support the World Food Safety Day.

Sustainability and climate action have been a vital chapter of our programme of work this year. The publication of two important guidelines, the "[IDF global Carbon Footprint standard for the dairy sector](#)" and the "[C-Sequ LCA guidelines for calculating carbon sequestration in cattle production systems](#)", are a testament to IDF's commitment.

The nutrition and health benefits of dairy continues to be a key area in the IDF programme of work. Some milestones were the 3<sup>rd</sup> IDF Nutrition and Health Symposium targeted to health professionals, the extensive work on the dairy matrix, and IDF's support to key FAO reports.

More and more IDF scientific and technical work is transversal impacting the whole dairy chain. IDF has recently launched two new Tasked Forces, 'Women in Dairy' and 'Processing'. Both will review gaps and propose new work as needed for these important areas.

One hundred twenty years old and more relevant today than ever. International trade and digital context, innovation and new technology still

pushes the limits of knowledge in nutrition, sustainability and safety. Challenges thankfully taken on by hundreds of IDF experts worldwide, contributing to one voice for the global dairy sector. If IDF would not exist, we would need to create it.

Finally, each year a different country hosts the IDF World Dairy Summit, bringing together global and industry leaders, dairy experts, scientists, technical specialists, farmers and more to learn about the latest on the most significant issues facing the global dairy sector today and tomorrow. It is my privilege to be part of the U.S. dairy sector hosting this important premier global dairy conference this year in Chicago.

I would like to thank all experts who devote their expertise and time to deliver the IDF programme of work. Together We Speak Dairy, We Innovate Dairy. The strength and diversity of our community of experts makes us unique and impactful.

**Dr. Jamie Jonker**

**Chair of the IDF Science and Programme Coordination Committee (SPCC)**

# 4

## Global reach

	<b>Argentina</b>
	<b>Australia</b>
	<b>Belgium</b>
	<b>Brasil</b>
	<b>Canada</b>
	<b>Chile</b>
	<b>China</b>
	<b>Cyprus</b>
	<b>Czech Republic</b>
	<b>Denmark</b>
	<b>Finland</b>
	<b>France</b>
	<b>Germany</b>
	<b>Iceland</b>
	<b>India</b>
	<b>Ireland</b>
	<b>Israel</b>
	<b>Italy</b>

	<b>Japan</b>
	<b>Kenya</b>
	<b>Kuwait</b>
	<b>Latvia</b>
	<b>Lithuania</b>
	<b>Luxembourg</b>
	<b>Mexico</b>
	<b>Mongolia</b>
	<b>Netherlands</b>
	<b>New Zealand</b>
	<b>Norway</b>
	<b>Poland</b>
	<b>Russia</b>
	<b>Rwanda</b>
	<b>South Africa</b>
	<b>South Korea</b>
	<b>Sweden</b>
	<b>Switzerland</b>
	<b>United Kingdom</b>
	<b>United States</b>
	<b>Zimbabwe</b>



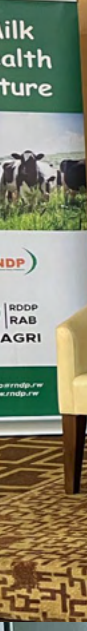
# IDF WORLD DAIRY SUMMIT 2022 INDIA



Republic of Rwanda  
Ministry of Agriculture  
and Animal Resources

*Our Milk, Our Health, Our Future*

THE WORLD "RAISED A GLASS" TO WORLD MILK DAY IN 2001,  
RWANDA FILLED A GLASS WITH MILK TO FEED HER CHILDREN  
**"ENJOY DAIRY"**



# 5

## At a glance

2022 September



### Projects

**Bulletin of the IDF N° 518/2022:**

The World Dairy Situation Report 2022

**Bulletin of the IDF N° 520/2022:**

The IDF global Carbon Footprint standard for the dairy sector

**Bulletin of the IDF N° 519/2022:**

C-Sequ LCA guidelines for calculating carbon sequestration in cattle production systems



### Partnerships and collaboration

IDF celebrated **World School Milk Day** across social media



### Event

**IDF World Dairy Summit**  
New Delhi

2022 October



### Projects

**Issue 6:**

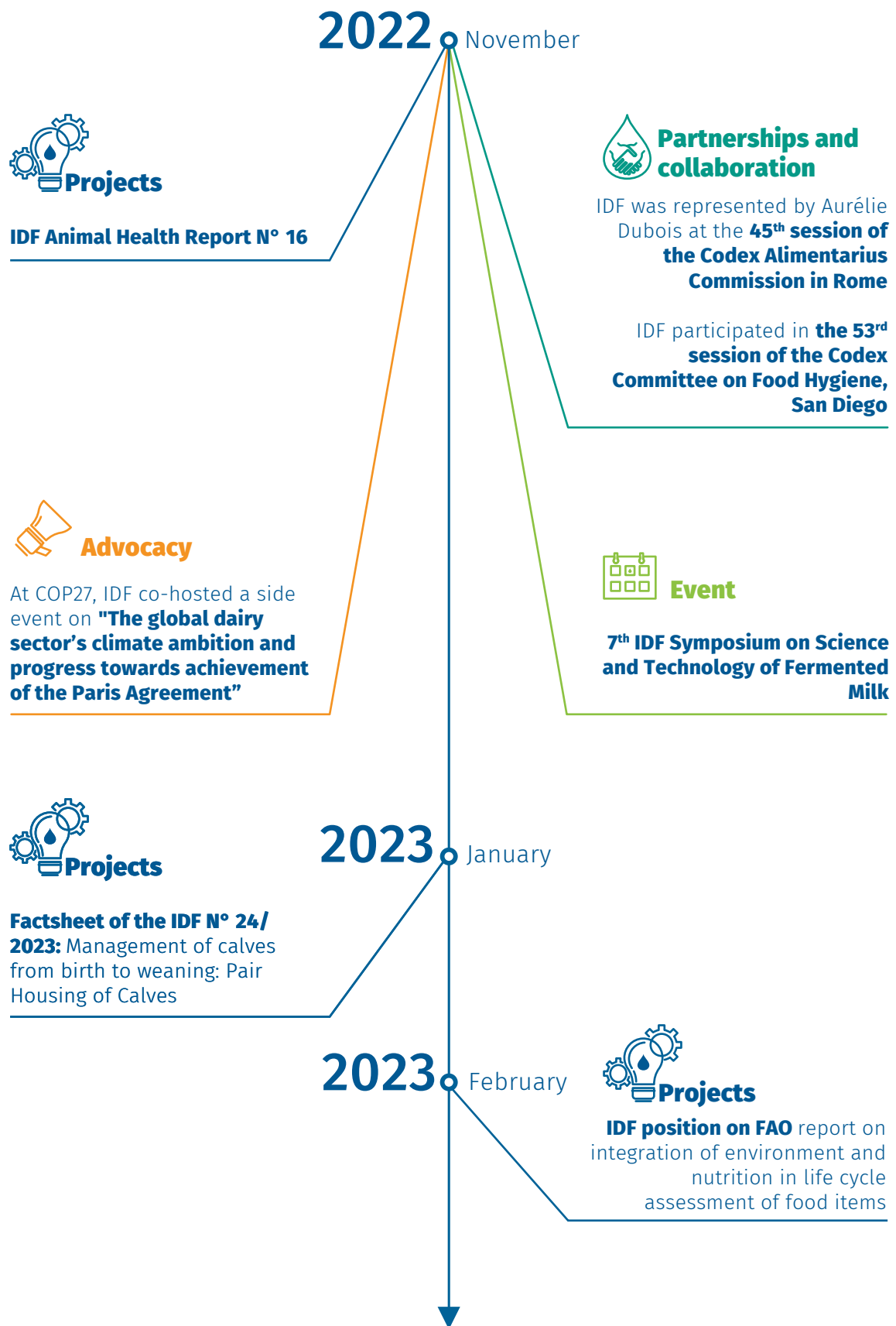
IDF Dairy Sustainability Outlook - COP27

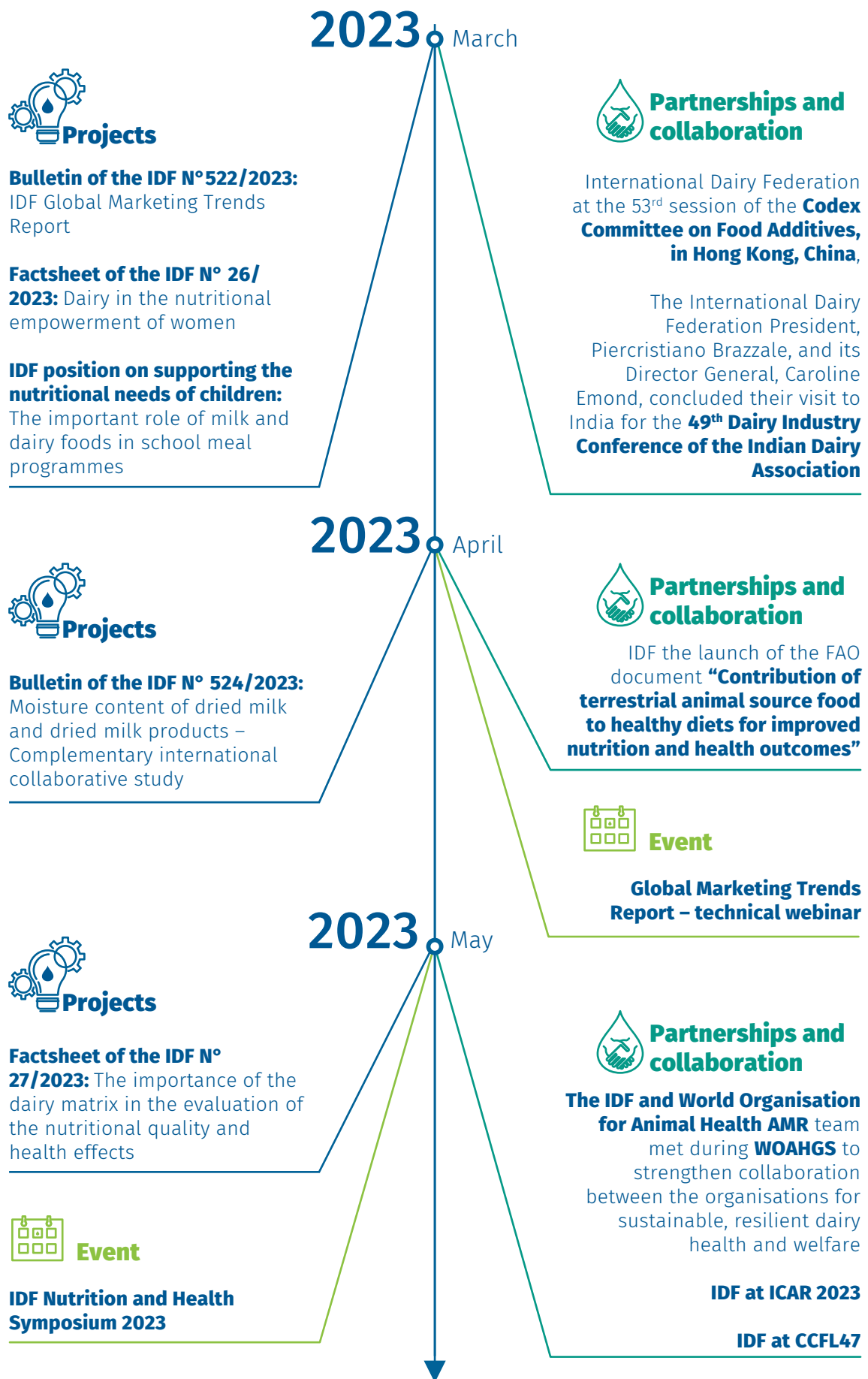


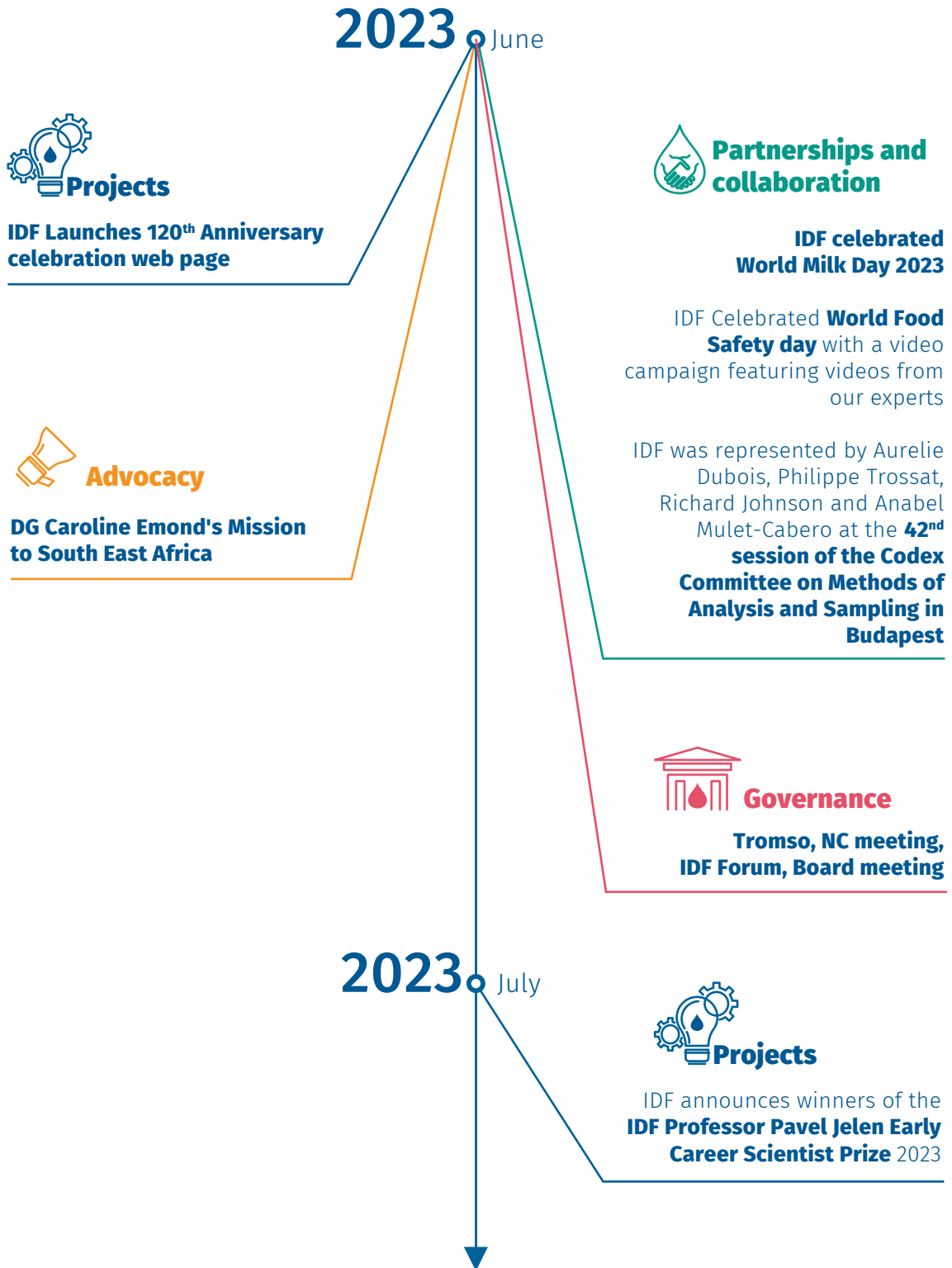
### Partnerships and collaboration

International Dairy Federation President Piercristiano Brazzale spoke at the Panamerican Dairy Federation FEPALE Congress in Quito Ecuador on Global Perspectives for Dairy

