





सी.एस.आई.आर.-केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान
CSIR-Central Food Technological Research Institute
सी एफ टी आर आई
cftri
1950 से.....
Since 1950.....
अन्नपाने च सर्वदा

FoodPro

CSIR - CFTRI Newsletter | January - March 2026

Food Processing | Nutrition | Innovation

Value Addition | Traditional Foods | Food Machinery

Shelf Life | Food Quality | Nutraceuticals

Centre of Excellence | Pre & Probiotics | PMFME

Skill Development | Technology Transfer | Incubation



ಸಿ.ಎಸ್.ಐ.ಆರ್-ಕೇಂದ್ರೀಯ ಆಹಾರ ತಂತ್ರಜ್ಞಾನ ಸಂಶೋಧನಾಲಯ, ಮೈಸೂರು

सीएसआईआर - केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान, मैसूरु

CSIR – Central Food Technological Research Institute, Mysuru

CONTENTS

Research Highlights 2 - 3
Products Developed 3 - 4
Technologies Transferred 4 - 5
IPR in the Horizon 5
Training Programmes Conducted 5 - 8
New Collaborations 8
Entrepreneurs' Speak 8 - 10
Events 10 - 14
Retirees 14
Ph.D.s Awarded by AcSIR 14 - 15
Select Publications 15

Research Highlights

Intensification of biofumigant stability: preparation of peppermint-piperitone nanoemulsion for effective fumigation against stored-product beetles

Insect pests cause qualitative and quantitative damage to stored grains, leading to food loss. The *Callosobruchus maculatus* (Pulse beetle), *Sitophilus oryzae* (Rice weevil), and *Tribolium castaneum* (Red flour beetle) are major insect pests of pulses, grains, and processed foods, respectively. Gaseous fumigation is the most efficient method for controlling insect infestation in bulk storage of grains. Phosphine and methyl bromide gases have been used widely to control stored-product insect pests during the past few decades. However, due to its ozone-depleting nature, methyl bromide has been phased out and is currently recommended exclusively for quarantine and pre-shipment purposes in India. Because of the sole reliance on phosphine and its prolonged use for bulk grain fumigation, many resistant strains of stored-product insect pests have emerged, leading to control failures. There is a need for alternative eco-friendly strategies to effectively manage insect pests. Essential oils (EOs) have been considered green alternative substances in agricultural pest control because of their insecticidal activities. Numerous EOs have been studied for their fumigant, contact, and repellent properties against many insect pests of stored products. However, air, humidity, light, and temperature cause chemical instability and degradation of some bioactive, which are the major drawbacks of EOs. Converting EOs into a nano-formulation prevents rapid evaporation and enhances stability. This study focused to prepare nanoemulsion using the peppermint EO (PEO) and piperitone compound (PC) combination and evaluate its stability and toxicity against the three major stored-product beetle pests. Five different nanoemulsion formulations (i.e., NE1 to NE5) were prepared using peppermint essential oil and piperitone combinations. The prepared nanoemulsions were subjected to dynamic light scattering (DLS) and thermodynamic stability analyses. Nano-sized droplets (< 68 nm) were obtained for all formulations with a range of polydispersity index (0.23 to 0.51) and negative zeta potential (-16.58 to -6.75). The optimised NE3 was assessed for its physical (DLS) and chemical (GC-MS) stability during 6 months of storage as well as fumigant toxicity against Callosobruchus maculatus, Sitophilus oryzae, and Tribolium castaneum adults. Thermodynamic stability analyses revealed that NE3 with a 1:2 ratio of oil-surfactant was highly stable. During six-months of storage, no remarkable changes were observed in the physical stability, chemical stability and fumigant toxicities of NE3. Whereas in bulk form, menthone, menthol, methyl acetate and piperitone compound levels were reduced (40, 33, 18 and 30%, respectively), and fumigant toxicity of bulk form was decreased with the increase of storage-duration against C. maculatus, S. oryzae, and T. castaneum with the significance of 0.72, 0.60, and 0.99 r^2 values, respectively. The study results suggest NE3 may be used as a potential biofumigant against stored-product beetles.

(**Source:** Madhurya Lokesh, Arunkumar Panneerselvam, Aswathi Kozhissery Sreekrishnakumar, Amal Anand, Tanushree Shambu Gowda,Subramanian Ezhil Vendan (2026). *Intensification of biofumigant stability:*

preparation of peppermint-piperitone nanoemulsion for effective fumigation against stored-product beetles, Journal of Food Science and Technology, 63(2):274–283.)

