



International Dairy Federation

2017/18 ANNUAL REPORT



Global Dairy Expertise

Advancing Knowledge • Enhancing Value

CONTENTS



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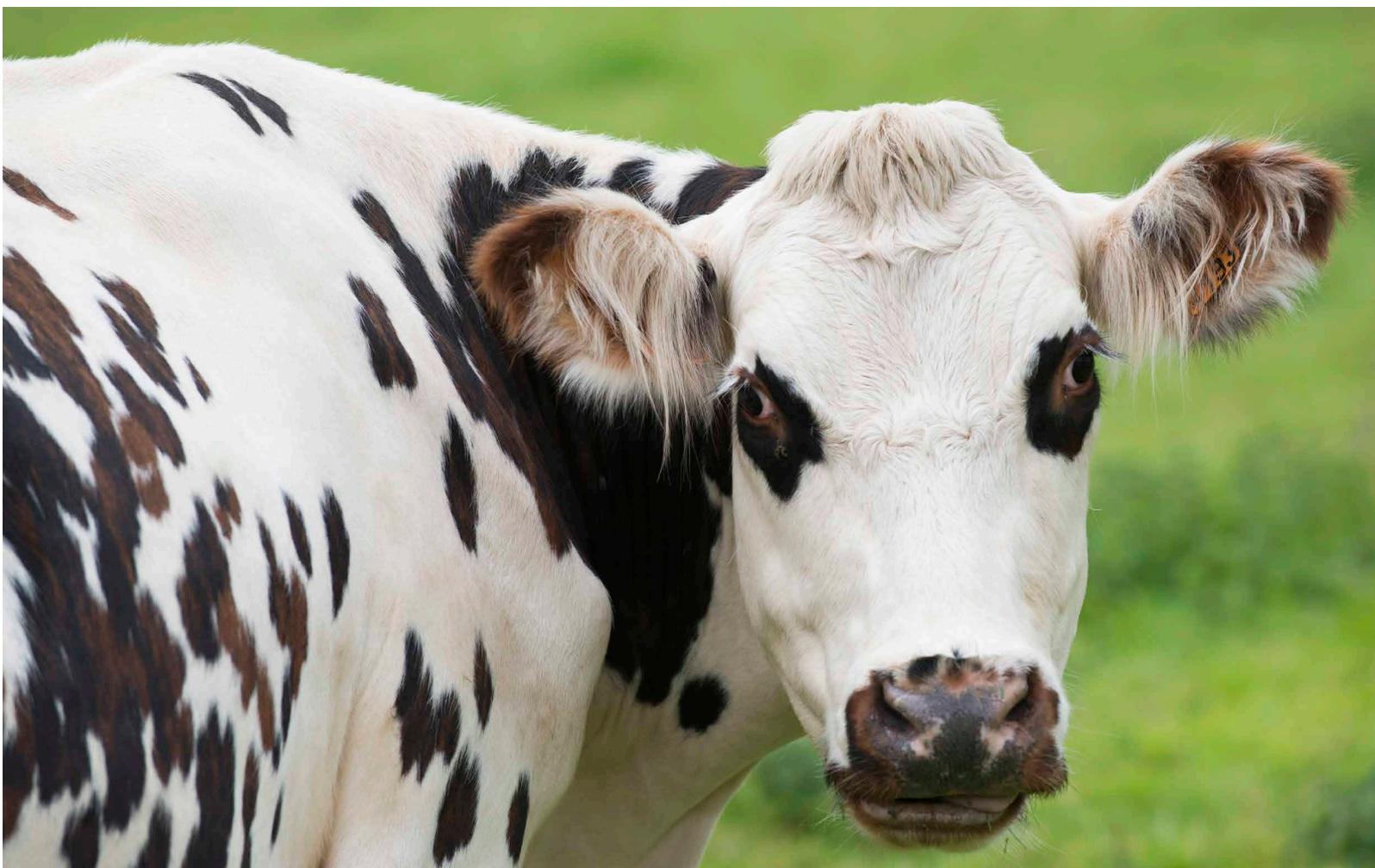
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IDF VISION

Helping to nourish the world with safe and sustainable dairy

IDF

- provides science-based expertise and promotes consensus in the global dairy sector.
- is the global voice of dairy to key intergovernmental organizations.



IDF WORKING AREAS



SUSTAINABILITY



DAIRY SAFETY & QUALITY



NUTRITION & HEALTH



STANDARDS



ANIMAL HEALTH & WELFARE



DAIRY SCIENCE & TECHNOLOGY



ECONOMICS, MARKETING & POLICIES



ENVIRONMENT



FARM MANAGEMENT



FOOD STANDARDS



HYGIENE & SAFETY



METHODS OF ANALYSIS & SAMPLING



NUTRITION & HEALTH

PRESIDENT'S MESSAGE

Welcome to the International Dairy Federation's Annual Report for 2017/18.

Within this year's report you will see the progress that the IDF team, alongside the many experts who give their time and expertise to drive the world of dairy forward, have made in helping the IDF deliver against its strategy over the past year.

As I reflect on the last 12 months, I think it is fair to say that it has been a year of change for the IDF. We have said goodbye to two well-liked and respected gentlemen – Dr Nico van Belzen, our former Director General, and Jaap Evers, our IDF Global Sector Lead on Standards. Both of them deserve our thanks for their dedication to the IDF and its work.

We also welcomed a new Director General, Caroline Emond, and a new Communications Director, Geraldine Goh, to the IDF.

Caroline has brought new energy to the work of the IDF, which has been much welcomed by the Head Office team and many of our members. Her excellent networking skills, management and enthusiasm for all things dairy is already modernizing the way we work. One of the areas that Caroline has been tackling as a priority is communications – both internally and externally. Geraldine will be instrumental in supporting Caroline and making sure the IDF's key messages gain traction with key stakeholders.

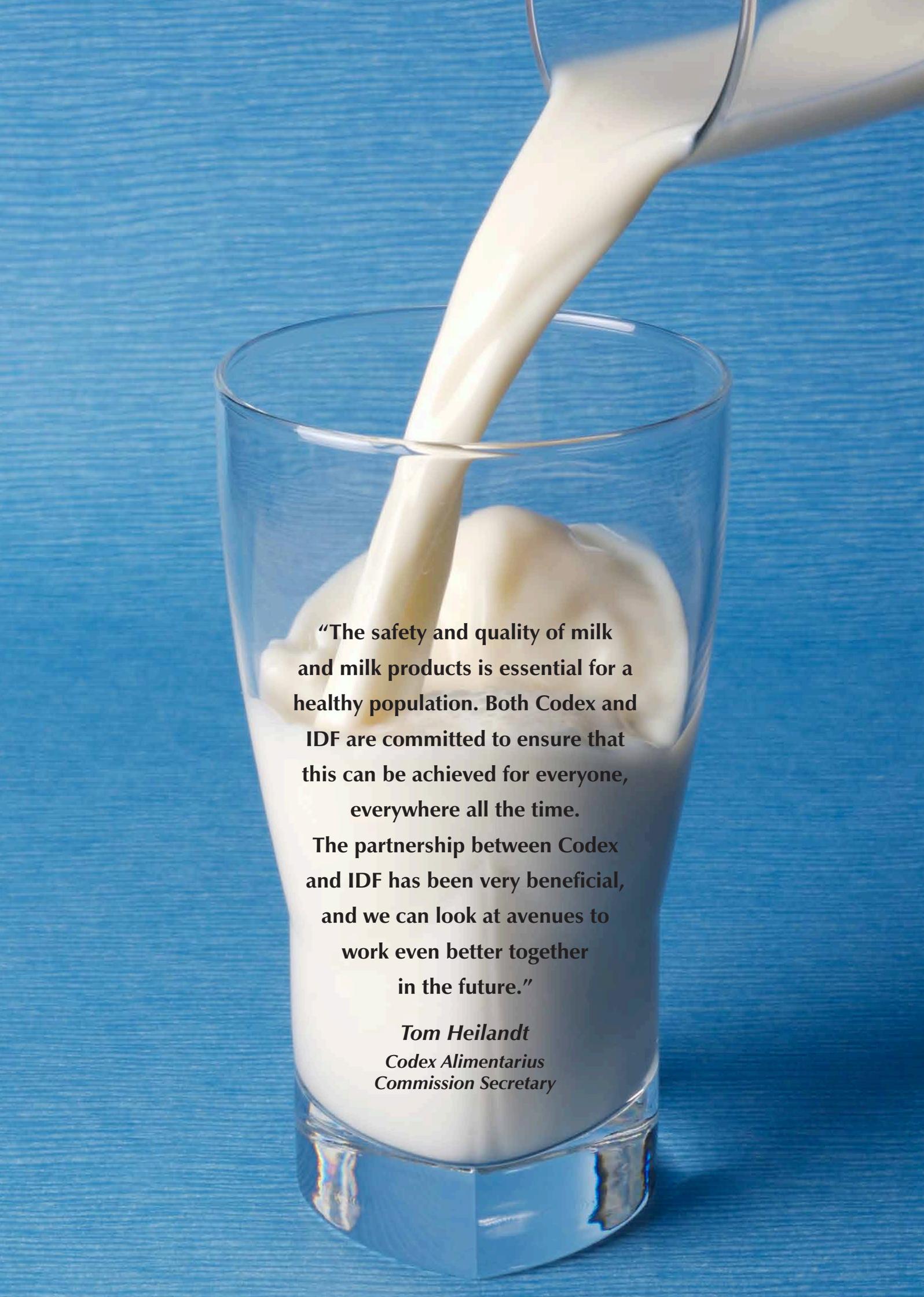
I want to congratulate our IDF team on their first-ever international conference organized by the Head Office on Nutrition and Sustainability held in Seville, Spain, earlier this year. The calibre of the speakers was excellent, and the conference covered what is, and will continue to be, hugely important issues for the dairy sector. The team, as well as our dedicated experts, also have my heartfelt thanks for their work within the vitally important areas of food safety, standards and indeed every area which underpins the work of the IDF along the supply chain.

One thing that I am pleased has not changed within the IDF is the passion that my colleagues on the Board, the SPCC, our experts and our members have for ensuring that the IDF continues to define the environment in which dairy operates. I have had the pleasure to meet many of you and to discuss the dairy sector in general, as well as the IDF. We all know there are huge challenges for dairy, but also huge opportunities – if we get it right.

As members, you can rest assured that the Board and I are looking at ways to ensure that the IDF can help secure a bright future for the dairy sector through its current and future work. We are here to serve you, and if you have any questions or comments for us, please let us know.

Dr Judith Bryans BSc PhD RNutr
President



A clear glass is being filled with milk from a white pitcher. The milk is captured mid-pour, creating a thick, white stream that falls into the glass. The background is a solid, vibrant blue. The glass is partially filled with milk, and the liquid surface is visible.

“The safety and quality of milk and milk products is essential for a healthy population. Both Codex and IDF are committed to ensure that this can be achieved for everyone, everywhere all the time.

The partnership between Codex and IDF has been very beneficial, and we can look at avenues to work even better together in the future.”

***Tom Heilandt
Codex Alimentarius
Commission Secretary***

DIRECTOR GENERAL'S MESSAGE



I am delighted with the opportunity to lead a dynamic team at the International Dairy Federation and to engage with a community of worldwide experts. I aim to contribute to the ongoing success of the IDF as a Global Dairy Ambassador, and to build on the excellent work undertaken by my predecessor Nico van Belzen.

IDF is a prestigious institution with a history stretching back over 115 years, setting standards in the dairy sector since 1903, before the existence of the UN Food and Agriculture Organization (FAO), World Health Organization (WHO), International Standards Organization (ISO) and Codex Alimentarius Commission.

IDF is a unique organization which has been strengthened by the diversity of its experts from all aspects of the value chain collaborating on a broad scope of work. We have the knowledge and credibility to have a seat at the table and to contribute in a meaningful way. I believe that IDF's work needs to be closely aligned with market realities and the work programmes of the FAO, WHO, OIE, ISO and Codex.

IDF has drawn its strengths from the stewardship of the Board; the commitment of the SPCC; the collective intellect, skills and experience of its global experts; and the dedication of staff to attain the shared goal of continuously uplifting the dairy sector.

IDF membership has its privileges which include access to global dairy expertise and the latest scientific knowledge that helps to sharpen competitiveness and the comparative advantage of market leadership. Through IDF, members can build influence in shaping international standards, policies and frameworks which affect the dairy sector.

Let's continue to make positive impacts to generate growth for the sustainable future of dairy.

Caroline Emond
Director General

“The 2030 Agenda and the Sustainable Development Goals are our collective response to building a fair globalization. We need to embed the essence of the 2030 Agenda into everything that we do. Let us demonstrate through decisive actions that the transformation demanded by the 2030 Agenda for Sustainable Development is well and truly underway.”