**IDF President, Piercristiano Brazzale, and IDF Science and Standards programme Manager, Laurence Rycken, at the United Nations CFS 50 conference**









# COP27 and other UN summits

**Sustainability and climate action have also been a vital chapter of our programme of work. After actively participating in the UNFCCC COP conferences, as well as at the UN Food Systems Summit, and other relevant international meetings, IDF has grown in expertise to provide leadership for the global dairy sector's positioning and participation at global summits involving the role of the dairy sector in food production, sustainability and environmental issues.**

An IDF delegation led by Director General, Caroline Emond, and President, Piercristiano Brazzale, attended the COP27 summit in Egypt, where IDF co-organised a side event on 'The Pathways to Dairy Net Zero' initiative together with the Global Dairy Platform (GDP) and the government of Uruguay. Two joint statements with GDP, two blogs by IDF Director General, Caroline Emond, and one blog on methane science by prominent IDF experts were also part of our efforts to convey the dairy sectors contribution to climate action and GHG emissions mitigation.

With methane emissions being one of the key topics discussed at COP27, IDF also developed an advocacy toolkit containing science-based information on the true nature of the sector's emissions and its real impact on the environment. The arguments will not only reflect this impact in the context of all GHG emissions from different sectors but also the positive effect that grazing and ecosystem services have on the environment. The advocacy toolkit will also include IDF's position on the FAO report on

['integration of environment and nutrition in life cycle assessment of food items'](#), published last February.

Also, in mid-2023, IDF participated in various international events that addressed the global dairy sector's role in sustainable food production and its environmental impacts, like the G20 - FAO International Symposium on Sustainable Livestock Transformation through One Health in India, the UN Food Systems Summit (UNFSS) Stocktaking in Rome and the FAO Global Conference on Sustainable Livestock Transformation in September.

For the UN Sustainable Development Goals meetings, IDF created a document with all the progress made by the dairy sector to achieve the different UN SDGs: the ones related to human nutrition and health, the ones related to climate action and environment protection and the ones related to the combat of poverty through the billion livelihood it provides globally.

# The IDF World Dairy Summit 2022 in India: an unforgettable momentum with remarkable outcomes

**Under the theme “Dairy for Nutrition and Livelihood”, the IDF World Dairy Summit 2022 was one of a kind four-day event comprising conferences, panel discussions, side events, poster sessions, networking opportunities, cultural activities, and technical and social tours.**

Over 1,500 dairy leaders, experts, farmers, processors, and producers from around the world attended the summit. The comprehensive program included 24 sessions covering various thematic verticals, such as Global dairy situation and trends, Dairy Science and Farming techniques and innovations, Socioeconomic and Livelihood, Nutrition and Health, as well as Sustainability and Climate Action discussions. The sessions were led by renowned speakers and specialists, with global audiences having the option to participate online. The opening ceremony, held on Monday, September 12, 2022, was graced by the presence of Prime Minister Narendra Modi and over 3,200 guests in person.

Prominent speakers from esteemed organizations like FAO, Codex, WHOA, OECD, UNEP, World Bank, and the Global Children Nutrition Foundation participated in various panels. Noteworthy figures among the 120 speakers and panelists included Shri Parshottam Rupala, Minister of Fisheries, Animal Husbandry and Dairying of India; Shri Amit Shah, Minister of Home Affairs & Cooperation of India; Ms. Meka Whaitiri, Minister of Food Safety and Associate Agriculture of New Zealand; Mr. Janusz Wojciechowski, EU Commissioner for Agriculture (virtual participation); Mr. Jason Hafemeister, Acting Under Secretary for Farm & Foreign Agricultural Services – USDA (virtual participation); Mr. Mayank Trivedi, Senior Vice-President & Head of Strategic Business Unit Dairy at Nestle; Mr. R G Sodhi, IDF Board and Managing Director Amul, India, and several journalists from India and other major international media.

Ms. Caroline Emond, IDF Director General, stated, “IDF World Dairy Summit 2022 provided

a platform for global dairy sector actors and stakeholders to meet in person, discuss the world dairy agenda, share knowledge and innovations, identify future trends, and create networking and business opportunities. It also offered insights into the Indian Dairy sector and its experiences.”

Mr. Piercristiano Brazzale remarked on the incorporation of sophisticated technology within the Indian dairy value chain, stating, “I was particularly impressed by the sophistication and technology that the Indian dairy value chain has incorporated. The breathtaking metrics that Indian Dairy presents today, along with its projected future growth, will surely establish it as the largest on a global scale.”

## **Key figures from the IDF World Dairy Summit 2022 include:**

- ▶ **925 Farmers attending**
- ▶ **776 Delegates attending**
- ▶ **114 national and international exhibitors (6,900 sq. meters space showcasing the latest technologies and innovations in the dairy sector)**
- ▶ **6,900 trade visitors to the exhibition area**
- ▶ **169 artists and artisans attending**
- ▶ **30 sponsors, including AMUL, Nandini, and Mother Dairy**

Furthermore, IDF released significant publications during the event, such as the [‘IDF World Dairy Situation Report 2022’](#), the [‘IDF Annual Report 2021-2022’](#), and two Bulletins on

[‘The IDF global Carbon Footprint standard for the dairy sector’](#) and the [‘C-Sequ LCA guidelines for calculating carbon sequestration in cattle production systems’](#). Notable awards, like the IDF Dairy Innovation Awards, the IDF Award, the IDF Prize of Excellence, the IDF Professor Pavel Jelen Early Career Scientist Prize, the Standing Committee Leader Recognition, and the Yves Boutonnat International Milk Promotion, were also presented (see the Recognition section on IDF’s corporate website).

The IDF WDS 2022 received support from local authorities, with the participation of 10 Ministers, including the presence of the Honourable Prime Minister of India, Shri Narendra Modi, and Chief

Minister of Uttar Pradesh, Shri Yogi Adityanath, during the opening ceremony.

Expressing gratitude, Ms. Caroline Emond said, “We are very grateful for this support as well as for the extraordinary work of the Organizing Committee, led by the National Dairy Development Board Chair, Shri Meenesh Shah. We also wish to thank all the leaders, experts, and delegates who attended the Summit, both in person and virtually, as well as all the speakers, panelists, and members of the IDF National Committees and Standing Committees, without whom this summit would not have been possible.”



# The Women in Dairy Task Force: Increasing Engagement

To commemorate International Women's Day, the IDF Task Force on Women in Dairy orchestrated a webinar that brought together various experts to exchange their thoughts and experiences on the vital role of women in the dairy industry. Our aim was to inspire and provide valuable insights on how the sector promotes the empowerment of women. During this event, we unveiled a new factsheet highlighting the significance of dairy in the nutritional empowerment of women.

Furthermore, IDF will release in Chicago the inaugural edition of the "Women in Dairy" report. This report compiles a range of initiatives that empower women and girls, demonstrating the widespread efforts being made by the Global

Dairy sector across all regions of the world. These efforts encompass the entire dairy value chain, from farms and processing to research and education.



The Global Conference on  
**Sustainable Livestock Transformation**  
25-27 September 2023



# 6

## IDF programme of work

### A. STANDARDS

*60 years of collaboration with Codex and ISO*

*2023 not only marks the 120th anniversary of IDF but also the 60th anniversary of its collaboration with CODEX and ISO.*

#### CODEX

IDF has been an observer at Codex since its creation by the FAO and the WHO in 1963.

IDF has contributed to the creation of Codex by highlighting the need for a standard for the use of dairy terms, and the consequential creation of the FAO/WHO joint expert group on milk and milk products. As an observer organisation, IDF has been recognized in the Codex procedural manual as the provider of the technical information that formed the basis for milk and milk products standards, within the now adjourned Codex Committee on Milk and Milk Products. This committee has produced the General Standard for the Use of Dairy Terms ([CS 206](#)) and 35 standards for dairy products ([butter, cheeses, fermented milk, etc.](#)).

IDF has actively engaged in all relevant Codex Committees with the purpose of contributing to food safety and developing food standards. IDF has also participated in the wide range of Codex's activities to promote the use of these standards by governments and other stakeholders with the aim of ensuring fair trade practices of safe products. Most relevant Codex Committees for the dairy sector include:

- **Codex Committee on Food Labelling,**
- **Codex Committee on Nutrition and Foods for Special Dietary uses,**
- **Codex Committee on Food Hygiene,**

- **Codex Committee on Food Additives,**
- **Codex Committee on Methods of Analysis and Sampling,**
- **Codex Alimentarius Commission.**

#### **The Importance of the protection of dairy terms: GSUDT webinar & engagement at Codex level on New Foods and Production Systems**

The GSUDT, as an international commitment in the framework of the Codex Alimentarius Commission of the FAO/WHO (CAC), has established a worldwide standard for the 'Protection of Dairy Terms'. It facilitates international trade in dairy products and helps to prevent consumers from being misled. Codex CAC members who decide to adopt the GSUDT, need to implement the standard within their national legal order. However, each country follows different approaches, depending inter alia on their legal traditions and political decisions.

In November 2022 IDF published the results of surveying its members on the extent to which the GSUDT is implemented in national law, including EU law. This publication gave an overview of how the GSUDT has been adopted and translated in 21 countries based on all continents. The bulletin provided a deep dive into the different regulatory approaches for achieving the protection of dairy terms as well as a unique picture of the legal system in the countries in question.

Moreover, on June 20 and 22, 2023 IDF organised a technical webinar to showcase how this has been implemented in national legislation. The webinar analysed the work done by IDF to capture the data. It also provided 5 case studies of countries that have implemented the GSUDT

at variable degrees aligned with their national legislative framework.

### **Engagement at Codex level: sustainability claims, food fraud, role of science in Codex work**

IDF participated in the 47<sup>th</sup> session of the Codex Committee on Food Labelling. At the meeting, several delegations mentioned that sustainability was an important topic for the world and that therefore Codex should consider how to include it in its work. Views differed on whether this was the right moment to start new Codex work on sustainability related labelling claims or if further reflection was needed to better define what was to be achieved and what the consequences of such work could be when implemented. The committee agreed to establish an electronic Work Group. IDF will participate in the work and provide relevant comments.

### **Prevention, mitigation and control of Food Fraud**

Since 2022, IDF has been contributing to the development of Codex guidelines on the prevention and control of food fraud. The purpose of these guidelines is to provide guidance to competent food safety authorities, other relevant agencies, and Food Business Operator's on the detection, prevention, mitigation and control of food fraud to help protecting the health of consumers, and to ensure fair practices in the food trade, including feed for food-producing animals. There have been different views related to the consideration of geographical indicators in the scope of the guidelines. At this year's Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS), it was agreed to continue this work. IDF will continue engaging in this important topic.

### **Role of science in Codex work**

IDF's historic commitment to Codex is rooted in Codex's own commitment to publishing science and risk-based standards that protect public health and facilitate fair practices in food trade. Over the last 60 years, Codex standards have benefited and protected dairy consumers and dairy producers around the world by increasing the amount of safe, high-quality milk and dairy products available in international trade.

IDF is therefore engaging in the discussion and raising issues that could potentially undermine any effort to formally adopt Codex standards, codes of practice and guidelines by Codex members, potentially raising questions about the scientific basis of the text, the quality and value of the risk assessment utilized, whether a country should adopt the Codex text and how such text with footnotes should be interpreted and enforced.

### **IDF work at the Codex Committee on Nutrition and Foods for Special Dietary Uses**

The Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) held its forty-third session from 7 – 10 March and 15 March in Düsseldorf (Germany). IDF was represented by Laurence Rycken (IDF), Jacco Gerritsen (NL) and Melanie Grivier (FR). Other IDF experts participated in the delegation of NZ and US.

On the meetings' agenda there were several topics of interest to the sector. The committee finalized the revision of the 'Follow-up Formula'. IDF engaged in earlier discussion with regards to the nutritional composition of the 12 to 36 months category to ensure coherence with the composition of whole milk as per WHO recommendation that children from one year can consume milk as part of a diversified diet. IDF monitors the discussion on the developments of nutrient reference values (NRV-R) for 6 to 36 months category. The Codex committee has not yet addressed any nutrient of concern. FAO is finalizing a report on NRV-R for this age category for Ca, vit D and Zinc.

