



2016/17 ANNUAL REPORT

INTERNATIONAL DAIRY FEDERATION



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MESSAGE FROM THE PRESIDENT



It is my pleasure to introduce the International Dairy Federation Annual Report for 2016/17.

It's been a milestone year for the global dairy industry. A year in which we have seen strong drive from intergovernmental agencies and national governments towards delivering against the United Nations (UN) Sustainable Development Goals. This has been matched by strong support from IDF members for the sustainable development of the dairy industry, demonstrated partly through their endorsement of the Dairy Declaration of Rotterdam – as you will see in this report.

It's also a year in which antibiotics and antimicrobial resistance have moved up the agendas of multiple intergovernmental organisations. The work of the IDF in this area – including its Guide on Antimicrobial Resistance from the Dairy Sector – has already proven a useful resource to share with key influencers. The guide, along with key statements from the IDF have been shared with the UN inter-agency Group on AMR during the recent multi-agency/multi-stakeholder Call to Action on AMR event, which took place in Berlin.

In the last year, we have seen increasing pressure from anti-dairy groups and the continued misuse of dairy terms. The IDF's work in nutrition and on the environment are key to promoting the benefits of dairy within a healthy diet and its role in helping to maintain a healthy planet for future generations.

I cannot cover all of the IDF's work this year in this brief introduction so I hope you will take the time to read the report and see what the IDF has done for you, our members. It's important to recognise that the IDF could not achieve this without the expertise of its members, its network of experts and its partnerships. Our unique structure coupled with our work programme – which spans farm to fork – remains essential to the dairy sector. Our unified voice as IDF members is vital in ensuring the positive future of dairy.

Judith Bryans
President

MESSAGE FROM THE DIRECTOR GENERAL

In this, the second IDF Annual Report, we highlight key achievements and progress made since our General Assembly in Rotterdam in 2016.



Here at the IDF we've been creating and improving dairy standards since 1903, and have been representatives of the global dairy sector to key organisations like the United Nations organisations since our establishment. The Codex Alimentarius Commission recently acknowledged the key role as a technical advisors we play, inviting the Federation to speak as part of the intergovernmental organisation panel at the 40th annual meeting of the Commission.

This year's Annual Report showcases some of the IDF's excellent technical work, which underlies the key role the Federation plays in working to reach a global consensus on topics relating to dairy. As part of this we have continued to build on our relationships

with key bodies such as the Codex Alimentarius, the Food and Agriculture Organisation of the United Nations (FAO), the World Health Organisation (WHO), the World Organisation for Animal Health (OIE) and several other intergovernmental agencies, as representatives of the global dairy sector.

I would like to personally thank IDF members and the experts involved in our work for their continued support of the Federation, the Board and SPCC for their guidance, and of course the IDF staff for their commitment and dedication.

Nico van Belzen, PhD
Director General

IDF Vision

Helping to nourish the world with safe and sustainable dairy.

WHAT WE DO

The IDF provides science-based expertise and consensus for the global sector and is the global voice of dairy to key intergovernmental organisations.

OUR PILLARS

Nutrition
Sustainability
Standards
Dairy Safety and Quality



MESSAGE FROM THE SPCC CHAIR



Another great year of achievements thanks to our network of dedicated professionals and scientists throughout the world.

Since the last World Dairy Summit in Rotterdam the Science Program Coordination Committee (SPCC) has been actively continuing its work along the two streams we presented last year:

- Annual Cycle of Work: all submitted NWI (New Work Items) were received by year. During our January meeting, the SPCC reviewed the twelve proposals, which were then approved by our National Committees. Alongside this, the SPCC has continued to build on and develop the strength of its communication with our Board, Chairs and Deputy Chairs.
- Content of work: the SPCC redefined the 2017 IDF priorities, extending three of the 2016 ones (analytical standards for infant formulas and milk products, Nitrogen Conversion Factor and the importance of dairy for sustainable nutritional security) as well as defining two new

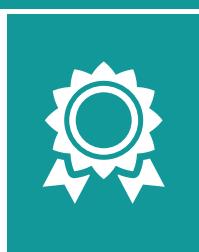
ones, covering the work done by our sector on two sensitive subjects (antimicrobial resistance and animal welfare). It is of the utmost importance that we successfully communicate our work in the face of today's challenges, and can demonstrate we have responded to them in a responsible way.

Adaptation to changing environments, quick reactions, new channels of communication, and emerging trends are all part of a new world we need to face. With our worldwide reach and dedicated network of contributors I am confident that with the support of our technical team the SPCC is well organised to respond to this new reality.

**Jean-Marc Delort
SPCC Chair**



IDF WORKING AREAS



STANDARDS



DAIRY SAFETY & QUALITY



NUTRITION



SUSTAINABILITY

ANIMAL HEALTH
& WELFAREDAIRY SCIENCE
& TECHNOLOGYECONOMICS,
MARKETING
& POLICIES

ENVIRONMENT

FARM
MANAGEMENTFOOD
STANDARDSHYGIENE
& SAFETYMETHODS OF
ANALYSIS &
SAMPLINGNUTRITION
& HEALTH

THE DAIRY DECLARATION AND THE SUSTAINABLE DEVELOPMENT GOALS

During the United Nations General Assembly in September 2015, 193 member countries adopted the Sustainable Development Goals (SDGs).

This represented a unanimous commitment to end poverty, protect the planet, and end inequality by 2030.

The SDGs are important to all nations, each country has its own work to do in ensuring their delivery. For the goals to be reached, everyone needs to do their part; governments, the private sector and civil society.

DAIRY DECLARATION OF ROTTERDAM

The world's population is growing and by 2050 will reach over 10 billion people. Feeding that number of people with nutritious, sustainable, safe and affordable foods with limited planetary resources will be a challenge. However it is a challenge the dairy sector is embracing.

As a sector we contribute to world economies through local and global trade. We provide a livelihood for a billion people. Our farmers and processors are

committed to environmental sustainability. We provide nutritious foods which are important to the health and wellbeing of all age groups. Female empowerment plays a strong role in the dairy industry, particularly in developing nations. A large number of supporting industries rely on dairy for the security and prosperity of those who work within them. All of these are integral in helping to deliver a number of the UN SDGs.

On the 19th October 2016, during the IDF World Dairy Summit in Rotterdam, the Food and Agriculture Organisation of the United Nations (FAO) and the IDF signed the Dairy Declaration of Rotterdam.

In doing so, the FAO recognised the importance of the dairy sector in helping to deliver the UN SDGs. The IDF is committed to the sustainable development of the dairy sector to generate widespread benefits for people and the planet.





We, representatives of the one billion person global dairy community, are committed to the sustainable development of the dairy sector to generate widespread benefits for people and the planet.



Pictured from top left to bottom right:
Australia, Belgium, Canada, China, Chile,
United Kingdom, Finland, France and Denmark



Pictured from top left to bottom right:
 Germany, Ireland, South Korea, New Zealand,
 The Netherlands, Israel, Poland, Lithuania, Zimbabwe,
 The United States of America and Japan.

FOCUS ON: STANDARDS

IDF Strategy

The IDF pro-actively contributes to the development of science-based, globally harmonised standards, guidelines, codes of practice and related methodologies, to continually improve the regulatory environments of the dairy sector.

INTERACT PRO-ACTIVELY AND REACTIVELY WITH INTERNATIONAL BODIES

It is of paramount importance that as a sector we are engaged in discussions on the setting of international standards, given the importance they have in protecting and safeguarding consumer health. The IDF works closely with the Codex Alimentarius Commission, acting as a technical adviser on behalf of the global dairy industry, helping develop regional and international standards for dairy products.

The IDF engages with a range of international bodies and stakeholders on behalf of the dairy industry, seeking to improve techniques, testing, standards and the information available to its members. Whether it be testing for somatic cells, setting standards on infant formula, the standardisation of techniques and instruments, or improving methods of analysis, the IDF is committed to improving the standards of food, animal health and welfare and the environment globally.

HIGHLIGHTS

IDF DAIRY PERMEATE STANDARDS ADOPTED BY CODEX

The Codex Alimentarius Commission has adopted the new international standard on powdered dairy permeates (both milk and whey permeate powders) as ingredients in food, a standard which was developed with the help of IDF experts. The IDF is recognised as a technical advisor to the Codex Commission on Milk and Milk Products and provides science-based expertise on compositional specifications and relevant analytical methods, as well as clarity on the technical justifications relating to processing aids and food additives. This new standard will be used in line with all existing and relevant Codex standards¹.

