

NIFTEM: Strengthening Food Tech & Entrepreneurship in India

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Executive Summary

- A. **NIFTEM is an Institute of National Importance (INI) under the Ministry of Food Processing Industries (MoFPI).** It serves as a **center for research, innovation, and entrepreneurship** in India's food processing sector, providing specialized education and industry-focused training.
- B. Established in **2012 in Haryana** and later expanded to **Thanjavur, Tamil Nadu**, NIFTEM serves as a **research and innovation hub** for the food processing sector. Despite its growing role, challenges persist in **curriculum relevance, industry linkages, and practical entrepreneurship training**.
- C. **Key gaps** include **outdated course content, weak industry-academia collaborations, and limited startup incubation support**. This restricts the institution's ability to meet evolving industry demands.
- D. The **food processing sector** contributes **12.41% to organized employment and has attracted \$6.7 billion in FDI**. Thus, it requires a **stronger talent pipeline, industry-driven curriculum, and global integration**—areas where NIFTEM must step up.
- E. **Implementing reforms (Curriculum modernisation, enhanced entrepreneurship training, stronger industry linkages, international collaboration)** will strengthen NIFTEM's position as **India's premier institution for food technology and entrepreneurship**. The institute has significant potential to drive innovation, research, and policy development for the country's food processing industry.

I. Introduction

The food processing industry is one of India's largest economic sectors, contributing significantly to GDP, employment, and exports. Recognizing its potential, the Government of India established the **National Institute of Food Technology Entrepreneurship and Management (NIFTEM)** to serve as a hub for research, innovation, and skill development in this domain. It operates under the **Ministry of Food Processing Industries (MoFPI)** as an autonomous institution of national importance. It plays a crucial role in enhancing research, technology development, and capacity building within India's food processing sector. The food processing industry is a significant contributor to India's economy, providing employment to **12.41%** of the organized manufacturing sector and attracting foreign direct investment (FDI) inflows of \$6.7 billion over the past decade. According to the **Viksit Bharat@2047 report**, India's food processing sector will grow significantly, reaching US\$ 1,100 billion by FY35, US\$ 1,500 billion by FY40, US\$ 1,900 billion by FY45, and US\$ 2,150 billion by FY47.¹ This article aims to provide an in-depth analysis of NIFTEM's role, related government policies and their impact on the sector. Additionally, we shall analyze key initiatives, challenges, and recommendations for strengthening the food processing sector.

II. NIFTEM and the Growth of India's Food Processing Industry

NIFTEM, an autonomous institution under the Ministry of Food Processing Industries (MoFPI) serves as a one-stop solution for food processing issues, emphasizing research, skill development, business incubation, and regulatory guidance. The institute was initially set up in **Kundali, Haryana in 2012** with an original investment of ₹500 crore. Subsequently, another institute was set up in **Thanjavur, Tamil Nadu**, formerly known as the **Indian Institute of Food Processing Technology (IIFPT)**. Deemed to be University under De Novo category : autonomous institution, it was granted the **Institute of National Importance status in 2021**, and continues to receive budgetary support, with ₹74 crore allocated for 2025-26.

As per the Vice Chancellor of NIFTEM-K, Dr. Harinder Singh Oberoi, the mission is to “**transform NIFTEM to IIFTEM** (International Institute of Food Technology Entrepreneurship and Management) through creating entrepreneurship among the students, farmers, FPOs, rural and urban youth”.² These institutions have curricular provisions related to food processing areas e.g. cold chain technology, food bio nanotechnology which can help in filling the technological gap, as well as the status of Institute of National Importance (INI) will also pave the way for the creation of skilled manpower.³

