Organised & conceptualised by

MINISTRY OF FOOD PROCESSING INDUSTRIES
GOVERNMENT OF INDIA

World Food Day 2023

Program Report

PREAMBLE

The National Institute of Food Technology Entrepreneurship and Management, Kundli (NIFTEM-K), an Institute of National Importance under the Ministry of Food Processing Industries in association with the Ind Food and Beverage Association (IFBA) celebrated the World Food Day 2023 on 16th October 2023. With the theme "Food for a Better Tomorrow – Building Synergies", the World Food Day brought together eminent leaders from academia, the industry, and the government to synergise and envision the future of the food sector in India.

NIFTEM-K, an Institute of National Importance (INI) under MoFPI, Govt of India, is uniquely poised to synergize the expertise of food technologists with the current demands on the Indian market, serviced by the food processing industry and facilitated by the government of India through various direct and indirect policies and programs.

Ind Food & Beverage Association (IFBA) is a not-for-profit Industry body founded in December 2021 by Industry stalwarts Deepak Jolly, Dr. Praveen Aggarwal and Dr. D V Darshane with the explicit vision of 'food for a better tomorrow'. IFBA is an association of Large and MSME food and beverage institutions of the country. IFBA works in collaboration with food regulators and scientific bodies to work with industry to innovate and provide healthier, safe and hygienic processed and packaged food products, educate and communicate consumers to make healthier food choices and build positive perception of the processed and packaged food industry.

The program was co-hosted by NIFTEM-K and the IFBA, and was held at the NIFTEM-K campus in Kundli, Haryana on October 16th 2023 in a day-long event. The program featured over 20 eminent experts in India's food & beverage and processed foods sector - academics, industry professionals, and technocrats - who will deliberate on key topics such as the importance of sustainable water use, ensuring food security to a growing nation, and the contribution of the food sector to Vision 2047.

Senior officials from various branches of the government were present at this session, such as NIFTEM-K, MoFPI, and the FSSAI. Amongst the industry, Founders and CXOs from Coca-Cola India, Connaught Plaza Restaurants (McDonalds), Bisleri International, and Dabur were present amongst others. The Subject Matter Experts (SMEs) were represented by the Safe Water Network and Prowess Advisors. Some significant startups amongst the dignitaries included Auric and PlantWise.

Over three insightful sessions, the program acted as a waystone for academia, the industry, and the government to envision the future - to reach the aspired $1.5 trillion contribution to the GDP by 2047. Through the intensive panel discussions, the representatives of the food processing sector brainstormed on a rapid and sustainable growth of the food processing industry which would make our food systems efficient and secure, and facilitate allied goals, such as doubling the farmers' income.

Partners

OPENING SESSION

The World Food Day 2023 program was inaugurated by an august panel of dignitaries from the government and industry.

Dr HS Oberoi, Director NIFTEM-K, poignantly recongized the need to align different industries and associations with the government to ensure holistic growth, highlighting the point that “no one grows by themselves”. He further contextualized the need for more prudent water use in the food processing sector, given how water may nurture or spoil food depending on its usage pattern.

Deepak Jolly, Chairman, IFBA provided the industry perspective of the food processing sector, with the message to revaluate and reform our food system to make it more equitable, more efficient, holistic, and inclusionary. In line with the theme of the World Food Day, he pointed that the food systems must be developed in a manner that doesn't leave anyone behind. Mr Jolly further highlighted the importance of entrepreneurship and startups in the Food Processing industry, and explained that the significant growth in the sector would be pushed by entrepreneurs who recognize the niche that needs to be serviced.

Dr. S S Deswal, IPS (Rtd), Vice-Chancellor of the Sports University of Haryana spoke of the importance of an active lifestyle as the perfect complement to growing food systems in his address. His remarks served as a poignant reminder to the food processing industry that their objective must be to ensure that no human goes hungry, and the food industry must produce food for all humans.

In an audio-visual message from the UN Food and Agriculture Organization's (FAO) Representative to India, Mr. Takayuki Hagiwara spoke at length about the importance of water in food processing, and appealed to all gathered to synergize in its judicious use on an industry as well as personal level, in line with UN SDG 12 (Responsible Consumption & Production). He also spoke about India’s development of the Food Loss Index as a corrective action to address the issue of food loss, a practice now adopted globally.

