



IDF Nutrition and Health Symposium 2025

Webpage: https://fil-idf.org/idf_events/the-nutrition-and-health-symposium-2025/

Theme: Exploring the Role of Dairy and Plant-Sourced Foods for Nutritious and Healthy Diets

Date: Tuesday, 20 May 2025

Background Information for Webinar:

In recent years, the global food landscape has experienced a significant shift toward plant-sourced foods, some positioned as alternatives to meat and dairy. Dietary changes are often motivated by factors such as perceived health claims, environmental concerns, and ethical considerations. However, this shift raises important questions about the nutrition and health implications of replacing animal-sourced foods with plant-sourced foods or adopting a more plant-rich diet.

This year's IDF Nutrition and Health Symposium delves into the scientific aspects of dairy and plant-based nutrition. Key topics to be addressed include:

- The health implications of more plant-rich diets and the reduction of animal-sourced foods
- Nutritional differences between dairy and plant-sourced drinks and foods
- The bioavailability of nutrients in dairy and plant-sourced foods
- The bio accessibility and digestibility of proteins in plant-sourced foods and dairy
- Intolerances and allergies related to dairy and plant-sourced products

With growing interest in plant-based diets and their implications for health and sustainability, consumers, health professionals, and industry stakeholders need reliable, science-based information. By examining the nutritional quality, digestibility, and bioavailability aspects of dairy and plant-sourced foods, this event aims to equip attendees with the knowledge to communicate and make informed dietary choices in the context of shifting towards more plant-rich diets.

Financial support: There is no financial support from third parties. IDF is the organizer.

Format: Virtual with pre-recorded talks and live panel discussions. The event will consist of two sessions, each featuring the same pre-recorded talks but different panel discussions. This setup ensures accessibility for audiences in different parts of the world.

Session 1: 07:00 – 09:45 CEST

Session 2: 16:00 -18:45 CEST

Programme :

Time (CEST)	Session 1	Session 2
Session 1: 07:00 - 07:05 Session 2: 16:00 – 16:05	Welcome Ms Laurence Rycken, Director General IDF	
Session 1: 07:05 - 07:15 Session 2: 16:05 – 16:15	Opening Remarks Dr Lynnette Neufeld, Director Food and Nutrition Division FAO	
Session 1: 07:15 - 07:20 Session 2: 16:15 – 16:20	Session Moderator: Professor Louise van der Berg, University of the Free State, South Africa	Session Moderator: Dr Rodrigo Valenzuela, Universidad de Chile, Chile
Session 1: 07:20 - 07:40 Session 2: 16:20 – 16:40	Balancing Sustainability and Nutrition: The Impact of Reducing Animal-Source Foods on Micronutrient Adequacy Dr Ty Beal, Global Alliance for Improved Nutrition (GAIN)	
Session 1: 07:40 - 08:00 Session 2: 16:40 – 17:00	Nutritional Differences Between Milk and Plant-Based Beverages Professor Hassan Vatanparast, College of Pharmacy and Nutrition, University of Saskatchewan, Canada	
Session 1: 08:00 - 08:20 Session 2: 17:00 – 17:20	Beyond Dairy: Evaluating Bioaccessible Calcium in Plant-Based Sources Dr Molly Muleya, Nottingham University, United Kingdom	
Session 1: 08:20 - 08:25 Session 2: 17:20 – 17:25	Health Break	Health Break

Session 1: 08:25 - 08:45	Transitioning to plant-rich diet: Protein quality	
Session 2: 17:25 – 17:45	Dr Suzanne Hodgkinson, Massey University, New Zealand	
Session 1: 08:45 - 09:05	Managing Cow's Milk Allergy in 2025: Milk Ladders	
Session 2: 17:45 – 18:05	Professor Carina Venter, University of Colorado, United States	
Session 1: 09:05 - 09:25	The Contribution of Dairy and Plant-Based Foods to Nutrition and Health in Japan	
Session 2: 18:05 – 18:25	Professor Seiichiro Aoe, Otsuma Women's University, Japan	
Session 1: 09:25 - 09:40	Panel Discussion	Panel Discussion
Session 2: 18:25 – 18:40	Moderator: Professor Louise van der Berg, University of the Free State, South Africa Panellists: • Dr Molly Muleya, Nottingham University, United Kingdom • Dr Suzanne Hodgkinson, Massey University, New Zealand • Professor Daniela Martini, University of Milan, Italy	Moderator: Dr Rodrigo Valenzuela, Universidad de Chile, Chile Panellists: • Dr Ty Beal, Global Alliance for Improved Nutrition (GAIN) • Mrs Zoe Longworth, College of Pharmacy and Nutrition, University of Saskatchewan, Canada • Dr Molly Muleya, Nottingham University, United Kingdom • Professor Carina Venter, University of Colorado, United States
Session 1: 09:40 - 09:45	Closing Remarks	Closing Remarks
Session 2: 18:40 – 18:45	Professor Louise van der Berg, University of the Free State, South Africa	Dr Rodrigo Valenzuela, Universidad de Chile, Chile
Running time: approx. 2 hours 45 mins	Close	Close