Characterization of foxtail millet protein concentrate extracted using conventional, novel methods and its application

Millet protein offers a viable alternative to traditional protein sources due to its high protein digestibility-corrected amino acid score (PDCAAS) and its great promise for combating global protein malnutrition and promoting sustainable food systems. Foxtail millet (*Setaria italica*) is rich in protein (10–13 %) and mineral content (3.3 %). The foxtail millet protein concentrate was extracted using conventional (alkaline extraction and isoelectric pH precipitation), enzymatic, and high-energy methods, and the extracts were compared for physicochemical, functional properties, and biological activities. Though a few reports are available on protein extraction from millets, the influence of ultrasound and enzyme treatment on the extraction of a protein concentrate from foxtail millet, including yield, purity, physicochemical-functional properties, and the development of a nutritional protein beverage, has not been studied. The hypothesis in the present study was to assess the feasibility and optimize conditions for protein extraction from millets, with micronutrient minerals as co-extractants. The ultrasonication resulted in higher protein yield (23–35 %) and purity (51–31 %) than the conventional method (yield 4–60 % and purity 51–7 %) and the enzymatic treatment (yield 9–12 % and purity 38–35 %). An enhancement in emulsion activity index from 82.04 to 72.65 m2/g and emulsion stability index from 39.78 to 21.98 min. was obtained after ultrasonication. The oil and water absorption capacity of the ultrasonicated sample was higher than that of the conventional method. Similarly, *in vitro* digestibility increased from 75.08% to 86.68%. The sensorial acceptability of the concentrate was improved by masking its bitter taste with spices as adjuvants (spiced protein beverage (PB). The overall sensorial acceptability of PB was 6.21 compared to that of commercial protein powder (4.14). The PDCAAS for extracted protein and PB was in the range of 0.70–0.90 for adults. The presence of intrinsic minerals in the protein concentrate is an important evaluation made in the manuscript that may help avoid the potential use of synthetic mineral compounds. The isolated protein concentrates were high in Fe and Zn, while the PB was high in Fe and Ca, indicating their potential for novel nutritional product development.

(**Source**: Aswathy K.V., Mekhasree S., Shilpa K., Malavika Santhosh, Hafeeza Khanum, Jyothi Lakshmi A., Pooja J. Rao, *Characterization of foxtail millet protein concentrate extracted using conventional, novel methods and its application*, Journal of Food Composition and Analysis, Volume 149, 2026, 108618)

Products Developed

Buckwheat *Chikki*

Buckwheat chikki is a nutritious traditional snack developed using buckwheat as the primary cereal ingredient. Rich in protein, dietary fiber, and bioactive compounds, it serves as a healthier alternative to conventional chikki.



Millet/Cereal based fermented beverage

Millet/cereal-based fermented beverages are functional drinks prepared using cereals such as finger millet, sorghum, pearl millet, rice, or barley through controlled fermentation. Fermentation by lactic acid bacteria and/or yeast enhances flavor, digestibility, nutritional quality, and shelf life.



Spicy Chilly-Tomato Sauce (Schezwan type)



Spicy chilli–tomato sauce (Schezwan type) is a flavorful condiment prepared from ripe tomatoes and red chillies blended with garlic, ginger, oil, and spices. The product is processed by pulping, cooking, and seasoning to obtain a bold, tangy, and pungent sauce with desirable consistency, flavor, and shelf stability.

Nutra Berry drink

Nutra Berry drink is a functional beverage prepared from nutrient-rich berries with high antioxidant, vitamin, and polyphenol content. The product is formulated by blending berry juice or pulp with



water and natural sweeteners, followed by pasteurization to obtain a nutritious, refreshing, and shelf-stable beverage.

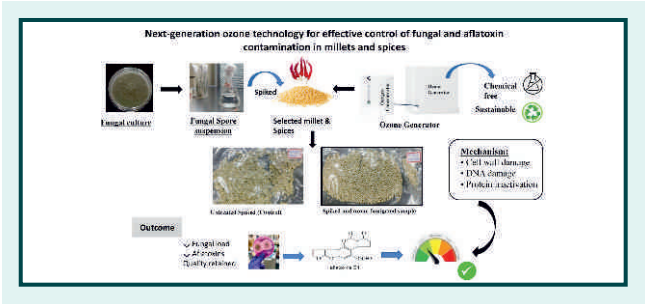
Ready to Eat Complementary Food (RTE: CF) with enhanced bio accessibility of zinc

Ready-to-Eat Complementary Food (RTE-CF) is developed using zinc-rich cereals, millets, and legumes to enhance zinc bioaccessibility for infants and young children. Processing techniques such as soaking, germination, fermentation, and thermal treatment help reduce antinutritional factors like phytates, thereby improving zinc absorption.