The role of the Food processing sector is of **paradigm importance but vastly understated** since the beginning in the economy. It is one of the largest employment providers in the organized manufacturing sector with **12.41% employment in the total registered/organized sector** as per the report of Annual Survey of Industries (ASI), 2022-23. The Gross value addition in this sector, owing to the policies of the Indian Government which we shall further discuss, have resulted in a substantial increase from 1.34 lakh crores in 2014-15 to 1.92 lakh crores in 2022-23. Not only this, but it also has a staggering USD 6.793 billion FDI equity inflow during April 2014 - March 2024. The share of processed food exports in agri-food exports has increased substantially from 13.7% in 2014-15 to 23.4% in 2023-24.⁴

¹ [India Brand Equity Foundation](#)

² [Official Website of NIFTEM-K - from the Director's desk](#)

³ [PIB report - 2021](#)

⁴ [MoFPI Year End Review 2024 - PIB](#)

III. Government Policies Supporting the Food Processing Industry: An In-depth Analysis

Keeping in mind the emergence of the food processing sectors as one of the largest in its economy and its growing contributions to the nation's GDP, the Government of India has launched several initiatives over the past few years to emphasize its importance and give this industry a much-needed boost. Some of the key schemes and policies are underscored as follows:

- A. **Pradhan Mantri Kisan Sampada Yojana (PMKSY):** Launched in 2017, PMKSY aims to modernize food processing infrastructure. Key components include: **Mega food parks, Cold chain logistics, Agro-processing clusters and Food safety and quality assurance programs.** Since January 2024, 143 projects have been approved under various component schemes of PMKSY (PM Kisan sampada yojana) and 69 projects have been operational, resulting in a processing & preservation capacity of 14.41 Lakh MT. The approved projects, on their operationalization, are expected to leverage **investment of Rs 2303.24 Crore, benefiting about 3.53 lakh farmers, and are expected to result in more than 0.57 lakh direct/indirect employment.** PMKSY has made a significant positive impact in terms of increase in prices of the agricultural produce at farm gate and reduction in its losses. NABCON's evaluation study report on cold chain projects showed that completion of 70% of the approved projects has shown significant improvement in waste reduction up to 70% in case of fisheries and 85% in case of dairy products.⁵
- B. **PM Formalization of Micro Food Processing Enterprises (PMFME) :** Introduced in 2020 under the **Atmanirbhar Bharat Abhiyan**, this policy focuses on empowering micro food enterprises. Major objectives include 35% subsidy for expansion/upgradation of micro-enterprises, skill training and branding support, Support to Farmer Producer Organizations (FPOs), Self-Help Groups (SHGs) and Producers Cooperatives along their entire value chain. The special **One District One Product (ODOP) approach** has been selected by 708 districts of 35 States and Union Territories, consisting of 137 unique products ranging from fruits and vegetables, makhana, moringa, milk products, bakery items, jaggery, pickles, papad, etc. A **GIS ODOP digital map of India** has been prepared that provides details of ODOP products of all the states and UTs which will enable stakeholders to identify resources and map their value chain.⁶ Since January 2024, 46,643 loans have been sanctioned under this initiative.
- C. **Production Linked Incentive Scheme for Food Processing Industry (PLISFPI) :** This scheme was launched by the Central Government in 2021 based on the principle of **Incremental sale based incentive**, with an outlay of Rs. 10,900 Crores, to be implemented over a six-year period from 2021-22 to 2026-27. This was brought in order to support the creation of large-scale food manufacturing on a global level with India's vast treasure trove of natural resources, as well as boost Indian food products brands in the international markets. This year's budget witnessed an **increased allocation to the scheme** of about Rs. 8,885 Crores as opposed to Rs. 6,125 Crores in the last fiscal year, aiming to drive investment and domestic manufacturing capabilities along with enhancing India's global competitiveness in 14 sectors.