Abstracts:

1. Balancing Sustainability and Nutrition: The Impact of Reducing Animal-Source Foods on Micronutrient Adequacy

Dr Ty Beal, Global Alliance for Improved Nutrition (GAIN)

As global food systems face mounting pressure to reduce environmental impacts, such as greenhouse gas emissions, freshwater depletion, and biodiversity loss, dietary shifts toward plant-rich, environmentally protective diets have gained prominence. Initiatives like the EAT-Lancet planetary health diet propose substantial reductions in nutrient-dense animal-source foods to align with planetary boundaries. However, these shifts may introduce critical trade-offs for human nutrition, particularly micronutrient adequacy. This presentation explores the nutritional implications of reducing animal-sourced foods, drawing on recent research. Evidence suggests that while environmentally protective diets increase folate intake and may reduce noncommunicable disease risk, they often decrease the intake and status of key micronutrients—zinc, calcium, iodine, and vitamins B-12, A, and D. Iron intake may rise, but its bioavailability from plant sources remains limited. These gaps are concerning given the global prevalence of micronutrient deficiencies, especially in vulnerable populations such as young children, pregnant women, and low-income communities reliant on starchy staples. Compounding this challenge, climate change may further diminish nutrient densities in crops, exacerbating risks. Current research reveals significant data gaps, including sparse biomarker evidence and inadequate adjustment for bioavailability, underscoring the need for rigorous assessment of dietary adequacy. This talk will discuss strategies to mitigate these trade-offs, including moderating animal-source food reductions, leveraging fortification and biofortification, and ensuring dietary diversity. By integrating environmental and nutritional priorities, we can design sustainable diets that safeguard both planetary and human health.

2. Nutritional Differences Between Milk and Plant-Based Beverages

Professor Hassan Vatanparast, College of Pharmacy and Nutrition, University of Saskatchewan, Canada

Globally, there is an increasing transition towards a plant-based diet to address concerns related to human health, environmental health, and animal welfare. Within this transition, plant-based beverages have entered into the limelight as a beverage that can act as an alternative for those excluding dairy. However, the nutritional contribution of these alternative beverages can be highly variable, ultimately impacting one's nutrition and health in different ways. In this presentation, Dr. Vatanparast will delve into the current population trends of plant-based beverages and dairy products at an international level as well as the nutrient contribution of these products. It is well known that dairy products provide a natural source of essential nutrients such as calcium and protein, however plant-based beverages often require fortification to match the nutritional values of dairy. Fortification is an effective population health measure to address nutrient inadequacies of products, however the bioavailability of these nutrients is often in question. Thus, Dr. Vatanparast will lead a discussion evaluating the variability of plant-based beverages available in the market in terms of their ingredients, processing and fortification requirements, nutritive components, and bioavailability of nutrients positioned beside dairy to support a comprehensive comparison. The presentation will conclude with a synthesis of the main public health concerns as well as future opportunities for plant-based beverages as a growing competitor to the dairy industry.

3. Beyond Dairy: Evaluating Bioaccessible Calcium in Plant-Based Sources

Dr Molly Muleya, Nottingham University, United Kingdom

Calcium deficiency is a global issue, particularly in diets with minimal dairy consumption. We evaluated the gross and bioaccessible calcium content of 25 plant-based products across five food groups, comparing them to bovine milk. Using the INFOGEST static digestion model with isotopically labelled calcium for improved accuracy, our study found significant variability in calcium content and bioaccessibility among the products. Calcium content ranged from 7.48 to 959 mg/100 g fresh weight, with about 50% of products matching or exceeding the calcium content of skimmed milk. Calcium bioaccessibility varied from 0.1% to 50%, with the lowest in spinach, plant-based beverages (milks), tofu, dried figs, and tahini due to high oxalate and phytate content or poor solubility of fortified calcium. Kale, finger millet, and fortified white bread were identified as the best plant-based calcium sources, with kale providing five times more bioaccessible calcium than skimmed milk. Wholemeal bread, certain beans, broccoli, cabbage, and almond drink were moderate sources, requiring 1.5 to 3 servings to match the calcium supply of one serving of skimmed milk. There is need for regulation of calcium fortification in plant-based beverages and further in vivo studies to validate bioavailability. Our study highlighted the importance of considering calcium content, bioaccessibility as well as typical portion sizes consumed in dietary recommendations.

