Fédération Internationale du Lait • International Dairy Federation

IDF Leaders Brief

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Coming up in 2012

IDF Regional Conference on Domestic Milk Supply and Demand Systems
20-23 March, 2012 – Seoul, Korea
www.2012idfrc.or.kr

IDF Cheese Ripening & Technology Symposium
21-24 May, 2012 – Madison, Wisconsin, USA
www.idfcheeseus2012.com

Food Fermentations: Microorganisms with Technological Beneficial Use

Fermentation has traditionally been used as a food process to preserve perishable food products and enhance their nutritional value. Until recently, the safety of fermentation processes and the microorganisms employed has neither been questioned nor regulated. With a growing concern of safety demonstration of microbial species, authoritative lists of microorganisms with a documented history of use have been in high demand.

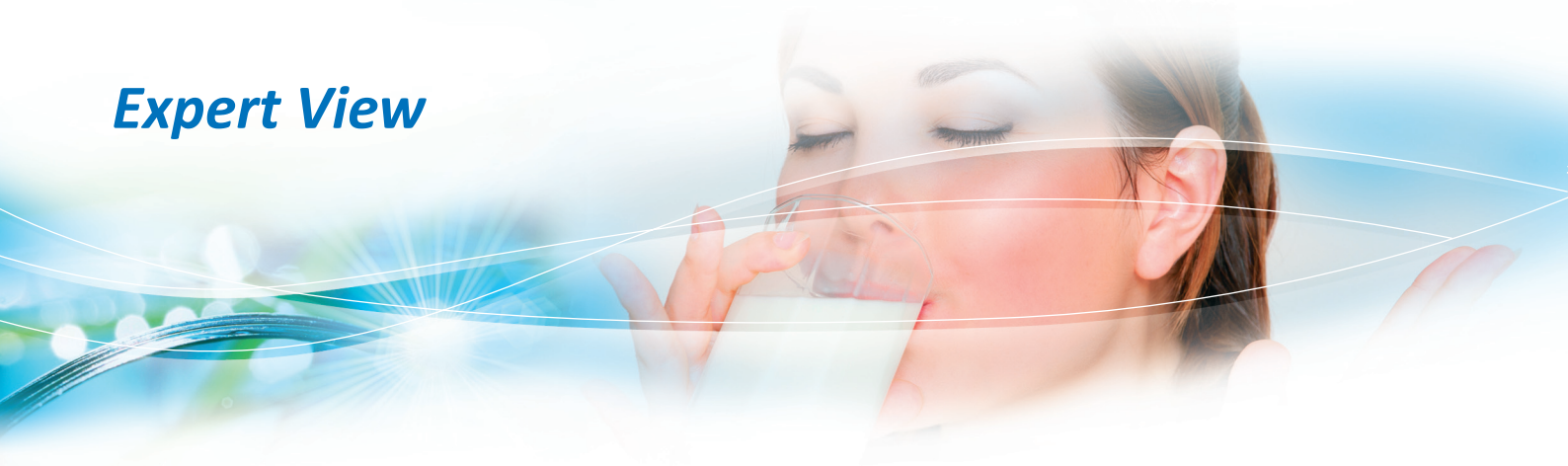
As part of its commitment to food safety, IDF revisited the previous 2002 IDF inventory of microorganisms with technological beneficial use in food fermentations, which has become a reference for food cultures in practical use in the past ten years, but needed an update due to the growing scientific evidence and the evolution of taxonomy.

The scope of the current list has been widened to microorganisms with a role in fermentations in a wider range of food matrices (dairy, meat, fish, vegetables, cereals, beverages, and vinegar) and in traditional food products worldwide. It also takes into account the latest changes in microbial taxonomy.

The scientific rationale to establish the inventory was endorsed by a dedicated Task Force of the International Dairy Federation (IDF), in collaboration with the European Food and Feed Cultures Association (EFFCA). It has been accepted for publication in the official journal of the International Committee on Food Microbiology and Hygiene - ICFMH - of the International Union of Microbial Societies - IUMS -, International Journal of Food Microbiology.

It is available with free access granted by IDF at:
www.sciencedirect.com

Expert View



IDF spoke with Dr. Bernard Faye, FAO consultant and leading researcher with the international cooperation centre for agricultural research and development (CIRAD)

How does non-cow milk production contribute to the development of a sustainable dairy sector?

Non-cow milk plays a key role in sustainable development. Species such camels or yaks are more adapted to remote and difficult areas than cows and therefore enhance the potential of areas such as deserts or mountains. Second, non-cow milk production units are usually fairly small, mostly family farms, and contribute to the development of rural populations in territories unfit for factory farming.

Last but not least, most non-cow milk is economically profitable for small-scale producers since most of it is processed into cheese, butter or fermented milk with a real added value.

Is non-cow milk a competitor or an ally for cow milk?

Non-cow milk is mostly produced in areas with little to no cow milk production, such as deserts, steppes, mountains or paddy fields. Therefore, I see non-cow milk as an ally rather than a competitor to cow milk. Not only is it produced in different areas but it also has specific features which may appeal to consumers. For example, in some regions of the world, camel or horse milk is thought to have medicinal properties.

Why is camel milk getting more and more attention?

Camel milk is gaining more and more attention in the scientific community. Although its overall composition is fairly similar to cow milk, its technological behavior and its detailed composition are very specific. It has high levels of vitamin C and milk proteins with powerful antibacterial properties. It is also known for its anti-diabetes characteristics and hypoallergic properties due to the absence of beta-lactoglobuline.