Whey permeate powder is a milk product obtained by drying whey permeate. Whey permeate is obtained by removing milk proteins through a mechanical process from whey (excluding acid whey). Milk permeate powder is a milk product obtained by drying milk permeate and is obtained by removing through ultrafiltration milk proteins from milk. Where other lactose-containing milk products are used as raw material, the powdered product will be 'dairy permeate powder.'

"Dairy permeate powders are new to the food market, so there were no clear product definitions available as a reference. This situation could jeopardise the true identity of these food ingredients and lead to unfair trade practices. In some countries, import restrictions have already been imposed. This new standard is necessary as a reference in trade"

Claus Heggum (DK)
– IDF Action Team Leader and SPCC member on Hygiene and Safety

¹ The new standard will take into account the provisions of CODEX STAN 206 (General Standard for Use of Dairy Terms), the General Principles of Food Hygiene (CAC/RCP 1-1969), the Code of Hygienic Practice for Milk and Milk Products (CAC/RCP 57-2004), the General Standard for Labelling of Pre-packaged Foods (CODEX STAN 1-1985), the General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995) and the General Standard for Food Additives (CODEX STAN 192-1995.)

On our agenda in 2016/17

THE IDF CONTINUES COLLABORATION IN THE SPIFAN PROJECT TO DEVELOP INTERNATIONAL STANDARDS FOR INFANT FORMULA

The nutritional quality of infant formula is important to guarantee the essential nutrients (including vitamins and minerals) for the adequate growth and development of babies and young children. The International Standards set by the Codex Alimentarius and national regulations are key to consumer assurance on the nutritional quality of infant formula².

The IDF has been a key collaborative partner on the SPIFAN project (Stakeholder Panel on Infant Formula and Adult Nutritionals), managed by AOAC International, together with ISO. This project has resulted in the adoption of six analytical methods for infant formula, agreed at the Codex Commission Committee meeting. These six Type II methods (i.e. reference methods) determine content on vitamins B12, C and E, chromium/molybdenum/selenium, myo-inositol and total fatty acid profile, and have become the recommended methods for these nutrients in infant formulas worldwide.

There are currently a number of different accurate analytical methods in use to verify the nutrients present in infant formulas. Despite scientific developments, there are few methods for determining micronutrient content harmonised internationally. This lack of harmonisation could potentially cause problems in international trade, due to the differing methods used by parties, each producing different results. The IDF has taken steps to address these issues in participating on this collaborative project.

The availability of harmonised standards helps manufacturers of infant formula and official control laboratories to check compliance with regulations. This results in more accurate determination of the nutritional quality of infant formula as well as fewer trade disputes caused by differences in analytical results. In addition, these methods may provide internationally validated anchor points to calibrate routine methods for manufacturing purposes. Therefore, these new analytical standards are key to ensure that infant formulas deliver adequate nutrients to babies and young children.

The IDF's collaboration with both the AOAC and ISO is now focused on creating up-to-date and globally harmonised methods for the determination of chloride, trace elements and fructooligosaccharides in infant formula and adult nutritionals.

IDF AND ICAR ACTION TEAM ON REFERENCE SYSTEM FOR SOMATIC CELL COUNTING

The IDF and ICAR (International Committee for Animal Recording) jointly collaborated on a project with the intention of setting up an international reference system for somatic cell counting in raw milk.

Any increase of the occurrence of somatic cells in raw milk signals that there is an inflammatory process occurring in the udder of the lactating animal. This in turn then influences the quality of milk for consumers, which is controlled by regulatory limits. Somatic cell counting is therefore a highly relevant factor when monitoring animal health and increases should trigger farm management decisions.

² The Codex Alimentarius or "Food Code" was established by the FAO and the World Health Organisation in 1963 to develop harmonised international food standards that protect consumer health and promote fair practices in the food trade.

IDF BULLETIN ON MIR SPECTROMETRY FOR MILK ANALYSIS: STANDARDISATION OF FT-MIR INSTRUMENTS AND USE OF REFERENCE MATERIALS

Fourier transform mid infra-red (FT-MIR) spectrometry is the most used worldwide method for compositional analysis and quality checks during routine liquid milk testing. This is a quick, reliable and precise method that requires little sample preparation and no consumables. It is particularly useful for measuring parameters related to milk composition (fatty acids, detailed protein composition, minerals) and to technological properties of the milk (ability to coagulate). Nowadays, with the use of prediction equations, indirect parameters, such as the metabolism of dairy cows (methane emissions, energy balance, energy intake, efficiency, ketosis), or the detection of adulteration can also be obtained.

Despite being a technology of choice, it has some drawbacks. Spectra

originating from different labs, with a different model or brand of FT-MIR apparatus, in different countries and from different time periods will give different results. Spectral standardisation would be useful to help overcome this problem. To help understand the existing approaches for spectral standardisation the IDF has prepared an overview paper with three examples of standardisation methods (Virtual Master Spectrum approach, Optimir project approach and universal spectra standardisation).

Mid infra-red (MIR) spectrometry uses recombined milk samples as reference material that allows a better overall analytical quality performance and reduces calibration cost. With the advent of FT-MIR spectrometry

and the foreseen applied spectrum calibrations, the use of recombined samples will still have value for milk testing laboratories. These recombined milk samples will be useful for calibration for fatty acids and individual proteins. The IDF has prepared a paper explaining the principles behind the use of recombined milk samples as reference material with suitable practical information for quality control procedures to promote standardised production of reference material for FT-MIR and MIR spectrometry in milk that complements the previous standard ISO 9622 | IDF 141.

Both papers were finalised during the Analytical Week in Madison, and will be published in an IDF Bulletin in the coming weeks.

Annually, billions of somatic cell count (SSC) measurements are made using both different instruments and methods. As a result of these differing methods of anchoring counting levels, the executing laboratories end up with results which are not comparable. There is a need for an international standard on somatic cell counting in milk; the current reference method needs to improve performance, and a certified reference material is lacking. The IDF and ICAR are working together on this missing anchor; a global reference system. Part of this solution are milk-based reference materials, currently being developed by the European Joint Research Centre, and are due to be made available by 2018. These reference values will be produced by inter-laboratory studies, with accredited laboratories from all around the world working in partnership. To complete this, a new statistical tool has been developed to compare values of SCC found in different laboratories.

This new reference system is key to the traceability and equivalence of somatic cell counting. This collaboration promises to be of huge value to all stakeholders in the global dairy sector.

THE IDF CONTRIBUTES TO THE CODEX GENERAL STANDARD FOR FOOD ADDITIVES

Food additives are substances added to food to maintain or improve the safety, freshness, taste, texture, or appearance of food. Their use is only justified when their use has a technological need, does not mislead consumers, and serves a well-defined technological function, such as to preserve the nutritional quality of the food or enhance the stability of the food. Once a food additive has been found to be safe for use by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and maximum use levels have been established in the Codex GSFA, national food regulations need to be implemented permitting the actual use of a food additive.

The General Standard for Food Additives (GSFA) of the Codex Committee on Food Additives (CCFA) has a big impact on the international trade of dairy products. The CCFA has the authority to address food additive provisions in dairy categories and standards, and has revoked, modified, and added provisions to dairy products, differing from existing relevant dairy standards. The IDF has taken action to ensure provisions are aligned with dairy standards, and for the most part this has been successful.

An Action Team of the IDF Standing Committee on Food Additives have started identifying inconsistencies with the aim of bringing these to the CCFA's attention in order to be corrected. This Action Team has kept the comparisons work up-to-date based on the yearly decisions of the CCFA. This year, IDF experts have prepared an alignment of the Cheddar additive provisions for consideration by the SCFA in 2018.

It is crucial that food additives approved by the Codex Committee on Milk and Milk Products maintain their approval on the GSFA. Newly approved food additive provisions in dairy categories must remain consistent with previous standards. The IDF SCFA has carried out this comparative work and is working towards collaborating with Codex on alignment. This work is identified as an IDF priority for 2018.

The categorisation of dairy products was revised by the GSFA last year with the purpose of allowing food additive provisions. In particular, the goal was to cover specific needs for UHT, recombined and reconstituted milks. Currently, IDF members are invited to provide levels of use and technological justification for these additives.

NEW ISO HORIZONTAL STANDARDS BASED ON IDF/ISO STANDARDS ON MICROBIOLOGY OF MILK AND MILK PRODUCTS

The IDF has been collaborating with ISO to guarantee harmonised standards. Thanks to the expertise of the IDF Standing Committee on Harmonisation of Microbiological Methods, the scope of two IDF/ISO standards aimed at detecting *Enterobacter sakazakii* (ISO/TS 22964|IDF/RM 210 Milk and milk products) and *Salmonella* spp. (ISO 6785 | IDF 093 Milk and Milk products) have been extended to the food chain by the ISO TC34/SC9 Committee.