4. Transitioning to plant-rich diet: Protein quality

Dr Suzanne Hodgkinson, Massey University, New Zealand

There are low- and middle-income countries in which lack of dietary protein contributes to malnutrition, particularly in children. Even in more industrialised countries, there are sectors that do not consume sufficient available protein. In the elderly for example, a low protein consumption is one of the factors that accelerates sarcopenia, with the associated negative consequences to well-being. With a transition to a plant-rich diet, protein quality is an essential component that needs to be considered. Not all amino acids (AA) in foods are digested and absorbed and the body has requirements for AA following a specific pattern. Thus when evaluating protein quality, both the AA pattern and the availability of the individual AA need to be considered, such as with metrics like digestible indispensable AA score (DIAAS; note data below is from Project Proteos; calculations using reference values for ages 6 months to 3 years old). Protein quality of plant sources vary widely, such as tofu (DIAAS 87%), quinoa (DIAAS 84%), chickpeas (DIAAS 77%), brown and white rice (DIAAS 61%), peanuts (DIAAS 48%) and black beans (DIAAS 41%). Plant foods can be combined to provide all of the AA required in sufficient quantities, or a greater amount of foods with lower protein quality can be consumed, but this will increase the calorie intake so is not always a practical option. Moreover, gastric capacity can limit food intake in younger children. Dairy products, on the other hand, have been shown to have excellent protein quality; both in AA composition and the availability of the AA. DIAAS values for dairy products are consistently >100% (milk 118%, yoghurt 110%, cheese 106%). When transitioning to a plant-rich diet, continuing to consume dairy products can ensure that AA requirements are being met. This can be particularly important for children and the elderly.

5. Managing Cow's Milk Allergy in 2025: Milk Ladders

Professor Carina Venter, University of Colorado, United States

Cow's milk allergy (CMA) is the most common and complex presentation of food allergies in early childhood. CMA can present as IgE and non-IgE mediated forms of food allergy. Non-IgE mediated CMA includes food protein-induced enterocolitis syndrome (FPIES), eosinophilic gastrointestinal

disorders (EGIDs), and food protein-induced proctocolitis (FPIAP). There are recent guidelines addressing CMA diagnosis, management, and treatment. Each of these guidelines have their own strengths and limitations. To best manage CMA, individualized avoidance advice should be given. Cow's milk (CM) can be replaced in the diet by using hypoallergenic formulas or plant-based beverages, depending on factors such as the child's age and their current food intake. Oral and epicutaneous immunotherapy is used to increase tolerance in children with CMA but is not without risk, and the long-term outcome of sustained unresponsiveness is still unclear. The allergenicity of CM proteins are affected differently by different forms of heating, leading to the use of baked milk or milk ladders in the management of CMA, most likely the most promising option for future management and treatment of CMA. The "ladder" approach has gained popularity to reintroduce cow's milk into a child's diet, showing an increase in the use of milk ladders world-wide. However, the order of milk ladder foods is different depending on whether it is based on calculated protein amounts, measured levels of bos d5 (b-lactoglobulin) or measured levels of bos d11(b-casein). Families and health care professionals need to be aware that depending on which protein is tested, ladder foods have a different order.

6. The Contribution of Dairy and Plant-Based Foods to Nutrition and Health in Japan

Professor Seiichiro Aoe, Otsuma Women's University, Japan

In recent years, the results of several cohort studies have suggested that the intake of milk and dairy products is inversely correlated with the risk of lifestyle-related diseases. In Japan the intake of milk and dairy products is recommended to ensure a balanced diet, especially the consumption of sufficient calcium as well as milk proteins. The Japanese Food Guide Spinning Top, a dietary balance guideline for Japanese, recommends consumption of two servings of milk and dairy products (200 ml of milk, equivalent to 200 mg of calcium) per day for adults. Soybeans are primarily consumed in Japan and are the only source of isoflavones, which are known to have anticancer effects and to inhibit cardiovascular diseases. The relatively high intake of soybeans may be the reason for the low mortality rates from breast and prostate cancers in Japan. Soybeans are also a major source of vegetable protein. This high intake of vegetable protein may also partly explain the longevity of the Japanese people.

In this way, it is thought that the typical Japanese diet, which includes a combination of milk and dairy products with plant-based foods such as soybeans, contributes to the longevity of the Japanese. In this session I will show how plant foods and milk and dairy products in the Japanese diet complement each other and help to maintain nutritional balance.