Next generation ozone technology for effective control of fungal and aflatoxin contamination in millets and spices

Next-generation ozone technology is an eco-friendly approach for controlling fungal growth and aflatoxin contamination in millets and spices. The process involves the controlled application of gaseous or aqueous ozone to inactivate fungi and degrade aflatoxins without harmful residues. Optimized ozone dosage and exposure time ensure microbial safety while preserving the quality, aroma, and nutritional properties of the commodities.



Jowar Roti Machine

The CFTRI-designed *Jowar roti* machine is available in both hand-operated and continuous-operated models for domestic, small-scale, and commercial applications. The hand-operated version enables easy dough portioning and pressing to produce uniform *jowar rotis* with minimal effort, at a low cost, and with simple maintenance.



Ready-to-Drink Pearl Millet Beverage

The ready-to-drink pearl millet beverage is a nutrient-rich, low glycemic index (GI) product developed using pearl millet and selected spice extractives. The process involves cleaning, soaking, cooking, and enzymatic or fermentation-assisted treatment to reduce starch digestibility, resulting in a flavorful, functional, and health-promoting beverage.



Technologies Transferred

- Energy food : New formulation
- Sesame based nutritional supplement
- Fermented and dehydrated ready mixes for *Idli/Dosa* batter
- Nutra *chikki* with added spirulina
- DOLYMIX, a ready to use mix for soft and enhanced number of IDLYS
- Instant traditional food : *Pongal*
- Shelf stable and ready to eat foods: thermo processed in retort pouches - non vegetarian
- Preparation of shelf stable *roti* from non-wheat cereal and millet (Ragi, Rice, Maize, Jowar, Bajra)
- Shelf stable Chapati
- Multigrain cereal-legume bar & puffed rice bar
- Malted ragi based ready to eat weaning food
- Chicken Pickle
- Ready Mix: Jamun

- Layered parotta (South Indian)
- Fermented and dehydrated ready mixes for *Idli/Dosa* batter
- Process for development of gluten free bread premix (version-2) Foxtail millet
- Instant traditional food : *Sambar*
- Pickles & chutneys : preparation
- Instant cake mix
- Eggless cake premix
- Pulse based papads
- Fortified protein rich vermicelli
- Nutritious high fiber soup sticks
- Ragi based *papads*
- Process for production of multigrain gluten free semolina
- Multigrain gluten free instant *rava idli* mix
- High protein rusk
- Sugar free bread
- Sugar free cake rusk
- Sugar free cup cake
- Sugar free rusk
- Virgin coconut oil spread
- Fruits & vegetables dehydration : Grapes, Banana, Onion, Potato, Peas, Green chillies
- Dhal based nutritional supplement for foods
- Spicy Chilly-Tomato Sauce (Schezwan type)
- Sesame based nutritional supplement
- Rice-milk mix
- Process for the preparation of raw banana powder (unripe)
- Turmeric powder from fresh turmeric rhizome
- Foods for diabetics
- Glucose-amla beverage mix
- Preparation of protein, vitamin and mineral fortified *chikki*
- Chocolate rich in healthy polyphenols
- Low GI beverage for diabetics
- Fortified mango bar
- Process for nutri fruit bars with immune boosters
- Preparation of shelf stable *roti* from non-wheat cereal and millet (Ragi, Rice, Maize, Jowar, Bajra)
- Tomato Products : preparation (including juice, ketchup, sauce)
- Osmo-air dried fruits (Amla, Jackfruit, Pineapple & Mango)
- Instant products from moringa leaves

IPR in the Horizon

Patents Filed

- Anti-insect sponge sachets infused with essential oils for multi -insect protection, 07/01/2026, 202611001928
- High performance, scalable ozone based multi-optional mode system and method for odour control, 13/01/2026, 202611003717
- Vegetable powder formulations for additive-free extrusion-based 3d food printing, 13/03/2026, 202611031183
- Method for synthesis of resistant starch-rich food matrix using transglycosylating?-glucosidase, 23/03/2026, 202611035204

Patents Granted

- A formulation and a process for the preparation of liquid asafoetida, 24/02/2026, PAT. No. 581509

Training Programmes Conducted

Processing of Fruits & Vegetables and Millets (05.01.2026-09.01.2026)

CSIR–CFTRI, Mysuru, organized a training programme sponsored by Sindhudurg Zilla Krushi Prathisthan Kirlos. The training covered topics such as shelf life of fruits and vegetables, minimal processing techniques, preservation of fruits and vegetables as pickles and chutneys, health benefits of millets, preparation of fruit concentrates and powders, dehydration of fruits and

vegetables, and millet storage and infestation control. A total of 12 participants attended the programme.