### **Different new work items were proposed under agenda 7 of the meeting, which all were of interest to the sector:**

#### **— Harmonized probiotic guidelines for use in foods and food supplements**

CCNFSDU43 agreed to establish an Electronic Working Group chaired by Argentina and co-chaired by China and Malaysia to further refine and clarify the proposal for new work on Harmonized Probiotic Guidelines for Use in Foods and Food Supplements in document CX/NFSDU 23/43/7, especially with regards to the scope, impact on food safety and need for

scientific advice. It also agreed to develop a revised discussion paper and project document, taking into account comments at CCNFSDU43 for the next session. IDF joint SCM and SCNH action team will participate and monitor the discussions as the topic remains of interest to the sector.

— **Guidelines including General Principles for the Nutritional Composition of Foods and Beverages made from Plant-based and other Alternative Protein Sources**

IDF supports the implementation of and compliance with the current Codex General standard on the Use of Dairy Terms. There was a limited amount of discussion amongst the member states. The committee agreed that CA and the US would refine the scope of the new work proposal.

IDF will monitor the subject at the next session and anticipate the risks related to protection of dairy terms and put forward the whole food / food matrix approach.

— **General Guidelines to establish nutrient profiles for front-of-pack nutrition labelling (FOPNL) and other nutrition policies**

IDF was not in favour of advancing the work, since CCFL did express that there was no need for NP in the establishment of the guidelines for FOPNL, CCNFSDU additionally had extended the scope beyond FOPNL.

CCNFSDU43 agreed that due to the past and ongoing work in this area done by WHO and the lack of support, the proposal should not be pursued at this time. IDF will monitor the outcome of WHO's publications expected this year and will review and update the IDF position of nutrient profiling models.

— **Nutrient reference value (NRV-NCD) for trans-fatty acids**

IDF was not in favour of this work due to the undifferentiation of the source of the TFA (ruminant or industrial) which is not in line with WHO's REPLACE plan to eliminate industrially produced TFAs. CCNFSDU43 agreed to not take up the new proposal in the absence of Member support, which is in line with IDF's position.

## Codex Committee on Methods of Analysis and Sampling

The CCMAS is the Codex Committee that reviews and endorses recommendations for methods of analysis and sampling to verify provisions included in Codex Standards, but also to use to solve a trade dispute in order to obtain equivalent results for comparison.

Recently, the CCMAS engaged in reviewing its main standard (CXS 234) which list all methods recommended per commodity. Given the active and regular participation of IDF and ISO to update the reference to their standards, the commodity for milk and milk products was first to go through the exercise. This exercise has allowed for clarification and led to discussion on a few topics.

One of these topics is the determination of moisture in dried milk and dried milks products.

The moisture content of dried milk and dried milk products is one of the predominant factors determining their keeping quality. The [ISO 5537|IDF 26](#) (IDF & ISO, 2023) standard recently published serves as the reference method for the determination of the moisture content in all types of dried milk. The revised standard includes validation data for extended matrices application, such as infant formula and dairy permeates powders. This standard is referenced under Codex (CXS 234) to verify the moisture and other parameters from 4 Codex standards for milk products.

For this method, based on vacuum oven with air flow to control the humidity, several delegations raised concerns during CCMAS sessions with the applicability and difficulties to get the equipment and conduct the necessary calibration.

IDF/ISO have conducted an additional validation study to demonstrate the validation of the method for dried products in addition to dried milk ([see Bulletin of the IDF n° 524/2023](#)).

An evaluation of the development and endorsement process with [ISO 5537 | IDF 26](#) learns that the favourable performance is well underpinned with results from comparisons against other methods., thanks to multi-lab validation data on skimmed milk powder and whole milk powder. This can be confirmed with more recent results in proficiency testing



with these and other dried milk products. IDF and ISO revised the initial method because it was providing unreliable results due to the ambient humidity.

CCMAS has recently agreed to keep the [ISO 5537 | IDF 26](#) as Codex Type I method for checking compliance with existing Codex provisions on the moisture content in dried milk products but has agreed to add the older method (normal oven) as an alternative method if needed. Discussions are still on the way for dairy permeates powders and whey powders.

The Codex Committee on Methods of Analysis and Sampling (CCMAS) held its 42nd session from 12-16 June in Budapest (Hungary). IDF was represented by Aurélie Dubois (IDF), Philippe Trossat (FR), Richard Johnson (NZ) and Anabel Mulet Cabero (IDF).

### Codex Committee on Food Additives (CCFA)

CCFA is committed to progress the Codex General Standard for Food Additives (GSFA). This commitment impacts the food additives in the Codex dairy standards and in dairy categories of the GSFA by possibly adding, deleting or modifying the acceptable levels of various food additives.

The Codex Committee on Food Additives (CCFA) held its 53rd session from 27 -31 March in Hong Kong (China). IDF was represented by Christian Bruun Kastrup (DK), Yoshinori Komatsu (JP) and Aurélie Dubois (IDF).

Many issues were relevant for dairy during the 2023 session: alignment of food additives provisions from dairy standards and more than 100 provisions for colours, sweeteners and others in all dairy categories under discussion to ensure justified use and fair practices of safe dairy products.

CCFA agreed to move forward for adoption by the Codex Alimentarius Commission the alignment of food additives provisions for the following 7 dairy standards:

- ▶ [CXS 207-1999 - Milk Powders and Cream Powder,](#)
- ▶ [CXS 243-2003 Fermented Milks,](#)
- ▶ [CXS 253-2006 Dairy Fat Spreads,](#)
- ▶ [CXS 262-2006 Mozzarella,](#)

- ▶ [CXS 281-1971 – Evaporated Milks,](#)
- ▶ [CXS 282-1971 - Sweetened Condensed Milks,](#)
- ▶ [CXS 288-1976 - Cream and Prepared Creams,](#)
- ▶ [CXS 290-1995 Edible Casein Products and](#)
- ▶ [CXS 331-2017 Dairy Permeates Powders.](#)

However, two standards will require further work: Creams and Prepared Creams (CXS 288) and Fermented milks (CXS 243), due to the complexity of the provisions.

Based on preparatory work undergone in IDF the past years, the CCFA 2019 and 2021 have completed the alignment for 22 dairy standards (13 standards for Ripened Cheeses, CXS 208-1999 – Cheeses in Brine, CXS 221-2001 Unripened Cheeses, CXS 250-2006 – Blend of Evaporated Skimmed Milk and Vegetable Fat, CXS 251-2006 – Blend of Skimmed Milk and Vegetable Fat in Powdered Form, CXS 252-2006 – Blend of Sweetened Condensed Skimmed Milk and Vegetable Fat, CXS 273-1968 Cottage Cheese, CXS 275-1973 Cream Cheese, CXS 278-1978 Extra Hard Grating Cheese and CXS 283-1978 General Standard for Cheese) and has acknowledged the support from IDF.

CCFA 2023 also completed the consideration of colours and sweeteners in the dairy categories, which was delayed due to the extensive use of the note 161, deferring to national legislation. CCFA agreed that the use of this note was against the principle of the GSFA and therefore compromise and consensus have been found to agree on allowance of these additives in various food products.

### Joint work with ISO/TC 34/SC 5 for standards for methods of analysis and sampling for milk and milk products

For the last 60 years, and on the request from Codex for harmonisation, IDF has also worked with ISO to develop IDF/ISO joint standards of quality for the dairy sector. These standards are developed by the 6<sup>th</sup> analytical IDF Standing Committees jointly with the ISO committee for

Milk and Milk products (ISO/TC34/SC5). It is a unique situation in food standardization, that fully optimizes the benefits from the expertise in IDF and the standardisation process and recognition from ISO. In effect, it is a fundamental work fully aligned with the four pillars of IDF: Standards, Safety and Quality, Nutrition and Health, and Sustainability.

It also fits under most of the nine Strategic Goals of the IDF Strategic Work Plan 2022-2025, in particular those which aim at delivering benefits for the dairy sector by working with Intergovernmental organizations (SG1) and non-governmental organizations (SG2), as well as those promoting and advocating food safety and quality (SG6), and SG9.

As part of this work, IDF and ISO organise the 'Analytical Week', an annual event. Organised under the aegis of the IDF and ISO/TC 34/SC 5 on milk and milk products, the analytical week provides the facility for dairy laboratory managers, dairy scientists and analytical professionals to network and exchange ideas on the latest developments in analytical solutions, progress the development of joint IDF/ISO Standards and launch of new initiatives.

During the 2022 – 2023 period, IDF and ISO have published new or revised standards on moisture, fat, sensory analysis, amino acids, alkaline phosphatase among others.

#### — IDF/ISO Standard for sensory analysis of milk and milk products

The purpose of the ISO 22935 | IDF 99 series (parts 1, 2 and 3) is to give guidance on methodology for sensory analysis and the use of a common nomenclature of terms for milk and milk products. This document specifies recommended methods for the sensory evaluation of specific milk and milk products. It specifies criteria for sampling, preparation of samples and the assessment of samples.

#### — [ISO 4214 | IDF 254: 2022 - Milk and milk products - Determination of amino acids in infant and adult / paediatric nutritional formulas and dairy products](#)

This document specifies a method for the quantitative determination of total amino acids. It specifies a method for the determination, in one single analysis of the following amino acids: alanine, arginine, aspartic acid (combined with asparagine), cystine (dimer of cysteine, combined

with cysteine), glutamic acid (combined with glutamine), glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tyrosine and valine. This method does not apply to the determination of tryptophan.

This method is applicable to infant and adult/paediatric nutritional formulas, dairy products and other matrices such as cereals. It was validated in infant formulas (milk- and soy-based, including partially hydrolysed and elemental products), toddler formula, adult nutritional powder, UHT skimmed milk, whey powder, sodium caseinate, whole milk powder, bran pet food, dry pet food and breakfast cereal.

This document was prepared by the IDF Standing Committee on Analytical Methods for Composition and ISO Technical Committee ISO/TC 34, Food products, Subcommittee SC 5, Milk and milk products, in collaboration with AOAC INTERNATIONAL and ISO/TC 34, Food products, Subcommittee SC 4, Cereals and pulses. It is being published jointly by ISO and IDF, and separately by AOAC INTERNATIONAL, and is an excellent example of broad international collaboration at country and organisation level for the benefit of all.

Besides the joint programme between IDF and ISO for standardized methods for milk and milk products, both organisations collaborate with a number of other international governmental and non-governmental organisations for the development of standards. For example, with AOAC International, for which there is an extensive collaboration with their Stakeholders Panel on Infant Formula and Adults Nutritionals. The aim is to join efforts, avoid duplication and divergence by developing jointly standards methods, a few of which are then submitted to Codex to verify provisions in Codex Standard for Infant Formula and Dairy products.

## ISO working group on plant-based foods

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 dairy terms. There are currently different views on whether to include animal-derived ingredients as part of the concepts defined in the proposed standard.

## B. SAFETY AND QUALITY

### Provision of experts' guidance and experience to the global dairy sector to ensure safe dairy products

Global cooperation is crucial in addressing the pressing issue of food safety. IDF actively collaborates to protect and enhance the transparency and reliability of the dairy supply chain. Our primary objective is to ensure the safety and quality of milk and dairy products, thereby instilling consumer confidence in the food they consume. The IDF plays a vital role in sharing knowledge and promoting best practices, striving for improved outcomes.

With continuous advancements in testing and monitoring techniques, alongside dedicated research and publications, the IDF addresses critical concerns such as residues and contaminants, pathogens and spoilage organisms, antimicrobial resistance, the impact of zoonotic diseases, pasteurization methods, and emerging hazard control measures. These collective efforts effectively safeguard and reinforce the integrity of dairy production on a global scale.

### Dairy relevant work from the Codex Committee on Food Hygiene: IDF co-lead on work on water reuse

Water is used for a wide range of activities in dairy operations, and the sector consumes a substantial volume of potable water for production processes, cleaning and disinfection. Other activities may also result in a high need of water, per example for chilling and steam production. At primary production the availability of water fit-for-drinking by the animals has a direct impact on animal health,

as well as the amount, quality and safety of the milk being produced.

Milk consists of 80 to 85% of (potable) water and this water (from milk) may become available during certain processes (e.g. concentration and drying of dairy products). The milk therefore provides an additional important source of water for dairy manufacturing plants. The reuse of such milk water and water used during normal operations in dairy manufacturing plants provides opportunity for reductions in the need for water from external sources, hence an important tool to address water scarcity and reduce the stress of available water in certain parts of the world or under certain environmental circumstances.

Milk and dairy products are an important and sometimes essential source of food in many parts of the world and represents a significant part of the global food trade. Milk and dairy products might be contaminated by a number of microbiological hazards, such as *Listeria monocytogenes*, *Campylobacter* and Shiga-toxin producing *Escherichia Coli*. Water may be the initial source of such hazards, or its use in dairy operations may contribute to their distribution and multiplication.

Guidelines on the fit-for-purpose use and reuse of water are essential to ensure the safe consumption of milk and dairy products and address the limited availability of water in parts of the world.

During the 53<sup>rd</sup> Session of the Codex Committee on Food Hygiene (CCFH) held in San Diego (United States of America) between 29 November and 2 December 2022, IDF was represented by Claus Heggum (DK). An Electronic Working Group (EWG) was created to establish guidelines with recommendations for the safe use and reuse of water from the dairy farm to the dairy manufacturing plant. Intended for food business operators and

competent authorities as appropriate, these guidelines include good agricultural and hygiene practices related to the use and reuse of water and provide examples of fit-for-purpose use and reuse of water.

This work will be co-lead for the development of an annex targeted for the reuse of water in dairy production, and the draft will be discussed by CCFH in 2024.