UN Secretary General António Guterres
addressing the
High-Level Political Forum on Sustainable Development
July 2018



SCIENCE AND PROGRAMME COORDINATION COMMITTEE CHAIR'S MESSAGE

Supporting our dairy sector with well aligned scientific programmes is the first priority of the Science and Programme Coordination Committee (SPCC). To achieve this goal, and provide the best support and value to our members, we regularly review, update and align the content of our programme to the fast changing needs of our sector.

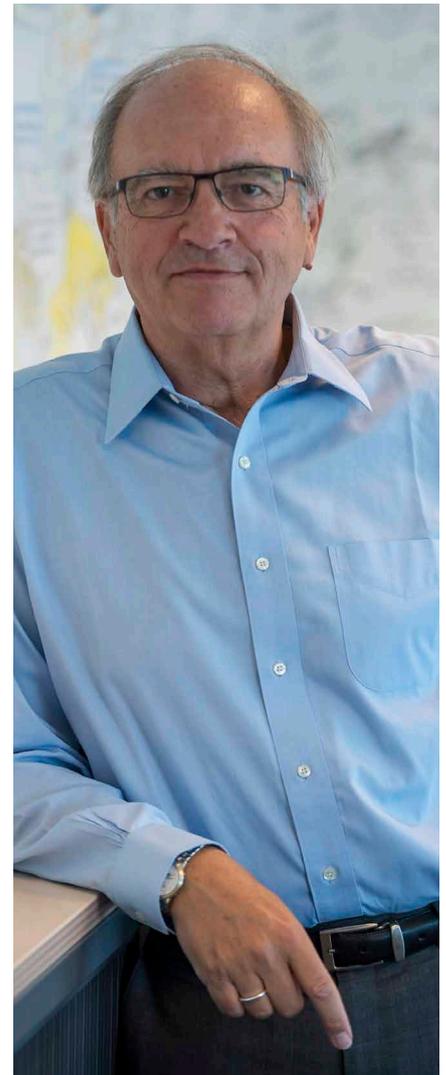
Our worldwide network of experts together with our technical staff and regular meetings of the different Standing Committees constitute a unique and invaluable source of information and knowledge to stay informed and relevant to IDF members.

Since the World Dairy Summit 2017 in Belfast, one of our main tasks has been to update and redefine the Strategic Work Plan for the upcoming years (2019-2021). Our focus areas remain unchanged: Sustainability, Dairy Safety and Quality, Nutrition and Health (Health has been added, showing the positive health impact that dairy products provide), underpinned by Standards. Redefining the content of our work programme along these focus areas, including enhanced communication, will ensure effective and timely dissemination of the best scientific knowledge.

As I am about to pass the baton to my successor, I am grateful for the opportunity to serve the IDF through my stewardship of the work programme supported by the collective efforts of our committee who bring valuable knowledge and perspectives, together with the contributions of international experts and the technical team at IDF.

I am proud of our achievements in building on the knowhow in our focus areas and increasing the value provided to our members. I am confident that IDF will continue to be well recognized for its science-based expertise, thanks to the IDF's worldwide network of specialists whose insights, skills and experience help to put the organization in the forefront of dairy intelligence.

Jean-Marc Delort
SPCC Chair



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



17 PARTNERSHIPS FOR THE GOALS



NUTRITION AND HEALTH

IDF STRATEGY

IDF pro-actively supports science-based nutrition policies to ensure that dairy continues to contribute towards closing the nutritional gap and remains an integral part of the diet for all age groups.

Supported by robust evidence, IDF's focus is to better understand the science which determines the impact of dairy products on nutrition and health. Dissemination of this information to policy makers promotes greater understanding of the nutritional value of dairy and the role it plays in healthy and sustainable diets.

Health impact of dairy through its nutrient density and dairy matrix

Scientific evidence supports the essential role of milk and dairy products as part of balanced eating patterns which are linked to a variety of beneficial health effects. A number of systematic reviews and meta-analyses show that increased dairy consumption may protect against weight gain and obesity, and may also significantly reduce the risk of type 2 diabetes and cardiovascular diseases such as stroke, despite their fat or saturated fat content.

Although research on nutrition has traditionally focused on identifying the specific mechanisms and health impacts of single nutrients, the constituents of milk or other dairy foods interact to produce beneficial outcomes. The nutritional value of dairy products should not be considered as equivalent to their nutrient contents but on the basis of the biofunctionality of the nutrients within dairy food structures. IDF strategy supports dairy's contribution towards improving the health of all age groups through the nutrient density of milk and the impact of the dairy matrix.

Dairy as an integral part of sustainable food systems: nutrition and sustainability interface

Milk and dairy products are nutrient-rich foods. The full nutritional aspect of foods, their nutrient bioavailability, and how they contribute to balanced diets and food security need to be considered before recommendations are made on the environmental impact of food production. IDF proactively promotes the nutritional attributes of dairy products to ensure that they continue to be considered as an integral, sustainable and safe part of the dietary patterns for all age groups.



ADVOCACY

Contribution to the World Health Organization

IDF provided extensive comments to the WHO Draft Guidelines on Saturated Fatty Acids and Trans Fatty Acids for Adults and Children in May 2018. IDF challenged the restrictive scientific data used by WHO in drafting the guidelines. We recommended conducting a wider review of scientific evidence before any recommendations are finalized.

Nutritional research has shifted from a focus on the health benefits of individual nutrients towards an examination of the relationship among nutrients in whole foods. The food matrix effect is based on the premise that nutrients are not consumed individually but collectively in foods and meals forming part of dietary patterns. Our comments highlighted the large and growing body of evidence, including meta-analyses, which show that dairy products are not associated with increased cardiovascular disease (CVD) risks, but may in fact be associated with reduced cardio-metabolic risks. Adopting a food-based approach in public health nutrition messaging is needed to avoid unnecessary reduction of food intakes, such as dairy which are nutritious by nature and play a key role in healthy diets, particularly for the most vulnerable, including children, pregnant women and older people.

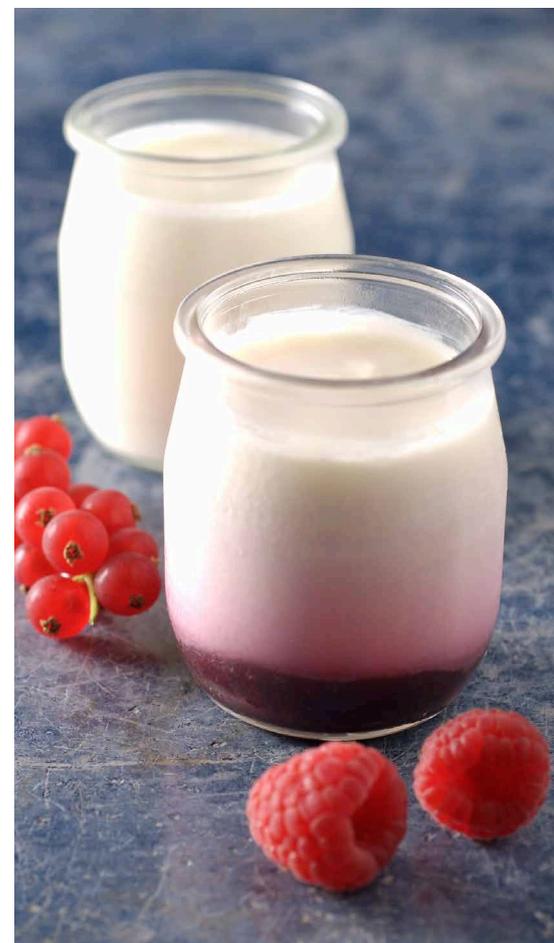
ON OUR AGENDA

IDF work on Codex Front-of-Pack Labelling (FOPL)

IDF has been actively engaged in recommending a holistic and evidence-based approach to labelling now that Codex has started work on developing guidelines on front-of-pack nutrition schemes. These schemes should fit into overarching nutritional policies aligned with country-specific dietary guideline recommendations while recognizing nutrient dense foods and the health benefits of consuming whole foods instead of assessing the nutrient quality of foods from individual components, some of which are detrimental to health in their pure form. Analysing the already implemented schemes worldwide and working on a consensus based position, IDF supports the Codex work as these schemes could help consumers make informed choices about food products. In addition, it is imperative that support is given through appropriate education programmes while consumers are provided with accurate and transparent nutrition labelling based on sound science. IDF has been ensuring that dairy products are accurately recognized in Front of Pack Labelling (FOPL) schemes, and has been engaged in the recent Codex discussion on the *Criteria for the Definition of "high in" Nutritional Descriptors for Fats, Sugars and Sodium*. Supported by the latest science, IDF has cautioned against a restrictive nutrient approach as it is misleading to generalize about the effects of a single nutrient without considering the impact and interactions of other components within the food product.

“It is essential to consider the whole dairy food matrix when discussing nutrition and health. Biochemical interactions between components in real food products change the characteristics of individual components and play a role in absorption through the human intestinal epithelium.”

David Everett
Chair, IDF Standing Committee on Dairy Science and Technology (SCDST)



United Nations Focus on Nutrition

- The triple burden of malnutrition is the coexistence of undernutrition, micronutrient deficiency (vitamins and minerals), overweightness and obesity.
- After a prolonged decline, world hunger appears to be on the rise again. The estimated number of undernourished people increased to 821 million, up from 777 million in 2015.
- Out of a world population of 7 billion, about 2 billion people suffer from micronutrient malnutrition. Nearly 2 billion adults are overweight or obese, while 41 million children under 5 are overweight.
- Multiple forms of malnutrition coexist with countries experiencing simultaneously high rates of child undernutrition and adult obesity.
- The developmental, economic, social and medical impacts of this global burden of malnutrition are serious and lasting for individuals and families; for communities and countries.
- The 2030 Agenda for Sustainable Development and the UN Decade of Action on Nutrition 2016–2025 call on all countries and stakeholders to act together to end hunger and prevent all forms of malnutrition by 2030.
- Comprising eight targets, SDG 2 unites hunger, food security, nutrition and sustainable agriculture under a single objective, compelling the international community to move towards an understanding of how they are interrelated and promoting integrated policy approaches and actions.
- Improving nutrition will be a catalyst for achieving goals throughout the SDGs. As action on nutrition is needed to achieve goals across the SDGs and, in turn, action throughout the SDGs is needed to address the causes of malnutrition.
- Dairy products are key to nutrition and health through their nutrient richness and unique food matrix.
- Through the Dairy Declaration of Rotterdam the dairy sector acknowledges its key role in food security and poverty alleviation.

IDF input in the UN Committee on Food Security (CFS)

As the UN Committee on Food Security (CFS) and its member states start work on translating the 2017 Report on Nutrition and Food Systems produced by the High-Level Panel of Experts (HLPE) into policy recommendations, IDF has been actively participating in the negotiations. The aim of the CFS is to identify policy changes required to reshape food systems that will improve nutrition and facilitate healthy diets through the development of voluntary guidelines.

IDF has been advocating that recommendations should be science-based and inclusive to all stakeholders. These measures will provide guidance to assist countries in actioning the recommendations of the Second International Conference on Nutrition (ICN2) under the umbrella of the UN Decade of Action on Nutrition (2016-2025) and the 2030 Agenda for Sustainable Development.



Distinguishing milk qualities from other beverages

Building on many national initiatives, IDF is developing a communication framework to promote the unique characteristics of dairy products. The work aims to counteract misconceptions about milk through supporting facts and a multidisciplinary approach.

Showcasing the latest science in the Microstructure of Dairy Products

In June 2018, IDF organized the 3rd IDF Symposium on Microstructure of Dairy Products in partnership with the Food Structure and Functionality Forum (FSFF) and Elsevier. The conference, which was held in Montréal, highlighted the latest research efforts in the structuring and de-structuring of food and dairy products, which are important in the development of innovative products to cater to growing consumer demands in applications ranging from improved health and digestion (nutritional release in the gastrointestinal tract) to new texture development and extension of shelf life.

The event brought together 200 experts in food engineering, food science and food technology, offering the opportunity for academics and industry to meet and share ideas and knowledge.

Promoting the role of dairy proteins

Current food systems need to be transformed to meet the global needs for nutrition in a sustainable manner. The use of natural resources (land, water, energy) and the ability to produce affordable and adequate nutrition in an efficient manner that is accessible to all, will increasingly become defining factors in national and international policy development and consumer behaviour. Protein is an important nutrient and must deliver all the essential amino acids in the correct balance for healthy cell growth, the repair of muscle tissues and the maintenance of overall health. IDF is actively promoting the fact that dairy proteins are an integral part of sustainable, healthy diets.

Dairy products provide high-quality protein which delivers high levels of essential amino acids which are easily digestible and bioavailable (the degree to which protein can be absorbed by the body which is determined by the structure of protein molecules and enzyme activities).