Development of Pour-over Millet Beverage and Curd through Probiotic Bacteria (07.01.2026-09.01.2026)

CSIR–CFTRI, Mysuru, organized a training programme with the participation of eight trainees. The programme focused on the introduction to millets and their health benefits, basic microbiological techniques and microbial storage studies, preparation of instant pour-over millet powder, millet milk extraction, preparation of primary inoculum for pour-over millet beverage and curd products, and evaluation through proximate, rheological, and sensory analysis. The training also covered market survey, cost economics, and pilot-scale processing.



Workshop on Food Processing Technologies (20.01.2026-21.01.2026).

CSIR–CFTRI, Mysuru, organized a Training Programme on “Exposure-cum-Training Workshop on Food Processing Technologies”. The programme was funded by the Deputy Director of Agriculture (Horticulture), Principal Agricultural Office, Malappuram, Government of Kerala, and conducted by the Technology Transfer Business Development division. A total of 26 participants attended the custom-made training programme, which focused on various food processing technologies and their applications.

Packaging Technology for Thermal Processing Applications (28.01.2026-30.01.2026).

CSIR–CFTRI, Mysuru, organized a three-day training programme on “Essentials of Packaging Technology for Thermal Processing Applications in Extension of Shelf Life and Food Safety”. The programme was funded by the Department of Agriculture, Government of Karnataka, and conducted for FPOs, SHGs, startups, and farmers' groups. A total of 27 participants attended the programme, which focused on creating scientific awareness and practical understanding of packaging technologies among different stakeholder groups. Key topics included aseptic and retort packaging for thermally processed foods, FSSAI regulatory requirements for food packaging and thermally processed products, and demonstrations through visits to pilot plants and the Centre of Excellence for Millets.



Post-Harvest Technologies of Fruits and Vegetables (02.02.2026-13.02.2026).

CSIR–CFTRI, Mysuru, organized a ten-day regular training programme on “Post-Harvest Technologies of Fruits and Vegetables & Processing of Fruits and Vegetables”. A total of seven participants attended the programme. The training focused on scientific awareness, practical understanding, and exposure to recent advancements and innovations through demonstrations and interactive sessions. Major topics covered included the health benefits of fresh fruits and vegetables, storage methods for shelf-life extension, mushroom processing, fermentation of fruits and vegetables, sensory analysis, and microbiological safety aspects, standards, and processing of food products.



Post-Harvest Technologies of Fruits & Vegetables (02.02.2024-04.02.2026)

CSIR–CFTRI, Mysuru, organized a three-day training programme on “Post-Harvest Technologies of Fruits & Vegetables”. The programme was funded by the Department of Himachal Pradesh, State Rural Livelihood Mission, Rural Development Department, Shimla (HPSRLM). A total of 29 participants, including SHG members, Block Development Officers, and State officials, attended the programme. The training focused on scientific awareness and practical aspects of post-harvest handling and processing of fruits and

vegetables. Key topics covered included the health benefits of fresh fruits and vegetables, fruit ripening methods and biochemical changes during ripening, HACCP in handling fresh horticultural produce, and minimal processing of fruits and vegetables.



Processing of Ragi & Millets (17.02.2026-19.02.2026)

CSIR–CFTRI, Mysuru, organized a three-day training programme on "Processing of Ragi & Millets" for SHG members from Odisha. The programme was funded by the Department of Agriculture, Government of Odisha, and attended by 28 participants. The training focused on primary processing and value addition of millets, destoning and refining of ragi, preparation of value-added ragi products, roasting of grains and flour, millet-based bakery products, and FSSAI guidelines related to food processing and safety.



Bakery Product Technology (16.02.2026-18.02.2026).

CSIR–CFTRI, Mysuru, organized a training programme on "Bakery Product Training: Ingredients, Processing and Product Quality". The programme was conducted by the Flour Milling, Baking & Confectionery Technology Department and attended by 10 participants.

Packaging Technology for Thermal Processing Applications (25.02.2026-27.02.2026)

CSIR–CFTRI, Mysuru, organized a three-day training programme on "Essentials of Packaging Technology for Thermal Processing Applications in Extension of Shelf Life and Food Safety". The programme was funded by the Department of Agriculture, Government of Karnataka, and attended by 31 participants. The training focused on key aspects of food packaging and thermal processing, including introduction to food packaging and sustainability, microbiological aspects of food spoilage, metal packaging types, lacquers for food applications, food packaging machinery, the role of paper and plastics in food packaging, sensory impacts of package-food interactions, aseptic and retort packaging for thermally processed foods, and FSSAI regulatory requirements related to food packaging and thermally processed products.



Workshop on Quality Control of Food Products (26.02.2026).

A one-day workshop on "Quality Control of Food Products" was conducted, at the CSIR–CFTRI Resource Centre, Hyderabad. The programme was attended by 19 participants from RBVRR Women's College and focused on quality control practices and standards in food products.

Food Processing & Value Addition (02.03.2026-03.03.2026).