These guidelines will add to a series of Codex texts for trade of safe dairy products:

- Code of Hygienic Practice for Milk and Milk Products (CXC 57-2004),
- General Principles of Food Hygiene: Good Hygiene Practices (GHPs) and the Hazard Analysis and Critical Control Point (HACCP) System (CXC 1-1969),
- Principles and Guidelines for the Conduct of Microbiological Risk Management (MRM) (CXG 63-2007),
- Principles and Guidelines for the Conduct of Microbiological Risk Assessment (CXG 30-1999),
- Guidelines for the validation of food safety control measures (CAC/GL 69 – 2008),
- Principles and Guidelines for the Establishment of Microbiological Criteria in Foods (CXG 21-1997),
- Code of Practice on Food Allergen Management for Food Business Operators (CXC80-2020), and
- General Standard for the Labelling of Prepackaged Foods (CXS 1-1985).

## Codex guidelines on Shiga toxin-producing Escherichia Coli (STEC)

Shiga toxin-producing Escherichia coli (STEC) is a cause of food-borne disease, and it is of importance as infections can result in a wide range of disease symptoms from mild intestinal discomfort to severe conditions.

Although Shiga toxin-producing Escherichia coli (STEC) have been isolated from a variety of food production animals, they are most commonly

associated with ruminants from which we derive meat and milk. Because of the widespread and diverse nature of ruminant-derived food production, coupled with the near ubiquity of STEC worldwide, there is no single definitive solution for controlling STEC that will work alone or in all situations. Instead, the introduction of multiple interventions applied in sequence, as a “multiple-hurdle scheme” at several points throughout the food chain (including processing, transport and handling) will be most effective.

Codex Alimentarius Commission approved new work in July 2019 on development of guidelines to control STEC in beef, raw milk and cheese produced from raw milk, leafy greens and sprouts.

To support the development of these guidelines, an FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA) was held in June 2020 to provide scientific advice on measures for pre- and post-harvest control of STEC in animals and foods of animal origin. The report summarises the review and evaluation of interventions applied for the control of STEC in cattle, raw beef, raw milk and raw milk cheese manufactured from cows’ milk. The report also evaluated available evidence for other small ruminants, swine and other animals. The information is presented from primary production to the end of processing, providing the reader with information on the currently available interventions based on the latest scientific evidence.

At its 53<sup>rd</sup> session in November 2022, the CCFH proposed the ‘Draft Guidelines for the Control of Shiga Toxin-Producing Escherichia coli (STEC) in Raw Beef, Fresh Leafy Vegetables, Raw Milk and Raw Milk Cheeses, and Sprouts’ as well as the Annex I on raw beef and the Annex III on raw milk and raw milk cheeses for adoption at step 5/8 by the Codex Alimentarius Commission in November 2023. IDF has significantly contributed to the content of the dairy annex to ensure its relevance and practicability for the dairy sector.

## Knowledge Platform on Chemical Contaminants – Prevention on the Development of Chlorates in the Dairy Chain

IDF initiated a Knowledge Platform on Chemical

Contaminants to together develop guidance for the dairy sector on 'Proactive Management of Emerging Risks from Farm through Processing'. The process works as follows:

A group of IDF experts identifies and prioritizes a list of chemical contaminants that are or could be of concern for the sector. Once prioritized, a group of subject matter experts is convened to develop a technical paper based on a similar template.

The first paper of the series is on the prevention of chlorate in the dairy chain.

Chlorate ( $\text{ClO}_3^-$ ) is a significant degradation product of chlorine-based disinfectants. It arises largely from chlorine-based products that are widely used in water disinfection processes designed to produce microbiologically safe potable water. Chlorate also arises from the use of such products for cleaning and disinfection of milk- and food-contact surfaces along the manufacturing chain from farm to table.

Chlorate levels may be especially elevated where water is used as an ingredient with subsequent evaporation or concentration steps, or where processing aids such as salts and strong bases are used, e.g., whey powders and milk protein concentrates.

IDF developed a [factsheet](#) and a Bulletin on the Prevention of the development of chlorates in the dairy chain in order to provide guidance on this matter.

More topics to follow address other disinfectants such as organic chlorines and other substances. The group also provides briefing sheets to IDF members on topics not specific to dairy as information material in a proactive manner.

## IDF Practical considerations of sampling when monitoring dairy food production

In-process sampling in dairy production and processing is critical for sanitation or hygiene management, process monitoring, and microbiological risk management. Quality Managers use sampling plan results to check if microbiological specifications, either internally defined or to meet a regulatory standard, are met.

However, practical guidance for in-process product sampling detailing food microbiological analytical methods is not a focus per se in the numerous International Standards Organization (ISO) standards. General guidelines are provided for milk and milk products (ISO 707 | IDF 50:2008) and primary food-animal production (ISO 13307:2013). Some general guidance for other foods is given in ISO/TS 17728:2015- Sampling Techniques for Microbiological Analysis of Food and Feed Samples. Unfortunately, this standard is not specific enough to provide clearly defined processes and responsibilities for taking samples along the process chain. There is a focus on finished product testing and, more recently, environmental sampling (ISO 18593:2018), but there is not enough relevant guidance for in-process sampling to understand in-process risks and provide guidance on where and how to take appropriate in-process samples.

The Bulletin of the IDF n°525 on Practical considerations of sampling when monitoring dairy food production (and add link when available) supports dairy plants and farms in generating accurate and representative in-process microbiological sample data.

## IDF / ISO standards on analytical methods for the determination of alkaline phosphatase

The determination of the alkaline phosphatase (ALP) activity is used to verify the process of conventional pasteurization of (bovine) dairy products. Pasteurisation inactivates/denatures the ALP that is naturally present in raw milk. The ALP test was initially established based on the finding that ALP in milk had similar inactivation kinetics to the inactivation of the pathogenic bacteria *Coxiella burnetii* and *M. tuberculosis*. Therefore, when ALP is inactivated to a legally established level, it serves as a marker indicating that the milk has been adequately treated.

IDF and ISO are currently revising or developing new standardized method for the determination of alkaline phosphatase in various products:

ISO/TS 4985 | IDF/RM 255: 2023 - Milk and milk products — [Determination of alkaline phosphatase activity — Fluorimetric microplate method \(open method\)](#) Parts 1 & 2 of ISO 11816 | IDF

155 - Milk and milk products – Determination of alkaline phosphatase activity – Fluorimetric microplate method.

IDF is finalizing a factsheet to clarify which methods to use for dairy products and to address the need for methods to determine ALP activity that are rapid, easy-to-use, can distinguish microbial from bovine milk ALP, and that are effective for a diversity of dairy samples.

## IDF / ISO standards on analytical methods for microbiology

IDF and ISO share a joint programme for standards for methods of analysis and sampling for milk and milk products. This programme includes dairy specific standards for microbiology, such as the quantification of lactic acid bacteria

by flow cytometry in dairy products, as well as a harmonisation programme with the ISO committee on microbiology of food. The aim of this programme is to ensure horizontal standards, that are applicable to all foods are also applicable to dairy products, and if they are not - to develop or revise existing standards specific to our sector, these are called vertical standards.

The scope of this work includes the development of standards for beneficial microorganisms. The current work of this is the revision of the standards for the enumeration of bifidobacterial in milk products ([ISO 29981|IDF 220](#)) or characteristic microorganisms of yoghurt ([ISO 7889|IDF 117](#)), pathogens (Revision of [ISO/TS 11059 | IDF/RM 225](#) 'Milk and milk products – Method for the enumeration of *Pseudomonas spp.*'), and other spoilage organisms that can affect the quality of milk products (such as spore counting of butyric acid forming clostridia – cheese spoiling).

## C. NUTRITION AND HEALTH

Nutrition and Health is one of the pillars of IDF's programme of work, and the period 2022 – 2023 was very active for this field. Some of the milestones were the 3rd IDF Nutrition and Health Symposium and the work on dairy matrix, which included reviewing the latest science and spreading the information with the launch of an [IDF factsheet on the dairy matrix](#), IDF's support to key FAO reports such as the '[FAO report on integration of environment and nutrition in life cycle assessment of food items](#)' and "[Contribution of terrestrial animal source food to healthy diets for improved nutrition and health outcomes](#)". It is also worth mentioning the work done on dietary guidelines and school milk programmes, which includes an IDF position paper on supporting the nutritional needs of children "[The important role of milk and dairy foods in school meal programmes](#)", and the upcoming launch of the new survey.

**An IDF factsheet on the importance of the dairy matrix in the evaluation of the nutritional quality and health effects was released during the Symposium.**

This [new factsheet](#) highlights the importance of considering the role of whole foods in nutrition and health.

"The focus of nutrition research has recently started to shift to examine the association of whole foods and dietary patterns with health" the authors explain. "This includes recognizing not only that foods have numerous nutritional attributes but also that the effect of one attribute is likely dependent on the combination of nutritional components contained in the whole food and the resulting structure" they state.

Dairy foods have shown to be a good example of this concept. This IDF factsheet promotes the definitions of the dairy matrix and dairy matrix health effects to be further considered with a broader perspective from research to policies.

On April 25, 2023, IDF's Director General, Ms. Caroline Emond, joined a prestigious panel at the FAO in Rome for the launch of the first scientific review of the document "[Contribution on animal source food to healthy diets for improved nutrition and health outcomes](#)", requested by the member countries of the Committee on

#### Agriculture – Subcommittee on Livestock.

Ms. Emond shared the panel with the FAO Deputy Director, Maria Helena Semedo, Her Excellency Ambassador, Carla Barroso Carneiro from Brazil, the FAO Chief Economist, Maximo Torero, the FAO Director of Animal Production and Health Division, Mr Thanawat Tiensin, the Director of the Department of Nutrition for Health at the World Health Organization, Dr Francesco Branca, and FAO Director Food and Nutrition Division, Dr Lynnette Neufeld.

On behalf of her colleagues from the global livestock associations (International Meat Secretariat, International Poultry Council and International Feed Industry Federation), and in the name of IDF, she commended the Secretariat of the Committee on Agriculture – Subcommittee on Livestock the publication of this important document, since this comprehensive science and evidence-based assessment of the contribution

of livestock to healthy diets for improved nutrition and health will make significant impacts on the global understanding of the benefits of animal foods. IDF shared input during the consultations.

Ms. Emond also expressed IDF's satisfaction that the document clearly reaffirms livestock's critical role in a healthy diet, for the document reminds us of the important nutritional role of animal foods and the need to emphasize their unique contribution to food and nutrition security.

She added: "This document is important because it provides strong references of the latest evidence of terrestrial animal source foods and their role in nutrition and health, particularly depending on factors such as lifecycle (age), gender, diet and lifestyle context. We believe that it should be used for nutrition education and referenced when setting nutrition policies, critically important for developed and developing countries alike."

## **IDF organised its third annual IDF Nutrition and Health Symposium with focus on the dairy matrix**

IDF organised on 3 May its third annual ‘Nutrition and Health Symposium - Beyond nutrients: the health effects of whole foods’. The symposium (which attracted 1001 registrants and 396 participants) featured key presentations from world renowned experts on dairy’s impact on non-communicable diseases. Speakers explored the impact of the dairy matrix on colorectal cancer, heart and bone health, as well as type 2 diabetes. The presentations were followed by an interactive panel discussion led by the moderators Professor Corinna Walsh from South Africa and Dr Andrea Josse from Canada.

After opening words from IDF President, Piercristiano Brazzale, and Director General, Ms. Caroline Emond, Dr Nancy Aburto, Deputy Director, Food and Nutrition Division at FAO, addressed her view on nutrition as “a world where all people are eating healthy diets form efficient, inclusive, resilient, and sustainable agrifood systems”.

“When it comes to what we eat, the sum of the parts can be greater than the whole” she added. “Symposia like the one today and the evidence that will be shared, discussed, and debated are vital to help inform the work we do at FAO. We rely on robust scientific evidence like what will be shared today as an important contribution to our efforts”, she concluded.

Hannah Holscher, Associate Professor of Nutrition at the University of Illinois at Urbana Champaign, focused her presentation on how food matrixes affect nutrient bioaccessibility “A growing body of research is demonstrating plausible biological mechanisms associated with matrix-specific health effects” she said.

“The role of fermented dairy consumption on health provides evidence for the food matrix effect in dairy foods, such as bioactive peptides that contribute to anti-hypertensive effects and the presence of  $\beta$ -galactosidase contributing to lactose digestion” Professor Holscher added.

The growing evidence about the relation between dairy, gut microbiota and cancer prevention was addressed by University of Bologna Associate Professor, Luigi Ricciardiello. Professor Ricciardiello’s presentation particularly focused on dairy’s preventive effects on colorectal cancer “There is strong indication that fermented milk products act through modulation of the gut microbiota, which is critical in reducing inflammation and the risk of developing colorectal cancer” he stated.

Next speaker, Emma Feeney, from University College Dublin, studied the relationship between cheese consumption and cholesterol, and ultimately stroke risks “Cheese is associated with a reduced risk of stroke, and it was slightly protective for CHD. The biggest reductions in total and LDL cholesterol are seen when people consumed fat from a whole food such as within the matrix of cheese” she explained.

Like previous years, the benefits of consuming dairy along the whole life course were also mentioned at this year’s symposium. An interesting view of the benefits of calcium and protein in adolescents and aged people were provided by University of Melbourne’s expert Dr Sandra Iuliano “Dairy foods are an important source of calcium and protein for older adults in care homes, that reduces fractures, falls, weight loss and malnutrition risk” she said. “Benefits are likely in other individuals with similar fracture risk and levels of calcium and protein inadequacies”, she added.

Canadian expert from Laval University, Professor André Marette, analysed the “Mechanisms underlying the beneficial effects of yogurt intake on obesity, type 2 diabetes and fatty liver disease”.

“There is growing literature suggesting that yogurt intake might reduce type 2 diabetes risk through its nutrient-rich profile and or by the presence of specific compounds derived from milk fermentation”, he stated.



## D. SUSTAINABILITY

During the 2022 – 2023 period, IDF continued to enhance its Science based contribution to sustainability and climate action.