IDF standards have now been replaced by ISO standards. The new standard on detection of *Cronobacter* spp. (ISO 22964 Microbiology of the food chain – Horizontal method for the detection of *Cronobacter* spp) covers food products for humans, feed and environmental samples. Detection of *Salmonella* is now covered by ISO 6579 Microbiology of the food chain – Horizontal method for the detection, enumeration and serotyping of *Salmonella* – Part 1: Detection of *Salmonella* spp. This document describes a horizontal method for the detection of *Salmonella* spp. in food, feed, animal faeces, and environmental samples from the primary production stage.

IDF REGIONAL STANDARD ON DOOGH ADOPTED BY CODEX

Doogh is a savoury yogurt-based beverage popular in Iran, Afghanistan, Armenia, Iraq, and Syria. It is sometimes carbonated and seasoned with mint. The typical starter microorganisms used in production of Doogh are those of traditional yogurt bacteria: *Streptococcus thermophilus* and *Lactobacillus delbrueckii* spp. *bulgaricus*. The Codex Alimentarius adopted the proposed draft standard for Doogh. The IDF has been a big contributor to the electronic working group, led by Iran together with a small group of countries and other Codex Observer organisations. The IDF provided guidance on technical aspects of discussion and aligned the document with the Codex Standard for Fermented Milks (Codex Stan 243-2003). The IDF acted as a guide and helped shape the draft on essential composition and quality factors, making comments on minimum protein content, pH and titratable acidity, the use of lactic acid as food additive and requested clarification for maximum criteria on yeasts.

“Harmonising food safety and quality standards of Doogh across a region facilitates the understanding in intraregional and international trade. The IDF provided technical expertise on this new regional standard of the Codex, that will allow consumers to purchase a product they know and like with the confidence that it is safe and of good quality.”

Michael Hickey (IE)
– IDF Action Team Leader



FOCUS ON: SUSTAINABILITY

IDF Strategy

The IDF proactively supports a vibrant dairy sector that is committed to continuously improving its ability to provide safe and nutritious milk and dairy products from healthy animals, closing the nutritional gap whilst preserving natural resources, and ensuring decent livelihoods across the whole dairy value chain. This must be done by developing and promoting sustainable practices across the dairy supply chain.

SUSTAINABILITY:

A HOLISTIC APPROACH

The IDF provides science-based guidance and leadership on dairy sustainability issues to key international organisations and influencers. We support and encourage the dairy sector to take a holistic and sustainable approach, which includes an awareness of environmental, economic and social considerations, to develop appropriate action plans.

SOCIOECONOMIC SUSTAINABILITY

The IDF promotes the development and maintenance of a transparent, innovative and effective market for dairy products. While increasing production of milk and other dairy goods, the sector remains committed to developing and carrying out economically and socially beneficial practices. To this end, the IDF is sharing knowledge on innovative and eco-friendly dairy farming and dairy processing technologies, and encouraging the industry to adopt energy saving, low carbon and water-efficient practices, minimising negative socioeconomic and environmental impacts.

ENVIRONMENTAL SUSTAINABILITY

The IDF works to develop common methodologies which help measure environmental performance and identify areas of improvement. By facilitating discussions among its members, the IDF also provides guidance on innovative practices and techniques that improve environmental performance, advising on issues from biodiversity and water assessment to energy use through the supply chain.

On our agenda in 2016/17

IDF GUIDE TO GOOD ANIMAL WELFARE PRACTICES IN DAIRY PRODUCTION 2.0

Since the adoption of the first IDF guide eight years ago, public awareness of and interest in animal health and welfare issues has increased. Hence, the IDF must proactively work on behalf of the dairy sector to maintain a viable and sustainable dairy industry that promotes science-based animal welfare standards and practices, while safeguarding the trust of consumers and the general public.

IDF experts participate actively in the development of guidelines that are continually updated to take into account new scientific data and welfare tools. The recently adopted OIE Chapter on animal welfare and dairy cattle production systems and the ISO technical specification on animal welfare management (ISO/TS 34700:2016) are such examples.

“Today, dairy producers are increasingly taking animal welfare into account and some have come to see it as a characteristic of quality of their products. Consumer interest in animal welfare is growing and this is having a tremendous influence on the market for animals and animal products. With the update of the guidance for welfare of dairy cattle in production systems harmonised with the international standards of the OIE, the IDF is at the forefront globally to make recommendations for the dairy sector.”

Luc Mirabito (FR) – Action Team Leader

The IDF's revised guide will be a reference document on animal welfare for the dairy sector worldwide, promoting a common interpretation and understanding of OIE and ISO standards in the industry when establishing local standards.

INNOVATIVE PRACTICES FOR ECO-FRIENDLY DAIRY TECHNOLOGIES

The IDF is committed to safeguarding and improving the sustainability in the dairy sector. At an industry level, dairy processors can still make significant progress toward improving their environmental impact. The IDF is currently preparing a White Paper on environmental best practice to promote and encourage improvements in energy and water consumption, and share technical solutions to help save energy and reduce water and carbon footprints.

The Action Team members are collecting case studies that demonstrate the dairy industry's leadership with respect to the development and implementation of innovative environmental practices. IDF experts aim to finalise this valuable document in a few months.

"The dairy industry is taking its responsibility for improving the environmental impact of our processing practices very seriously. Dairy processors can already measure the carbon and water footprint of their products using a common approach, and also identify hotspots for further improvement. The IDF is working on showcasing new practices and technologies to support continual progress in this area."

Piercristiano Brazzale (IT) – SPCC Member on Environment and AT Leader

GUIDELINES ON THE USE OF SENSORS FOR ANIMAL HEALTH AND PRODUCTIVITY

Dairy farmers worldwide now have a number of sensor systems available for use. Some sensors may be useful for monitoring and treating clinical and sub-clinical mastitis at an individual animal and herd level. Yet information for determining or comparing the performance criteria of these sensor systems is not freely available to farmers.

The valuable expertise of IDF scientists and farmers is being used to produce guidance and recommendations on the comparative techniques these systems use, so that the relative value and advantages of these different systems can be assessed in practical terms by dairy farmers.

WORKING WITH THE GLOBAL DAIRY SECTOR

The IDF plays a key role in the Global Agenda for Sustainable Livestock (GASL), a multi-stakeholder partnership which looks to ensure the dairy sector is working towards achieving the United Nations Sustainable Development Goals (SDG's). The IDF has recently helped the GASL Guiding Group members establish two new action networks: the Livestock Anti-Microbial Partnership and Livestock for Social Development.

The IDF continues to participate actively in the Livestock Environmental

Assessment and Performance (LEAP) partnership. This year it nominated experts to the three most recently formed technical advisory groups on Biodiversity, Soil Carbon Stock Change, and Feed Additives. The IDF Standing Committee on Environment took part in a review of draft guidelines for environmental quantification of nutrient flows and impact assessment in livestock supply chains. At a sectoral level, the IDF released a guide 'Water Footprint Methodology for the Dairy Sector', the recommendations of which were considered during the development of LEAP's draft guidelines on Water Use Assessment of Livestock Production Systems and Supply Chains.

MINIMUM AND OPTIMUM CLUSTER REMOVAL SETTINGS

IDF experts have been working on guidelines for milking equipment suppliers and dairy farm advisers to improve udder health and milk quality. Despite existing knowledge, take-off settings for cows and small ruminants are still below the optimum, decreasing milking efficiency with significantly longer milking times, which also contribute to over-milking and an increased risk of mastitis. To address this issue, the IDF is undertaking the task of proposing standardised take-off settings for automatic milking systems for cows and smaller ruminants. An IDF evaluation of research and practice of teat-cup and cluster removal strategies for cows and small ruminants will be finalised in the next few months.

HIGHLIGHTS

IDF DAIRY FARMERS FORUM

The Standing Committee on Farm Management (SCFM) collaborated with local organisers around the world to create and host the IDF Dairy Farmers Forum at the IDF World Dairy Summit 2016, in Rotterdam. The event brought together around 45 farmers from 15 countries - from Oceania, South East Asia, Africa, Europe and North America, all with different sized farms and representing a range of age demographics. Participants discussed important issues including farm economics and livelihood, animal health and nutrition, soil fertility, and water availability. The event offered a great framework for everyday business discussions and also provided an opportunity for farmers to see the interconnections between their work and the Dairy Declaration of Rotterdam.