CSIR–CFTRI, Mysuru, organized a "Farmer-Centric Exposure-cum-Training Programme on Food Processing & Value Addition". The programme was sponsored by the Society for Elimination of Rural Poverty and attended by 30 participants.

Workshop on Ginger Processing and Value Addition Technologies (11.03.2026-12.03.2026)

CSIR–CFTRI, Mysuru, organized an "Exposure-cum-Training Workshop on Ginger Processing and Value Addition Technologies". The programme was sponsored by Karnataka Agricultural Produce Processing and Export Corporation Ltd., Government of Karnataka, and conducted by the Technology Transfer Business Development division.



Grain Processing, Products for Health & Wellness, and Sensory Analysis (23.03.2026-25.03.2026).

CSIR–CFTRI, Mysuru, organized a training programme on "Grain Process & Products for Health & Wellness and

Sensory Analysis" for participants from Ramaiah University of Applied Sciences. A total of 29 participants attended the programme. The training included lectures and demonstrations on grain diversity and structure, grain processing and Centre of Excellence on Millets, nutraceuticals in millets and their health benefits, grain storage and infestation control, and millet product demonstrations such as popping, flaking, and extrusion of grains. The programme concluded with certification of the participants.



New Collaborations

- **Buhler India Pvt. Ltd., Attibele, January 12, 2026**
  Scope : Strengthen the academic collaboration in the advanced areas of wheat milling technology and create avenues in generating work force for the benefit of flour milling industry in India and abroad.

- **National Institute of Engineering, Mysuru, March 26, 2026**
  Scope : Promote academic and research collaboration and facilitate joint research projects in interdisciplinary domains such as Artificial Intelligence, Data Analytics, Food Technology, Nutrition Science and related areas.



- **Kadamba, Bengaluru, March 26, 2026**
  Scope: To foster collaborative research program and to provide advancement in scientific and technological knowledge for benefit of society at large and enhancing business opportunities.

Entrepreneurs' Speak

Avaan Aqua (Mr. Balachandar Mohanraj)
Avaan Aqua, based in Chennai, is a forward-looking beverage company focused on transforming everyday hydration in India. Through its brand, Magic & Pure (MnP), the company offers innovative zero-sugar-infused water products designed for health-conscious consumers. Its first product, MnP Piper, introduces a unique paan-infused water concept that blends traditional Indian flavours with modern wellness trends. The company plans to expand its portfolio with a wider range of infused waters and functional beverages catering to evolving consumer preferences. Avaan Aqua aims to establish a strong market presence by combining accessibility, refreshing taste, and health-oriented innovation, while promoting better hydration choices for modern consumers.

Vision :
We aim to convert millions of daily sugary drink purchases into Magic & Pure purchases, fundamentally reshaping the mass market beverage landscape through accessibility and health.

Mission :
Our Mission is to become the most widely distributed, top-of-mind brand for everyday healthy hydration in India. By making functional, zero-sugar hydration accessible to everyone, we're not just selling water - we're transforming how India hydrates, one bottle at a time.

Role of CFTRI :
CFTRI played a vital role in supporting Avaan Aqua's product innovation by providing the licensed technology and know-how for manufacturing paan-flavoured water. Through this non-exclusive licensing agreement, CFTRI

enables the company to produce scientifically developed, safe, and high quality infused beverages. Its technical expertise ensures that Avaan Aqua can maintain consistent product quality, comply with food safety standards, and scale up production effectively in the competitive beverage industry. This collaboration strengthens the company's capability to deliver innovative and reliable beverage products to the market.

Challenges :

Avaan Aqua faces challenges from rising production costs and intense competition in the functional beverage market. The growing demand for sports drinks, vitamin waters, herbal teas, and plant-based hydration products increases competitive pressure. Additionally, the use of natural flavourings, organic ingredients, and eco friendly packaging raises production costs. Consumer preference for clean-label products further adds to expenses. Established companies like Nestle, PepsiCo, and The Coca-Cola Company dominate the market with strong distribution networks.

Our Product



BIRAC BioNEST Incubation Centre

The BIRAC-BioNEST incubation facility at CSIR-CFTRI is designed to nurture entrepreneurial talent in food bioprocessing and biotechnology research.

Events and Visits

Food Safety Workshop

BioNEST & STC, CSIR–CFTRI, in association with ITCFSAN and FSSAI, successfully conducted a four-day certificate-oriented workshop on Food Safety & Export Regulations from March 24–27, 2026. The programme saw active participation from startups, entrepreneurs and food industry professionals, providing key insights into FoSCOS, food labelling, FSS Act compliance, and export regulations.