### Understanding Methane

As methane became the focus of global climate change and environmental meetings, as well as public conversations around livestock and dairy, IDF developed a series of technical and communication tools to explain this complex technical topic. In December 2022, IDF published two blogs on the matter, one by IDF Director General, Caroline Emond, “Sustainable animal foods are necessary to the world”, and one by IDF experts, Sanne Dekker and Anna Flysjö, “Dairy’s commitments to Climate Action and the methodologies it has developed to comply”.

Also, on May 17, 2023, IDF organized the webinar “Understanding methane: science, policy, finance and actions”. What do we really know about methane? Do we understand its true nature, its natural cycle and its actual global warming potential? These were some of the questions that the webinar addressed to put the conversation around methane in context.

### Heat stress

Heat stress was a major topic within IDF’s programme of work on Animal Health and Welfare, since it is currently the cause of the loss of billions of litres of milk annually in almost all world regions, causing large economic losses to the global dairy sector. It is also a great source of concern since the issue is expected to worsen in the coming years due to global warming, and the increase in frequency of extreme events like heat waves with extremely high temperatures.

The IDF Heat Stress Action Team gathers scientist from different countries that work with, and are specialized in heat stress, members are from New

Zealand, India, Israel, Italy, Germany, Pakistan, Sweden, Denmark, Nigeria, USA and Brazil. They started working almost two years ago, and they virtually met almost every two months. The tasks are divided between its members, each one contributing with their strong professional skills and expertise.

The main outcomes will be presented at the IDF World Dairy Summit 2023 in Chicago.

### Farmers roundtables

Three roundtable webinars were organized this year (2023), one on 11 April, one on 4 May and a third one on 22 August. The first one of the year focused on greenhouse gas activities that farmers are doing to reduce their greenhouse gas activities. Two great speakers participated. Prof. John Gilliland OBE from Ireland, who was able to give us some theory behind methane and emissions, as well as Sandra Jefford, who explained the practical implications of what is being done by farmers that he’s involved with to reduce their emissions. The second speaker was a dairy farmer from Australia who has profiled their carbon emissions and is using renewable energy and mixed plant species to reduce emissions. Approximately 130 people registered for the webinar, and 50+ people attended.

The second webinar focused on skills and capability. Two excellent speakers, Joanna Shipp and Charles Krause, from the US talked about what they’re doing to maintain their workforce. The third covered the use of technology on dairy farms and featured Andrew Aldridge and Professor Joe Jacobs. Farmers attending the IDF World Dairy Summit 2023 will enjoy an in person Dairy Farmer Round Table. They will get to know other farmers and discuss key topics such as labor, climate change, sustainability and opportunities and challenges for new farms.

## A new IDF Global Carbon Footprint Methodology for the Dairy Sector

In September 2022, IDF released an update of the [IDF Global Carbon Footprint](#) methodology for the dairy sector that marked a significant step toward achieving greenhouse gas (GHG) emission reduction goals. This comprehensive guideline empowers the dairy industry to measure its emissions accurately and implement targeted actions, ultimately contributing to climate action and the UN Sustainable Development Goals.

The revised methodology, presented during a special session at the IDF World Dairy Summit 2022 in Delhi, India, aimed to establish an LCA Global Standard that assists the dairy industry in reducing GHG emissions throughout its value chains.

Since the signing of the Dairy Declaration of Rotterdam in 2016 by IDF and FAO, there has been a strong commitment to mitigate climate change. Having accurate tools to calculate emissions is crucial in this endeavour. As stated by IDF Director General, Caroline Emond, in the bulletin's foreword "We can't reduce what we cannot measure." Thus, the IDF Global Carbon Footprint standard for the dairy industry plays a pivotal role in understanding emission sources and profiles worldwide, enabling targeted actions towards achieving net-zero emissions.

The revised methodology has been developed by the IDF LCA Action Team, comprising 50 experts

from 17 countries. This team has reviewed the latest scientific advancements and best practices to ensure the methodology's robustness. Recognizing the evolving nature of science, IDF emphasizes its commitment to continue working on various LCA-related topics.

The update incorporates changes in key areas, supported by robust scientific evidence, to ensure consistency and comparability with the previous version and future revisions. The bulletin highlights the evolution of the dairy sector and practices, reflecting the need for up-to-date guidelines.

The IDF's LCA methodology plays a fundamental role in quantifying both the dairy sector's impacts and progress. It also fosters alignment around GHG emissions terminology, facilitating the sharing of mitigation strategies and learnings within the sector.

IDF also released a [Bulletin with Carbon Sequestration Guidelines](#).

In addition to the updated LCA methodology, IDF also released a separate bulletin providing guidelines for calculating carbon sequestration in cattle production systems. Developed through collaborative efforts between dairy and beef sector organizations over four years, this methodology quantifies carbon removal and encourages farmers to implement practices that promote carbon sequestration, supporting climate change mitigation.



Republic of Rwanda  
Ministry of Agriculture  
and Animal Resources

**RAB**

Our Milk Our Health Our Future

THE WORLD "RAISED A GLASS" TO WORLD MILK DAY IN 2001,  
RWANDA FILLED A GLASS WITH MILK TO FEED HER CHILDREN  
"ENJOY DAIRY"



# 7

## IDF's continuous growth

### IDF Welcomes New Members and Expands Expertise

**IDF expanded its family, with the addition of new members and a growing pool of experts by welcoming Rwanda as a Full Member and the promotion of Zimbabwe from associate to Full Membership status.**

Rwanda's accession to Full Membership status within the IDF is a pivotal moment for both the country and the federation. It underscores Rwanda's dedication to promoting dairy excellence and sustainable practices within its borders and beyond. With a growing dairy industry and a commitment to quality standards, Rwanda's Full Membership in the IDF paves the way for enhanced cooperation, knowledge exchange, and technical assistance. This partnership will undoubtedly strengthen Rwanda's dairy sector and contribute to the global dairy community's collective wisdom.

Zimbabwe's promotion from an Associate Member to a Full Member of the IDF is a testament to the nation's enduring commitment to dairy excellence. As a Full Member, Zimbabwe gains increased access to the wealth of knowledge and resources offered by the IDF. This promotion not only recognizes Zimbabwe's contributions but also positions the country to play a more substantial role in shaping the future of the global dairy industry.

#### School Milk Knowledge Hub

School meal programmes are a significant safety net for children. As it is one of the primary means for children to have access to healthy meals, the programmes help combat poverty and malnutrition. Their impact on education is seen in increased engagement from students. For over 30 years IDF has been engaging on this topic, collecting and sharing information from the view of implementers of these programs

The UN Food Systems Summit (UNFSS), convened by the UN Secretary-General in September 2021, resulted in a few concrete actions, including the establishment of the School Meals Coalition, which aims to ensure, through school meal programs, that 'every child has the opportunity to receive a healthy meal every day in school by 2030'. School Milk Programmes are a type of school meal programme which promotes the distribution of milk and dairy products in schools.

IDF understands the role that milk and dairy foods play in supporting the health of children worldwide and shares information through the [IDF School Milk Knowledge Hub](#) and School Milk Bulletin. In February 2023, a new IDF position paper on the importance of milk and dairy foods in schools was published, highlighting the role milk and dairy play in school meals.

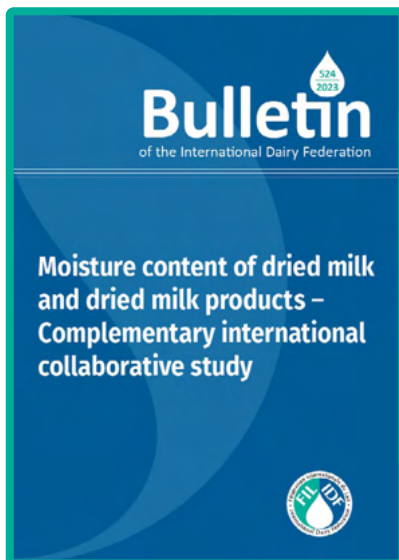
The hub is also the place where case studies are featured to provide further insights into the implementation of these programs as well as for players in the field to be inspired.

Finally, leveraging our vast network IDF is uniquely placed to get insights on how these programs are implemented and to better understand the challenges in reaching children around the world with nutritious dairy products. Therefore, we will conduct our survey at the end of 2023, with the expected results to be launched during World School Milk Day in 2024.

# 8

## Publications and contributions to international organizations

### Bulletins

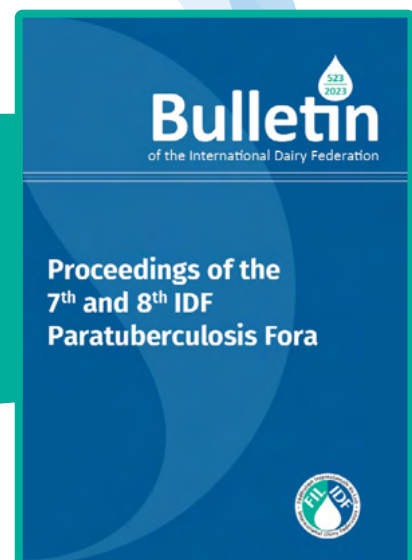


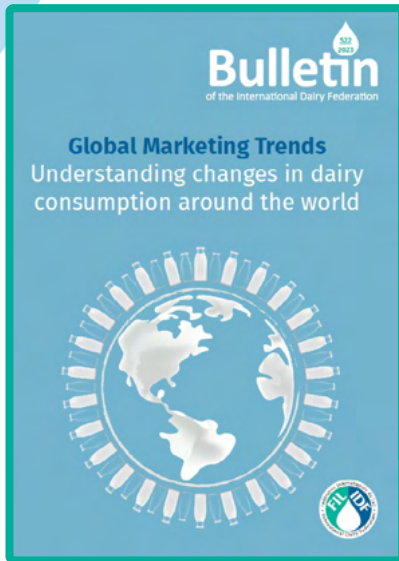
#### Bulletin of the IDF N° 524/2023:

Moisture content of dried milk and dried milk products – Complementary international collaborative study

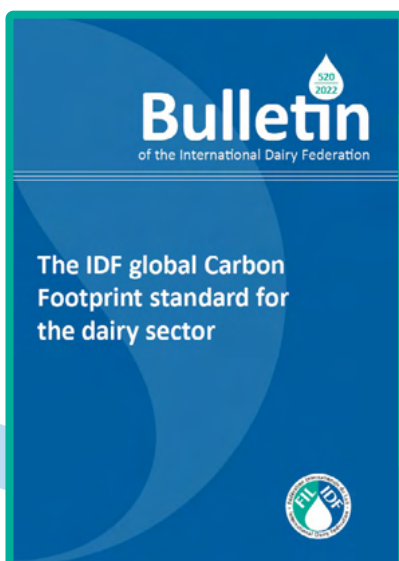
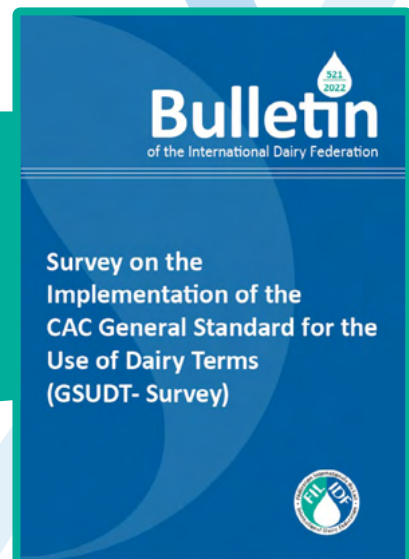
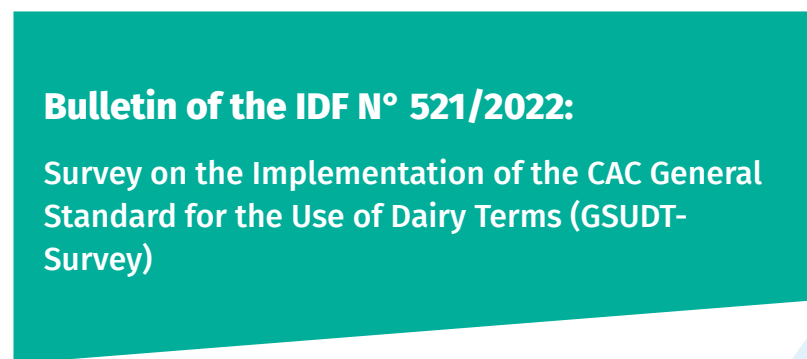
#### Bulletin of the IDF N° 523/2023:

Proceedings of the 7<sup>th</sup> and 8<sup>th</sup> IDF Paratuberculosis Fora





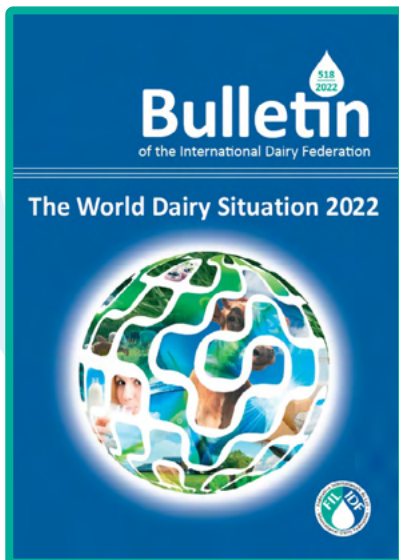
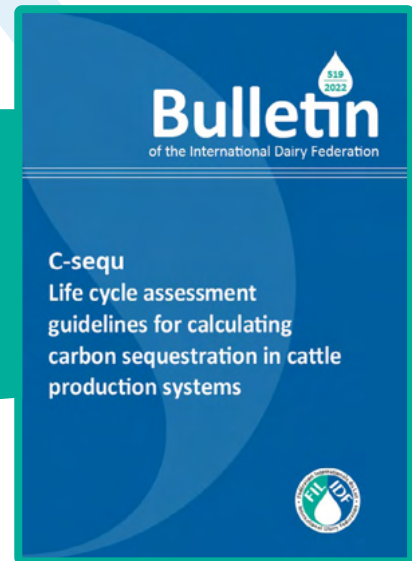
**Bulletin of the IDF N° 522/2023:**  
IDF Global Marketing Trends Report



**Bulletin of the IDF N° 520/2022:**  
The IDF global Carbon Footprint standard for the dairy sector

**Bulletin of the IDF N° 519/2022:**

C-Sequ LCA guidelines for calculating carbon sequestration in cattle production systems



**Bulletin of the IDF N° 518/2022:**

The World Dairy Situation Report 2022

**IDF Animal Health Report N° 16**



## Factsheets

**Factsheet of the IDF N° 28/2023**  
August 2023

**Prevention of the development of chlorate in the dairy chain**

**Key messages:** Scientific evidence, industry capability through networking, shared evidence.

**Background**

Chlorate (ClO<sub>3</sub><sup>-</sup>) is a significant degradation product of chlorine-based disinfectants. It arises largely from chlorate-based products that are widely used in water disinfection processes designed to produce microbiologically safe potable water. Chlorate also arises from the use of such products for cleaning and disinfection of milk and food contact surfaces along the manufacturing chain from farm to table.