Positioning dairy in dietary guidelines

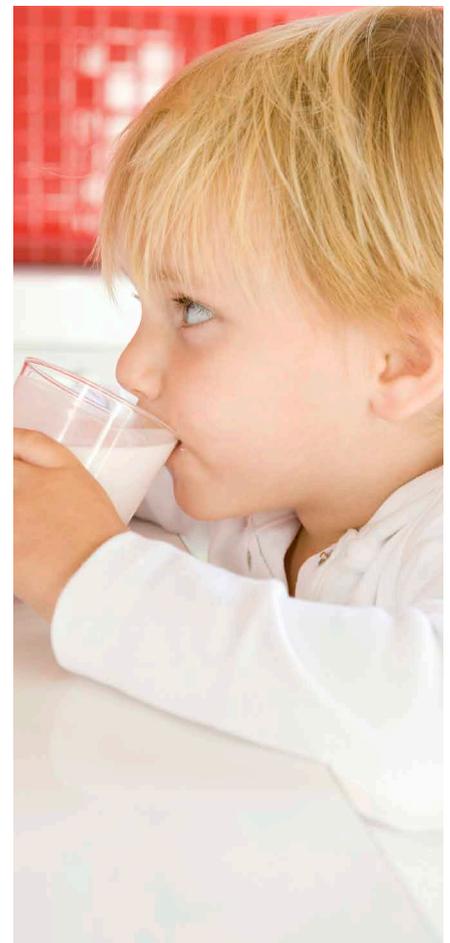
Dietary guidelines are established to provide advice on foods, food groups and dietary patterns to the general public to foster healthy eating habits and lifestyles. The recommendations should be aligned with current scientific evidence. IDF is examining how dairy products are incorporated into dietary guidelines around the world and analyzing the science that underpins its place in healthy eating patterns. Through a member survey, IDF is looking at the trends with regard to dairy recommendations in dietary guidelines. IDF is also providing information updates to members on the different situations worldwide and evidence to support the place of dairy in healthy diets.

Sharing the latest science on milk and health benefits

A new fact sheet on the Health Benefits of Dairy reviews the science supporting the importance of milk and dairy products as part of a healthy eating pattern.

“IDF is working to promote greater knowledge on the health benefits of nutrient-rich milk and dairy products in balanced diets. Proteins, vitamins and minerals in the dairy matrix work together in synthesis to produce high nutritional value in dairy products which will enhance health.”

Dr Stephan Peters
Chair of the IDF Standing Committee on Nutrition and Health (SCNH)



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DAIRY SAFETY AND QUALITY

IDF STRATEGY

IDF pro-actively engages in safeguarding the integrity and transparency of the dairy supply chain to ensure the safety and quality of milk and dairy products.

IDF strives to create a global consensus on risk assessment, as well as to promote science-based and informed approaches to food safety and quality. IDF works with key international organizations to ensure that safety and quality of dairy products are continuously improving. The work covers microbiological, as well as chemical and physical risks. The evolution of testing and monitoring, alongside IDF research and publications on issues like residues and contaminants, pathogens and spoilage organisms, antimicrobial resistance, the impact of zoonoses, pasteurization and new classes of hazard control measures, effectively safeguard and build on the integrity of dairy globally.

ACHIEVEMENTS

IDF/ISO Guideline for the validation of qualitative screening tests to detect residues of veterinary drugs in milk and milk products

There is currently no international guidance for the validation of screening methods for the detection of antibiotic residues. This guide covers procedures by providing general workflows and protocols to validate and verify biological and qualitative screening tests for the detection of residues of veterinary drugs in raw or liquid milk (pasteurized, UHT, reconstituted milk powders and whey protein extracts).

This guideline is intended to be useful for manufacturers of screening test kits, laboratories validating screening methods or tests, competent authorities and dairies or end users of reagents or tests for the detection of veterinary drug residues in milk products. The goals of this guideline are aimed at harmonizing the validation of test kits or methods to build confidence and trust among stakeholders on the result of a residue screening, and to limit the overlap and multiplication of validation work in different laboratories by sharing the validation results generated by an independent expert laboratory.

Inventory of historically safe use of micro-organisms

Following the publication of the scientific rationale of Microbial Food Cultures in the International Journal of Food Microbiology (IJFM) in 2012, which was jointly endorsed by the IDF and the European Food & Feed Cultures Association (EFFCA), the study has been actively promoted in different conferences and publications. During the IDF World Dairy Summit 2016, an Action Team was initiated to update the inventory. A questionnaire had been sent in early 2017 to IDF National Committees for submission of proposals on the study of new species. Responses have been compiled in the past year and an update of the 2012 Inventory is expected to be published in an IDF Bulletin before the end of 2018.

This second publication contains 30 bacterial and 25 fungal species newly documented with a history of use in food. The scientific information collected within this publication will further promote recognition of the safety of fermented food products (dairy and other food matrix) for their international commercialization.

ON OUR AGENDA

IDF Bulletin on Pasteurisation

Since the withdrawal of the 1986 Bulletin in 2005, IDF has had no documentation on pasteurisation. The current document is a collaboration between the IDF Standing Committees on Microbiological Hygiene (SCMH), Nutrition and Health (SCNH) and Dairy Science and Technology (SCDST). The purpose of the Bulletin is to provide information on pasteurisation, its effect on milk products from hygiene and nutrition perspectives, available technologies to counteract mis-information about pasteurisation, and to reconfirm that *Mycobacterium avium paratuberculosis* (MAP) is killed by pasteurisation.

Inventory, Evaluation and Perspectives on methods for the determination of Somatic Cell Counting

Somatic cell count (SCC) represents the total number of somatic cells in milk and is used as an indicator for mastitis and milk quality worldwide. The parameter is used for regulatory purposes as well as for the management of animal health. The current IDF/ISO reference method for SCC, which is based on microscopy, has been described as tedious, cumbersome and challenging to work with. Therefore, the IDF Standing Committee on Statistics and Automation has worked on this publication to define the criteria for reference methods, map all available methods for determination of SCC and recommend one or two candidates that could potentially be used as a new reference method.

IDF expertise key to the control and reduction of food-borne antimicrobial resistance

Antimicrobial resistance (AMR) poses a complex, global public health challenge. IDF's guidance for the dairy sector on good practices for dairy production, processing, storage, and transport help to prevent, minimize and curb foodborne antimicrobial resistance, safeguarding consumer health. IDF has a central role in promoting good practices in the dairy sector as it facilitates the coordination and collaboration of stakeholders along the dairy chain. IDF cooperates with FAO and OIE on AMR, and had the opportunity to comment on the work of the United Nations Interagency Coordination Group on this subject. Through its own Task Force, IDF is active in the Codex Task Force on AMR and submitted comments to the *Establishment of Guidelines for Integrated Surveillance of AMR* and the *Revision of the Code of Practice to Minimize and Contain AMR*.

Codex Committee on Food Hygiene

IDF is involved in the revision of the General Principles of Food Hygiene and its HACCP annex. While the Codex Committee on Food Hygiene (CCFH) is aimed at producing key conclusions in the revised document at its next session in Panama (12-16 November), IDF has drawn attention to certain discrepancies with ISO 22000 and differing concepts on control measures. While the CCFH eWG has spent significant efforts to examine and discuss the concept of "Enhanced Good Hygiene Practices" (which would correspond to similar terms such as Operational Prerequisite Programmes), IDF regrets that the concept of Enhanced Good Hygiene Practices has been put aside in order to progress the revision of the General Principles of Food Hygiene.

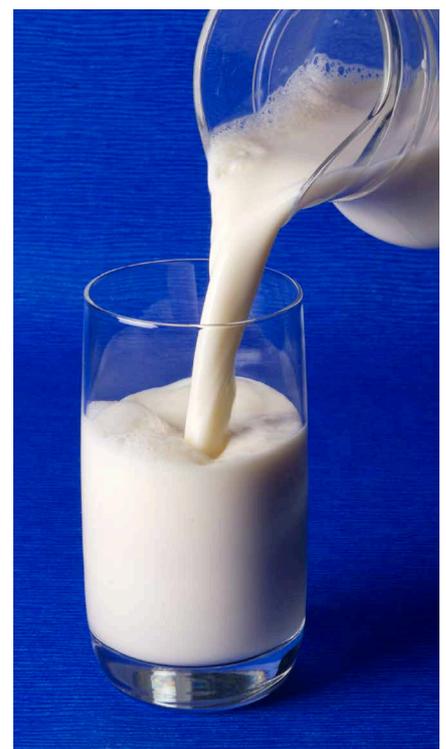
IDF will also monitor and participate, where relevant, in the two new work areas recently agreed by the Codex Alimentarius Commission:

- Code of practice for allergen management for food business operators
- Guideline for the Management of (Micro)biological Foodborne Crisis/Outbreaks



“This Bulletin is of value to the dairy industry and a broader audience as it will provide an overview of the process of pasteurisation of milk, the advantages of milk pasteurisation from a public health perspective, and the scientific basis demonstrating that milk pasteurisation does not impact the nutritional properties of milk”

Kieran Jordan
Action Team leader and Chair of the IDF Standing Committee on Microbiological Hygiene (SCMH)

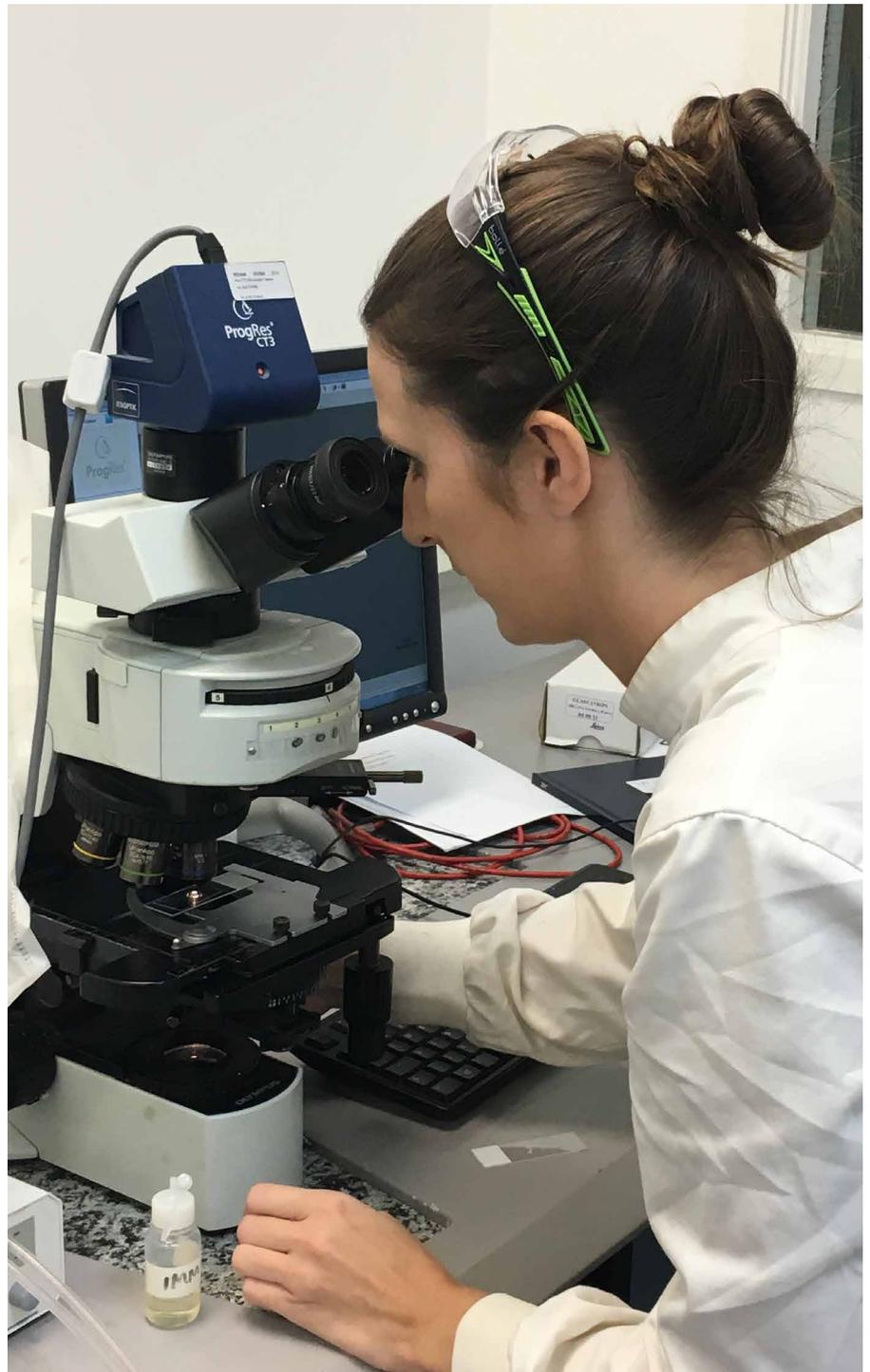




Codex Committee on Contaminants in Foods (CCCF)

The Standing Committee on Residues and Chemical Contaminants (SCRCC) is monitoring and contributing to the CCCF Proposed draft guidelines for risk analysis of contaminants in food in the absence of a regulatory level or risk management framework. The purpose and scope of this work is to promote an internationally harmonized approach to address possible public health and trade issues arising from detections of very low levels of chemicals inadvertently present in food. The proposed new work excludes the intentional and fraudulent addition of chemicals to foods.