The importance of dairy to agriculture as a whole is enormous. As an industry, dairy employs a community of one-billion people, affects six billion consumers and is responsible for 363 million dairy cattle. Yet, the event showed us that communication and the sharing of ideas between individual farmers globally still remains challenging, largely due to language differences, costs and the lack of ability to find appropriate professional networks. The Dairy Farmers Forum was proof that farmer communities at both a national and international level are willing to cooperate and build stronger networks with others from the whole dairy sector to improve supply chains, nutrition and the ecology of our planet. There is no room for complacency; dairy still has work to do and must take steps to further improve the efficiency, effectiveness, and sustainability credentials of this sector.

FOCUS ON: DAIRY SAFETY AND QUALITY

IDF Strategy

The IDF proactively engages in safeguarding the integrity and transparency of the dairy supply chain, in order to ensure the safety and quality of milk and dairy products.

PRIORITISING BIOLOGICAL HAZARDS

The IDF strives to create a global consensus on risk assessment, as well as promote science-based and informed approaches to food safety and quality issues. High on the agenda in this field is the problem of antimicrobial resistance. The IDF continues to emphasise the importance of the responsible use of antimicrobial agents, and is working with Codex to lead the way on developing codes of practice and guidelines for the global dairy industry.

CREATING PRINCIPLES, IMPROVING PRACTICE

The IDF works with key bodies like Codex and many others to ensure the safety and quality of dairy products are continually improving. The evolution of testing and monitoring, alongside IDF research and publications on issues like Johne's disease, pasteurisation and new classes of hazard control measures, effectively safeguard and build upon the integrity of dairy globally. The IDF plays a key role in sharing knowledge and best practice, to create better outcomes.



"The International Dairy Federation is encouraging good animal health and welfare to minimise the need for antimicrobial use. We strongly believe that the use of antimicrobials is only part of an animal health management programme that aims to limit disease in animals and improve animal welfare. The dairy sector will continue to evaluate potential strategies to decrease the usage of antimicrobial agents as they may arise."

Carol Barnao (NZ)
– Task Force Leader

HIGHLIGHTS

GUIDANCE ON ANTIMICROBIAL RESISTANCE (AMR) FROM THE DAIRY SECTOR

The emergence of new AMR mechanisms and their ability to spread globally threaten our ability to treat common infectious diseases, resulting in prolonged illness, disability, and the death of humans and animals. The IDF therefore promotes prudent and responsible use of antimicrobial agents within the dairy industry, so as to ensure antimicrobial agents continue to be effective in treating and curing diseases in animals.

The IDF has formalised their position on antimicrobial resistance on behalf of the global industry, giving recommendations on the correct usage of antimicrobials to all relevant stakeholders in the dairy sector in a new factsheet – 'Guidance on antimicrobial resistance from the dairy sector.'

Limiting the spread of AMR requires the successful implementation of global strategies by public health, veterinary and environmental authorities in every nation throughout the world. Thanks to the expertise of its members, the IDF is participating in the Codex Task Force on AMR. The most recent consultation from the task force focussed on the revision of the Code of Practice to Minimise and Contain Antimicrobial Resistance and the Guidelines for the integrated monitoring and surveillance of foodborne Antimicrobial Resistance. Here the IDF is helping define the scope of work and acted as an advocate of the use of informative surveillance systems, based on the risk analysis and risk management of AMR trends and trends in the use of antimicrobials.

On our agenda in 2016/17

INPUT TO CODEX CCFH – REVISION OF GENERAL PRINCIPLES OF FOOD HYGIENE AND HACCP

The IDF has been participating in the electronic working group of the Codex Committee on Food Hygiene. Its focus is primarily in relation to the proposed approach for differential management of control measures. The IDF supports the inclusion of a new class of hazard control measures, called the OPRP (Operational Prerequisite Program, similar to that used in ISO 22000) into the existing Critical Control Points (CCPs) and Prerequisite Programs (PRPs).

In a workshop with the drafting group on the review of the General Principles of Food Hygiene, the IDF argued that both CCPs and OPRPs were control measures identified by hazard analysis, but that the latter should be managed with slightly more flexibility.

REVIEW – MAP DETERMINATION METHODOLOGIES IN DAIRY PRODUCTS

Mycobacterium avium subsp. *paratuberculosis* (MAP) causes Johne's disease in cattle. Current available evidence is insufficient in proving or disproving MAP as the causative agent of at least some cases of Crohn's disease in humans. Despite this, MAP continues to be controversially linked to Crohn's disease in humans by some researchers. Currently, no reference method is available for MAP detection and enumeration in milk and milk products.

Therefore the IDF is finalising a review on methods currently available for MAP analysis.

THE TECHNOLOGY OF PASTEURISATION AND ITS EFFECT ON THE MICROBIOLOGICAL AND NUTRITIONAL ASPECTS OF MILK

A cross-Standing Committee (SC) Action Team involving SCMH, SCDST and SCNH is finalising an IDF Bulletin on the pasteurisation of milk. The three Standing Committees are finalising an approximately ten-page concise and well-referenced Bulletin on the pasteurisation of milk. Each Standing Committee is providing a contribution on microbiology (SCMH), nutrition (SCNH) and technology (SCDST). The current publication is intended to fill a gap, by addressing microbiological, nutritional and technological aspects of milk pasteurisation.

The focus of this Bulletin is on pasteurised cow's milk for direct consumption. This Bulletin will be of value to the dairy industry as it provides an overview of the advantages of milk pasteurisation from a public health perspective and the scientific basis demonstrating that milk pasteurisation does not impact on the nutritional properties of milk.

UPDATE OF THE INVENTORY OF MICROBIAL FOOD CULTURES

IDF experts working on microbiology, dairy science and technology have prepared an update of the successful 2012 publication on the inventory of microorganisms for food use. This second publication contains more than 50 newly documented species to have a history of use in food.

The scientific information collected within this publication could help on the recognition of fermented food products (dairy and other food matrix) for international commercialisation. The updated review will be soon available as an IDF Bulletin.

IDF REVIEW ON LISTERIA AND ITS SIGNIFICANCE IN DAIRY PRODUCTION

IDF experts on microbiology are working on a review paper describing the ecology of *Listeria spp.* and *Listeria monocytogenes* and its significance in dairy production; why listeria can be found in dairy products, how we can identify *listeria spp.* and what is the current prevalence of this species during the dairy food process.

Listeria monocytogenes is a very important life-threatening bacterium in certain risk groups such as babies, small children, pregnant women, elderly people, transplant recipients and others with low immunity levels. The contamination of milk and milk products by *Listeria monocytogenes* may be one of the sources of human listeriosis. Also, the resistance of the *Listeria spp.* to commonly-used antimicrobials is increasing and constitutes a serious public health hazard. There is a need to monitor the occurrence of this organism in food and food processing environments, with new strategies required to overcome product contamination and assure the safety of dairy products. The IDF will gather all the significant scientific updates on this species, to advise the dairy industry.

FOCUS ON: NUTRITION

IDF Strategy

Nutrition is a priority area for both the IDF and the dairy industry as a whole. The IDF pro-actively supports science-based nutrition policies to ensure dairy is an integral part of the diet for all age groups and contributes to closing the nutritional gap.

THE DAIRY MATRIX AND HEALTHY DIETARY PATTERNS

Dairy foods are an integral part of dietary guidelines worldwide. Their inclusion is a recognition of the fact that they contribute a wide variety of nutrients to the diets of all age groups.

However, dairy foods are much more than the sum of their single nutrients. The dairy matrix should be considered when evaluating nutritional properties and possible health effects. It is increasingly recognised that the unique combination and interaction between the constituents of the dairy matrix is very important to produce an overall effect on health. The IDF is passionate about ensuring that the role of dairy foods and not just single nutrients as part of healthy eating patterns, is understood by key opinion formers.

EDUCATION AND PROMOTION OF THE SUSTAINABILITY AND NUTRITION OF DAIRY

All food production comes at an environmental cost; it is essential that environmental cost is not viewed in isolation.

The IDF works hard to help its members tackle inaccurate information about dairy, and provide cutting-edge repositories of information so that its members can successfully represent dairy in the global debate about nutrition and sustainability.

PROMOTING THE BENEFITS OF NUTRIENT-DENSE FOODS

Dairy foods are an important part of a healthy diet; providing a unique balance of protein, fats and important nutrients, dairy has a role to play in tackling malnutrition in all its forms and ensuring balanced diets. The IDF has been working to promote the sharing of information on dairy foods among its members and the wider community, including safeguarding the correct usage of dairy terms. It also includes the IDF taking a leading role in Codex discussions on Front of Pack Labelling, ensuring stakeholders recognise oversimplified messages. The IDF provides information and research on key issues like 'free from' claims in relation to trans fats, microRNAs and health outcomes and better techniques for identifying the protein quality of foods, notably in those for young children.