**Occurrence in milk and dairy products**

Where appropriate prevention measures are not followed, many food types, including dairy products and dairy ingredients, may be considered as dietary contributors. Chlorate levels may be especially elevated where municipal chlorinated water is used as an ingredient with subsequent inorganic or organochlorine residues. Chlorate also arises from the use of such products when whey powders and milk protein concentrates are used, e.g., whey powders and milk protein concentrates.

**Toxicity, exposure and human health risk**

Perchlorate (ClO<sub>4</sub><sup>-</sup>) and, to a lesser extent, chlorate can both have an adverse effect on iodine uptake by the thyroid gland, causing reduced production of thyroid hormones and hypothyroidism. Iodine deficiency can lead to irreversible neurodevelopmental toxicity conditions at the early stages of human life. Population groups most vulnerable to iodine deficiency include pregnant women, infants, small children, and people with deficient iodine intake or a pre-existing thyroid disease. Scientific opinions from the European Food Safety Authority (EFSA) and the Joint FAO/WHO Expert Committee for Food Additives (JECFA) adopt slightly different risk assessment methodologies and have drawn different conclusions. JECFA has noted that the dietary exposure to chlorate is compatible with the exposure permitted within the WHO drinking water guidelines and set a tolerable daily intake (TDI) of 10 µg/kg body weight based on EFSA has estimated the view that dietary exposure of infants and toddlers to chlorate exceeds stated food safety guidance values (FSV) (µg/kg body weight). However, applying the newly established FSV guidance on the use of the French Food Safety (BNC) modeling, Kaber et al. (2021) recently derived a TDI of 10 µg/kg body weight for chlorate. Also in 2022, ANSES – the French Agency for Food, Environmental and Occupational Health & Safety – conducted an assessment and established an updated TDI for perchlorate of 1.5 µg/kg body weight (ANSES, 2022). This TDI equates to 15 µg/kg body weight for chlorate.

www.idf.org

## Factsheet of the IDF N° 28/2023: Prevention of the development of chlorate in the dairy chain

## Factsheet of the IDF N° 27/2023: The importance of the dairy matrix in the evaluation of the nutritional quality and health effects

**Factsheet of the IDF N° 27/2023**

**Key messages:** Scientific evidence, industry capability through networking, shared evidence.

**The importance of the dairy matrix in the evaluation of the nutritional quality and health effects**

**Introduction**

Nutrition research has traditionally focused on identifying the specific associations through which single nutrients impact health outcomes – for example, calcium and bone health, protein and skeletal muscle and, saturated fat and heart disease. The approach to studying individual nutrients in relation to health has been described as a ‘reductionist’ perspective (Mozaffarian et al., 2013). However, the field of nutrition research has shifted to examine the association of whole foods and dietary patterns with health (Mozaffarian et al., 2018). This includes recognizing not only that foods have numerous nutritional attributes but also that the effect of one attribute is being dependent on the combination of nutritional components contained in the whole food and the resulting structure. This focus shift is also based on the fact that people consume nutrients as part of a food, and not in isolation. Moreover, foods are usually also eaten as part of a meal. Based on this emerging insight, the following definitions of dairy matrix and dairy matrix health effects are proposed:

- Dairy matrix describes the unique structure of a dairy food, its components (e.g. nutrients and non-nutrients) and how they interact.
- Dairy matrix health effects refer to the impact of the whole dairy food on health that extends beyond its individual components (e.g. nutrients and non-nutrients).

**The dairy matrix**

Dairy foods are unique with regard to their nutrient content and structure, both of which differ across the dairy food category. Dairy foods are excellent sources of calcium, vitamins B2 and B12, high-quality protein, lactin, and are rich in magnesium, potassium, and various fatty acids (FAO, 2013). Milk is an emulsion, which consists of fat suspended in an aqueous phase containing proteins and numerous vitamins and minerals. The composition and structure of cheese and yogurt can vary depending on the type of milk used and the method of production. The physical structure of dairy products varies from the solid matrix of cheese, to the gel-like structure of yogurt and liquid milk. The unique structure of a dairy food, its components (e.g. nutrients and non-nutrients) and how they interact, is defined as dairy matrix.

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**Factsheet of the IDF N° 26/2023**  
March 2022

**Dairy in the nutritional empowerment of women**

**Key messages:** Scientific evidence, industry capability through networking, shared evidence.

**Introduction**

The empowerment of women – their ability to make life choices (Philly, 2016) – is central to the United Nations sustainable development goal (SDG) 5: Achieve gender equality and empower all women and girls. It includes matters affecting women's specific health and is hence also linked to SDG 3 (Promote healthy lives and ensure well-being for all at all ages) and SDG 2 (End hunger, achieve food security and improved nutrition, and promote sustainable agriculture) (Interlink.org/organizational\_actors). Women's nutrition empowerment refers to maternal nutrition (i.e. pregnant and lactating women, and mothers of young children; Heise et al., 2012) as well as to adolescent girls, non-pregnant and non-lactating women of reproductive age, and older women (Fox et al., 2018). Since the decision-making about what food to serve is one of the indicators of women's empowerment (Philly, 2016), the nutrition-related health concerns of women are explicitly part of the holistic approach to achieve SDG 5.

**This fact sheet reviews scientific evidence of women's dairy-related health and nutrition across the life course, and it outlines some potential roles of women's empowerment programmes in these contexts. Systematic reviews are the primary source of information. Malnutrition refers to protein-energy undernutrition, micronutrient deficiencies like vitamins and mineral shortages (also called ‘hidden hunger’), and diet-related non-communicable diseases such as overweight/obesity. These conditions are sometimes collectively labelled the ‘triple burden of malnutrition’, which may co-exist in an individual or within a household, especially in nutritionally insecure low- and middle-income countries (BMJ: Flegal & Henshall, 2018). ‘Hidden’ micronutrient deficiencies are, however, not ‘invisible’ against the backdrop of obesity coupled with poor protein and micronutrient status up to the point of disordered eating (Choung et al., 2021; Kim et al., 2019). Food insecurity tends to be associated with poor dietary intake, including dairy consumption below recommendations, among women (Johnson et al., 2018).**

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## Factsheet of the IDF N° 26/2023: Dairy in the nutritional empowerment of women



## Factsheet of the IDF N° 25/2023: Foodborne Salmonella and dairy products



## Factsheet of the IDF N° 24/ 2023: Management of calves from birth to weaning: Pair Housing of Calves

## IDF Factsheet N° 23/2022: Executive Summary of IDF Country Update – November 2022





## IDF Factsheet N° 22/2022: Enumeration of butyric acid forming (cheese spoiling) clostridia – methodical considerations

## Joint IDF/ISO standards

### ISO/TS 4985 | IDF/RM 255: 2023 - Milk and milk products — Determination of alkaline phosphatase activity — Fluorimetric microplate method



### ISO 5537 | IDF 26: 2023 - Dried milk and dried milk products — Determination of moisture content (reference method)

### ISO 22935-3 | IDF 99-3:

2023 - Milk and milk products — Sensory analysis — Part 3: Method for evaluation of compliance with product specifications for sensory properties by scoring



INTERNATIONAL STANDARD  
ISO 22935-2  
IDF 99-2  
Second edition  
2023-04

Milk and milk products — Sensory analysis —  
Part 2:  
Methods for sensory evaluation  
Lait et produits laitiers — Analyse sensorielle —  
Partie 2: Méthodes pour l'évaluation sensorielle



Reference numbers  
ISO 22935-2:2023/IEC1  
IDF 99-2:2023/IEC1  
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### ISO 22935-2 | IDF 99-2:

2023 - Milk and milk products - Sensory analysis - Part 2: Methods for sensory evaluation



INTERNATIONAL STANDARD  
ISO 22935-1  
IDF 99-1  
Second edition  
2023-04

Milk and milk products — Sensory analysis —  
Part 1:  
Recruitment, selection, training and monitoring of assessors  
Lait et produits laitiers — Analyse sensorielle —  
Partie 1: Recrutement, sélection, entraînement et contrôle des juges



Reference numbers  
ISO 22935-1:2023/IEC1  
IDF 99-1:2023/IEC1  
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### ISO 22935-1 | IDF 99-1:

2023 - Milk and milk products — Sensory analysis — Part 1: Recruitment, selection, training and monitoring of assessors





**ISO/TS 17996 | IDF/RM 205:**  
 2023 Cheese — Determination of rheological properties by uniaxial compression at constant displacement rate

**ISO 23318 | IDF 249:**  
 2022 - Milk, dried milk products and cream — Determination of fat content — Gravimetric method



**ISO 4214 | IDF 254:**  
 2022 - Milk and milk products - Determination of amino acids in infant and adult / paediatric nutritional formulas and dairy products

## ISO 9232 | IDF 146: 2003 / AMD 1:

2023 - Yoghurt - Identification of characteristic microorganisms - Amendment 1: Inclusion of performance testing of culture media and reagents



## Contributions to International Organisations

**IDF position on FAO report on integration of environment and nutrition in life cycle assessment of food items**

**IDF position on supporting the nutritional needs of children:**  
The important role of milk and dairy foods in school meal programmes

**IDF position on WHO study on saturated fat and trans-fat intakes and their replacement with other macronutrients**

**IDF position on WHO Global Report on sodium Intake Reduction**

**IDF submission to WHO on draft Guideline on Fiscal Policies to Promote healthy diets**

**IDF submission to CFS on draft Report on Reducing Inequalities for Food Security and Nutrition**

**IDF submission to CAC on scientific integrity of Codex**

**IDF submission to CCEXEC on standards for milkfat products**

**IDF submissions to CCMAS on new and updated methods of analysis for amino acids, lactose, fat and moisture determination (3)**

**IDF submissions to CCFA on alignment of food additives and General standards for Food additives (10)**

**IDF submissions to CCFL on allergens, environmental labelling, use of technology, e-commerce (8)**

**IDF submissions to CCNFSDU on NRVs, nutritional profiling models and probiotics (3)**

**IDF submission to CCFICS on food fraud (3)**

**IDF submission to CCFH on STEC and water reuse (3)**

**IIDF comments to ISO/TC 34/SC 9 on ISO 15214 mesophilic lactic acid bacteria**

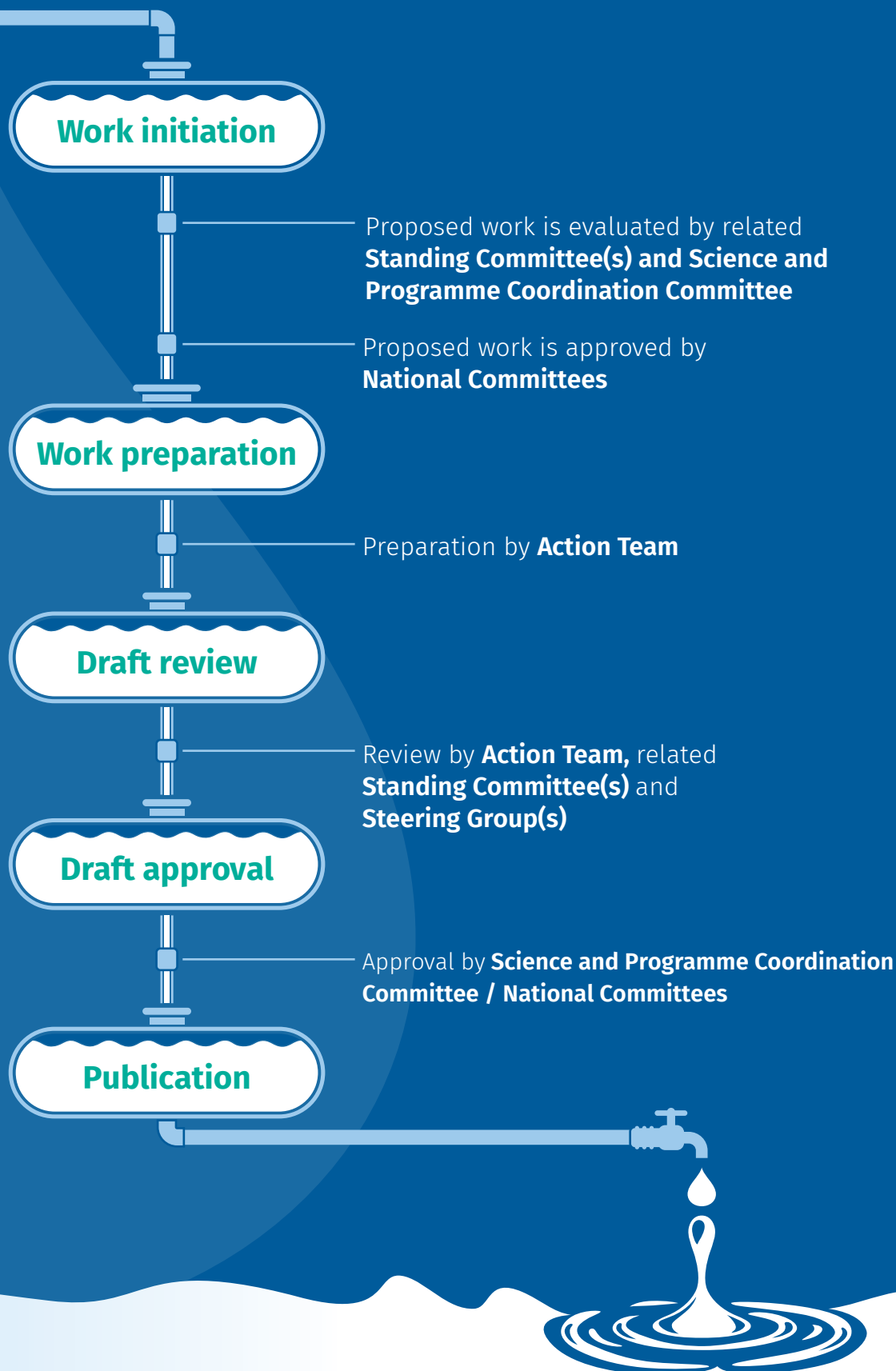
**IDF comments to ISO/TC 207/SC 7 on ISO 14068 on Greenhouse gas management**

**IDF comments to ISO/TC 34/WG 26 on Plant-based food**

## Publications process (introduction)

IDF has a comprehensive, inclusive and scientific publication process, which is not known or well-

understood by some stakeholders. To leverage this important process, IDF has developed a statement about the publication review process that will be added to the inside cover of bulletins and a dedicated [webpage](#) where you can find a diagram of this process.