The scope was recently reformulated to illustrate that the guidelines were aimed at contaminants which fell outside the normal regulatory framework. No other rapid risk assessment methods could be identified, and thus the document focused on the Threshold of Toxicological Concern (TTC) methodology only. The Codex Alimentarius Commission agreed to adopt the guidelines to Step 5 for adoption by the 41st Session of the Codex Alimentarius Commission (CAC41). IDF will participate in the CCCF eWG to further develop the guidelines.



Revision of methods for determination of fat in milk and milk products

Fat determination is a key parameter for dairy producers from milk payment to compliance and quality controls.

At present, eight different IDF/ISO standards exist for the determination of fat content in milk products using the Röse-Gottlieb principle:

- Milk (ISO 1211 | IDF 1)
- Dried milk, dried buttermilk and butter serum (ISO 1736 | IDF 9)
- Cream (ISO 2450 | IDF 16)
- Whey cheese (ISO 1854 | IDF 59)
- Liquid, concentrated, powdered milk-based infant food (ISO 8381 | IDF 123)
- Milk-based edible ices and ice mixes (ISO 7328 | IDF 116)
- Evaporated and sweetened condensed milk (ISO 1737 | IDF 13)
- Liquid skimmed milk, whey, buttermilk (ISO 7208 | IDF 22)

IDF in collaboration with ISO/TC34/ SC5 (ISO Subcommittee on Milk and milk products), is revising the standardized methods listed above for the determination of fat content in milk products into one single standard as all these methods are based on the same Röse-Gottlieb principle. The merger of standards will result in harmonized and consistent descriptions for the products to be analyzed. Also, analysts will only require one standard, instead of eight, for the determination of fat content in a wide range of dairy products.

The Röse-Gottlieb method is already validated for milk, whereas for cream and skimmed milk, a collaborative study will be organized. The method will remain applicable to other dairy products as well.

Most of these methods are currently referenced in Codex Standard 234 as recommended methods for determination of fat in dairy products to demonstrate compliance with Codex standards. Therefore, once published, the revised standard will be submitted to Codex to update those references accordingly.

“Codex Standards define the level of food safety which is internationally acceptable and helps to facilitate fair trade practices, particularly in developing countries.”

Claus Heggum
Representative for Hygiene and Safety on the IDF Science and Programme Coordination Committee SPCC



1 NO POVERTY



8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



17 PARTNERSHIPS FOR THE GOALS



SUSTAINABILITY

IDF STRATEGY

IDF has sustainability as a core part of its strategy. The work of the IDF continues to support the dairy sector in its efforts towards sustainable development.

IDF strongly supports the work of the global Dairy Sustainability Framework (DSF). Both organisations believe in a vibrant dairy sector which is committed to continuously improve its ability to provide safe and nutritious products from healthy cattle, while preserving natural resources and ensuring decent livelihoods.

IDF holds a position on the IDF Governors' Group and chairs the Advisory Council. IDF supports the vision of the DSF by undertaking a variety of work to help achieve global targets by developing and promoting sustainable practices across the dairy supply chain. IDF provides science-based guidance and leadership on dairy sustainability issues to the DSF and to key international organizations and influencers. IDF supports a holistic sustainable approach for the dairy sector, including environmental, nutritional and socio-economic aspects.

Following are some work areas that IDF supports as part of its sustainability strategy which demonstrates IDF's commitment to sustainable dairy practices. They are not the only work areas that IDF covers in its Sustainability Strategy – other work areas are also included in other IDF strategies as sustainability covers many issues. The highlighted areas demonstrate what has been achieved in the past year.

ACHIEVEMENTS

IDF Symposium: Role of Dairy in Sustainable Diets

IDF organized a successful event in Seville in February 2018 where dedicated and insightful scientists took a critical look at dairy's role in sustainability solutions. From a health perspective, the high density of nutrients in dairy and its preventive role in non-communicable diseases contributes towards making dairy a vital food in the human diet. The debate around the reduction or elimination of animal husbandry to address greenhouse gas emissions could lead to an uncertain and suboptimal food production system that would not have a significant effect on climate change as the excellent value of the nutrients gained from dairy outweighs the amount of carbon emission per kg.

Yet, the dairy sector is committed to find an optimal balance for animal-based production systems, and IDF is identifying challenges and opportunities to foster sustainable dairy production.

Stronger Involvement of Dairy Farmers in IDF Work

The Standing Committee on Farm Management (SCFM) launched a new priority: stronger involvement of IDF with dairy farmers worldwide. A commitment has been made to set up an IDF Dairy Farmers Round Table to provide a stronger voice for farmers to make positive contributions towards IDF's Standing Committees. The IDF Dairy Farmers Round Table represents an opportunity to receive feedback from farmers about issues of interest to them which can be addressed by IDF. The SCFM decided to seek proactive interaction with host countries on future IDF World Dairy Summits to plan relevant conferences and IDF Dairy Farmers' Forums.

A five-day programme for farmers will be featured at the IDF World Dairy Summit 2018 held in Daejeon, Korea. The importance of dairy in agriculture is enormous as it employs a one-billion-strong community and involves six billion consumers with more than 360 million dairy cattle.

ON OUR AGENDA

IDF releases innovative review of milking practices

An IDF publication on teat cup and cluster removals aims to help reduce the over-milking of cattle and small ruminants to enhance udder health and boost productivity. Over-milking occurs when the milking apparatus remains attached to the udder with little or no milk being removed, thereby subjecting the udder to tissue stress, resulting in poor milking efficiency.

There are large differences in recommendations for removal methods for both cows and small ruminants in different countries. The IDF has undertaken the task of reviewing these and providing best practice guidance to milking equipment suppliers, dairy farm advisers and operators who can benefit from expert advice on how to address their milking performance and milk quality concerns, particularly for the selection of optimal teat-cup and cluster removal settings.

See the Bulletin of the IDF N° 491/2018 Teat-cup and cluster removal strategies for cattle and small ruminants.

Guide for good animal welfare practice in dairy production

Since the adoption of the first IDF guide ten years ago, animal welfare, including health, has become one of the major challenges in the animal production sector. In most countries, public awareness and expectations have been raised. Hence, it is important that the dairy sector works proactively to safeguard consumer trust.

Furthermore, in the past decade, new scientific data, tools, and animal welfare standards have been published (OIE, 2017; ISO, 2016). Precision dairy farming has become a reality and new questions on global health have emerged (such as the use of antimicrobials in livestock, antimicrobial resistance or the sustainability of livestock farming).

This update of the IDF Guide includes the latest scientific, technological and managerial developments which demonstrates ways to achieve the goals set by the OIE and ISO Standards on a practical level. This document incorporates the current OIE principles.

This Guide is aimed at raising awareness of animal welfare and encouraging the implementation of good welfare practices on dairy farms, and is targeted at farmer organisations, dairy processors and farmers (producers).

“The use of automatic cluster removers has led to a significant reduction in over-milking, a reduction in machine-on time and an improvement in udder health.”

Ralph Ginsberg
Leader of the IDF Action Team on Milking Equipment and Methods



“Dairy is a vital part of sustainable food systems. Dairy foods provide us with precious and valuable nutrients. Acknowledging the diversity of production systems, the dairy sector will continue its efforts to optimize environmental performance and be part of the solution to the global food security challenge.”

Ying Wang

Chair of the IDF Standing Committee on Environment (SCENV)

IDF Forum to share knowledge on Paratuberculosis

The disease caused by *Mycobacterium avium paratuberculosis* (MAP), is one of the most widespread bacterial diseases capable of infecting a wide array of animal species, including ruminants in agriculturally developed countries. IDF supports the fight against this disease by sharing the current status of paratuberculosis control programmes in a biennial Forum on Paratuberculosis. If Johne’s disease is ignored, there is clear evidence that the prevalence will increase, particularly in regions where there is significant animal movement. By hosting this Forum, IDF supports the adoption of a long-term vision towards the prevention and control of Johne’s disease.

The forum showcased active regional control efforts and research over growing industry concerns about the zoonotic potential of MAP and the desire to be proactive in control at both farmer and processor levels, and/or to meet trade requirements. Countries with strong, active programmes appear to be tightly linked to dairy processors and/or export markets. As a result of strong processor interest, it is clear that they are motivated to participate in the control programmes. This level of interest among processors reflects the value of a voluntary control and/or status report programme to be made mandatory for farmers.

IDF supports other international organizations, such as the World Organisation for Animal Health (OIE) in the prevention, control and implementation of good ruminant health and welfare.

Supporting sustainability with eco-friendly dairy technologies

IDF has released a new publication, Total Cost of Ownership methodology, to support sustainable investment.

This new Bulletin is an analysis meant to determine all the lifetime costs derived from owning certain kinds of assets. IDF has adapted the Total Cost of Ownership (TCO) to a dairy processing system to support decision-making as a comparative tool. The TCO structure developed by this publication is based on the concept of Life Cycle Assessment, which is one of the most important techniques used to assess environmental impacts associated with all the stages of a product’s life. Therefore, TCO could also be used as a basis to calculate environmental key performance indicators. In this way, TCO can be a very powerful tool to support sustainable investment, from economic and environmental perspectives.

IDF remains committed to safeguarding the sustainability of the dairy sector. IDF is preparing several Bulletins on environmental best practices to promote technical solutions to improve energy saving and water consumption.

IDF produced a Bulletin of the IDF N° 492/ 2018: Total cost of ownership: An approach to support sustainable investments in the dairy processing and packaging industry.

Encouraging adequate farmer interventions through the use of sensors

The emergence of antimicrobial resistance in bacteria has had profound effects on the management of therapeutic approaches to both human and veterinary diseases. Treatment and control of mastitis is the most common use of antimicrobials in dairy cows. The IDF Action Team on sensors is working on the different areas based on potential interventions by the farmer to support them on decision-making on mastitis. This work is underpinned by IDF’s vision to reduce antimicrobial usage and resistance by encouraging good animal health and welfare.

IDF is committed to provide guidance on the evaluation of test performance and use of data originating from sensors for udder health management. As a consequence, an IDF action team is currently working on guidelines encompassing the types of intramammary infections, clinical and subclinical, where a sensor system should be able to detect, with a focus on the potential interventions by the farmer rather than on the old way of assessment.



“Fostering good animal health is a driver which can help to reduce the need for antimicrobials. Healthy animals do not need antibiotics.”

Olav Østerås
Chair of the Standing Committee on Animal Health and Welfare (SCAHW)

Better animal health to diminish the use of antimicrobials and antimicrobial resistance

IDF is constantly monitoring animal health, antimicrobial use and resistance under several horizontal projects. IDF published the results of the first survey on animal health, industry milk quality and hygiene statistics in the 2018 IDF Animal Health Report. This biennial work aims to provide accurate, convincing data to be used to encourage greater awareness among farmers of the economic implications of failing to control or address mastitis.

By reviewing yearly scientific literature on antimicrobial resistance (AMR) in mastitis pathogens, IDF monitors and reports on new research results to identify any potential issue or arising organism of concern for the dairy sector.

These activities complement the existing communication material on AMR, the factsheet *Guidance on Antimicrobial Resistance from the Dairy Sector* published in 2017 and the *IDF Guide on Prudent Use of Antimicrobials* from 2014.