The government has consistently prioritized the formalization and growth of micro food processing enterprises, reflecting a strong commitment to strengthening this sector. Over the past few years, there has been a steady increase in budgetary allocations for the Prime Minister Formalisation of Micro Food Processing Enterprises Scheme. The initial estimates for the previous fiscal year saw a moderate allocation, but a significant revision

⁵ [MoFPI Year End Review 2024 - PIB](#)

⁶ [Vocal for Local - Press Information Bureau](#)

mid-year indicated growing demand and the need for additional support. The latest budgetary provisions reflect an even sharper increase, suggesting a **substantial policy push** toward integrating small-scale food processors into the formal economy, enhancing their access to credit, infrastructure, and technical support. The projected allocation for 2025-26, showing a significant increase (66.67%) up to Rs. 2000 crores, compared to the revised estimate of Rs. 1200 crore in 2024-25,⁷ is clearly visible. This signals the government's intent to expand and strengthen the scheme further. Similarly, the Production-Linked Incentive (PLI) scheme for the food processing industry has received a considerable boost in this year's budget, reaffirming the government's intent to scale up domestic food manufacturing and enhance global competitiveness. The increased allocation of nearly Rs. 8,885 crores marks a substantial rise from the previous fiscal year's provision of around Rs. 6,125 crores. This expansion underscores the **focus on incentivizing large-scale production, fostering innovation, and integrating advanced technologies within the sector**. By directing higher financial resources toward these initiatives, the government aims to create a robust ecosystem that enhances value addition, generates employment, and strengthens the overall resilience of India's food processing industry.

IV. Key Challenges in NIFTEM and the Food Processing Sector

One of the most significant challenges confronting India's food processing industry is the lack of advanced infrastructure. Additionally, inefficiencies in supply chains, insufficient storage and transportation infrastructure, and restricted access to credit and financing further hinder the growth of these enterprises. As per **Dr. Prashant Sarangi, the Director (Research) - ICSI-CCGRT, Navi Mumbai**, some of the threats which plague the Indian Food processing Industry include:

- A. Huge Competition from global leaders
- B. Frequent changing nature of global laws on food production
- C. Non-availability of adequate land for the raw materials
- D. Reduction in interest in this sector among working class
- E. Low salary/wage in comparison to other industries
- F. Inadequate automation with respect to Information management⁸

Upon taking the example of the institute itself, a key concern usually faced is the reality that the course content is **heavily outdated**. The **curriculum lags behind global trends** in food technology, particularly in emerging fields such as biotechnology, digital food processing, sustainable practices, and data analytics in agri-tech. There is a **lack of hands-on entrepreneurial training**. The result is that Students graduate without the knowledge or skills needed to compete internationally or innovate within local markets, thereby limiting their entrepreneurial potential and employability.⁹ This causes challenges in launching or managing successful agri-based startups. Moreover, NIFTEM's connections with leading food processing companies and startups are limited. The **absence of robust industry partnerships** restricts opportunities for internships, live projects, mentorship, and direct recruitment, thereby affecting student placements and the institute's reputation as a leader in innovation. While leading institutions worldwide have incorporated modules on digital transformation, sustainable food systems, and biotechnology, often in collaboration with industry experts, NIFTEM's curriculum still remains anchored in **traditional food technology and management topics**, with

⁷ [Annual Financial Statement 2025-26 : Budget at a glance](#)

⁸ [Dr. Prasant Sarangi, Director \(Research\) - ICSI-CCGRT, Navi Mumbai](#)

⁹ [Entrepreneurship and training linkages](#)

minimal integration of the latest global practices. Hence, a **clear disconnect** is felt between what is being taught and what is required in today's competitive food tech and agri-startup ecosystem.

V. Way Forward : Recommendations and International Best Practices

To propel India's food processing sector towards efficiency, sustainability, and global competitiveness, a **multi-pronged approach** is essential. This includes policy innovation, infrastructure enhancement, technology adoption, and skill development, inspired by successful global models. For instance, the **Union Budget 2025** continues to uphold the government's commitment to economic growth, rural development, and employment generation. A significant announcement in this year's budget is the **establishment of the National Institute of Food Technology, Entrepreneurship, and Management (NIFTEM) in Bihar**, a move aligned with the 'Purvodaya' initiative aimed at boosting the development of Eastern India.¹⁰