# 9

## Awards and events

### Awards

The IDF Award, IDF Prize of Excellence, Standing Committee Leader Recognition and Yves Boutonnat International Milk Promotion Trophy, which are the most important acknowledgements that the IDF gives for outstanding contributions to dairy science and promotion, were delivered at the Gala Dinner of the IDF World Dairy Summit 2022 in Delhi India.

#### IDF Award

The IDF Award is a prestigious prize granted to persons having made a significant contribution to dairy on a global level. The IDF Award Committee has decided to hand out two IDF Awards in 2022.

**The first winner** of the IDF Award is Professor Judith Ann Narvhus, from Norway. Professor Judith Narvhus has special expertise in fermented dairy products, and in particular, her research has been focused on microbial metabolism in dairy products. She has led several national research and development projects on traditional fermented products and has made a remarkable contribution both to the national and international dairy fields.

One of her greatest achievements is first and foremost long engagement to develop the academic level of dairy science and technology on the African continent. She has taken up the task of developing dairy science in many African countries (Ethiopia, Tanzania, Uganda, Zimbabwe, South Africa, Malawi), many of these emphasizing women in dairying. The rationale behind this work has been that building up and strengthening university institutions and research in developing countries within food and dairy science will contribute to the development of intellectual resources within these institutions, increase the competent workforce, contribute to developing visionary leaders, increase gender equity, and that will enhance sustainable economic, social and

environmental development in the food and dairy sector of these countries.

**The second winner** of the IDF was Dr Aleksander Surazynski. Dr Surazynski is an internationally known expert who has been through FAO in service in various parts of world including Chile, Colombia, India and Swaziland. His work and expertise have resulted in numerous publications and 21 patents.

He has a PhD in Technical Sciences (Food and Dairy Technology) from Agriculture University in Poznan and his main fields of study are Dairy Chemistry, Dairy Microbiology and Dairy Technology. He was President and Vice President of the Polish National Committee of the International Dairy Federation and a prominent member of IDF SCDST, SCDPE, SCM, and SCSIL. Since 2009, he is a Member of the Scientific Board of the Dairy Industry Innovation Institute.

#### IDF Prize of Excellence

The IDF Prize of Excellence is given as a mark of recognition and appreciation for an outstanding piece of work carried out by an individual or group of individuals, who contribute as volunteers from among the grassroots of IDF, to the IDF Programme of Work in accordance with IDF's purpose and following the five key concepts constituting "SWIFT" as a driver for the further development of IDF. These concepts are Speed, Worldwide visibility, Impact, Focus, and Transparency.

In 2022, the recipient was Mr Nicholas Gardner from the US. Mr Gardner has had a long career working on international food standards and more specifically on issues of strong interest to the international dairy industry. His leadership and engagement are well recognized within the IDF community. In addition to his significant involvement with Codex work, he has been the Deputy Chair of the IDF Standing Committee on Standard of Identity and Labelling since 2020 and also leads IDF's new work item (NWI) within



the SCSIL's Action Team on Environmental Labelling.

### Standing Committee Leader Recognition

The Standing Committee Leader Recognition highlights exemplary achievements among the committees' leadership and rewards exceptionally good handling of the SC/TF processes: keeping the SC/TF focused and productive, providing constructive and high-quality contributions, and working well together with IDF staff. As the latter criterion is only observable to the IDF staff, they review the nominations made by SC/TF members and IDF staff and decide on awarding the Recognition.

In 2022, the SC Leader Recognition was awarded to Yvette Soustre, France, and Karin Kraehenbuehl, Switzerland. Yvette Soustre, nutrition manager at CNIEL, France is a true believer in dairy and its nutritional power. She received this award for her dedication to IDF as she just finished serving as co-chair of the Task Force on dairy and ultra-processed foods, and previously as an SPCC nutrition member as well as chair if the Standing Committee on Nutrition and Health.

As an active member of the IDF, she ensured her dairy colleagues were kept on point with her sharp remarks and kept science-based always on top of mind. Always at hand to help staff with a diverse request, her thorough knowledge of nutrition and health has been a key reference.

Karin Kraehenbuehl is working with Nestlé, Switzerland. She is a long-time IDF expert and dairy, safety specialist. She chaired two IDF Standing Committees, the SC on Analytical Methods for Additives and Contaminants, and just completed a second term as chair of the SC on Residues and Chemical Contaminants. She reactivated the SCRCC and allowed, with other IDF experts, the launch of the initiative about the knowledge platform on contaminants, being a key contributor as well.

She received this award for her outstanding leadership of a key committee that covers safety topics relevant for dairy. She has kept on motivating the committee by maintaining active SC and AT meetings. She has kept in touch with Action Team leaders and staff, balanced the various input and used her broad expertise to ensure the progress of the work.

### Yves Boutonnat International Milk Promotion Trophy

Yves Boutonnat International Milk Promotion Trophy was initiated in 1989 by the IMP Group. IMP is a permanent action team of the IDF Standing Committee on Marketing, it is a means of showcasing, to dairy farming and industry delegates attending the annual IDF World Dairy Summit, the best generic advertising campaigns created recently amongst the group in the key areas of innovation, nutri-marketing, and marketing communication. In honour of one of their founding members, Yves Boutonnat, it is now called the Yves Boutonnat International

## The IDF Dairy Innovation Awards, launched in 2022

In February 2022, IDF announced the launch of the IDF Dairy Innovation Awards today, which is designed to encourage and celebrate innovative practices across the dairy sector.

“Dairy actors around the world have been actively engaged over the years in improving farming and processing of milk and dairy foods. It is important for IDF to stimulate and share light on innovative practices and processes in the global dairy sector. IDF Board is thrilled to present the IDF Dairy Innovation Awards 2022 which will demonstrate the engagement and dynamism of our sector”, said Piercristiano Brazzale, IDF President.

The awards were hosted by the IDF in partnership with world-leading food and drinks consultancy Zenith Global, and supported by Headline sponsorship from Tetra Pak, a world leading food processing and packaging solutions company.

The winners of the IDF Dairy Innovation Awards 2022 were announced at a ceremony that took place at the IDF World Dairy Summit in New Delhi, India.

In its inaugural edition, the IDF Dairy Innovation Awards received 144 entries with participation from every continent worldwide, which showed that the Dairy Sector’s commitment with innovation and sustainability has no boundaries and may be found in every link of the milk and dairying production chain.

Milk Promotion Trophy.

In 2022, the IMP Trophy went to the US for the campaign “Reset yourself with Dairy”.

### The winners

#### Innovation in Sustainable Farming Practices – Environment

National Dairy Development Board, India - Manure Value Chain Model, India, a system of small familiar biogas to obtain organic fertilizer and gas for cooking has an extraordinary socio-economic value for Indian communities. An innovative effort to bring existing technology in the small holder context to scale by creating a business model that rewards the value of manure for small holder farmers. This is all the more important as low yielding small holder farms have a strong environmental impact. Improvements and innovations in this area, create large impact if taken to scale. A really great example of the circular economy at the small holder scale. The high score is due to its focus on smallholders who are the majority of dairy farms in India and worldwide.

#### Innovation in Sustainable Farming Practices – Animal Care

DairyCS - DairyCS Meadow-Sense, Israel, a smart, innovative technology that is extremely useful in helping the farmer to stay on top of the health and welfare of their livestock, and be able to take action earlier, plus ensure that each animal is getting the care and attention that they need.

National Dairy Development Board, India - e-GOPALA, India, an extraordinary innovation that allows the farmer to be in control.

#### Innovation in Sustainable Farming Practices – Socio-Economic

Mooofarm Private Limited - Mooofarm App, India, an app that gives the possibility to stay in touch with the veterinaries, a great example of application of digital farming. It is unique in its use of facial recognition for identification and gamified incentives.



### Innovation in Sustainable Processing

Brazzale SpA - Fully automated maturing warehouse 4.0, Italy, Brazzale SpA's next generation cheese ripening facility matches new technology with green energy generation, a model for other cheesemakers around the world.

### Innovation in Research & Development – Farming

DairyCS - DairyCS Meadow-Sense, Israel. Automatic and digital farming are the future of the zootechnic and agriculture to increase the efficiency and productivity, finally to reduce the environmental impact and obtain and ensure the animal health and care.

National Dairy Development Board, India - Establishing system of Genomic Selection for buffaloes in India, India. The use of genomic to improve the selection of buffalo has a socio-economic high value. Genomic selection will allow for improved individual productivity thereby decreasing GHG intensity of production and increasing value back to the dairy farmer.

### Innovation in Research & Development – Collection & Processing

National Dairy Development Board, India - NDERP (NDDB Dairy ERP), India, an open source-based ERP integrated with AMCS (Automatic Milk Collection System) software, India, a system that guarantees a control of the milk delivered by the farmers, with important socio-economic consequences. NDERP provides transparency in milk collection and food safety analysis for payments to small shareholder dairy farmers.

### Innovation in Research & Development – New Product Development

Yili Group - Yili Drinkable Cheese, China. Yili Drinkable Cheese is a new product in the cheese category by making it a drinkable product. During the developing of the cheese market for children in China. This an innovative product that could open new system of consumption of the cheese.

### Innovation in Research & Development – Food Safety

Yili Group - Construction and Application of the "Food Safety Risk Analysis Model" in Dairy Enterprises, China, a fully integrated system of control to guarantee food safety.

### Innovation in Research & Development – Consumer Nutrition

Gujarat Cooperative Milk Marketing Federation Ltd (Amul)- Amul Protein Buttermilk & Amul Protein Lassi, India, a high quality product for infant fortified, based on the latest data of nutrition survey.

Société des Produits Nestlé SA; Nestlé Product Technology Centre Dairy - Unlocking iron fortification in dairy to address micronutrient deficiency, Switzerland, a great innovation that provides for iron fortification to address iron deficiency, achieving bioavailability of iron through fortification without negative effects and, therefore, a commendable breakthrough.

### Innovation in Sustainable Packaging

Wipak UK Ltd - Recyclable Butter Wrap, United Kingdom. Replacing aluminium and polyethylene with an FSC-certified is a very innovative

packaging system. It accurately identifies the UN Sustainability Goals and achieves via use of this packaging material.

### Innovation in School Milk Programmes

Karnataka Co-operative Milk Producers' - Federation Karnataka Cooperative Milk Producers' Federation Ltd, India. This project is addressing with success the hard realities of that state. It's a clearly beneficial program to industry, as well as the children, reaching large numbers of beneficiaries, with substantial potential for economic growth for small holder producers.

### Innovation in Climate Action

China Shengmu Organic Milk Limited - Quality Milk in the Desert, China, for its holistic approach to climate action, targeting some of the most impactful ways to make dairy more sustainable, including reducing enteric emissions, improving biodiversity and carbon sequestration via reforestation.

## IDF Professor Pavel Jelen Early Career Scientist Prize

Also in 2022, IDF announced the establishment of the new "IDF Professor Pavel Jelen Early Career Scientist Prize" for "early-career" scientists, including graduate and postgraduate students who are less than 3 years since graduation from their highest degree attained. It is aimed toward the recognition of scientists and/or technologists in the dairy science and technology field.

The award was named in honour of Professor Pavel (Paul) Jelen, a Czech born scientist who has spent his career based in Canada and the US, developing academic work on Dairy Food Science and Technology, and encouraging, mentoring, and educating students and early-career scientists and technologists, and who recognizes the importance of communication.



# The winners of the inaugural “IDF Professor Pavel Jelen Early Career Scientist Prize 2022” were:

## First Place:

Angela Costa (Mid-IR spectroscopy for an accurate prediction of IgG concentration in bovine colostrum)

## Equal Second Place:

Debashree Roy (Composition, structure, and dynamic digestion behaviour of milk from different species)

Prabin Lamichhane (Structure-function relationships: new insights into controlling split and crack defects in cheese)

## Third Place:

Angela Costa Third Place: Nick Smith (Understanding dairy’s contribution to a sustainable food system)

Angela Costa received a plaque recognizing her achievement and was granted an honorarium of €400 as well as travel expenses of up to €1,800 to support her attendance at the IDF World Dairy Summit in India where she presented her work. Both Debashree

Roy and Prabin Lamichhane received a printed certificate recognizing their achievement and an honorarium of €200 each, and Nick Smith received a printed certificate recognizing his achievement and an honorarium of €100.