Smt. Anita Praveen, Secretary, Ministry of Food Processing Industries, Government of India, spoke about water being equally critical to food for the survival of humans, animals, plants, and “the very essence of our planet”. She highlighted that it is imperative to consider sustainable water use as a matter of utmost seriousness and to ensure that it is not depleted beyond recovery for generations to come.

SESSION 1

The first session approached the criticality of water as a scarce and valuable resource in the act of food processing, which was the overall theme of World Food Day 2023. Dr. Sunil Pareek shed light on the pressing issue of water scarcity. His research emphasized the critical need for effective water management in water-intensive industries such as dairy and horticulture to ensure sustainability.

- Rajesh Srivastava of Prowess Advisors, moderating the session, expressed his appreciation for the pilot plants and encouraged the strengthening of the referral laboratory at NIFTEM. He urged industry stakeholders to incorporate water savings prominently in their annual reports, and **suggested water audits to be conducted and assign ratings to encourage sustainability**.

- Coca Cola's Ashok Athawase Pralhad promoted water reuse through cost-effective technologies, stressing **the importance of applying the right technology at various stages of manufacturing** in the beverage industry. He also highlighted the substantial water-saving potential through **digitization**.
- Ravindra Sevak of the Safe Water Network discussed the significance of working with communities for integrated water management, and enlightened the panel on the use of **IoT-based monitoring and water supply systems** for sanitation and drinking purposes. He also stressed the importance of water supply automation and chlorination in both rural and urban areas.
- Bisleri International's Ganesh K. addressed the need for modification in the existing technologies within the food industry (such as Reverse Osmosis (RO)) to reduce water loss. He also mentioned the **cost-effective measure of using energy-efficient spray nozzles**, which can significantly save water in offices and industries. Additionally, he suggested the **filtration of saline water** and the **use of ozone cleaning** for utensils to reduce water loss.
- Mr. Kunal Sharma's of KRBL highlighted the relevance of water quality in basmati rice production and its correlation with the size and sensory attributes of the rice. This emphasized the need for **highest quality water** in the rice industry.
- Dr Ashok Banerjee of the Acme Cleantech Solutions Pvt Ltd. discussed the importance of water in fermentation processes and green ammonia production. He introduced the concept of **fungal protein (Mycoprotein) as a promising ingredient** for processed foods and explored the use of **renewable energy in green ammonia production**.
- To summarise the session, Dr. HS Oberoi stressed the necessity of **water budgeting** to effectively manage water resources. He accepted the idea of water audits and would add programs or courses related to water management in the NIFTEM-K curriculum to further sustainability in water usage.

SESSION 2

Session 2 of the Program, titled "Processed Foods - Enhancing Food Safety & Security" was focused on the value addition that can be achieved by the food processing industry in terms of ensuring consumer safety and for using food processing as a means of enhancing the food security of the nation. Moderated by the Ms Inoshi Sharma, Executive Director of the FSSAI, the panel consisted of eminent food processing scientists working alongside the industry.

- Dr. Komal Chauhan, NIFTEM-K, discussed preserving nutrients during food processing, emphasizing techniques like pH- and temperature maintenance. **Enrichment and fortification are vital for addressing micro-nutrient deficiencies**, she explained, with a focus on fortifying staple foods. She further espoused that the manufacturing of processed foods must be guided by the practice of combining foods, such as how grains and legumes were combined in ancient times.
- Dr. Deshraj Sharma of Ferrero India addressed the crucial aspect of food safety within the industry. He highlighted the **industry's commitment to food safety** throughout the supply chain, using advanced methods to detect allergens and foreign materials. He urged industries to **collaborate to combat counterfeiting**, possibly using blockchain technology.
- Representing the Italian Embassy, Dr. Annalisa Zezza emphasized the importance of responding to consumer demands for nutritious, not just calorie-rich, foods. She stressed that **controls and regulations play a critical role** in ensuring the safety of food products and making them **viable for**

exports, especially to Europe. She also discussed the **significance of traceability in the food industry**, which fosters transparency for consumers and regulators.

