

India's Frozen Food Industry, Driven by Technological Advancements, Has a Bright Future

India's frozen food sector is experiencing rapid growth, driven by technological advancements that are reshaping the industry and setting the stage for a promising future. With annual growth rates of 13–14%, the industry is poised to leverage modern technology to meet rising consumer demand and expand its market footprint.

Haresh Karamchandani, Managing Director and Group CEO of HyFun Foods, highlights the changing dynamics. "Urbanization and evolving lifestyles have heightened the demand for convenient and nutritious food options, particularly among younger and working populations. This trend is fuelling the growth of the frozen food sector, which aligns perfectly with modern dietary habits," he says.

Advanced freezing techniques are central to this transformation, preserving food quality and nutritional value while significantly reducing food waste. "By extending the shelf life of perishable items, we optimize the use of agricultural resources and minimize waste," Karamchandani adds.

The industry is witnessing a shift from being a niche segment to becoming a mainstream food source. Mohit Marwaha, Associate Vice President at Yummiez, Godrej Tyson Foods, notes, "The frozen ready-to-cook segment alone is now a Rs 3,500 crore category, growing at 15% annually. This growth underscores the rising demand for quick and tasty meal solutions that cater to the diverse tastes and fast-paced lifestyles of modern India."

Advanced Freezing and Packaging Techniques

Today's processors use state-of-the-art freezing technologies like Individual Quick Freezing (IQF), which preserves the texture, colour, and nutritional value of foods by freezing individual pieces. Packaging has also evolved, with flexible, multi-layered laminated materials ensuring longer shelf life and preventing contamination.

"Flexible packaging not only keeps goods secure but also enhances shelf life and customer convenience, ensuring safe storage and easy access," says Karamchandani.

Frozen foods are also addressing nutritional challenges by offering easy-to-prepare meals that require minimal equipment and cooking skills, thus making nutritious food accessible to a wider audience. "Proportionate servings and clear preparation instructions help reduce food waste, allowing consumers to cook just what they need," Karamchandani explains.

Embracing smart technology

Technological innovations like "freezers on wheels" are revolutionizing the frozen food supply chain. These vehicles use advanced eutectic mixtures to maintain temperature without traditional refrigeration units, similar to how mobile phone batteries store power. This technology extends the shelf life of frozen foods during transportation, ensuring they remain fresh and safe.

The integration of smart technology and data analytics is further transforming the industry. "IoT devices and sensors provide real-time tracking of temperature, humidity,

and other critical conditions, enhancing product safety from production to delivery,” says Karamchandani. “This level of monitoring optimizes inventory levels, reduces waste, and ensures products are available when and where they are needed.”

Enhanced traceability through blockchain and other technologies also helps companies comply with food safety regulations, creating an immutable record of each product’s journey. Data analytics plays a crucial role in reducing the environmental impact by optimizing supply chain processes, cutting down on waste, energy consumption, and greenhouse gas emissions.

As India’s frozen food industry continues to grow, the integration of advanced technologies will be key to maintaining quality, ensuring food safety, and meeting the evolving demands of consumers. With ample room for expansion, the sector is well-positioned to become a significant player in the global frozen food market.

Reference: <https://agronfoodprocessing.com/indias-frozen-food-industry-driven-by-technological-advancements-has-a-bright-future/>