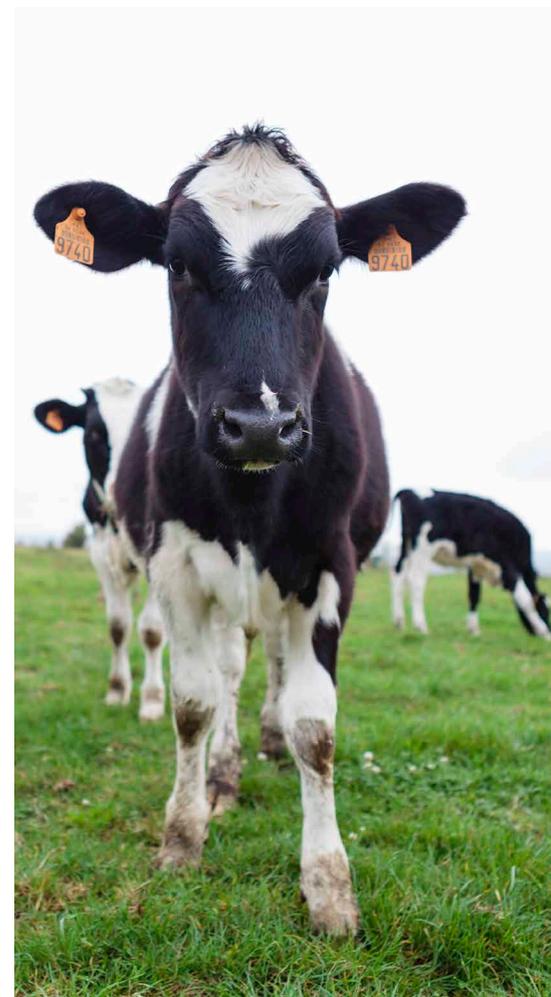
Sharing innovative research findings and providing an update on progress achieved

This year's IDF Animal Health Report comprises 24 articles which provide a glimpse of noteworthy topics on member countries and current research within the field of animal care, antimicrobial resistance and farming practices. IDF's work on animal health and welfare aligns with the efforts of international organizations (World Health Organization, Food and Agriculture Organization of the United Nations, World Organisation for Animal Health and Codex), stakeholders and consumers. Furthermore, healthy and productive dairy animals can contribute towards the provision of a safe, sufficient and nutritious food supply at a time of a rapidly increasing global population.

Dairy's contribution to the agenda on sustainable development

IDF is part of The Global Agenda for Sustainable Livestock (GASL) multi-stakeholder partnership to encourage the dairy sector to work towards achieving the UN Sustainable Development Goals.

IDF actively participated in the Livestock Environmental and Performance (LEAP) partnership and IDF provided comments on the public review of *Nutrient Flows and Impact Assessment*; internal and public reviews of *Guidelines for Assessing Soil Carbon Stock Changes in Rangelands and Grasslands*; and internal and public reviews of *Water Use Assessment of Livestock Production Systems and Supply Chains*. IDF is following the work of the two Technical Advisory Groups on Biodiversity and Feed additives.



3 GOOD HEALTH AND WELL-BEING



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



17 PARTNERSHIPS FOR THE GOALS



STANDARDS

IDF STRATEGY

Standards play a key role in every part of the dairy chain from good farming practices to quality measures to ensure consumer confidence in the safety, reliability and quality of dairy products which comply with national and international regulations. Food standards are aimed at protecting public health and the wellbeing of the planet besides promoting access to food worldwide.

Being multisectoral, standards cover different areas of work in the IDF: analytical standards, food standards, animal health and welfare, environment, and nutrition. The area of standards addresses IDF's input into shaping global regulatory frameworks through policies, laws, regulations, protocols/codes of practice, specifications, guidelines and fact sheets. IDF is recognized by a wide range of international organizations as the voice for the global dairy sector on standards.

IDF proactively contributes to the development of science-based globally harmonized standards, guidelines, codes of practice and related methodologies to continually improve regulatory environments for the dairy sector.

ACHIEVEMENTS

Alignment of provisions for food additives in Codex dairy standards

In the past year, the most notable achievement of the IDF Standing Committee on Food Additives (SCFA) has been the culmination of almost 10 years of efforts to end the confusion over which Codex "list" of food additives is the "correct" reference for both the international dairy sector and importing countries.

Today, Codex has a listing of acceptable food additives and maximum levels in the Codex dairy standards, as well as a listing of different food additives or different maximum levels for dairy products in the Codex General Standard for Food Additives (GSFA). Over the years, this "dual" Codex food additive system has created confusion on the application of the relevant Codex system among the two systems. This has resulted in cases where dairy products have been blocked by some importing countries.

The CCFA is committed to moving all food additives from the Codex food standards to the GSFA. Over the past 10 years, the IDF SCFA has been preparing for this food additive "alignment" effort by identifying conflicts that will need to be addressed when all the food additive provisions are removed from the Codex dairy standards.

At the 2018 CCFA meeting, delegates unanimously and formally supported the proposal for IDF support to the co-chairs of the CCFA eWG through IDF's input to the CCFA's endeavours to move all food additives in the Codex food standards into the GSFA.

The IDF SCFA submitted a detailed analysis on the challenges for moving the 13 Codex Commodity Standards for Ripened Cheeses to the CCFA eWG. The submission has been the result of the collective knowledge and efforts of a dedicated Action Team involved in developing the groundwork for the alignment exercise where other active members of the SC could provide their valuable inputs into the recommendations submitted to the CCFA eWG. The outcome of the review by the CCFA eWG will be considered at the 2019 CCFA meeting.

Adoption by Codex of joint AOAC/IDF/ISO analytical standards for infant formula

Close collaboration is continuing between the IDF and ISO on standardization efforts for methods of analysis for infant formula. Efforts started in 2012, when AOAC INTERNATIONAL and ISO signed an agreement to collaborate on the development of standards for methods of analysis for infant formula and adult nutritionals in order to provide internationally recognized methods to determine the content of infant formula. IDF was recognized in this agreement through the existing IDF/ISO agreement for milk and milk products.

The preparation, submission to and adoption by Codex in July 2018 of ISO 21422 | IDF242 Milk, milk products, infant formula and adult nutritionals – Determination of chloride – Potentiometric titration method, in conjunction with ISO standards on vitamin D and biotin, is the result of the close cooperation of IDF with ISO and AOAC INTERNATIONAL.

Other standards prepared by IDF/ISO and AOAC will be published shortly and submitted to the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) in 2018. These are multi-element methods by the Inductively coupled plasma mass spectrometry, ICP-MS (ISO 21424 | IDF 243) and Inductively coupled plasma atomic emission spectroscopy, ICP-AES (ISO 15151 | IDF 229) that will allow determination of calcium, copper, iron, magnesium, sodium, etc in infant formula. Collaboration is ongoing on standards for the determination of amino acids, fructans and Galacto-oligosaccharides (GOS) in infant formula.

IDF contribution to ISO on monitoring device for cooling tanks

Monitoring devices for cooling tanks support the control of storage conditions and indicate if specified conditions are exceeded. As the monitoring device is part of the milking and cooling installation, it is essential that its design and installation are compatible with the complete installation and comply with the installation manufacturer's specifications. To support the work of the International Organization for Standardization (ISO), IDF submitted comments to the new ISO work on Milking and cooling machine installations – Monitoring device for cooling tanks – Requirements. This document was prepared by the Technical Committee 23, Tractors and machinery for agriculture and forestry, Working Group on Monitoring device milking installations.

“The advanced, preparatory work of the IDF SCFA to the Codex Committee on Food Additives (CCFA) on alignment has strengthened the technical and scientific image of IDF by Codex member governments, contributing to a reduction in dairy trade barriers based on food additives, and will ultimately improve market access for internationally traded dairy products.”

Allen Saylor
Chair of the Standing Committee on Food Additives (SCFA)

ON OUR AGENDA

IDF contributes to Codex

Currently there exists over 30 specific Codex Standards on milk and milk products, and over 50 guidelines and codes of practice affect the way these products are manufactured and traded.

IDF also contributes to the work of several horizontal Codex committees, engaging Codex across more than a dozen committees on many topics. IDF actively participates in the following Codex groups:

- CCCF (Codex Committee on Contaminants in Food): guidelines for risk analysis of contaminants in food in the absence of a risk management framework.
- CCFA (Codex Committee on Food Additives): alignment of food additive provisions in Codex standards on dairy with the GSFA (General Standard for Food Additives).
- CCFH (Codex Committee on Food Hygiene): Revision of the Codex General Principles of Food Hygiene and the HACCP annex.
- CCFICS (Codex Committee on Food Import and Export and Certification Systems): food authenticity.





- CCFL (Codex Committee on Food Labeling): Front of Pack Labelling
- CCMAS (Codex Committee on Methods of Analysis and Sampling): Updates of references to methods of analysis and sampling in Codex STAN 234
- CCNFSU (Codex Committee on Nutrition and Foods for Special Dietary Uses): revision of the Standard for Follow-up Formula
- TFAMR (Ad Hoc Intergovernmental Codex Task Force on Anti-microbial Resistance)

Supporting the adoption of date marking provisions in the Codex General Standard for the Labelling of Prepackaged Foods

Date marking is a key element in food labelling for food safety and quality which facilitates decision-making by consumers on the freshness of the product. This will enable them to decide on the optimal date for consumption thereby preventing food waste.

IDF is engaged on this issue and has recommended that date-marking requirements should be outcome-based by providing clear and understandable information to consumers while providing flexibility for food producers.

IDF AND ISO COLLABORATION ON MILK AND MILK PRODUCTS

Determination of nitrofurazone in milk and milk powders

The IDF and ISO are jointly developing an internationally harmonized analytical standard for the determination of intact nitrofurazone in milk and milk powders. Nitrofurazone is an antibiotic veterinary drug that is prohibited for use in food producing animals by most food safety authorities worldwide due to its cancer-causing properties.

Currently, most food testing bodies assess compliance by determining the presence of semicarbazide (SEM), the de facto marker metabolite for this banned veterinary drug. SEM can also be formed via other pathways or result from other sources. This creates the risk of a false positive result and the rejection of SEM dairy products which would be nitrofurazone negative and compliant.

Statistical analysis

The IDF Standing Committee on Statistics and Automation (SCSA) hosts permanent Action Teams to support the use of statistics in other analytical SCs. Those groups review the intended scheme of collaborative study, analyze the results and contributes statistical opinions to Codex.

These activities are essential for continue high quality method development and will ensure that validated methods can be trusted by their users whether it is for compliance or quality control.

Revision of IDF/ISO standard for the enumeration of bifidobacteria

Bifidobacteria are acknowledged as the major components of the intestinal microflora of humans and are frequently associated with health-promoting effects. There has been increased interest in creating food products which contain these bacteria as dietary probiotics such as fermented milks, powdered formulae, beverages and supplements. To ensure a probiotic effect, a certain number of bacterial cells in the products are needed. Therefore, it is critical to precisely enumerate the bifidobacteria in the products.

According to ISO 29981 | IDF 220:2010 "Milk products - Enumeration of presumptive bifidobacteria - Colony count technique at 37 °C", which was published in 2010, the recommended diluent was to use a quarter-strength of Ringer's solution or any other suitable and equivalent diluents. However, studies have suggested that quarter-strength Ringer's solution yielded lower counts as compared to other buffers and is not commonly used for regular enumeration of

bifidobacteria. Therefore, the Standing Committee on Analytical Methods for Dairy Microorganisms (SCAMDM) has mandated the Action Team to revise the existing standard. The group has successfully conducted two pilot studies to:

- compare buffers on the effects on enumeration of bifidobacterial samples.
- review the effects of various primary dilution conditions such as shaking condition, temperature and retention time on the enumeration of powder products.

Now that the pilot studies have confirmed the proposed changes, the next step in an international collaborative study is to validate these changes to introduce an improved joint IDF/ISO standard that will be expected to provide more reliable results.



“The standard under development will provide a tool for clear confirmation of nitrofurazone use and avoid rejection of false positive batches. This is expected to reduce the risk of trade disputes, minimize waste of good product, and improve cost savings for the sector.”

Karin Kraehenbuehl
Chair of the IDF Standing Committee on Analytical Methods for Additives and Contaminants (SCAMAC)

PUBLICATIONS

“This report helps to enhance understanding of the impact of policies and economic factors on the dairy sector with the increased focus on sustainable development and nutrition.”