- Dr. Ranjan Mitra from Dabur delved into the topic of **ensuring nutrient stability over the shelf life of food products** to the consumer. Dr Mitra further stressed the importance of **dispelling myths about processed foods** by communicating through **effective food labelling** and adopting manufacturing practices that can ensure the stability and safety of products throughout their shelf life.
- HUL's Dr. Sakshi Bhushan tackled supply chain issues, highlighting the importance of supply and consumption to minimize waste and ensure food security. She advocated for **informed raw material choices, machine learning for waste forecasting, and a technology-teamwork blend** in the supply chain. Dr Bhushan also mentioned HUL's efforts in supporting stressed communities and water conservation in India.
- Concluding the Session, Ms Inoshi Sharma talked about how food processing helps in enhancing shelf life, promotes sustainability and make healthier options available for the consumers. She also stressed upon the need of **addressing the issue of food fraud** to **build consumer trust.**

SESSION 3

The final session of the program, titled "Vision 2047: the $1.5Tr contribution of the Food Processing Sector" served as a platform for visionaries from the industry to gather and deliberate on the future of the food processing industry and how it would contribute to India's ambitious 2047 goal of a $25Tr economy. The session was moderated by Ms Ratna Bhushan, an eminent food sector reporter with the Economic Times, with the panel comprising of all quadrants of the Indian food sector, such as established companies (McDonalds), startups (Auric and PlantWise), food scientists (NIFTEM-K), and industry associations (IFBA).

- In her introductory remarks, Ms. Ratna Bhushan shed light on the **prominence of the food-based industry at this year's G20 summit** and its crucial role in contributing to India's GDP. She emphasized **the need to expedite the growth of the food processing sector** and the various ways in which India can achieve this.
- In his address, Mr. Rajeev Ranjan of Connaught Restaurants (McDonalds) underscored the significance of addressing the $1.5 trillion aspiration, explaining it to be **a food supply issue rather than a demand problem**. He identified three critical areas vital for the industry's success: **the need to enhance agricultural yield, curbing the substantial 30-40% food wastage throughout the value chain, and the importance of branding agricultural produce for enhancing value and food safety for consumers**.
- NIFTEM-K's Dr. Aashutosh Upadhyay highlighted the need to **enhance collaboration between industry and academia to realise the true potential growth** of the food processing sector, highlighting the need for increased cooperation for fostering innovation and growth. He further identified the **critical role of entrepreneurs** in the sector, illuminating how entrepreneurs are **able to identify and service niche markets** using technology-driven innovation, therefore increasing the size of the market.
- Mr. Deepak Agarwal (Founder, Auric) discussed the coming decade as the era of the food business, with **a focus on consumer identification and innovation**, transitioning from **unpacked to packed and**

unbranded to branded food products, and how his company was serving the niche of fortified beverages produced using ayurvedic methods for the burgeoning market of health-conscious Indians.

- Ms. Manisha Upadhyay (Founder, Plantwise) elaborated on the importance of **sustainable alternatives in the food industry** through plant-based food. She further highlighted the necessity research on animal-based protein, which can contribute to the development of plant-based protein foods.
- Mr. Deepak Jolly of the IFBA emphasized the necessity for collaboration between the government, academia and industry to realize the Vision 2047. Recognizing the aspiration of a $1.5Tr contribution to the economy by 2047, he espoused that the food processing industry is more than capable of meeting its target by investing in research and development, ensuring food regulatory compliance, adopting new technologies, focusing on value-added products, expanding exports, improving food safety and promoting sustainable agriculture practices.

CLOSING SESSION

The closing remarks of the Program were delivered by Dr Praveen Aggarwal, Executive Director of the IFBA. He summarised and illuminated the insights garnered from the sessions, offering a tangible glimpse into the vast potential of the food processing sector and providing a roadmap for realizing its true capabilities. Dr Aggarwal explained that the trajectory of the economy has been set, with ambitions of reaching $5 trillion by 2025 and $10 trillion by 2030, with the food industry positioned to play a pivotal role, contributing at least five times more than its current share to an envisioned economy of $25 trillion.

