

GOVERNMENT OF INDIA
MINISTRY OF FOOD PROCESSING INDUSTRIES
RAJYA SABHA
UNSTARRED QUESTION NO. 2322
ANSWERED ON 07TH AUGUST, 2026

**CENTRES OF EXCELLENCE AND IMPORT SUBSTITUTION IN FOOD
PROCESSING SECTOR**

2322. SMT. SUDHA MURTY:

Will the Minister of FOOD PROCESSING INDUSTRIES be pleased to state:

- (a) the number of Centres of Excellence, research infrastructure and clinical validation facilities for the food processing sector currently functional in the country and their location, State-wise;
- (b) whether any research output, including patents filed, studies published or technologies commercialized, have been recorded from these Centres of Excellence;
- (c) whether the Ministry has identified specific raw materials that are currently dependent on imports, used in the food processing industry, if so, the details thereof; and
- (d) the status of indigenous research or development being undertaken to reduce this import dependency?

ANSWER

**THE MINISTER OF FOOD PROCESSING INDUSTRIES
(SHRI CHIRAG PASWAN)**

(a) & (b) Ministry of Food Processing Industries (MoFPI) has two autonomous Institutes of National Importance (INI), namely the National Institute of Food Technology Entrepreneurship and Management, Kundli (NIFTEM-K), Haryana and the National Institute of Food Technology, Entrepreneurship and Management, Thanjavur (NIFTEM-T), Tamil Nadu. These Institutes have established state-of-the-art research infrastructure to support innovation, product development, technology validation, and entrepreneurship in the food processing sector. NIFTEM-Kundli has Centre of Excellence for Food Fortification (CEFF) which undertakes research, development, training, and policy advocacy in staple food fortification. NIFTEM-Thanjavur has Centre of Excellence in Non-Thermal Processing Technologies which is equipped with High Pressure Processing (HPP), Pulsed Electric Field (PEF), Cold Plasma, Ultrasound Processing, and Pulsed Light technologies. The Centre of Excellence in Grain Sciences at NIFTEM-T focuses on grain quality evaluation, post-harvest handling, milling, processing, and value addition to cereals, millets and pulses.

NIFTEM-Thanjavur (Tamil Nadu) has filed 124 patent applications and a total of 27 patents (22 full patents and 5 design patents) have been granted. Further it has developed 108 technologies, of which 66 have been commercialized through 113 commercialization/licensing transactions. It has published 86 scientific research papers in peer-reviewed journals during the last year.

NIFTEM-Kundli (Haryana) has filed 29 patent applications since 2014, out of which 13 patents have been granted as on date. Also, 4 copyrights, 1 design registration, and 1 trademark have been granted. It has developed 74 technologies, of which 59 have been transferred to industries, startups, and women entrepreneurs.

(c) & (d) India imports various raw materials to cater to the demand of the food processing sector. Key imported items include palm oil, soybean oil, olives, oats, walnuts, almonds, pistachios, exotic fruits (especially dried exotic fruits), cocoa, high-value nutraceutical ingredients (such as curcumin and resveratrol extracts), specific food additives used for texture/shelf-life, food-grade encapsulation matrices etc.

NIFTEMs under the MoFPI have undertaken research work for development of micro/nano-encapsulation technologies for bioactives (curcumin, resveratrol, fish and chia oil) using domestically sourced carriers, indigenous solar and hybrid drying systems, millet- and locally grown-grain-based substitutes for imported cereals, plant-protein premixes replacing imported dairy/soy inputs, and agro-waste valorization technologies. These projects aim to build self-reliant processing capacity and reduce reliance on imported raw materials over time.

Further, under the Biotechnology for Economy, Environment and Employment (BioE3) Policy, the Department of Biotechnology (DBT), Government of India, is also promoting research, innovation and indigenous technology development to strengthen domestic capabilities and reduce import dependence on critical biomanufacturing inputs and value-added products relevant to the food processing industry. In this regard, ‘Enzymes’ have been identified as one of the priority sub-sectors, as the country is currently a net importer of several enzymes, including those used in the food processing industry. DBT is supporting research and development projects for development and application of enzymes in the food processing industry, including β -galactosidase for galactooligosaccharide production, cellulases for production of prebiotic oligosaccharides, trehalose synthase for trehalose production, plant-derived milk-clotting enzymes for dairy applications, and enzyme-based technologies for the production of human milk oligosaccharides and other value-added nutraceutical ingredients. In addition, Functional Foods and Smart Proteins have been identified as one of the six priority thematic sectors under the BioE3 Policy. Under this thematic area, research has been supported on the development of novel indigenous protein sources, fermentation-derived proteins, plant-based proteins, cell culture-based proteins, advanced protein extraction and texturisation technologies, functional food ingredients, and other value-added food ingredients with improved nutritional, functional, sensory and commercial attributes.