HIGHLIGHTS

THE CORRECT USE OF DAIRY TERMS

Recently the European Court of Justice* ruled that purely plant-based products were not permitted to denominate their products with dairy terms. Currently IDF National Committees are exchanging knowledge on national legislation and best practice initiatives to protect the correct usage of dairy terms and the specificities of dairy products.

Given the importance of the correct use of dairy terms, a modification of the Codex standard for food products aimed at young children was also

recommended. The IDF believes that the inclusion of the term 'milk' in any description of a plant-based product would be a contravention of the General Standard for the Use of Dairy Terms. It was therefore proposed that if milk is the only source of protein and is the predominant ingredient of a product, the name may include the animal of origin and the term 'milk'. However if the only source of protein is of plant origin, product labelling should include 'based on' with the name of the plant or plant protein clearly visible to consumers.

*Common Organisation of the Markets in Agricultural Products – Regulation (EU) No 1308/2013 – Article 78 and Annex VII, Part III – Decision 2010/791/EU – Definitions, designations and sales descriptions – 'Milk' and 'milk products' – Designations used for the promotion and marketing of purely plant-based products.



On our agenda in 2016/17

IDF NUTRITION AND SUSTAINABILITY HUB

Dairy foods fit within dietary patterns that are both healthy and respectful of environmental limits. As a part of a sustainable diet, dairy cattle contribute to the maintenance of biodiversity and of the ecosystem. Dairy foods are culturally popular and affordable, nutritionally adequate, and contribute to a safe and healthy diet.

Despite this, some dietary advice continues to propagate misconceptions about the sustainability credentials of dairy. The IDF recognises the challenge and importance of providing the international dairy sector with relevant information, allowing members to join the conversation about dairy sustainability. The IDF Standing Committees on Nutrition and Health and Environment are therefore working together on the creation of a Nutrition and Sustainability Central Information Hub, as a key resource for members to take advantage of.

Key information and resources have been made available to IDF members, in the form of scientific articles, reports, guidelines, and links to any other relevant communications materials on the subject of nutrition and sustainability. It is vital our members have access to the most up-to-date information, to allow them to confidently and accurately defend the credentials of dairy.

“The dairy sector can provide consumers with nutritious dairy products, in a way that is environmentally respectful, economically viable, and socially responsible – for current and future generations. Dairy has a key role in a sustainable food system and in a sustainable diet.”

**Ying Wang (US)
– Action Team Co-Leader**

DAIRY MATRIX IN COMPREHENSIVE VIEW OF THE NUTRITIONAL QUALITY OF FOOD

The Standing Committee on Nutrition and Health (SCNH) are currently drafting a fact sheet highlighting the role of the dairy matrix on a healthy dietary pattern. Through the years dietary guidelines have evolved, shifting away from recommendations of individual nutrients to the interactive, synergistic, and potentially cumulative relationships of nutrient-dense foods. These newly established eating patterns may be more predictive of the overall health status and disease risk than individual foods or nutrients.

IDF INPUT TO CODEX - COMPOSITION OF FOLLOW-UP FORMULA

As these products can be consumed as a replacement for milk products, the IDF advocates that the mandatory composition reflect the minimum levels of nutrients present in dairy. The IDF recommends a minimum level of 3.5g of fat per 100 kcal to allow the nutrient range to accommodate an array of reference foods, identified as suitable for young children, aged between 1-3 years of age. The IDF supports the recommended allowance of a maximum level of 12.5g of available carbohydrate per 100 kcal in these products, in order to restrict excess addition of sugars and added refined carbohydrate.

Correct assessments of a food's protein quality are important for nutritious and sustainable diets, as adequate advice on nutritional protein intake is vital for the optimal use of land and other resources. The IDF is therefore supportive of the FAO's consultation of experts, with a view to creating guidelines on the provision of protein quality descriptions. This review is both important and necessary as current methods (Protein Digestibility-Corrected Amino Acid Score, PDCAAS) have not proved adequate in giving information on

protein in foods for children under the age of two. The IDF remains committed to an approach which uses the most current measures of protein quality and thus would also include the PDCAAS methodology.

The IDF continues to safeguard and support the correct labelling of products for young children. The IDF therefore recommends nutrition reference values should be displayed per serve or per 100ml, rather than per 100g of powdered product.

IDF INPUT TO CODEX – FRONT-OF-PACK (FOP) NUTRITION LABELLING

The overarching objective of FOP nutrition labelling should be to deliver meaningful public health outcomes and to provide consumers with accurate and transparent nutritional information labelling. Labelling should be based on sound science, in an accessible format that enables consumers to choose healthier foods for a balanced diet. The IDF supports proposals to develop general guidelines to implement nutritional labelling on the front of packaging, provided that labels provide clear and transparent guidance and are supported by sound science. The IDF has been vocal in raising awareness of the dangers present when labelling schemes are oversimplified.

The IDF wants to enable consumers to easily recognise healthier food choices, and that this is adapted to meet the diverse and specific needs of people living in different regions of the world. As part of this the IDF has made recommendations to Codex, favouring schemes which encourage consumers to purchase and consume a variety of everyday/core foods, rather than schemes based only on a nutrient-approach. The IDF has been clear on the need for adequate clarification on labelling distinctions across food categories and core food groups (such as milk, cheese and yogurt), containing complex nutrient-rich foods with well-established health benefits.

IDF INPUT TO CODEX – CLAIM FOR ‘FREE FROM’ TRANS FATTY ACIDS

The IDF has reiterated its opposition to the proposed ‘free from’ trans fatty acids (TFA) claims in foods. It is the opinion of the IDF that any consideration of claims related to TFA be reconsidered in the context of a reduction of TFA from partially hydrogenated oils and fats, as scientific study has identified these as risk factors of cardiovascular disease. A 2015 systematic review and meta-analysis commissioned by the World Health Organisation (WHO) found that industrial but not ruminant trans fats were associated with coronary heart disease mortality. Furthermore, despite dairy providing TFAs, the intake of full-fat milk and dairy products is

scientifically proven to be either inversely or not at all associated with heart disease, stroke as well as several other cardiovascular risk factors such as blood pressure, obesity, type 2 diabetes and risks of metabolic syndrome.

There are cases in which products may be incorrectly deemed to be ‘trans fat free’. This is a result of laboratories using low performance laboratory methods, which are unable to correctly detect low levels of trans fatty acids in foods. In order to avoid confusion in the marketplace, the IDF supports further validation studies on the new method 16958|IDF 231:2015/AOAC 2012.13 in other foods, to verify its application and to estimate its performance characteristics in other foodstuffs.

IDF ANALYSIS OF WHO SYSTEMATIC REVIEWS ON SATURATED-FATTY ACIDS AND TRANS-FATTY ACID

The IDF has provided an analysis of two WHO systematic review papers on the effects of saturated-fatty acids and on trans-fatty acid intake on blood lipids and lipoproteins. The IDF has requested more statistics and an increased number of studies, owing to the current small number available which severely limits the ability to make any conclusions of clinical relevance. Several studies, including meta-analyses, have shown that dairy products, including those that are higher in fat, are not associated with increased cardiovascular risk and may in fact be associated with reduced cardiometabolic risk. This speaks to the importance of considering the effects of the food as a whole, rather than focusing on single isolated nutrients. Concerning ruminant TFAs, the IDF has signaled that the findings of a recent meta-analysis of cohort studies commissioned by WHO, indicate that TFAs are not associated with cardiovascular risk and the effect on blood lipids resulting from changes in ruminant or industrial TFA are not similar.



ALL PUBLICATIONS CAN BE PURCHASED OR DOWNLOADED FROM THE IDF WEBSITE AT WWW.FIL-IDF.ORG

IDF PUBLICATIONS

BULLETINS

Covering a wide range of dairy-related subjects and issues, IDF Bulletins are the go-to reference guides for dairy professionals.

BULLETIN OF THE IDF N° 484/ 2016

Proceedings of the 5th

Paratuberculosis Forum

This publication contains twelve papers written by representatives of national and regional Johne's disease control programmes on the lessons learnt through their implementation. The Forum was hosted by Oniris – INRA France, the co-convenor of the 13th International Colloquium on Paratuberculosis. Presentations cover a variety of approaches to manage Johne's disease, from compulsory regulations targeting clinical disease to voluntary industry programmes aimed at reducing economic impact and supporting the production of high quality milk. The papers highlight the successes and challenges and the importance of communications and incentives to maintain farmer engagement and cooperation, in order to ensure Johne's disease control programmes are more effective in the future.