To realize Vision 2047, Dr Aggarwal emphaised on the need for synergy among academia, industry, and government to ensure that no Indian faces food scarcity. He called for unwavering commitment and contributions from every sector, including resource deployment, finance, infrastructure, and labour. The path toward sustainable practices in food and agriculture was non-negotiable, said Dr Aggarwal, given the prevailing detrimental water consumption and air pollution levels. Urgent investment and focus must be directed towards economizing consumption and enhancing critical facets such as research and development, logistics, storage, productivity, and disease resilience. He proposed a practical solution in the form of ultra-localizing initial food processing, eliminating unnecessary transportation and simplifying logistics.

Addressing evolving social trends, Dr Aggarwal recognized the the dynamic landscape of a wealthier India and a burgeoning middle class. Rising disposable incomes have shifted priorities, with food security taking precedence. This shift signifies a substantial opportunity for the food sector, compounded by the increasing demand and consumption.

Concluding the program, Dr Aggarwal identified three remarkable growth opportunities. Firstly, the industry must cater to the smallest markets, transitioning from urban to entirely rural areas, necessitated understanding their preferences, pricing, and market dynamics. Second, an emphasis on food packaging and processing as a mark of reliability, which is vital in the context of an aware, quality-conscious consumer. Lastly, the integration of e-commerce platforms as a promising avenue to reach a broader consumer base, seizing the opportunity presented by the growing trend of home food delivery. These strategic actions can collectively drive the food processing sector forward, positioning it to capitalize on a wealth of emerging opportunities and meet its targets of 2047.

POLICY RECOMMENDATIONS

To ensure demand fulfillment, the supply chain between farmers and the food processing industry must be built at an accelerated rate with new technologies in processing and farm production. We suggest the following policy recommendations to facilitate the accelerated growth rate:

- Water budgeting: Practices such as water budgeting, auditing, and rating to be followed in the industry to directly enhance the sustainable use of water.
    - Interlinking sustainable water consumption to financial or monetary incentives, especially though audits and ratings, is likely to incentivize food producers to review their production methods more proactively
    - Annual reports on water consumption can be generated by food industry for effective water management and monitoring
    - In addition, food technology courses in universities may consider adding water auditing in their curriculums to educate future generations of food producers in water budgeting as a standard practice
- Tech-enabled production monitoring: The use of digitisation and IoT, both widespread and easily available technologies, in the food manufacturing processes to make them more efficient per rupee and per litre. IoT-based production methods are particularly efficient, as output data may be monitored in real time.
    - Collaborative efforts between the tech sector and industries will be critical to achieving success in these measures
- Partnership models: Partnership models between industry, academia, and government must be established to build consumer trust and accelerate the growth of the food processing industry towards achieving Vision 2047.
    - Food Processing Industry, Consumer Groups and Academia could come together in creating awareness about the benefits of food processing and also to bust myths about the adverse effects of processing.
- Research and Development for sustainable use of water: Academics and Industry may conduct studies on exploring the possible role of extracting the water having nutrients from the fruits, vegetables and flowers during drying and using it for development of value added food products. Research could focus on developing indigenous machinery for processing, developing low energy processes which help in nutrient retention, comprehensive food safety and food waste valorisation
    - MoFPI and MSME can initiate a scheme on Total Quality Management of Food Professionals towards capacity building of the food industry professionals for ensuring food safety throughout the production process.
    - FSSAI in its Eat Right Campaigns may also include a statement on advantages of food processing, especially for ameliorating nutritional profile and extending shelf life of the processed food products.

- Development of Backward Linkages to facilitate production: The government may consider incentivizing Indian farmers to encourage larger horticulture produce, and developing supply chain linkages with industry towards mutual benefit.
    - Agro-Processing Clusters: Create agro-processing clusters near agricultural regions to facilitate ease of production. This can include setting up processing facilities and cold storage units which provide significant value-addition to support beverage manufacturers
    - Farmer Outreach Programs: Establish farmer outreach programs to educate and assist farmers in growing crops suitable for beverage production, such as specific fruits and vegetables. By collaborating with agricultural experts and extension services, the government can help farmers to improve crop quality and yield.
    - Contract Farming and Fair Pricing: Encourage contract farming practices to ensure a stable supply of raw materials for beverage manufacturers. Implement fair pricing mechanisms to guarantee reasonable returns to farmers and build long-term relationships.