NASSCOM Delegation Visit

The BioNEST Incubation Centre at CSIR–CFTRI hosted a delegate from NASSCOM for an interaction with incubated startups. The delegate reviewed innovative solutions developed by the startups and appreciated the dynamic entrepreneurial ecosystem fostered at the centre.



Ajinomoto Co. Inc. Delegation visit

The BioNEST Incubation Centre at CSIR–CFTRI hosted delegates from Ajinomoto Co., Inc., along with advisors from FSSAI and representatives of the Food Future Foundation. The delegation interacted with incubated startups, discussed advancements in food processing and biotechnology, and appreciated the translational research and innovation activities at the centre.



Visit by ASC Corps

The BioNEST Incubation Centre at CSIR–CFTRI hosted the second delegation from the Army Service Corps in February 2026 for an interactive session with incubated startups. The officers reviewed startup technologies and products for potential defence applications under challenging field conditions, with discussions focused on food technology, scalability, and nutrition solutions for high-altitude terrains.



Panel Discussion at ICSI National Seminar

Representatives from BioNEST Incubation Centre, CSIR–CFTRI, participated as panelists in the National

Seminar “Emerging South – Growth Beyond Metros” organized by the Institute of Company Secretaries of India (ICSI) on January 17, 2026, at Rani Bahadur Auditorium. The seminar brought together entrepreneurs, professionals, bankers, regulators, and ecosystem enablers to discuss growth opportunities in IT, MSMEs, startups, and food and textile sectors. BioNEST–CFTRI contributed as a knowledge facilitator, focusing on food innovation and technology development.



Accomplishments by BioNEST incubatees

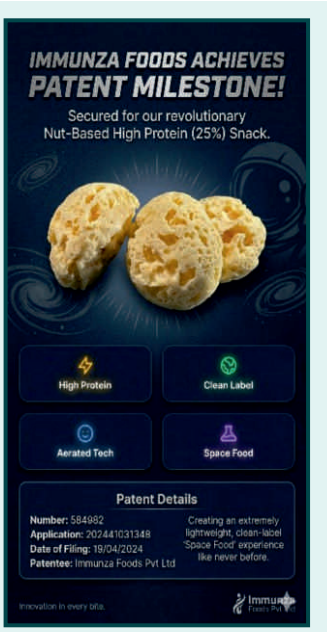
- One of our startup founders, Ms Sayanika Deka from Indimeat (Svastha Samriddhi Pvt. Ltd.), was among 7 startups representing India at the Global InnovationAlliance Market program in Seoul, South Korea.



- One of our startups, Gusteau Foods, was awarded the “Rural Impact Startup for Natural Food Colours” under the TANSEED 7.0 Cohort, receiving a grant of 15 Lakhs.



- Immunza Foods has been awarded a patent for Aerated Nut-Based High Protein 'Space Snack.



Events

New Year Address by Director, CSIR–CFTRI (January 01, 2026)

Dr.Giridhar Parvatam, Director, CSIR-CFTRI addressed the staff and students of CSIR–CFTRI on the occasion of New Year 2026. In his address, he highlighted the Institute's major achievements during 2025 and emphasized the roles and responsibilities of every individual in taking the Institute to greater heights in 2026.



Republic Day Celebrations at CSIR–CFTRI (January 26, 2026)

Dr. Giridhar Parvatam, Director, CSIR-CFTRI hoisted the National Flag on January 26, 2026, as part of the Republic Day celebrations at CSIR–CFTRI. He addressed the staff and students of the Institute, highlighting the importance of dedication and national service. On the occasion, the CFTRI calendar was

released and a selfie point was inaugurated by the Director in the presence of Heads of Departments and other attendees.



Inauguration of Sisal Plantation at MG Halli Campus (February 02, 2026)

The Sisal plantation was inaugurated by Dr. Giridhar Parvatam, Director, CSIR-CFTRI in the virtual presence of the Director General, CSIR, at the CSIR–CFTRI MG Halli Campus on February 02, 2026. The programme was organized under the prestigious SISAL CSIR NFC Mission Project, led by CSIR-Advanced Materials and Processes Research Institute, to explore the industrial and ecological potential of sisal fibres.



4th Meeting of the 12th Research Council (February 12-13, 2026)

The fourth meeting of the 12th Research Council of CSIR–CFTRI was held during February 12–13, 2026, in the presence of Dr. C. Vasudevappa and other council members. Dr. N. Kalaiselvi, DG, CSIR and Secretary, DSIR, Ministry of Science & Technology, Government of India, participated virtually and encouraged the Institute to develop sustainable technologies for the future. Dr.Giridhar Parvatam, Director, CSIR-CFTRI presented the major achievements and developments of the Institute during the previous six months. Principal Investigators of ongoing RSDF projects and MLPs/GAPs/MMPs also presented their progress reports. The meeting concluded with valuable suggestions from the Research Council members, with active participation from the S&T staff of the Institute.