## Virtual events

**10 November 2022**

Technical webinar: Energy saving on dairy plants

**29-30 November 2022**

7th Symposium on Science and Technology of Fermented Milk (In case you missed it, watch the videos on demand here)

**6 December 2022**

Technical webinar: Ethnoveterinary medicine: role in mastitis

**8 December 2022**

Technical webinar: Protein methodologies

**31 January 2023**

Technical webinar: Updated Chilean dietary guidelines: place of dairy

**22 February 2023**

Technical webinar: Launch of IDF Pavel Jelen Award

**8 March 2023**

Technical webinar: Celebrating women in dairy through engaging case studies

**13 March 2023**

Technical webinar: Cell-based fermentation technology and the dairy sector

**15 March 2023**

Technical webinar: LCA Guidelines: deep dive for users

**28 March 2023**

Technical webinar: New ICAR/IDF project on the use of infrared data - ExtraMIR

**11 April 2023**

Technical webinar IDF Dairy Farmer Roundtable: Dairy farmers role in Climate Action - On farm initiatives to reduce GHG Emissions

**12 April 2023**

Technical webinar Global Marketing Trends Report

**13 April 2023**

IDF Webinar: Nutrients for cost – Dairy's role in school meals

**3 May 2023**

IDF Nutrition and Health Symposium

**4 May 2023**

Technical webinar: World Dairy Situation with focused on US

**17 May 2023**

Technical webinar: Understanding methane: science, policy, finance and actions

**20 & 22 June 2023**

Technical webinar Deep Dive in the GSUDT

**29 June 2023**

Technical webinar Milking: Setting the scene, opportunities and challenges, trends in different regions

**22 August 2023**

Technical webinar IDF Dairy Farmer Roundtable: New technology being implemented on farm

# 10

## IDF Board of Directors



**Piercristiano Brazzale**

IDF PRESIDENT AND CHAIR OF THE  
BOARD OF DIRECTORS – BRAZIL

Piercristiano joined the IDF Board in 2018. A former member of the IDF SPCC for Environment, then Chair of SPCC, Piercristiano works in the family company Brazzale S.p.A. Piercristiano was elected President of IDF in 2020.



**Jamie Jonker**

CHAIR OF THE SPCC

Jamie joined the IDF Board in 2020 as the elected Chair of the Science and Programme Coordination Committee. He is a former SPCC member on Animal Health and former Chair of the: IDF Standing Committee on Farm Management and Task Force on Animal Feeding, and a member of the IDF Standing Committees on Animal Health and Welfare, Residues and Chemical Contaminants, and Environment. He is Chief Science Officer, of the Nation





**Helle Huseby**  
CHAIR OF THE NSC

Helle joined the IDF Board in 2019 as the National Committee representative. She is Chair of the National Secretaries Committee. In addition to her role as the National Secretary of IDF Norway, Helle is the Trade Policy and Government Relations Manager at TINE SA.



**Minfang Lu**  
IDF BOARD MEMBER

Mr Jeffrey (Minfang) Lu, Mengniu Group joined the IDF Board in 2019 as a dairy sector (processing) representative. He is the Chief Executive Officer and Executive Director of the Mengniu Dairy in China.



**Gilles Froment**  
IDF BOARD MEMBER

Gilles joined the IDF Board in 2020 as a representative elected by the General Assembly. He is Vice-President Government and Industry Relations for Lactalis Canada. Former chair of the Standing Committee for Dairy Policies and Economics for 6 years. Gilles Froment was also appointed IDF Treasurer in 2022.



**R. S. Sodhi**  
DELEGATE OF GA

Elected to IDF Board a representative elected by the General Assembly on 1 June 2021. Managing director – Gujarat Cooperative Milk Marketing Federation Ltd or GCMMF-Amul branded products in India.



**Andrew Hoggard**  
IDF BOARD MEMBER

Andrew joined the IDF Board in 2020 as a dairy sector (farming) representative. He is a dairy farmer in NZ and the National President of the Federated Farmers.



**Laurent Damiens**  
IDF BOARD MEMBER

Laurent Damiens has been involved in IDF since 2008, as an expert in the Standing Committee on Marketing (SCM). Since then, he has been an active member, acted as chair and deputy chair of this Standing Committee and has been leading the IDF Task Force on Plant Based products. The addition of the “Global marketing trends” chapter in the IDF World Dairy Situation report is the concretization of a work he initiated. Being an expert in his field, he attended several IDF World Dairy Summits as speaker at the Marketing conferences.



**Tjitske Regina Bolt**  
IDF BOARD MEMBER

Tjitske is a hands-on, purpose-driven professional with nearly 25 years of international work experience in public and private sector. Her analytical, empathetic and diplomatic skills enable her to get to the heart of matters quickly and to easily connect to others with the aim of finding lasting solutions to intricate problems. Tjitske is an energetic, open and honest, optimistic and resilient person. Tjitske was born and raised in Friesland, the Netherlands’ province well known for its dairy farming. She lives near The Hague with her husband and two children.



# 11

## Science and Programme Coordination Committee

SPCC POSITION	NAME AND COUNTRY	TERMS OF OFFICE
Chair	Chair Jamie Jonker (US)	2020–2024
Academia	Andrew Novakovic (US)	2021–2023 (3 <sup>rd</sup> term)
Methods of Analysis and Sampling	Philippe Trossat (FR)	2022–2024 (1 <sup>st</sup> term)
Animal Health	Henk Hogeveen (NL)	2022–2024 (2 <sup>nd</sup> term)
Dairy Sector (farming)	David Cotton (UK)	2022–2024 (2 <sup>nd</sup> term)
Dairy Processing	Virginie Rivas (FR)	2022–2024 (1 <sup>st</sup> term)
Economics and Policies	Benoît Rouyer (FR)	2021–2023 (2 <sup>nd</sup> term)
Food Standards	Allen Sayler (US)	2022–2024 (2 <sup>nd</sup> term)
Hygiene and Safety	Kieran Jordan (IE)	2021–2023 (2 <sup>nd</sup> term)
Marketing	Richard Walton (JP)	2021–2023 (2 <sup>nd</sup> term)
Nutrition	Maretha Vermaak (ZA)	2021–2023 (2 <sup>nd</sup> term)
Technology	David Everett (NZ)	2022–2024 (2 <sup>nd</sup> term)
Environment	Pierre Barrucand (FR)	2021–2023 (1 <sup>st</sup> term)
Farm Management	Lynda McDonald (SE)	2021–2023 (1 <sup>st</sup> term)

# 12

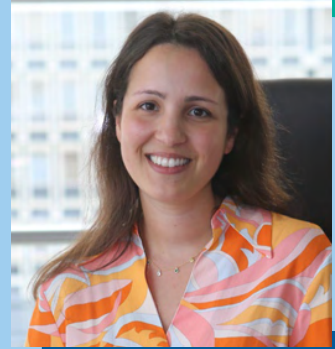
## IDF Head Office



**Ms. Caroline Emond**  
DIRECTOR GENERAL



**Ms. Apolina Fos**  
OFFICE & MEMBERSHIP  
MANAGER



**Ms. Raquel Sousa**  
ADMINISTRATIVE  
ASSISTANT



**Ms. Aurélie Dubois-Lozier**  
SCIENCE & STANDARDS  
PROGRAMME MANAGER



**Ms. Laurence Rycken**  
SCIENCE & STANDARDS  
PROGRAMME MANAGER



**Dr. María Sánchez Mainar**  
SCIENCE & STANDARDS  
PROGRAMME MANAGER



**Dr. Anabel Mulet Cabero**  
SCIENCE OFFICER



**Mr. Sebastian Dates**  
COMMUNICATIONS  
MANAGER



**Ms. Ebba Eriksson**  
COMMUNICATIONS OFFICER

# 13

## National Committees

COUNTRY	NAME
Argentina	Arturo Jorge Videla
Australia	Helen Dornom
Belgium	Maura Geypens
Brazil	Guillaume Tessier
Canada	Pierre Doyle
Chile	Octavio Oltra Hidalgo
China	Jingquan Fang
Cyprus	Georgios Papaioannou
Czech Republic	Jiri Kopacek
Denmark	Sanne Bastholm Rasmussen
Finland	Anna-Kaisa Auvinen
France	Thierry Geslain
Germany	Ludwig Börger
Iceland	Bjarni Ragnar Brynjolfsson
India	Meenesh Shah
Ireland	Mark Fenelon
Israel	Adriana Shohet

<b>COUNTRY</b>	<b>NAME</b>
<b>Italy</b>	<b>Massimo Forino</b>
<b>Japan</b>	<b>Schinichi Totsuka</b>
<b>Kenya</b>	<b>Margaret Rugut Kibogy</b>
<b>Korea, Republic of</b>	<b>Byung Gab Son</b>
<b>Kuwait</b>	<b>Henrik Kjaerbye</b>
<b>Latvia</b>	<b>Erna Galvanovska</b>
<b>Lithuania</b>	<b>Laima Urbsiene</b>
<b>Luxembourg</b>	<b>Jeanne Bormann</b>
<b>Mexico</b>	<b>Miguel Angel Garcia Paredes</b>
<b>Mongolia</b>	<b>Narantungalag Sarandagina</b>
<b>Netherlands</b>	<b>Jurgen Jansen</b>
<b>New Zealand</b>	<b>Sharon Mitchell</b>
<b>Norway</b>	<b>Helle Huseby</b>
<b>Poland</b>	<b>Piotr Kolakowski</b>
<b>Russian Federation</b>	<b>Artyom Sergeevich Belov</b>
<b>Rwanda</b>	<b>Florence Musiime Umurungi</b>
<b>South Africa</b>	<b>Edu Roux</b>
<b>Sweden</b>	<b>Maria Karlsson</b>
<b>Switzerland</b>	<b>Walter Bisig</b>
<b>United Kingdom</b>	<b>Ian Wakeling</b>
<b>United States</b>	<b>Debra Wendorf-Boyke</b>
<b>Zimbabwe</b>	<b>Paidamoyo Patience Chadoka</b>

# 14

## Financial Statement

After appropriation of the 2022 result the balance total is € 2.229.466. The equity amounts to € 1.884.194; this is € 1.505 more than at end 2021 due to the surplus over 2022 as detailed in the table hereunder.

IDF BALANCE SHEET	31/12/2022	31/12/2021
Fixed assets	9,725	3,822
Receivables <1 yr	73,684	4,040
Investments	1,374,518	1,481,644
Cash	746,252	708,823
Deferred charges	25,288	39,173
<b>TOTAL ASSETS</b>	<b>2,229,466</b>	<b>2,237,502</b>
Equity	1,884,194	1,882,689
Payable <1 yr	343,072	317,313
Deferred income	2,200	37,500
<b>TOTAL LIABILITIES</b>	<b>2,229,466</b>	<b>2,237,502</b>



# Income Statement

<b>IDF INCOME STATEMENT</b>	<b>31/12/2022</b>	<b>31/12/2021</b>
<b>Gross operating margin</b>	<b>927,981</b>	<b>992,135</b>
<b>Remuneration, social security</b>	<b>785,073</b>	<b>708,427</b>
<b>Depreciations</b>	<b>4,469</b>	<b>4,317</b>
<b>Other operating charges</b>	<b>24,708</b>	<b>54,985</b>
<b>Financial result</b>	<b>112,225</b>	<b>1,912</b>
<b>Result of the period</b>	<b>1,505</b>	<b>222,495</b>

# Celebrating 120 Years of Excellence: International Dairy Federation's Milestones and Future Collaborations

2023 marks a momentous occasion for the International Dairy Federation (IDF) as we celebrate our 120<sup>th</sup> anniversary since our establishment in September 1903. Over the past century, IDF has been at the forefront of promoting excellence in the dairy sector globally, championing scientific expertise, and fostering collaboration among key stakeholders. As we reflect on our rich history, we also look forward to the future, reaffirming our commitment to delivering high-quality milk and milk products that contribute to the nutrition, health, and well-being of consumers worldwide.

Since its inception, IDF has remained steadfast in its mission to represent the dairy sector at the international level, providing a trusted source of scientific expertise and knowledge. Our core objective has been to support the development and promotion of quality milk and milk products, ensuring that consumers receive nutritionally valuable and safe products.

One of IDF's pivotal roles over the past 120 years has been the establishment and advancement of international standards for the dairy sector. Through close collaboration with key stakeholders, IDF has consistently strived to uphold safe, sustainable, and fair-trade practices within the industry. By sharing our expertise, knowledge, and best practices, we have fostered harmonization and excellence across the global dairy sector.

To celebrate this significant milestone, IDF is launching a series of commemorative initiatives, such as an IDF promotion campaign, [a special web section](#), commemorative e-book, among other things with the aim of enhancing the dairy community's sense of pride and belonging, as well as to commemorate IDF's contribution to the development of global dairy.

As we enter the next chapter of IDF's journey, we are committed to continuing our collaboration with our members, experts and stakeholders worldwide to drive the dairy sector forward. We recognize the evolving challenges and opportunities that lie ahead, and we aim to leverage our collective knowledge, expertise, and networks to address emerging issues, promote sustainability, and meet the changing needs of consumers.

We extend our heartfelt gratitude to all our members, partners, and stakeholders for their invaluable support and collaboration throughout the years. Together, we look forward to a future of continued innovation, growth, and positive impact in the global dairy community.



SCAN HERE

# GLOBAL DAIRY EXPERTISE SINCE 1903

## Helping nourish the world with safe and sustainable dairy

IDF is the leading source of scientific and technical expertise for all stakeholders of the dairy chain. Since 1903, IDF has provided a mechanism for the dairy sector to reach global consensus on how to help feed the world with safe and sustainable dairy products.

A recognised international authority in the development of science-based standards for the dairy sector, IDF has an important role to play in ensuring the right policies, standards, practices and regulations are in place to ensure the world's dairy products are safe and sustainable dairy.



### INTERNATIONAL DAIRY FEDERATION

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