Not to forget the fantastic potential of camels as they can thrive in harsh climates and regions with very few resources. As global warming raises the earth temperature, camels can be a real asset.

Do you see any obstacles to non-cow milk production?

Unfortunately, a few milking species have almost entirely disappeared from the production circuits. Although you may be able to find a bit of lama milk in small towns of Peru or Bolivia, lama milk production is almost extinct. Lamas were the only milking animals available to the Incas but with the arrival of new species and with small udders giving very little milk, lamas fell in the marginal production category.

Another marginal production is reindeer milk. Although it is a major source of milk in polar zones and is undoubtedly valuable from a nutrition point of view with over 10% of proteins, difficult milking processes and low production – from 250 to 300ml per day – prevent it from being widely produced.

However, these remain marginal cases and other non-cow milk production is doing well.

What's the value added of non-cow milk for the dairy sector and what can be done to promote these categories?

Non-cow milk has specific features such nutritional, dietetic, organoleptic or even medicinal properties. These features can have high added-value for the dairy sector. For example, goat, ewe and buffalo milk are perfect for cheese-making. Other milks such as horse, donkey or goat milk are commonly used as substitution milk.

It is important to note that non-cow milk can also be considered as landmarks for certain regions or countries. Among others, fermented horse milk (kumis) reflect the identity of steppes in Central Asia, camel milk is found in Somalia, buffalo cheese in Italy, ewe cheese in the Southwest of France and yak butter is identified to Tibet.

Overall, non-cow milk production is booming.

Codex Committee on Food Hygiene

Today, Codex principles for microbiological criteria (MC) are focused on the use for lot-by-lot testing, that is the evaluation of whether a single batch of food is acceptable or not. This approach is relatively costly, not efficient, and not in line with the principal microbial sampling strategies used by food business operations today. For verification purposes, it is much more important to assess the system performance over time and across processing lines.

In 2010, Codex initiated a review of its principles for establishing and applying MC for foods. From the very start, IDF was involved in the Codex working group assigned to carry out the drafting. IDF has ensured that current approaches to microbiological sampling and testing applied in food businesses will be addressed by the revised principles.

At the meeting of the Codex Committee on Food Hygiene early December 2011, IDF was assigned to lead the development of an example of microbiological criteria established for food to verify the performance of HACCP systems. Country delegations were assigned to lead the development of examples of MC for the other purposes.

IDF also recommended that the revised Codex principles address both MC based on attribute sampling (the approach used today, where the limit is a fixed value that is either met or not met) and MC based on variables sampling (the limit is an acceptable/not acceptable distribution of microbial content with e.g. 95% confidence). Variable sampling requires fewer samples for the same level of protection and is a fairly cost-effective means of frequent verification, but the approach requires knowledge of the microbial distributions in the product.

ISO Specification on Food Safety at Farming Level

ISO just published its latest standard of the ISO 22000 series of complementary standards for management systems for food safety covering farming.

IDF's science-based contribution throughout the drafting process has resulted in a global reference document aiming at assisting farmers in various primary food production systems to implement best practices in maintaining a hygienic environment and in controlling food safety hazards in food chains.

This new ISO standard recognizes, and is fully aligned with other international reference documents such as the Codex Code of Hygienic Practice for Milk and Milk Products and the IDF/FAO Guide to Good Dairy Farming Practice (revised in 2011). This major document will not impose extra burden nor additional compliance costs on dairy farmers running recognized quality farm assurance systems.

This is another historical milestone to ensure food safety through harmonized international standards of the OIE, Codex and ISO.

ISO/TS 22002:2011 can be ordered via the ISO website on-line store:
www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=57389

Save the date IDF World Dairy Summit 2012: South Africa

The next IDF World Dairy Summit will be hosted in Cape Town, South Africa on 4-8 November. The theme of next year's event is "A World in One Country," drawing on the fact that South Africa is a nation rich in colour and diversity, often called "Rainbow Country".

From snow-capped mountains to deserts, South African dairy farmers operate in a diverse range of climates, giving rise to a wide variety of farming systems. Catering to an array of different cultures and markets, the choice of dairy products is as varied as the methods of production. Marketing strategies must therefore be tailored accordingly, be they targeting consumers in a humble spaza shop or in a sprawling urban mall. The Summit is an excellent opportunity to learn from South Africa, where dairy farming practices may differ significantly from those in other countries. There will be great potential for all participants of the Summit to gain fresh insight and perspectives.

New to the Summit next year will be a conference on dairy in emerging economies, focusing on the socio-economic benefits of dairying for producers, processors and the community at large. Drawing on the African setting, there will be important links to the matter of food security throughout.

For more information, visit www.wds2012.com.

Water Footprint in the Dairy Sector

This IDF technical workshop on Water Footprint will take place in Brussels, Belgium, on 14-15 February 2012. Its aim is to identify, describe and assess the context, the main issues and the existing methodological approaches to water footprinting metrics in the global dairy sector. The workshop is part of the IDF work programme and falls fully within its mission to provide the best global source of expertise and scientific knowledge. The participants will increase their ability to appreciate the environmental impact of milk production and processing.

On the first day, a technical meeting will gather representatives of the dairy industry such as experts of the IDF Standing Committee on Environment and others, scientists, and representatives from various international organizations working on the issue of water use assessment. The second day will be devoted to reviewing findings and addressing key issues including conclusions and recommendations. These should ultimately lead to the elaboration of a standard methodology for water footprint in the dairy sector by IDF in direct line of a previous work on carbon emissions.

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