BULLETIN OF THE IDF N° 486/ 2017

The IDF Guide to Water Footprint

Methodology for the Dairy Sector

These guidelines are intended to reach better understanding of water footprint assessment within the dairy sector. They provide transparency about a dairy product's water profile throughout its life cycle to allow monitoring, quantification and evaluation of the potential environmental impacts related to water use. The document reviews previous work on life cycle assessment and provides guidelines on standardization of water footprint. The guidelines followed ISO 14046, and are aligned with the LEAP guidelines for water use that cover all livestock sectors.

demographics, economy, dairy sector dynamism, changes in consumption habits, and consumer expectations. Also featured are anti-milk and anti-fat messages and cattle-breeding debates across the globe. This data analysis provides the necessary elements for future strategy guidelines for all dairy product segments.

BULLETIN OF THE IDF N° 488/ 2017

The IDF Guide on Biodiversity

for the Dairy Sector

These guidelines aim at providing principles for identifying biodiversity indicators that can be used to measure progress and assist technical advisors of dairy industry stakeholders in improving biodiversity management.

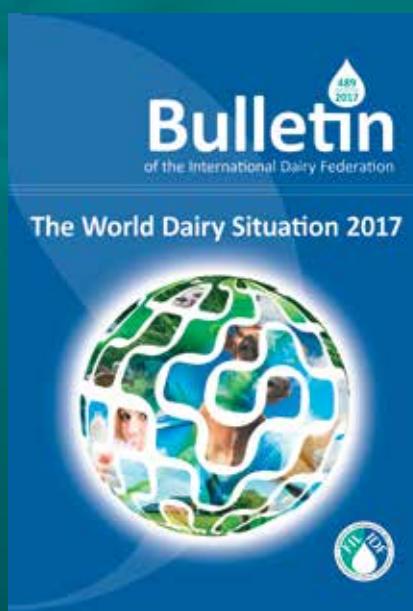
BULLETIN OF THE IDF N° 487/ 2017

IDF Global Marketing Trends,

Understanding Changes in

Global Dairy Consumption

Based on in-depth research conducted by IDF national experts, this study is intended to supplement the existing World Dairy Situation report by shedding light on global food consumption trends, with a particular focus on dairy products by geographic region. In addition to exploring dairy consumption trends, the report identifies key consumption drivers and barriers. The study looks at the major dairy product categories, and the various factors influencing consumption:



BULLETIN OF THE IDF N° 489/ 2017: The World Dairy Situation Report

This report contains a wealth of information about the international dairy sector, including data tables, graphs, Country Reports and analyses for more than fifty dairy-producing countries. Every aspect of the industry is covered: from milk production and processing to trade, pricing and consumption. In-depth analyses of current trends, recent developments and expected changes are also provided.

JOINT IDF/ISO STANDARDS

International standards for methods of analysis and sampling for milk and dairy products used as references at a national and global level

ISO 11816-2|IDF 155-2: 2016

Milk and milk products – Determination of alkaline phosphatase activity - Part 2: Fluorimetric method for cheese

ISO / TS 19046-1|IDF/ RM 233-1: 2017

Cheese – Determination of propionic acid level by chromatography – Part 1: Method by gas chromatography.

ISO / TS 19046-2 |IDF/ RM 233-2: 2017

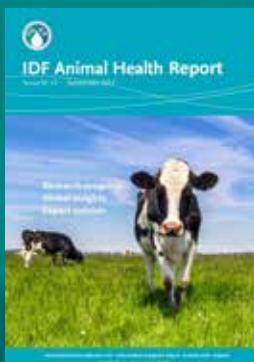
Cheese – Determination of propionic acid level by chromatography – Part 2: Method by ion exchange chromatography



These two documents were 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, by the Action Team on Propionic acid (C25).

REPORT AND ENDORSEMENTS

Working with international organizations to publish authoritative guidelines and best practices manuals



ANIMAL HEALTH REPORT 2017

IDF's Standing Committee on Animal Health and Welfare (SCAHW) and their collaborators have contributed to this publication to provide IDF community with knowledge of current activities in the field. It also offers a forum in which short descriptions of recent research, including summaries of PhD and master theses, different projects and campaigns from member countries are made available to all members.

ENDORSEMENT OF THE SSAFE GLOBAL DAIRY FARMING FOOD SAFETY TRAINING NETWORK

The IDF has endorsed the Global Dairy Farming Food Safety Training Framework prepared by SSAFE as a tool to contribute to the food safety training of rural dairy farmers around the world. This new framework sets out a set of basics and requirements built on existing international standards, codes of practice and guidance from Codex, IDF, ISO and others, to help dairy farmers take a step-wise approach to better food safety management. This framework will help dairy farmers apply FAO/IDF Good Dairy Farming Practices and enable international organizations and the private sector to design dairy training programs based on local needs and conditions. The framework is available for free download from the SSAFE website.

FACT SHEETS

Covering and getting the facts out to scientists on a broad range of dairy subjects summarizing the state-of-the art of literature

IDF COUNTRY REPORTS – OCTOBER 2016

Members of the IDF Standing Committee on Dairy Policies and Economics (SCDPE) from 15 countries submitted country reports covering the six months leading up to October 2016. This factsheet highlights the main findings from the review of the country reports presented at the SCDPE meeting in October 2016.

CRONOBIAC T SPECIES IN THE DAIRY INDUSTRY

USE OF WOOD IN CHEESE RIPENING

IMPACT OF TRANSPORT TEMPERATURE ON THE QUALITY OF DRY DAIRY PRODUCTS

ESCHERICHIA COLI AS AN INDICATOR IN CHEESE PROCESSING

BACILLUS CEREUS IN MILK AND DAIRY PRODUCTS

RAW MILK CHEESES

001/2017 - THE IMPORTANCE OF SALT IN THE MANUFACTURING AND RIPENING OF CHEESE

002/2017 - REASONS WHY GALACTOSE IS GOOD FOR YOU

003/2017 - GUIDANCE ON ANTIMICROBIAL RESISTANCE FROM THE DAIRY SECTOR

004/2017 - EXECUTIVE SUMMARY OF IDF COUNTRY REPORTS – APRIL 2017

EVENTS



IDF/ISO Analytical Week 2017

WISCONSIN, MADISON, US

130 participants representing 22 countries

HIGHLIGHTS

The IDF/ISO Analytical Week is a focal event for the Action Teams and the six analytical IDF Standing Committees in which to progress the joint IDF/ISO work programme. The meetings of the Standing Committees also served as an ISO/TC34/SC5 meeting.

The symposium on 'New Approaches to the Safety, Quality and Performance Triangle', stimulated new ideas, with delegates hearing from speakers inside and outside of the dairy sector. A brief overview of the US Food Safety Modernization Act (FSMA) was presented, as well as an explanation as to why the law was needed and how it impacts the dairy sector. Other presentations addressed food safety challenges and opportunities, and highlighted cutting edge technologies such as the use of big data to balance the triangle of Safety, Quality and Performance.

The joint standards between AOAC, IDF and ISO on determination of multi-elements by ICP-OES (inductively coupled plasma optical emission spectrometry), multi-

elements by ICP-MS (Inductively Coupled Plasma Mass Spectrometry), and determination of chloride in milk products, infant formulas and adult nutritions are moving forward.

In total, six standards are expected to be published within the coming year. IDF members also finalised several publications on infrared technologies; spectrum standardisation, quality assurance practices with new parameters, preparation and associated quality control of recombined milk samples. These will shortly be published in IDF Bulletin's. In addition, up to six new topics could be proposed by the end of the year regarding guidance on sample preparation for cheese, sodium determination in cheese, or new or revised methodology for ash in dairy matrices for example.

Representatives from AOAC International and USP (US Pharmacopeial Convention) attended the week, in the frame of IDF cooperation with other international organisations. The USP and IDF are considering the harmonisation of IDF/ISO and USP standards on Non-Protein Nitrogen. The IDF will also monitor AOAC work on MCPD/GE in infant formula, multi-residue antibiotics, and heavy metals. Currently, the IDF is also collaborating with ISO on the AOAC Stakeholder Panel on Infant Formula and Adult Nutritions.



