

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

JOINT FAO/WHO FOOD STANDARDS

PROGRAMME

Codex Alimentarius Commission

Forty fourth Session

IUFoST Providing Food Science and Technology Expertise and Solutions - Supporting the Codex Mandate

Conference Room Document (CRD) Introduced by the International Union of Food Science and Technology (IUFoST)

The International Union of Food Science and Technology (IUFoST), an observer in Codex, is grateful to the FAO and WHO for raising the importance of emerging issues affecting agri-food systems in the *Codex Alimentarius* Commission. IUFoST welcomes the paper (CX/CAC 21/44/15 Add.1) presented by FAO/WHO. The purpose of this CRD is to provide a deeper understanding, to Codex members and observers, of the work of IUFoST and how the expertise within IUFoST can be leveraged by Codex, its members, and FAO and WHO.

IUFoST, a country-membership organisation, is the global voice of Food Science and Technology. It is the only representative for the discipline of Food Science and Technology elected into the International Science Council (ISC) by its interdisciplinary peers. It is a voluntary, non-profit federation of national food science organisations, linking the world's food scientists and technologists.

Facing current world events, affecting food production and consumption, IUFoST has reaffirmed its commitment and its action plan towards meeting future food and nutrition needs, security and safety challenges, as expressed by the United Nations Sustainable Development Goals (SDGs).

As a result of the current Covid-19 Pandemic, it is estimated that 100 million more people will be pushed into extreme poverty (World Bank, 2021). In this alarming situation, effective and concrete actions are needed more than ever, to lead the fight to improve access to food, support healthy communities and help people to achieve good health. Enabling and maintaining sustainable food systems can help the world to achieve tangible progress in creating jobs, fighting poverty and hunger, and ensure a healthy well-being for all citizens.

IUFoST, through its national scientific bodies globally, and Fellows of the International Academy of Food Science and Technology (IAFoST) and its partners, are committed to continuing efforts

to address food system issues at the global level, through solutions that meet local needs as well. This approach can help filling the gaps in the food supply side, drive demand changes, increase the efficiency of post-harvest operations, shorten the journey of food from farm to consumer and promote food and nutrition security.

As a part of the commitment to support new food sources and production systems, IUFoST has identified areas of priorities where, as an organisation and its adhering bodies, commit to continue their work towards:

- Further addressing and thus reducing food losses and waste;
- Mitigating environmental effects through encouragement for innovative, new technologies and sustainable diets;
- Expanding knowledge of traditional foods and processes and their health benefits;
- Working on influencing consumer demand for healthier diets by educating the consumer on food choices/habits and new healthy alternatives;
- Increasing knowledge on how food interacts with the body to reduce over-nutrition;
- Improving capacity building, education and training at all levels;
- Advocating safe food for all.

In this context, IUFoST has challenged its members and associates to work on all fronts to:

- Improve processes followed in food systems¹;
- Engage creatively with partners across business, policy and science;
- Increase research productivity and visibility;
- Reduce dependence on water;
- Reduce waste and re-use resources;
- Build capacity through education in all and for all sectors.

Recent discussions of experts gathered under the IUFoST banner (IUFoST, 2021), highlighted the following recommendations, adopted and disseminated by IUFoST as part of a collective call for action to mobilize Food Science and Technology solutions to address the development of new food sources and enhance the yield of food production systems:

- Capacity building and collaborative research efforts are required from governments and must include industry engagement. Overall, a cross-discipline engagement is needed with food science and technology as the coordinating component, to ensure the safety and sustainability of the traditional food chain. Identification of accountable bodies, securing public/private co-funding and progress tracking systems are key success factors.

¹ Food systems embrace the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption, and disposal (loss or waste) of food products that originate from agriculture (incl. livestock), forestry, fisheries, and food industries, and the broader economic, societal, and natural environments in which they are embedded (von Braun et al., 2021).