Wondervogel India 2026 (February 18, 2026)

Under the scientific exchange programme, Wondervogel India 2026 was held on February 18, 2026, with the participation of around 20 students and 3 faculty members from Hokkaido University, Japan. The participants were briefed on the various activities of CSIR–CFTRI and engaged in interactive discussions with the Institute's R&D team.



Symposium on Sodium Reduction in Indian Traditional Foods, (February 21, 2026)

CSIR–CFTRI, in collaboration with AFST(I), Ajinomoto, and Food Future Foundation, organized a one-day International Symposium on “Sensory Strategies for Sodium Reduction in Indian Traditional Foods” on February 21, 2026. Sridevi Annapurna Singh, Former Director, CSIR-CFTRI served as the Chief Guest, while the programme was presided over by Giridhar Parvatam, Director, CSIR-CFTRI. The Guests of Honour included Dr Paramjit S Panesar, President, AFST(I), Dr Pawan Agarwal, Convener, Chairperson, CODEX & Former Advisor, FSSAI and Mr Sanjay Dave, Executive Officer, Ajinomoto Co. Inc. The Guest of Eminence was Dr Miro Smriga, Executive Officer, Ajinomoto Co. Inc. The symposium featured three technical sessions on nutrition aspects and sodium reduction strategies, safety and regulatory perspectives of flavour enhancers, and sensory science and food choice. Each session was followed by expert panel discussions that enabled detailed deliberations and outlined future directions in the field.



National Science Day Celebration (March 03, 2026)

National Science Day was celebrated on March 03, 2026, commemorating the remarkable contributions of

Sir C. V. Raman to Indian science. The programme featured an inspiring keynote address by the Chief Guest, Proff. K. R. S. Sambasiva Rao, who delivered a thought-provoking lecture on "Exploratory Thinking in Modern Research Practice." The function was presided over by Dr. Giridhar Parvatam, Director, CSIR-CFTRI. In his presidential address, he highlighted the significance of National Science Day and reflected on the pioneering contributions of Sir C. V. Raman, whose discovery of the Raman Effect continues to inspire scientific inquiry across generations.



International Women's Day Celebration (March 10, 2026)

International Women's Day was celebrated at CSIR–Central Food Technological Research Institute (CFTRI), Mysuru, on March 10, 2026, bringing together scientists, staff, and students to recognize the achievements and contributions of women in science and society. Dr. Deepa P, Director of the Central Sericultural Research and Training Institute attended the programme as the Chief Guest, while Dr. Parameshwara C. M. CEO and Founder of Smiles Hospital, Bengaluru was the Guest of Honour. The event was presided over by Dr. Giridhar Parvatam, CSIR-CFTRI, Mysuru.



Inauguration of Mobile Processing Unit for Northeast Region (March 13, 2026)

CSIR–CFTRI, Mysuru, developed a Mobile Processing Unit (MPU) for processing fruits and vegetables in the Northeast region. The unit was designed and developed for the North East Centre for Technology Application and Reach (NECTAR)), Shillong, an autonomous institute under the Department of Science and Technology, Government of India. The MPU was inaugurated on March 13, 2026, by C. H. Vijayashankar, Hon'ble Governor of Meghalaya, in the presence of Dr Arun Kumar Sarma, Director General, NECTAR and Dr Giridhar Parvatam, Director, CSIR-CFTRI.



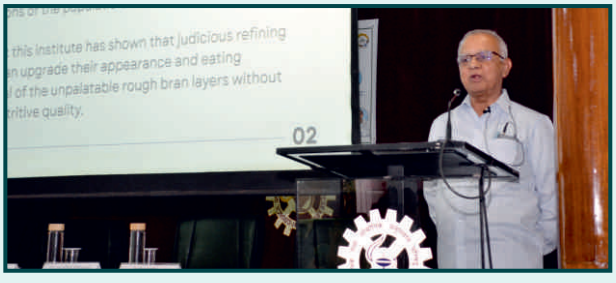
Symposium on "Insights in Food Product Development" (March 25, 2026)

The Traditional Foods and Applied Nutrition Department organized a half-day symposium on "Insights in Food Product Development" on March 25, 2026. Prof. Jamuna Prakash participated as the Chief Guest and delivered a lecture on "Positioning and Optimizing Nutrition in Food Product Development." Dr Giridhar Parvatam, Director CSIR-CFTRI delivered the presidential remarks. During the technical sessions, Dr. Chetana R. spoke on "Commercializing Food Innovation: A Technology Translation Approach," while Dr. Asha M. R. delivered a lecture on "A Sensory Science Framework for Consumer-centric Product Development."