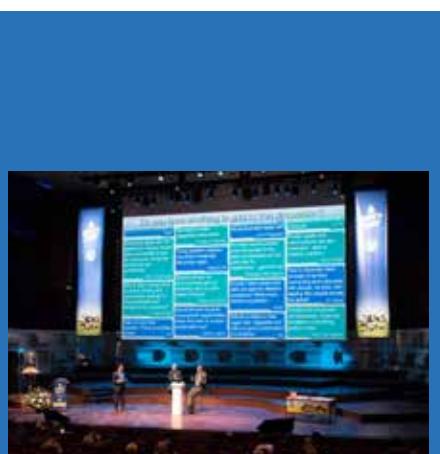
IDF World Dairy Summit 2016

ROTTERDAM, THE NETHERLANDS

1,200 delegates, from 67 countries

HIGHLIGHTS

- Delegates enjoyed a wide conference range of programmes covering topics such as; economics, nutrition, environment and biodiversity, marketing, farming and circular economy, standards, food safety, technology, dairy development, nutrition and sustainability and communications
- The summit included plenary sessions with interactive discussions on; the present and future of dairy, animal welfare, nutrition, dairy footprint and sustainability
- The summit represented points of view and updates from the global dairy community, with a total of 133 speakers from 21 countries
- Joint FAO-IDF sessions on antimicrobial resistance
- IDF Leaders Forum
- IDF Forum
- IDF Dairy Farmers Event
- Election of the new IDF president: Dr Judith Bryans
- The Dairy Declaration of Rotterdam
- Ten technical tours of processing plants in the Netherlands, with a thematic approach
- Side events also included; dairy supply chain and the circular economy, 'Big Data' in the dairy industry, and the production of efficient and high quality UHT dairy products.



PASSING ON THE BATON

"I started my Presidency by saying that such was the importance of the IDF that if it did not exist, the dairy sector would need to create something like it. My four years as President has not weakened my view of this. I am extremely proud of what the IDF has been able to achieve through our work programme, which on aggregate is worth many tens of millions of dollars each and every year to the global dairy sector."

*Dr Jeremy Hill
– former IDF president*

TALKING ABOUT THE IMPORTANCE OF DAIRY IN NUTRITION AND SUSTAINABILITY

"The sustainable development goals are high on the agenda and therefore we must take steps to realise them for people everywhere, without leaving anyone behind. Good nutrition has the power to make or break the promise of the sustainable development goals."

*Gerda Verburg
– UN Assistant Secretary General and SUN Movement Coordinator*

THE IDF LEADER'S FORUM

"We need to look at the carbon footprint per protein, cows are very efficient in producing protein. In dairy farming the science is very promising, the sector needs science and real scientists that stay in their role"

*Martin Scholten
– Wageningen University and Research*

"Food is made available through the process of dairy production. The dairy animals are the main capital of small holders. It gives them the opportunity to become independent. In poor families where there is a dairy animal present, nutrition is better."

*Henning Steinfeld
– Head of Livestock Information, Sector Analysis and Policy Branch at the FAO*



IDF BOARD

Dr. Judith Bryans

IDF President

United Kingdom | Dairy UK

Judith joined the Board in 2016 and was elected as president in the same year. Prior to this Judith had been working with the IDF since 2005, which includes three years as SPCC member and three years 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 and Programme Coordination Committee

Switzerland | Nestlé

Jean-Marc joined the IDF Board in 2015 after four years as member of the SPCC. Currently Vice President of R&D and Operations of the dairy business unit at Nestlé, Jean-Marc has over 30 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 work since 1989, working within 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. An expert in nutrition and health and risk management in the dairy sector, Tova's primary affiliation is with the Israel Dairy Board. Previously she worked 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.

Clay Hough (part way through the year)

United States | International Dairy Foods Association

Dairy Processing

Clay was a member of the IDF Board between September 2015 and August 2017. As Senior Group Vice-President and General Counsel at the International Dairy Foods Association, Clay took care of the IDFA's regulatory, international and legal affairs, meetings and educational services, and memberships. In addition he was also active in US-IDF.

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 Dairy Sector Task Team of National Economic Development and Labour Council.

Ron Maynard

Canada | Dairy Farm 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.

Catherine Tokarz

Canada | Saputo Inc.

Catherine joined the IDF Board in 2016 after being involved with the IDF for more than 20 years. She is experienced in dairy policy and economics, working with industry stakeholders, dairy farming organisations and dairy processing associations. Catherine is Senior Vice-President of Governmental Affairs at Saputo Inc. She previously served in IDF Canada.

Dr Jeremy Hill

Invited Observer of the Board

New Zealand | Fonterra

Jeremy held the IDF Presidency between 2012 and 2016, after ten years on the Board and twenty years of contributions to the IDF. Currently he works as Chief Science and Technology Officer for the Fonterra Cooperative Group. Jeremy has previously held a number of senior R&D leadership roles throughout the dairy supply chain and sits on the Board of several organisations and is an honorary member of the IDF.

SCIENCE PROGRAMME COORDINATION COMMITTEE



17

STANDING COMMITTEES

1,200

EXPERTS



45

COUNTRIES

Jean-Marc Delort
(Switzerland)
Chair

**Piercristiano
Brazzale**
(Italy)
Environment

Mary Anne Burkman
(United States)
Nutrition

Laurent Damiens
(France)
Economics and
Marketing

Eric Grande
(France)
Food Standards

Claus Heggum
(Denmark)
Hygiene and Safety

Dr Phil Kelly
(Ireland)
Dairy Technology

Dr Erik Konings
(Switzerland)
Dairy Processing

Dr Olav Østerås
(Norway)
Animal Health

Pierre Schuck
(France)
Academia

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

Andrew Hoggard
(New Zealand)
Dairy Farming

Dr Koos Coetzee
(South Africa)
Farm Management

(As at 1 October 2017)

STAFF

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Director General

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Communications Officer

Aurélie Dubois-Lozier
Technical Manager

Henriette Christiansen
Office Manager

Laurence Rycken
Technical Manager

Apolina Fos
Secretary to the
Director General

Dr. Delanie Kellon
Technical Manager

Stefania Pupo
Secretary

Dr. Jaap Evers
IDF Leader – Global Standards

Nadine Kamunga
Administrative Support

Dr. María Sánchez Mainar
Interim Communication
& Technical Manager

STANDING COMMITTEES

Animal Health and Welfare (SCAHW)

Chair: Olav Østerås (NO)
Deputy Chair: Ylva Persson (SE)

Analytical Methods for Additives & Contaminants (SCAMAC)

Chair: Karin Krahenbuehl (CH)
Deputy Chair: Valérie Gaudin (FR)

Analytical Methods for Composition (SCAMC)

Chair: Philippe Trossat (FR)
Deputy Chair: Richard Johnson (NZ)

Analytical Methods for Dairy Microorganisms (SCAMDM)

Chair: Stéphane Chartier (FR)
Deputy Chair: Biljana Bogicevic (CH)

Analytical Methods for Processing Aids and Indicators (SCAMPAL)

Chair: Jacqueline Page (US)
Deputy Chair: Charlotte Egger (CH)

Dairy Policies and Economics (SCDPE)

Chair: Gilles Froment (CA)
Deputy Chair: Véronique Pilet (FR)

Dairy Science and Technology (SCDST)

Chair: David Everett (US)
Deputy Chair: Geoffrey W. Smithers (AU)

Environment (SCENV)

Chair: Ying Wang (US)
Deputy Chair: Marcin Preidl (DE)

Food Additives (SCFA)

Chair: Allen R. Sayler (US)
Deputy Chair: Jennifer Huet (FR)

Farm Management (SCFM)

Chair: Jamie Jonker (US)
Deputy Chair: Birthe Lassen (DE)

Harmonization of Microbiological Methods (SCHMM)

Chair: Barbara Gerten (GE)
Deputy Chair: Patricia Rollier (FR)

Marketing (SCM)

Chair: Ida Berg Hauge (NO)
Deputy Chair: Mike Johnston (UK)

Microbiological Hygiene (SCMH)

Chair: Kieran Jordan (IE)
Deputy Chair: Position vacant

Nutrition & Health (SCNH)

Chair: Isabelle Neiderer (CA)
Deputy Chair: Mickey Rubin (US)

Residues and Chemical Contaminants (SCRCC)

Chair: Robert Salter (US)
Deputy Chair: Emily Meredith (US)

Statistics and Automation (SCSA)

Chair: Bianca Müller (DE)
Deputy Chair: Rob Crawford (NZ)

Standards of Identity and Labelling (SCSIL)

Chair: Karine Simbelie (FR)
Deputy Chair: John Allan (US)

Task Force on Nitrogen Conversion Factor (TF NCF)

Chair: Evers Jaap (IDF)

Task Force on Antimicrobial Resistance (TF AMR)

Chair: Barnao Carol (NZ)

(As at 1 October 2017)