- Real food challenges are in handling scarcity: inefficient use of natural resources, small and fragment structures, suboptimal agricultural practices, poor management and lagging food safety and traceability standards. These sectors need greater attention from policy makers. More collaborative work is needed between academia and industry with local governments participation. This is not to replace sustainable agriculture and not to increase the energy requirement per unit of production.
- Robustness of food regulatory systems is a prerequisite to sustainable food and further investments are needed to enhance food control systems globally along with investments in food production systems.
- Bridging the gap between academia and the public (inter-government institution collaborations) and private sector is a key enabler to achieving a sustainable food system.
- Urban agriculture offers untapped potential of food production sources. Optimized energy and water usage can be made available through food science and technology solutions to further support the urban and indoor agriculture environment.
- Improving food safety approaches, including through propagation of risk assessment, hazard surveillance / monitoring, surveillance and investigation, require additional investments through capacity building programs with enhanced collaborative efforts regionally and globally.
- It is important to invest in developing food packaging materials and processes that will extend shelf life of food, reduce waste, and are sustainable, safe, economical and not detrimental to the environment.
- Disruptive technology interventions and other new innovative technologies (3D Printing, High Pressure Processing, etc.) through cutting edge R&D in many food research institutions and academia with capacity building, are important contributors to achieving a sustainable food system.
- Consumer education, together with inter-disciplinary collaborations are needed to start changing consumers' habits to practice sustainable food consumption. Education through communication to all sectors and engagement with consumers, nutritionists, medical fraternity, and the governments continues to be vital. IUFoST's national and regional bodies have demonstrated successful communication vehicles to increase scientific knowledge of facts around food and food safety: experts representing Food Science and Technology in the areas of fortification, food safety, food processing and product development, production and market economy, human nutrition, food engineering, and quality control would work with partners in agriculture, animal breeding, and genetics, livestock processing, social agencies, government regulatory bodies, and UN agencies including CODEX.

- Food Science and Technology has a central role to play to guide traditional and indigenous crops through local technology processes that have been established over centuries in local kitchens and marketplaces, to scale them up with the use of appropriate technologies. More research should be focused on the components of traditional foods, and processes related to the environment (soil, climate, water resource). Traditional processes for scale-up and adaptation to other localities need to be explored. Appropriate food engineering approaches, and standardisation, in conjunction with cultural and environmental reference points, would ensure the safety of traditional foods.
- The role of food industries in the food chain, from farm to consumer, is an important aspect of sustainable food production, processing and consumption, in line with the SDGs. Thus, the need for constant interactions with the latest innovations in Science and Technology is crucial. IUFoST reaffirmed its commitment to work together with the private sector on some of the challenges related to diet transition with obesity and non-communicable diseases (NCDs), especially high calorie, dense fat as well a sugar-rich food.

In the light of these commitments, the search for sustainable solutions is and will remain the trigger for IUFoST mobilization, as the global voice of Food Science and Technology. Translation of success stories throughout the world, using Food Science and Technology, can significantly help in achieving the SDGs and future resilient food systems.

It is within this context, that IUFoST wishes to express its interest in providing support to FAO/WHO as it considers a number of emerging issues including new food sources and production systems of direct relevance and within the expertise of the food science and technology community in IUFoST.

References

- IUfoST. (2021). *IUfoST Declaration on the Eve of World Food Day 2021*. <https://www.iufost.org/news/world-food-day-2021-iufost-releases-plan-action>
- von Braun, J., Afsana, K., Fresco, L. O., Hassan, M., & Torero, M. (2021). *Food Systems-Definition, Concept and Application for the UN Food Systems Summit*. <https://sc-fss2021.org/>
- World Bank. (2021). *Updated estimates of the impact of COVID-19 on global poverty: Turning the corner on the pandemic in 2021?* <https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty-turning-corner-pandemic-2021>

ABOUT IUFOST

The International Union of Food Science and Technology (IUfoST) is the global scientific organization representing more than 300,000 food scientists, engineers and technologists from its work in over 100 countries. IUfoST is a full scientific member of ISC (International Science Council) and the only elected representative of Food Science and Technology in the ISC. IUfoST organizes world food congresses, among many other activities, to stimulate the ongoing exchange of knowledge and to develop strategies in those scientific disciplines and technologies relating to the expansion, improvement, distribution and conservation of the world's food supply. General Secretariat IUfoST: secretariat@iufost.org, Website: www.iufost.org