

GOVERNMENT OF INDIA
MINISTRY OF FOOD PROCESSING INDUSTRIES
LOK SABHA
UNSTARRED QUESTION NO. 1920
ANSWERED ON –01.08.2023

PRESERVATION OF FOOD PRODUCTS

1920. SHRI D.M. KATHIR ANAND:

Will the Minister of Food Processing Industries be pleased to state:

- (a) whether the Government has done any innovative scientific research and achieved success in technology pertaining to the preservation of food products for long duration and if so, the details thereof;
- (b) whether the Government has made any breakthrough in innovative frozen food technology and if so, the details thereof; and
- (c) the steps taken by the government to use nanotechnology to enhance product shelf life, aroma, texture of food products and safe and durable packaging?

ANSWER

THE MINISTER OF STATE FOR FOOD PROCESSING INDUSTRIES
(SHRI PRAHLAD SINGH PATEL)

- (a) Ministry of Food Processing Industries (MoFPI) does not undertake R&D work on its own. However, MoFPI is currently implementing Research and Development Scheme, which is a part of Human Resource & Institutions Scheme under the umbrella scheme of the Ministry i.e. Pradhan Mantri Kisan SAMPADA Yojana (PMKSY). Under the scheme, financial assistance as grant- in-aid is given to various Universities, IITs, Central/ State Government Institutions, Government funded organizations, R&D laboratories and CSIR recognized R&D units in private sector to promote and undertake demand driven R&D work in food processing sector for product & process development, design and development of equipment, improved storage, shelf-life, packaging etc. Under the scheme of Research and Development in Processed Food Sector, a total of 272 R&D projects have been assisted by Ministry. Out of which, 72 R&D projects have been approved since F.Y 2017-18 after launch of PMKSY. Of these, 08 Innovative R&D projects have been approved under PMKSY and 02 before PMKSY. List of innovative R&D projects assisted by MoFPI on preservation of food products for long duration is given in **Annexure-A**.
- (b) No R&D proposal on innovative frozen food technology has been received so far under the scheme. However, if any R&D project proposal on innovative frozen food technology is received, the same may be considered for financial assistance from MoFPI subject to fulfillment of scheme guidelines.
- (c) List of R&D projects assisted by MoFPI using nanotechnology to enhance product shelf life, aroma, texture of food products and safe and durable packaging is given in **Annexure-B**.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF LOK SABHA UNSTARRED QUESTION NO. 1920 FOR ANSWER ON 01st AUGUST, 2023 REGARDING “PRESERVATION OF FOOD PRODUCTS”

Sl. No.	Title of the project	Name of University/ Institute/ College	Approved grant (Rs.in Crore)	Released GIA (Amount Crore)
1	Development of technological interventions for enhancement of quality, shelf-life, and microbiological safety of traditional/ethnic meat products	ICAR-National Research Centre on Meat	0.25	0.23
2	Novel, non-thermal energy efficient, industrially scalable hydrodynamic cavitation processing of apple juice for enhanced nutritional bioactives and shelf life extension	Institute of chemical technology	0.44	0.37
3	Development of biofumigation system for safe storage of food commodities against stored product insect pests	CSIR-Central Food Technological Research Institute, Mysuru, Karnataka	0.16	0.11
4	Design and development of hot air assisted continuous Infrared drying system for high value fish and fishery products	ICAR-Central Institute of Fisheries Technology, Cochin, Kerala	0.27	0.25
5	Processing and Packaging of Tender Coconut Water for Rural Market	Indian Institute of Packaging, Andheri, Mumbai	0.47	0.32
6	Processing and Packaging of Tender Coconut Water for Rural Market	Indian Institute of Packaging ,Andheri, Mumbai	0.50	0.46
7	Integrated Processing of Beverages from Minor Tropical Fruits: Process Optimization and Shelf-Life Extension	Institute of Chemical Technology, Mumbai	0.36	0.26
8	Studies on application of natural antimicrobial peptides for enhancing shelf life of milk and meat products	Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar	0.40	0.31
9	Development of Processing Technology and Prototype Unit for Manufacture & Shelf Life Extension of Sugarcane Juice	Indian Institute of Technology, Kharagpur	0.54	0.37
10	Development of an Industrial scale cold plasma unit for decontamination of fruits and vegetables	CSIR-Central Food Technological Research Institute, Mysuru, Karnataka	0.33	0.21

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF LOK SABHA UNSTARRED QUESTION NO. 1920 FOR ANSWER ON 01st AUGUST, 2023 REGARDING “PRESERVATION OF FOOD PRODUCTS”

Sl. No.	Title of the project	Name of University/ Institute/ College	Approved grant (Rs.in Crore)	Released GIA (Amount Crore)
1	Preparation and Characterization of Nano emulsions of Curcumin for their use in Functional Foods	National Dairy Research Institute, Karnal, Haryana	0.20	0.15
2	Development of Process for nano encapsulation of polyphenols for food supplement applications	Central Food Technological Research Institute (CFTRI), Mysuru , Karnataka	0.20	0.18
3	Design, development and application of novel functional nanofiltration membranes for the processing of vegetable oils	Central Food Technological Research Institute (CFTRI) , Mysuru , Karnataka	0.84	0.55
4	Non-destructive Nanosensors for detecting chemical and biological food toxins using surface enhanced Raman Scattering	Amrita Centre for Nanosciences, Amrita Vishwavidyapeetham, Elamakara, Cochin, Kerala	0.65	0.65
5	Synthesis and Characterization of Nano-Cellulose and its Application in Biodegradable Polymer Composite Films for Food Packaging	Institute of Chemical Technology, University of Mumbai, Matunga, Mumbai, Maharashtra	0.33	0.24
6	Fabrication of Highly Sensitive nanocomposited MnO ₂ /CNTs Based Sensor for Detection of Hydrogen Peroxide in Milk	Research Department of Physics, Bishop Heber College, Vayalur Road, Tiruchirappalli, Tamil Nadu	0.40	0.39
7	Nanopatterning with low temperature process for the production of instant foaming soluble coffee	Indian Institute of Crop Processing Technology, Thanjavur, Tamil Nadu	0.49	0.46
8	Development of NanoImmuno Rapid Test to detect Mycobacterium avum subspecies paratuberculosis in Milk samples	Central Institute for Research on Goats, CIRG Makhdoom, PO-FARAH, Mathura, Uttar Pradesh	0.66	0.46
9	Development of Antimicrobial polymeric nano-composite film from PET waste for packaging of milk and milk products	Department of polymer, Science and Technology, University of Calcutta, Kolkata, West Bengal	0.48	0.44
10	Application of nanoimmobilized β Galactosidase for production of galactooligosaccharides from dairy by-product	National Dairy Research Institute, Karnal, Haryana	0.44	0.32