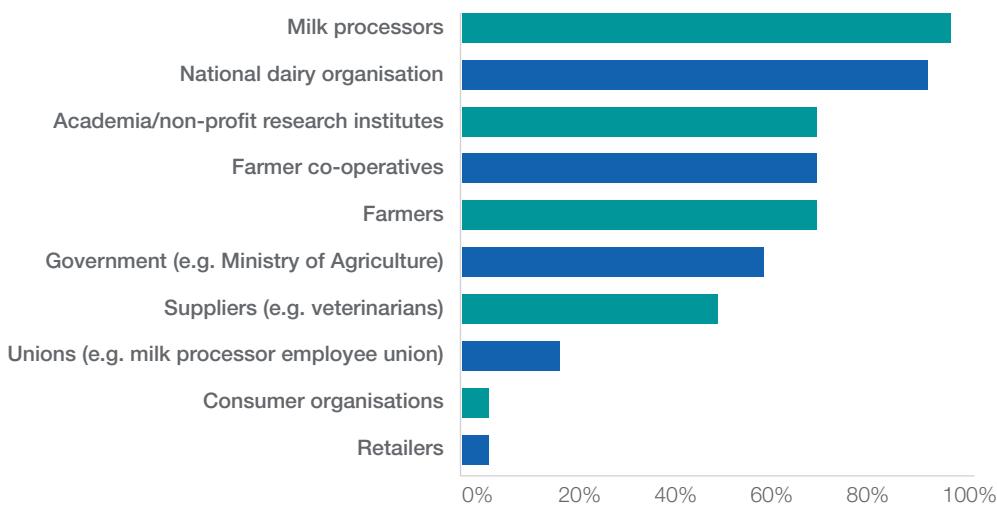
NATIONAL COMMITTEES



IDF Member Countries

Argentina	Croatia	Greece	Korea (Republic of)	Netherlands	Sweden
Australia	Cyprus	Iceland	Kuwait	New Zealand	Switzerland
Belgium	Czech Republic	India	Latvia	Norway	Turkey
Brazil	Denmark	Iran	Lithuania	Paraguay	Ukraine
Bulgaria	Egypt	Ireland	Luxembourg	Philippines	United Kingdom
Canada	Finland	Israel	Mexico	Poland	United States of America
Chile	France	Italy	Mongolia	Russian Federation	Uruguay
China	Germany	Japan	Nepal	South Africa	Zimbabwe

IDF MEMBERSHIP REPRESENTS ALL KEY STAKEHOLDERS IN THE DAIRY CHAIN



IDF MEMBERSHIP COVERS MORE THAN

75%



OF GLOBAL MILK PRODUCTION

AWARDS

2016 IDF PRIZE OF EXCELLENCE

The IDF Prize of Excellence for 2016 went to Dr Sandra Casani. Thanks to Dr Casani's leadership, this work led to the release of a new joint International Dairy Federation (IDF)/International Organisation for Standardisation (ISO) Standard. The Standard ISO 19344|IDF 232 provides a method for the quantification of lactic acid bacteria (LAB) by flow cytometry in fermented products, starter cultures, and probiotics used in dairy products. A published report of the collaborative study can be found in the Bulletin of the International Dairy Federation No. 478/2015

2015 YVES BOUTONNAT INTERNATIONAL MILK PROMOTION TROPHY

This year the award went to the National Dairy Council of Ireland for their 'Healthfest 2016' event. Experts at the National Dairy Council Ireland teamed up with experts to analyse and tackle Ireland's obesity crisis, and myths surrounding dairy and other food categories. They created 'Healthfest' to give teenagers access to a wide range of high quality, robust information on healthy eating, hosting talks with a range of speakers from scientists to TV personalities, to help young people make informed choices about foods and diet.

2016 IDF AWARD

The IDF Award recognises remarkable contributions to dairy science and the improvement of scientific dairy knowledge made by an individual to the industry worldwide. Every year IDF National Committees from across the globe submit their award nominations, hoping to win this prestigious award.

In 2016, the IDF Award Committee decided to exceptionally honour three nominees; Dr Pavel Jelen, Dr Phil Kelly and Dr Kevin Marshall.

They have each made outstanding contributions to the dairy industry over a sustained period in their respective areas of dairy research and development. Their work has had significant and longstanding influence on the commercial development of the industry in their own countries and worldwide. Even in retirement they continue to make substantial contributions especially in the areas of education, mentoring and research leadership. In addition, each has played significant leadership roles in the scientific, technical, policy and strategic direction of the IDF over a very long period. They have been champions in the development of IDF and in promoting it to the wider international dairy community.

Working with



FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS (FAO)

ORGANISATION FOR ECONOMIC & CO-OPERATION DEVELOPMENT (OECD)

UN COMMITTEE ON WORLD FOOD SECURITY

CODEX ALIMENTARIUS

EUROPEAN COMMITTEE FOR STANDARDISATION (CEN)

WORLD ORGANISATION FOR ANIMAL HEALTH (OIE)

INTERNATIONAL STANDARDS ORGANISATION (ISO)

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 ORGANISATION**



FINANCIAL REPORT

The balance sheet total at the close of 2016 was €2,002,196. Total equity in 2016 amounted to €1,728,565; compared with 2015 equity increased, with the financial results showing €81,547 more equity than in 2015.

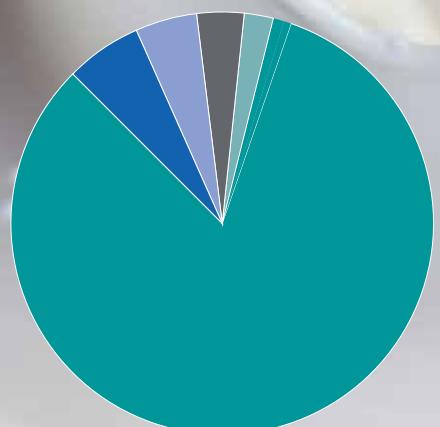
Similar to previous years, our income in 2016 came mostly in the form of membership fees. Highest costs were recorded as being staff salaries, social security costs and pensions. IT costs in 2016 were relatively high due to a complete overhaul and redesign of the IDF website and intranet system.

IDF BALANCE SHEET

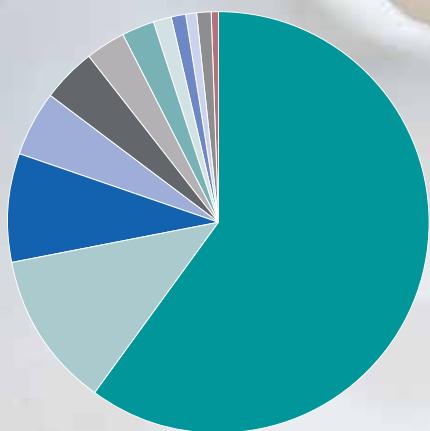
	31/12/2016	31/12/2015
TOTAL ASSETS	2,002,196	1,847,090
Fixed assets	22,882	23,593
Receivables <1 yr	25,778	75,636
Investments	284,255	402,833
Cash	1,669,281	1,334,779
Deferred charges	0	10,248

TOTAL LIABILITIES	2,002,196	1,847,090
Equity	1,728,565	1,647,018
Payable <1 yr	235,531	200,072
Deferred income	38,100	0

INCOME 2016



- █ Membership fees
- █ Events
- █ Publications
- █ Other income
- █ Financial

COSTS 2016

■ Salaries and social security

■ IT and phone

■ Office rent and charges

■ Layout

■ Travel

■ Accounting

■ Tax

■ Variable office costs

■ Depreciations

■ Insurance, maintenance, leasing

■ Meeting costs

■ Financial charges

IDF INCOME STATEMENT (EURO)

Year	2016 <i>Actual</i>	2015 <i>Actual</i>
REVENUES	1,324,639	1,368,913
Membership fees	1,162,100	1,218,600
Income from IDF publications	57,584	70,065
Income from IDF events	90,240	28,592
Partnership income	0	30,000
Financial income	11,370	16,158
Other income	3,344	5,498
COSTS	1,257,303	1,207,138
Staff salaries, social security, pensions	764,568	790,493
Office rent and charges	107,826	101,997
IT and phone	148,128	30,490
Insurances, maintenance, leasing	9,257	9,968
Taxes	29,008	26,852
Travel	53,028	52,035
Meeting costs	7,922	27,514
Editing, layout and printing	69,130	81,865
Variable office costs	13,584	17,066
Audit, consultants and outsourcing	42,779	20,344
Depreciations	9,838	7,287
Financial charges	2,235	-428
Other charges	0	41,654
Result of ordinary activities	67,336	161,775
Exceptional results	14,212	10,599
RESULT	81,547	172,374



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