Jurgen Jansen

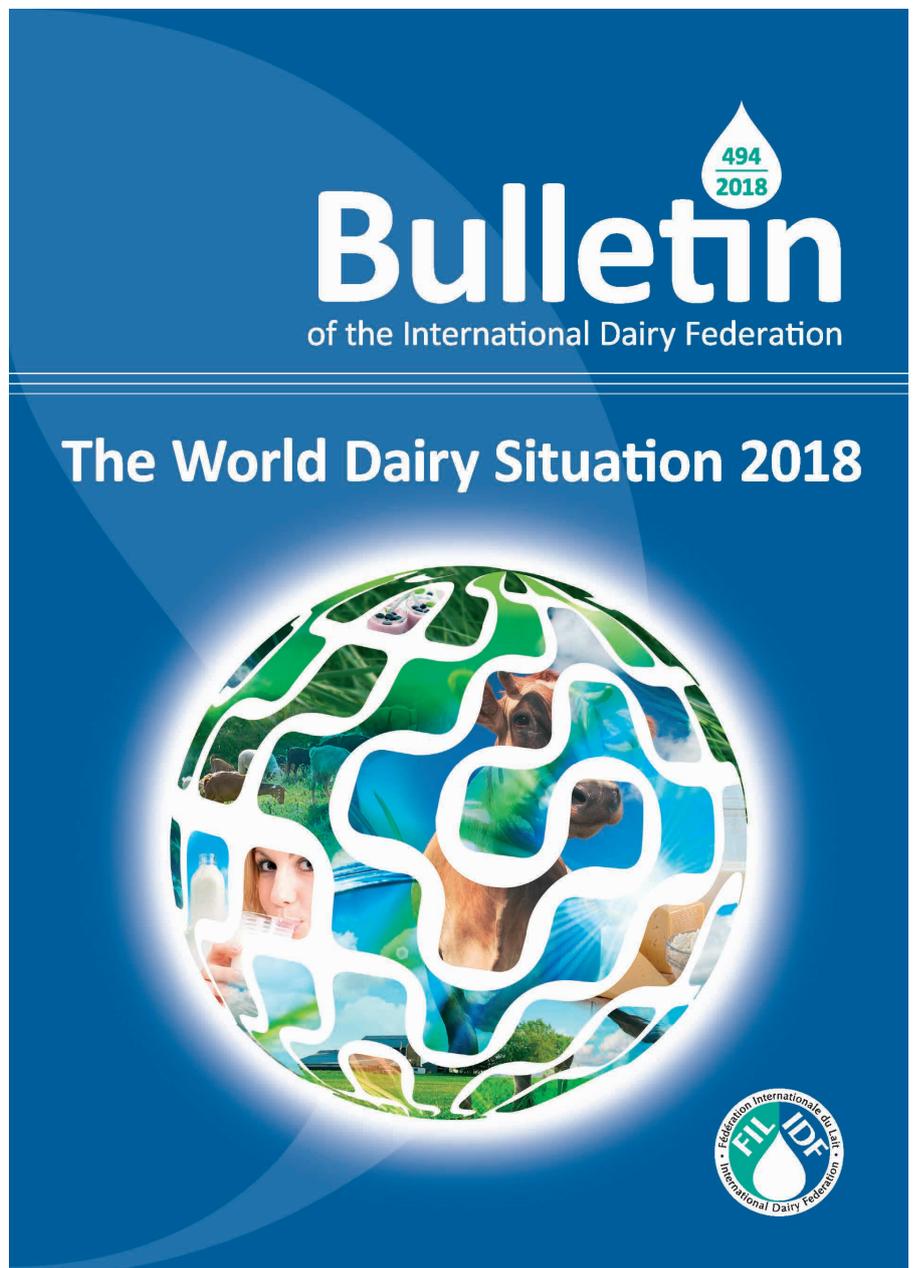
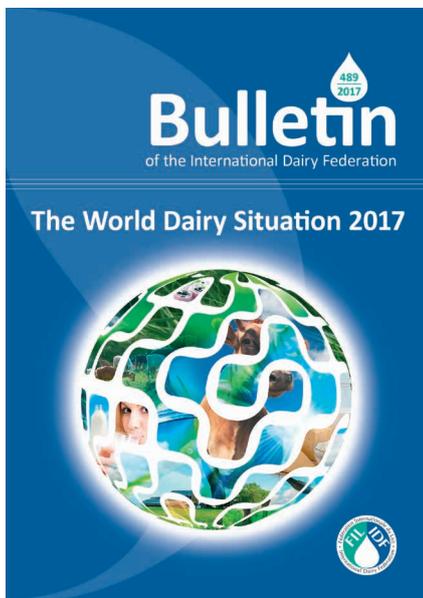
IDF National Committee

Secretary for The Netherlands

BULLETINS

The World Dairy Situation 2018

The World Dairy Situation 2018 is a flagship publication produced annually which presents data on the global dairy sector. It features more than 50 dairy producing countries across five continents, presenting an overview of information on milk production and processing, as well as trade, pricing and consumption. It was put together by IDF experts from dairy producing countries around the world under the scope of work by the IDF Standing Committee on Dairy Policies and Economics (SCDPE). The publication offers comprehensive data from national and international sources, providing an insight on the macro supply and demand trends in the dairy sector. Milkfat-driven recovery of the market resulted in profitable milk prices throughout most of 2017, propelling above-average milk production growth last year. The strongest growth was recorded in India, Pakistan, Turkey, Australia, Poland and the United Kingdom.



Bulletin of the IDF No. 490 | 2017:**Quality Assurance Tools for Mid Infrared Spectrometry in Dairy Laboratories, Part 1**

The development and use of recombined milk samples have brought significant improvements in the overall analytical quality performance of mid-infrared devices for the determination of milk composition in dairy laboratories. The first paper in this Bulletin briefly reviews the history of the development of recombined milk samples and explains the principles behind their use.

In recent years, several new applications with infrared spectrometry have been developed and implemented in dairy laboratories. Some of these prediction equations are not directly related to a component present in milk but are the result of the interrelation(s) with other known or unknown components marked by variations in mid-infrared spectra. This new approach requires spectral standardisation. The second paper in this Bulletin provides an overview of three different standardisation procedures.

Bulletin of the IDF No. 491 | 2018:**Teat-cup and cluster removal strategies for cattle and small ruminants: Review and recommendations**

Since the 1990s, when the technology was first introduced to Europe, automatic milking systems (AMS), which involved extraction of milk from dairy animals without human labour, have gained momentum. Today, more than 25,000 dairy farms worldwide employ AMS to milk their dairy herds. An optimal teat-cup removal is needed to achieve gentle, quick and complete milking while keeping dairy animals healthy and stress-free.

This publication provides the physiological background on why automatic and early detachment may shorten the machine-on time without loss of milk production. It explains quarter milking studies from the parlour and automatic milking machines' take-off studies. Automatic cluster removal is used in small ruminants with their own specificities, since goats and ewes are often different in their milk repartition in the udder and their milking response cluster take-off.

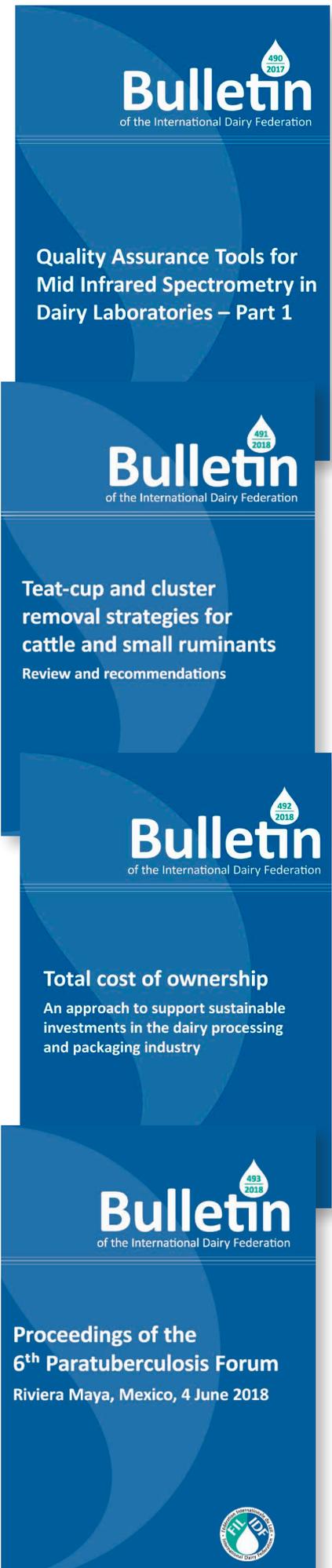
This work can help milking equipment suppliers, dairy farm advisers and operators on the adjustment of the factory default settings to optimal settings on automatic take-offs. Appropriate settings can significantly improve teat condition and parlour throughput while maintaining the quality and volume of milk harveste

Bulletin of the IDF No. 492 | 2018:**Total cost of ownership: An approach to support sustainable investments in the dairy processing and packaging industry**

Total Cost of Ownership (TCO) is an analysis meant to determine the lifetime costs derived from owning certain kinds of assets. The TCO methodology described in this report has been adapted to a dairy processing system. To support decision-making, it is possible to use TCO as a comparative tool. The TCO structure is developed based on the concept of Life Cycle Assessment, which is one of the most important techniques used to assess environmental impacts associated with all the stages of a product's life. Therefore, TCO could also be used as the basis for calculating environmental key performance indicators. In this way, TCO can be a very powerful tool for supporting sustainable investment, both from an economic and environmental perspective.

Bulletin of the IDF No. 493 | 2018:**Proceedings of the 6th Paratuberculosis Forum, Riviera Maya, Mexico, 4 June 2018**

The 6th ParaTB Forum, hosted by the International Dairy Federation (IDF), was held on 4 June 2018 at the International Convention Centre in Riviera Maya, Mexico. The Forum comprised more than 25 delegates, representing 13 countries (Germany, Italy, Spain, The Netherlands, Ireland, Czech Republic, Brazil, Colombia, Canada, Australia, Argentina, Slovenia, and the United Kingdom). The Forum presents an opportunity for delegates to discuss and report on the current state of paratuberculosis research and control programmes in their home countries. This IDF publication reviews some of the common themes and takeaways that emerged from the presentations.



JOINT IDF/ISO STANDARDS

INTERNATIONAL
STANDARD

ISO
19660
IDF 237

First edition
2018-02

Cream — Determination of fat content — Acido-butyrometric method

Crème — Détermination de la teneur en matière grasse — Méthode acido-butyrométrique

INTERNATIONAL
STANDARD

ISO
19662
IDF 238

First edition
2018-02

Milk — Determination of fat content — Acido-butyrometric (Gerber method)

Lait — Détermination de la teneur en matière grasse — Méthode acido-butyrométrique (méthode de Gerber)

INTERNATIONAL
STANDARD

ISO
9233-1
IDF
140-1

Second edition
2018-03

Cheese, cheese rind and processed cheese — Determination of natamycin content —

Part 1: Molecular absorption spectrometric method for cheese rind

Fromage, croûte de fromage et fromages fondus — Détermination de la teneur en natamycine — Partie 1: Méthode par spectrométrie d'absorption moléculaire pour croûte de fromage

INTERNATIONAL
STANDARD

ISO
9233-2
IDF
140-2

Second edition
2018-03

Cheese, cheese rind and processed cheese — Determination of natamycin content —

Part 2: High-performance liquid chromatographic method for cheese, cheese rind and processed cheese

Fromage, croûte de fromage et fromages fondus — Détermination de la teneur en natamycine — Partie 2: Méthode par chromatographie liquide de haute performance pour fromage, croûte de fromage et fromages fondus

INTERNATIONAL
STANDARD

ISO
21422
IDF 242

First edition
2018-09

Milk, milk products, infant formula and adult nutritional — Determination of chloride — Potentiometric titration method

Lait, produits laitiers, formules infantiles et produits nutritionnels pour adultes — Détermination de la teneur en chlorures — Méthode par titrage potentiométrique



Reference numbers:
ISO 21422:2018(E)
IDF 242:2018(E)

© ISO and IDF 2018

ISO 19660 | IDF 237: 2018

Cream — Determination of fat content — Acido-butyrometric method

This document specifies an acidobutyrometric method for determining the fat content of cream. The reference method remains the gravimetric method (by ammoniacal ether extraction) described in ISO 2450 | IDF 16.

This method is applicable to cream having a fat content between 20% and 50% inclusive:

- intended for manufacturing butter
- sweet, unmaturred and non-inoculated
- raw or having undergone a heat treatment
- non-homogenized
- with or without preservatives (2-bromo-2-nitropropane, 1,3 diol or bronopol)

ISO 19662 | IDF 238: 2018

Milk — Determination of fat content — Acido-butyrometric (Gerber method)

This document specifies a method, the acido-butyrometric or “Gerber”, for determining the fat content of milk. It is applicable to whole milk and partially skimmed milk and milk containing authorized preservatives (potassium dichromate, bronopol). It does not apply to formalin milk nor to milks that have undergone a homogenisation treatment.

ISO 9233-1 | IDF 140-1: 2018

Cheese, Cheese rind and processed cheese — Determination of natamycin content — Part 1: Molecular absorption spectrometric method for cheese rind

This document specifies a method for the determination in the cheese rind of natamycin mass fraction of above 0.5 mg/kg and surface-area-related natamycin mass of above 0.03 mg/dm².

This second edition cancels and replaces the first edition (ISO 9233 1 | IDF 140 1:2007), which constitutes a minor revision to incorporate the amendment ISO 9233-1:2007/Amd.1:2012.

ISO 9233-2 | IDF 140-2: 2018

Cheese, cheese rind and processed cheese — Determination of natamycin content — Part 2: High-performance liquid chromatographic method for cheese, cheese rind and processed cheese

This document specifies a method for the determination of natamycin mass fraction in cheese, cheese rind and processed cheese of above 0,5 mg/kg and of the surface-area-related natamycin mass in cheese rind of above 0,03 mg/dm².

This second edition cancels and replaces the first edition (ISO 9233-2 | IDF 140 2:2007), of which it constitutes a minor revision to incorporate the amendment ISO 9233 2:2007/Amd.1:2012.