Speakers' bios:

1. Dr Ty Beal, Global Alliance for Improved Nutrition (GAIN)

Dr. Ty Beal is head of food systems data and analytics at the Global Alliance for Improved Nutrition (GAIN). Passionate about translating complex research into actionable insights, he brings an interdisciplinary background in global nutrition, public health, epidemiology, and food systems. His research examines how diet quality, micronutrients, animal-source foods, and food processing influence human health, nutrition, and noncommunicable diseases, with work published in leading journals and covered by prominent news outlets. Dr. Beal serves on UN expert advisory groups, including WHO, FAO, and UNICEF. Committed to accessible science, he speaks at international conferences and webinars and engages audiences through op-eds, blogs, podcasts, and social media. Driven by a vision of healthy, sustainable diets for all, his research prioritizes underrepresented populations. Dr. Beal holds a PhD from the University of California, Davis.

2. Professor Hassan Vatanparast, College of Pharmacy and Nutrition, University of Saskatchewan, Canada

Dr. Hassan Vatanparast (MD, PhD) is a Professor at the University of Saskatchewan, with joint appointments in the College of Pharmacy and Nutrition and School of Public Health. His research focuses on nutrition and socio-cultural determinants of health, particularly among marginalized populations such as newcomers, Indigenous communities, and children. Dr. Vatanparast has a global reach in his research and health promotion initiatives, collaborating with numerous international organizations. As a nutritional epidemiologist, he investigates the role of diet in disease prevention, with extensive research on the role of dairy in optimal growth and development. Through this research, Dr. Vatanparast has noted the substantial shift in dairy consumption both throughout the life course and over the last few decades and recognizes the trending movement towards plant-based dairy alternatives.

3. Dr Molly Muleya, Nottingham University, United Kingdom

Dr. Molly Muleya is an Assistant Professor in Nutrition at the University of Nottingham since 2023. Before that, she was a Research Fellow for the IMMANA program (Innovative Methods and Metrics for Agriculture and Nutrition Actions) for 1 year and 3 years for the Future Foods Beacon of the University of Nottingham. She holds a PhD in Food Science and Nutrition from the University of Ghent, Belgium. Dr. Muleya's research focuses on the dynamic intersection of agriculture, food science, nutrition and health with interests in the bioaccessible protein and mineral supply of food systems. To this end, she has published several papers in which innovative in vitro digestion tools, techniques and resources are pioneered to enhance our understanding on nutrient digestibility and bioaccessibility. Dr. Muleya co-leads the Nutritional Composition and Digestibility Lab (NCDL) at the University of Nottingham and collaborates on projects to understand nutrient bioavailability of food ingredients, particularly plant-based and alternative/novel sources of food.

4. Dr Suzanne Hodgkinson, Massey University, New Zealand

Dr Suzanne Hodgkinson completed her BSc in physiology and biochemistry followed by a MSc in digestive physiology and a PhD in physiology at Massey University. This was followed by a Post-doctoral Fellowship funded by what was then known as the New Zealand Dairy Board. She then spent fifteen years working as an academic in the Universidad Austral de Chile in Valdivia, Chile, where she set up research programmes in dog nutrition as well as pig and European wild boar

production and nutrition. She returned to New Zealand in 2015 and is now leading the Nutrition Team of the Riddet Institute at Massey University.

She runs both preclinical and clinical studies, including nutrition studies. She is also involved in studies aiming to validate in vitro (laboratory based) models of the human digestive tract. Her specific areas of expertise relate to nutrition and digestive physiology. Recently her work has predominantly involved protein digestion and absorption through the GI tract, protein metabolism and the evaluation of protein quality of foods for human diets.

5. Professor Carina Venter, University of Colorado, United States

Carina Venter is a Professor of Pediatrics, Section of Allergy/Immunology at the Children's Hospital Colorado and the University of Colorado Denver School of Medicine, where she is conducting research in allergy prevention and working with children with food allergies. Dr. Venter is currently the chair of the European Academy of Allergy and Clinical Immunology (EAACI) work group on Immunomodulation and nutrition. She is also a member of the World Allergy Organization (WAO) Diagnosis and Rationale for Action against Cow's Milk Allergy (DRACMA) Guideline.

6. Professor Seiichiro Aoe, Otsuma Women's University, Japan

Seiichiro Aoe, Ph.D., is a professor and academic dean chairman at the Laboratory of Nutrition, Department of Food Science, Faculty of Home Economics, Otsuma Women's University in Japan. He has an extensive background in nutritional science, with key research interests in dietary fiber nutrition and functional components in dairy products.

Dr. Aoe holds a Master's degree in Agricultural Chemistry (1984) and a Doctorate in Science and Technology (1989) from Chiba University, Japan. His professional career includes nearly 20 years as a researcher at Snow Brand Milk Products Inc. (1984–2003) before transitioning to academia, where he has served as an assistant professor (2003–2007) and professor (since 2007) at Otsuma Women's University.

He is an active leader in the field, serving as a director of both the Japanese Dairy Science Association and the Japan Society of Nutrition and Food Science, contributing significantly to advancements in nutrition and food science.