The first and foremost thing that the Indian Government requires is to ensure **cold chain expansion**, as India loses a significant portion of its produce due to inadequate storage facilities. Learning from **Thailand's Cold Chain Hubs**, which integrate smart warehousing with blockchain-enabled tracking, India can establish multi-modal cold storage networks linked to railway freight corridors. Another opportunity in the current scenario is effectively **leveraging AI and technology in food processing**, possibly by incentivizing start-ups across the country, as **Denmark** deploys AI-based quality control in Dairy and Meat products. Significant tax rebates for using renewable energy and sustainable packaging, as done in **Germany's Green-processing tax cuts**, is also the need of the hour to ensure that India not only boosts its economy but also ensures commitment to its sustainable development goals. Alongwith the initiatives by the Government, there is a dire need for the **private sector** to step in and contribute in the logistics partnerships. Taking inspiration from the **Netherlands' Agro-logistics model**, the Government of India could foster **Public-Private partnership** by collaborating with firms for efficient transportation and storage of perishable food produce.

Another latest example is the **USDA's Office of Urban Agriculture and Innovative Production (OUAIP)** offering \$2.5 million in grants, while the Natural Resources Conservation Service (NRCS) is allocating \$11.9 million through an agreement with the **National Institute of Food and Agriculture (NIFA)**, the counterpart of India's NIFTEM, which plans to use this funding to support the hiring of Urban Agriculture Conservation Extension Educators through Cooperative Extension programs at Land-grant Universities.¹¹ Similarly, the Government of India can introduce tax deductions on R&D expenditures in food technology startups and offer corporate tax deductions for new investments in food processing infrastructure and technology adoption. Additionally, capital gains tax exemptions can be provided for venture capital funds investing in agri-food startups, encouraging more private sector participation. The **Regulatory Sandbox mechanism**, as considered for adoption in Indonesia by the **Indonesian Food and Drug Authority (BPOM)**, has been already updated by the Reserve Bank of India, providing a controlled space for testing new financial products and services.

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¹⁰ [Budget 2025 - Strengthening the food processing sector - foodtechnetwork](#)

¹¹ [USDA Press release](#)

¹² [RBI Press Release - 2024](#)

With regards to reforming the institution itself - NIFTEM, the Government needs to introduce some **urgent reforms**, such as:

- A. **Revising and updating the curriculum:** Modernize course modules by incorporating cutting-edge emerging subjects in the field, such as digital food processing, biotechnology, sustainable practices, data analytics, and the circular economy. **Engage industry experts in curriculum development** to align academic content with evolving market demands. Moreover, a structured system for **regular curriculum reviews, ensuring alignment with global trends and technological advancements**, can go a long way to ensure its success.
- B. **Enhance Practical Entrepreneurship Training:** Establish or collaborate with incubation centers to provide students with hands-on entrepreneurial experience. Integrate **live projects, business simulations, and case studies** focused on real-world startup challenges and market opportunities. Develop **structured mentorship programs** connecting students with seasoned entrepreneurs, industry leaders, and alumni entrepreneurs.
- C. **Strengthen Industry Linkages:** Forge strategic partnerships for collaborations with leading food processing companies, agritech firms, and innovative startups to facilitate internships, research initiatives, and job placements. Another key step in this direction can be to establish an **advisory board comprising key industry stakeholders** to guide strategic decisions, curriculum enhancements, and research directions. Organize guest lectures, workshops, industry-driven hackathons, and networking events to bridge the gap between theoretical knowledge and industry applications.

NIFTEM is at the **forefront of transforming India's food processing industry** through research, skill development, and policy implementation support. Strengthening its institutional framework, expanding its outreach, and enhancing industry collaborations will ensure that it plays a decisive role in India's journey towards becoming a global leader in food technology and processing. A sustained focus on **investment, innovation, and entrepreneurship** within NIFTEM will drive long-term growth and sustainability in the sector.

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