ISO 21422 | IDF 242: 2018

Milk, milk products, infant formula and adult nutritional — Determination of chloride — Potentiometric titration method

This document specifies a method for the determination of chloride in milk, milk products, infant formula and adult nutritional by potentiometry with an analytical range of 0,35 mg chloride/100 g to 711,6 mg chloride/100 g product, or ready-to-feed products.

REPORT

Animal Health Report 2018

The 12th edition of the *IDF Animal Health Report* provides a glimpse of noteworthy topics on member countries and current research within the field of animal care, antimicrobial resistance and farming practices. It provides an opportunity for those involved in the field to present their findings through innovative research and providing an update on progress achieved and lessons learned.



All publications can be purchased or downloaded from the IDF website at <https://store.fil-idf.org>

EVENTS

IDF events offer opportunities for dairy sector stakeholders to:

- Connect with policy makers, dairy experts, scientists and academia, and learn about innovations, benchmarks and best practices.
- Contribute to the dialogue on topical issues of interest with representatives of national, regional and international organizations and sector leaders.
- Have access to leading thinkers and opinion makers on market trends.



PARTNERSHIPS

IDF works closely with the following organizations to advance the interests of the dairy sector:



UN Food and Agriculture Organization



World Organisation for Animal Health



International Organization for Standardization



Codex Alimentarius Commission



UN Committee on World Food Security



Organisation for Economic Co-operation and Development



European Committee for Standardisation

IDF Partners

AOAC INTERNATIONAL

Eastern and Southern Africa Dairy Association

European Dairy Association

Federación Panamericana de Lechería

Global Agenda for Sustainable Livestock

Global Dairy Agenda for Action – Dairy Sustainability Framework

Global Dairy Platform

HealthforAnimals

International Committee for Animal Recording

International Farm Comparison Network

International Food Additives Council

Stakeholder Panel on Infant Formula and Adult Nutritionals

Sustainable Agriculture Initiative Platform

U.S. Pharmacopeial Convention

World Veterinary Association



THE DAIRY DECLARATION OF ROTTERDAM

'We, representatives of the one billion person global dairy community, gathered in Rotterdam at the World Dairy Summit, are committed to the sustainable development of the dairy sector to generate widespread benefits for people and the planet.'



Signatories of the Dairy Declaration of Rotterdam

1 Argentina	6 China	11 Germany	16 Lithuania	21 South Africa	26 ESADA**
2 Australia	7 Cyprus	12 Japan	17 New Zealand	22 United Kingdom	
3 Belgium	8 Denmark	13 Ireland	18 The Netherlands	23 United States	
4 Canada	9 Finland	14 Israel	19 Poland	24 Zimbabwe	
5 Chile	10 France	15 Italy	20 Republic of Korea	25 FEPALE*	

* Pan-American Dairy Federation (FEPALE) comprises members from 20 countries involved in the dairy chain.

** Eastern and Southern Africa Dairy Association (ESADA) comprises 11 countries: Ethiopia, Kenya, Malawi, Mauritius, Rwanda, South Africa, Sudan, Tanzania, Uganda, Zambia and Zimbabwe.

THE DAIRY COMMUNITY ACCEPTS SUSTAINABILITY CHALLENGE

We recognize:

- The UN 2030 Agenda for Sustainable Development as the overarching framework that guides our actions towards sustainable development from a social, environmental, economic and health perspective.
- The vital role of dairy for food security and poverty reduction and the important livelihood and development opportunities for family farmers, smallholders and pastoralists.
- The critical contribution the dairy sector makes to Sustainable Development, including:
 - the essential role of dairy products for balanced, nutritious and healthy diets.
 - the major contribution that dairy makes to countries' economies, income, employment and livelihoods.
 - the key function of the dairy sector in the management of terrestrial ecosystems and the need to address environmental degradation and climate change, and to support biodiversity.

We agree to:

- Take an integrated approach to promote the sustainability of dairy systems, jointly taking into consideration social, economic, health and environmental dimensions.
- Give particular attention to the needs of family farmers, smallholders and pastoralists.
- Build, implement and disseminate tools and guidelines to facilitate the identification and adoption of sustainable practices in the dairy sector.
- Build capacity in support of sustainable practices and provide enabling conditions.
- Measure and report on sustainability outcomes.
- Strengthen multi-stakeholder dialogue for consensus-building, reviewing progress and continuous improvement.



“We value our collaboration with the IDF where we benefit from its dairy expertise through its knowledge and intelligence on the dairy sector. This is useful for our members in their implementation of international standards and best practices which we will continuously document for review and to share with the world.”

Peter Ngaruiya
ESADA Executive Director

NEW SIGNATORIES OF THE DAIRY DECLARATION OF ROTTERDAM

The Eastern and Southern Africa Dairy Association (ESADA) and Argentina have become the latest signatories of the Dairy Declaration of Rotterdam, which brings the total number of signatories to 26 to date, including 24 countries and two regional organizations.

ESADA's Chairperson Dr Kipkirui Lang'at, its Executive Director Peter Ngaruiya and IDF Director General Caroline Emond, inked the Declaration on 22 August 2018 in Nairobi, Kenya, during the 14th African Dairy Conference and Exhibition.

“The significance of the dairy sector in alleviating poverty and improving the welfare of the African rural population cannot be gainsaid,” stated Mr Ngaruiya. “In Eastern Africa where over 80 per cent of the milk is produced by smallholders, a slight positive change in the sector can have a huge impact on the lives of many households.

“Technological advancement and changes in practices, albeit gradually, hold the key to transforming the African dairy sector which holds huge potential that requires to be unlocked for the good of the African people,” he added.

“ESADA shall actively participate in various fora and other dialogues aimed at generating and disseminating best practices and sustainability initiatives. These initiatives will go a long way in supporting our agenda of transforming the African dairy sector across the entire value chain for the good of all the stakeholders and the environment,” said Mr Ngaruiya.



ESADA's Chairperson Dr Kipkirui Lang'at signing the Dairy Declaration with Mr Peter M. Ngaruiya, ESADA's Executive Director and IDF Director General Caroline Emond looking on.



IDF Director General Caroline Emond with the Argentine Minister of Agro-Industry Luis Miguel Etchevehere at the signing ceremony of the Dairy Declaration at a FEPALE congress in Buenos Aires.

Argentine Minister of Agro-Industry Luis Miguel Etchevehere signed the Declaration with the IDF Director General on 13 September in Buenos Aires at a Pan-American Dairy Federation (FEPALE) congress which comprises the dairy sectors of 20 countries in the Americas.

Earlier on, the IDF National Committee of Italy, Assolatte (Italian Dairy Association), Confcooperative (Confederazione Cooperative Italiane) and AOP Latte Italia (Association of Producer Organisations of Latte Italia) signed the Declaration on 1 June this year in Cremona, Italy.

Mr Luciano Negri, President of the IDF National Committee of Italy, said: “I’m proud to have contributed to the realization of this important event. With the signing of this document, the Italian dairy chain demonstrates that it is in the forefront in recognizing sustainability issues that are central to the Italian dairy sector, which has always been committed to producing high-quality products with high nutritional and sensory value for the well-being of consumers all over the world.

“This step will give even more impetus to the activities aimed at building a sustainable dairy supply chain which is aware that the world of tomorrow is the responsibility of all of us, and it is built with the decisions we take today.”



Dr Massimo Forino (left) and Mr Luciano Negri (right).





FEPAL President Daniel Peregrina and IDF Director General Caroline Emond.

The IDF National Committees of South Africa and Cyprus inked the Declaration in December 2017, while FEPAL signed it in November. The other signatories include China, France, Poland, UK, US, Germany, The Netherlands, South Korea, New Zealand and Australia. These signatories represent more than half of the world's milk production.

"We encourage more countries and members of the dairy chain around the world to sign up to the Dairy Declaration in support of sustainability and the positive contributions to food security, employment generation, poverty reduction and the management of ecosystems to maintain biodiversity," said Ms Caroline Emond, IDF Director General.

"Capacity-building in best practices is important to enable dairy farmers and processors to develop integrated approaches towards sustainability which will benefit the global community while generating socio-economic growth."

The Declaration was jointly launched by the International Dairy Federation (IDF) and the UN Food and Agriculture Organization (FAO) in October 2016 during the IDF Dairy Summit in Rotterdam. It signifies commitment by both organizations to the sustainable development of the dairy sector which encompasses economic, social, health and environmental dimensions.

The Declaration also recognizes the essential role of dairy products for balanced, nutritious and healthy diets.

IDF BOARD



From left to right: Alwyn Kraamwinkel, Jørgen Hald Christensen, Dr Judith Bryans, Dr Tova Avrech, Thierry Geslain, Cary Frye, Jean-Marc Delort and Ron Maynard.

Dr Judith Bryans BSc PhD RNutr

IDF President

United Kingdom | CEO Dairy UK

Judith was elected IDF President in 2016, having first joined the IDF Board in 2015. Judith served as a member of the Science Programme Coordination Committee (SPCC) for three years from 2005, following a three-year stint as Chair of the Standing Committee on Nutrition and Health. She was appointed Chief Executive of Dairy UK, the dairy supply chain trade association in the UK, in 2013.

Jean-Marc Delort

Chair of the IDF Science Programme Coordination Committee (SPCC)

Switzerland | Nestlé

Jean-Marc joined the IDF board in 2015 after four years as a member of the SPCC. Formerly Vice-President of R&D and Operations of the dairy business unit at Nestlé, Jean-Marc has over 35 years of experience in the dairy industry both in R&D and Operations, with a strong international track record.

Jørgen Hald Christensen

IDF Treasurer

Denmark | Danish Dairy Board

Jørgen joined the IDF Board in 2014. He has contributed to IDF's work since 1989, working in various positions. Jørgen is CEO of the Danish Dairy Board, which safeguards and represents a number of common interests in Denmark and abroad on national and international dairy policies.

Dr Tova Avrech

Israel | Israel Dairy Board

Tova joined the IDF Board in 2014. She is the Chief Health Officer with the Israel Dairy Board with expertise in nutrition and health, and risk management in the dairy sector.

Tova previously served as Chair to a large dairy processing company in Israel.

Thierry Geslain

France | Centre National Interprofessionnel de L'Economie Laitière

Thierry joined the IDF Board in 2015 as a National Committee representative. In addition to his role as National Secretary of FIL France, Thierry is Director of Scientific and Technical Affairs at the French national dairy inter-branch association, CNIEL.

Catherine Tokarz

Canada | Saputo Inc.

Catherine joined the IDF Board in 2016 and has been involved with IDF for more than 25 years. She has worked in dairy policy and economics as well as regulatory affairs with dairy farming organisations, dairy processing associations and government. Catherine is Senior Vice-President of Governmental Affairs at Saputo Inc. and currently serves as Vice President of IDF Canada.



Cary Frye

United States | International Dairy Foods Association

Cary joined the IDF Board in 2017 as a General Assembly representative. She has contributed to IDF's work since 1996 in a leadership role in standards and labelling, chairing the IDF Standing Committee on Food Labelling and Terminology from 2010-2014. Cary previously served on the IDF Board of Directors from 2013-2015 to help align the organization's work in the key areas of standards, sustainability, nutrition, dairy safety and quality. She is the Senior Vice President of Regulatory Affairs at the International Dairy Foods Association.

Alwyn Kraamwinkel

South Africa | South African Milk Processors' Organisation

Alwyn joined the IDF Board in 2016. Alwyn is CEO of SAMPRO, a member of the Board of Directors of Milk SA, Chair of the Board of Directors of Dairy Standard Agency, and leader of the business caucus of the Dairy Sector Task Team of the National Economic Development and Labour Council.

Ron Maynard

Canada | Dairy Farmer in Tyne Valley

Ron has been a member of the IDF Board since 2016. He has been involved with the IDF since 2007, including four years as Chair of the Farm Management Standing Committee and one year as a member of the SPCC. Ron has been a partner of a family farm in Canada since 1982.

SCIENCE AND PROGRAMME COORDINATION COMMITTEE

Jean-Marc Delort
(Switzerland)
Chair

**Piercristiano
Brazzale**
(Italy)
Environment

Laurent Damiens
(France)
Economics, Policies
and Marketing

Eric Grande
(France)
Food Standards

Claus Heggum
(Denmark)
Hygiene and Safety

Dr Phil Kelly
(Ireland)
Dairy Science and
Technology

Dr Koos Coetzee
(South Africa)
Farm Management

Dr Erik J.M. Konings
(Switzerland)
Dairy Processors

Dr Jamie Jonker
(United States)
Animal Health and
Welfare

**Dr Andrew
Novakovic**
(United States)
Academia

Dr Jan M Steijns
(The Netherlands)
Nutrition

**Dr Harrie van den
Bijgaart**
(The Netherlands)
Methods of Analysis
and Sampling

Andrew Hoggard
(New Zealand)
Dairy Farming

June 2018

STAFF

Caroline Emond
Director General

Apolina Fos
Secretary to the Director
General

Aurélie Dubois-Lozier
Technical Manager

Laurence Rycken
Technical Manager

Dr María Sánchez Mainar
Technical Manager

Dr Jaap Evers
IDF Leader, Global Standards

Geraldine Goh
Communications Director

Marylène Tucci
Communications Officer

Stefania Pupo
Administrative Support

Nadine Kamunga
Administrative Support

June 2018



17

STANDING
COMMITTEES

1,200

EXPERTS



41

COUNTRIES

STANDING COMMITTEES



Animal Health and Welfare (SCAHW)

Chair: Olav Østerås (Norway)
Deputy Chair: vacant

Analytical Methods for Additives and Contaminants (SCAMAC)

Chair: Karin Kraehenbuehl (Switzerland)
Deputy Chair: vacant

Analytical Methods for Composition (SCAMC)

Chair: Philippe Trossat (France)
Deputy Chair: Richard Johnson (New Zealand)

Analytical Methods for Dairy Microorganisms (SCAMDM)

Chair: Yao Su (China)
Deputy Chair: Biljana Bogicevic (Switzerland)

Analytical Methods for Processing Aids and Indicators (SCAMPAI)

Chair: Martin Alewijn (The Netherlands)
Deputy Chair: Frea de Boer (The Netherlands)

Dairy Policies and Economics (SCDPE)

Chair: Gilles Froment (Canada)
Deputy Chair: Véronique Pilet (France)

Dairy Science and Technology (SCDST)

Chair: David Everett (United States)
Deputy Chair: Geoffrey W. Smithers (Australia)

Environment (SCENV)

Chair: Ying Wang (United States)
Deputy Chair: Marcin Preidl (Germany)

Food Additives (SCFA)

Chair: Allen R. Saylor (United States)
Deputy Chair: Christian Bruun Kastrop (Denmark)

Farm Management (SCFM)

Chair: Helen Dornom (Australia)
Deputy Chair: Birthe Lassen (Germany)

Harmonisation of Microbiological Methods (SCHMM)

Chair: Barbara Gerten (Germany)
Deputy Chair: Patricia Rollier (France)

Marketing (SCM)

Chair: Ida Berg Hauge (Norway)
Deputy Chair: Mike Johnston (United Kingdom)

Microbiological Hygiene (SCMH)

Chair: Kieran Jordan (Ireland)
Deputy Chair: François Bourdichon (France)

Nutrition and Health (SCNH)

Chair: Stephan Peters (The Netherlands)
Deputy Chair: Erica Hocking (United Kingdom)

Residues and Chemical Contaminants (SCRCC)

Chair: vacant
Deputy Chair: vacant

Statistics and Automation (SCSA)

Chair: Bianca Mueller (Germany)
Deputy Chair: Rob Crawford (New Zealand)

Standards of Identity and Labelling (SCSIL)

Chair: John Allan (United States)
Deputy Chair: Melissa Cameron (Australia)

TASK FORCES

Task Force on Plant-Based Beverages

Chair: Laurent Damiens (France)

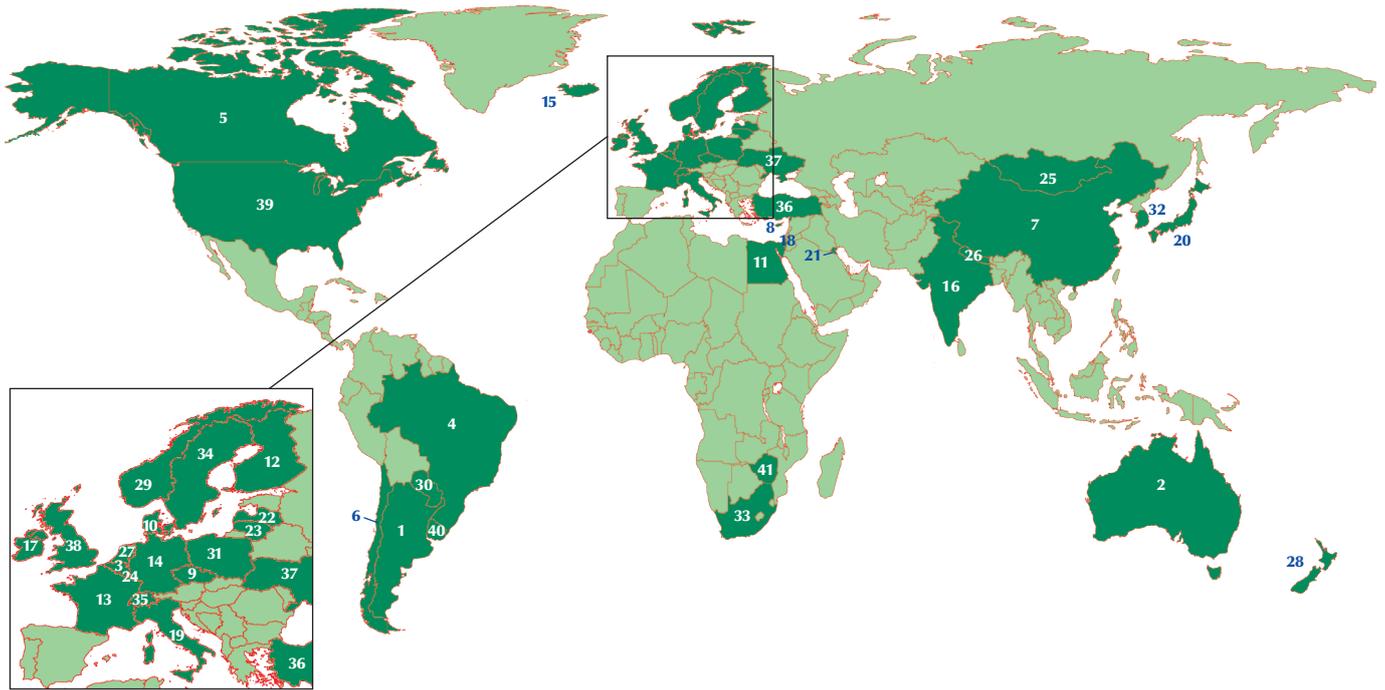
Task Force on Protein from a Dairy Perspective

Chair: Laurence Rycken (IDF)

Task Force on Antimicrobial Resistance

Chair: vacant

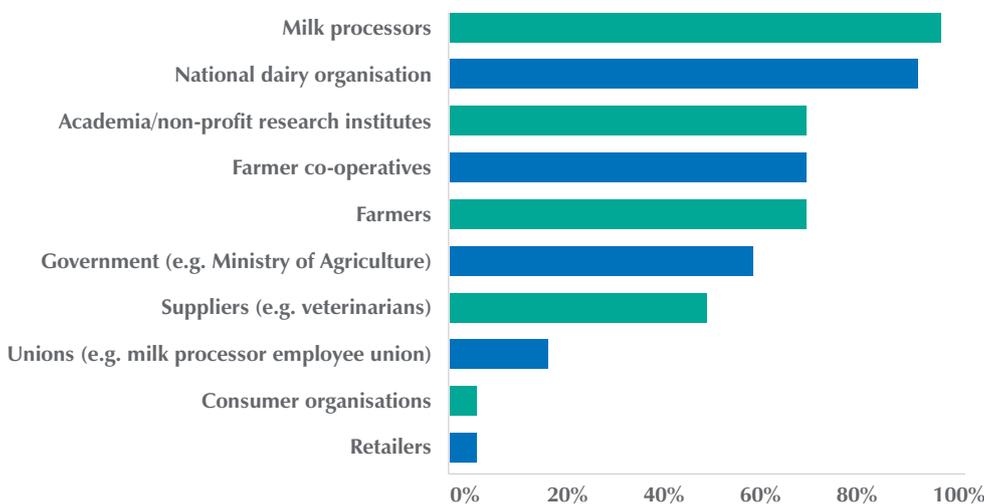
NATIONAL COMMITTEES



IDF Member Countries

- | | | | | |
|------------------|------------|--------------------|----------------------|-------------------|
| 1 Argentina | 10 Denmark | 19 Italy | 28 New Zealand | 37 Ukraine |
| 2 Australia | 11 Egypt | 20 Japan | 29 Norway | 38 United Kingdom |
| 3 Belgium | 12 Finland | 21 Kuwait | 30 Paraguay | 39 United States |
| 4 Brazil | 13 France | 22 Latvia | 31 Poland | 40 Uruguay |
| 5 Canada | 14 Germany | 23 Lithuania | 32 Republic of Korea | 41 Zimbabwe |
| 6 Chile | 15 Iceland | 24 Luxembourg | 33 South Africa | |
| 7 China | 16 India | 25 Mongolia | 34 Sweden | |
| 8 Cyprus | 17 Ireland | 26 Nepal | 35 Switzerland | |
| 9 Czech Republic | 18 Israel | 27 The Netherlands | 36 Turkey | |

IDF MEMBERSHIP REPRESENTS ALL KEY STAKEHOLDERS IN THE DAIRY CHAIN



IDF MEMBERSHIP COVERS MORE THAN

75%



OF GLOBAL MILK PRODUCTION

AWARDS

IDF Prize of Excellence 2017

The IDF Prize of Excellence 2017 was awarded to Mr Keith A Johnston (New Zealand) for his outstanding contribution to the work of the IDF. Mr Johnston, principal research technologist at Fonterra shared his expertise within various IDF Standing Committees which resulted in the publication of the Codex cheese standards, and the initiation of the alignment of the food additives in these same Codex dairy standards with the Codex General Standard for food additives (GSFA).

IDF Award 2017

The IDF Award 2017 was presented to Dr Robin Condron (Australia), former manager in animal health and welfare at Dairy Australia. For over 15 years, Dr Condron has been an active contributor to the IDF, providing strategic advice to local industry and internationally in the technical areas of food safety, animal health and welfare.

IDF Leader Recognition Award

The winner of the IDF Leader Recognition Award was the internationally renowned nutrition expert Mary Anne Burkman from The Dairy Council of California for her skills in translating scientific language into practical information. Ms Burkman is recognised as a pioneer in bringing the nutrition and sustainability fields together and has played a key role in drafting essential resource papers for the IDF.

International Milk Promotion Group Yves Boutonnat Trophy 2017

The Norwegian Dairy Council won the International Milk Promotion Group (IMP) Yves Boutonnat Trophy 2017 for their successful marketing campaign “One nutrient, hundred communication possibilities”.



Mr Keith Johnston received the IDF Prize of Excellence 2017 from IDF President Dr Judith Bryans



Dr Robin Condron, IDF Award 2017 winner with IDF President Dr Judith Bryans

FINANCIAL STATEMENT

The balance sheet total at the close of 2017 was €2,065,559. Total equity in 2017 amounted to €1,788,583; this is €60,019 more than at end 2016 due to the result in 2017 that is further detailed below.

As in previous years, income in 2017 was largely through membership fees. Higher costs were incurred for travel, office rental, IT and telecommunications (website and intranet upgrade in 2016 which continued into 2017). Staff salaries and related costs were lower due to attrition and long-term illness. Exceptional costs were incurred for the services of a media and strategic consultant, and a settlement for the termination of a staff.

Balance Sheet (Euro)

	31/12/2017	31/12/2016
TOTAL ASSETS	2,065,559	2,002,196
Fixed assets	23,213	22,882
Receivables <1 yr	115,247	25,778
Investments	185,485	284,255
Cash	1,651,585	1,669,281
Deferred charges	90,029	0
TOTAL LIABILITIES	2,065,559	2,002,196
Equity	1,788,584	1,728,565
Payable <1 yr	256,775	235,531
Deferred income	20,200	38,100

Income Statement (Euro)

YEAR	2017 Actual	2016 Actual
REVENUES	1,363,597	1,324,639
Membership fees	1,183,950	1,162,100
Income from IDF publications	89,281	57,584
Income from IDF events	75,000	90,240
Financial income	12,359	11,370
Other income	3,006	3,344
COSTS	1,253,798	1,257,303
Staff salaries, social security, pensions	810,790	764,568
Office rent and charges	112,727	10,826
IT and phone	74,832	148,128
Insurances, maintenance, leasing	9,094	9,257
Taxes	30,314	29,008
Travel	69,522	53,028
Meeting costs	8,859	7,922
Editing, layout and printing	62,873	69,130
Variable office costs	18,418	13,584
Audit, consultants and outsourcing	42,130	42,779
Depreciations	11,771	9,838
Financial charges	2,468	2,235
Other charges	0	0
Result of ordinary activities	109,799	67,336
Exceptional results	-49,780	14,212
RESULT	60,019	81,548





Global Dairy Expertise



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