Symposium on "Grain Processing and Value Addition" (March 26, 2026)

The Grain Science Technology Department organized a half-day symposium on "Grain Processing and Value Addition" on March 26, 2026. Er Shankara R Retd. Senior Principal Scientist, GST Dept., CSIR-CFTRI attended as the Chief Guest and delivered a talk on "Grain Processing." A scientific lecture was delivered by Dr. Meera M. S. on the topic "Unlocking the Potential of Grains through Processing." Presidential remarks were delivered by Giridhar Parvatam, Director, CSIR-CFTRI.



Upcoming Events

- The Culmination Ceremony of the Platinum Jubilee Celebrations and the inauguration of the BIRAC-BioNEST Incubation Centre at CSIR–CFTRI by Dr Jitendra Singh, Hon'ble Union Minister of State (Independent Charge) for Science & Technology and Earth Sciences, and Vice President of CSIR.
- Celebration of National Technology Day on May 18, 2026.

Visitors

- A team from McDonald's comprising Chef Swarup Solgaonkar (General Manager and Head of New Product Development), Ms Sulakshna Mukherjee (Associate Director and Head of Corporate Communications), Mr Pranil Bhamare (Associate Director – Quality Systems (QS)), and Dr Shatadru Sengupta (Chief Legal Officer, Vice-President)) visited CSIR–CFTRI, Mysuru, on January 23, 2026. The discussions focused on continuing collaborative work in new product development, improvement of existing products, and testing and analysis services. The visit resulted in fruitful deliberations and the formulation of a collaborative roadmap for future initiatives.



- A group of 25 Indian Army officers from the ASC Centre and College, Bengaluru, visited CSIR–CFTRI on February 17, 2026, as part of their training programme. The officers visited the CFTRI Showcase, Food Safety & Analytical Quality Control Department, BioNEST Incubation Centre, and the International School of Milling Technology. The participants were briefed on the Institute's activities, including technology and process development, training programmes, academic activities, and research and development initiatives.



- Dr. Venkatesan Selvaraj, Director of the Tea Research Association, Tocklai Tea Research Institute, Jorhat, Assam, visited CSIR–CFTRI on March 5, 2026, to discuss potential collaborations in the area of tea research. During the visit, he toured the CFTRI Showcase and the Food Safety & Analytical Quality Control Laboratory Department.



- A group of 11 IAS Officer Trainees from Lal Bahadur Shastri National Academy of Administration visited CSIR–CFTRI on March 16, 2026, as part of their Winter Study Tour. The trainees visited the CFTRI Showcase, Food Safety & Analytical Quality Control Laboratory, and the International School of Milling Technology (ISMT).



- Officials from National Bank for Agriculture and Rural Development, including Dr Surendra Babu (Chief General Manager), Ms Rajapriya Murugan (Deputy General Manager), Mr Harshajith (Assistant Manager), and Mr Shantveer (District Development Manager), visited CSIR–CFTRI, Mysuru, on March 26, 2026. The discussions focused on scientific interventions by CSIR–CFTRI in processing lines for the Kalyana Karnataka region.



Technical and Invited Talks

- A talk on “Service Matters and Personal Claims” with reference to vigilance aspects was organized at

CSIR–CFTRI on January 6, 2026. The session was delivered by K. Ravi Kumar, Controller of Administration, CSIR-CFTRI

- A technical talk on "The Science of Structure: Mechanisms of Protein Texturization and Starch Gelatinisation through Advanced Extrusion Technology" was organized on February 27, 2026, and delivered by Ms Tibor Hasiz. The session was attended by staff members, research scholars, and students.
- CSIR-CFTRI in association with Association of Microbiologists of India, Mysore Chapter arranged an expert talk on the topic "Discovery of the Yeast and Plant Folate Transporters" by Prof. Anand Kumar Bachhawat, Emeritus Professor (Biology), Indian Institute of Science Education and Research (IISER), Mohali, Punjab. The talk was attended by the staff, research scholars and students.
- An IBSC Awareness Programme was organized on March 27, 2026, in the Assembly Hall at CSIR–CFTRI. The session was delivered by Dr Sarma M. V. R. K. The programme was attended by the scientific and technical staff of the Institute.
- A technical talk on "The Science of Structure: Mechanisms of Protein Texturization and Starch Gelatinisation through Advanced Extrusion Technology" was conducted on February 27, 2026. The session was delivered by Ms. Tibor Hasiz from Germany.egion.

Retirees

- Dr Jeyarani T, Principal Technical Officer, HRD Dept.
- Ms Manjula T. C, Lab Attendant, TFAN Dept.
- Dr Meera M. S, Chief Scientist and Head, GST Dept.
- Dr S.V.N. Vijayendra, Chief Scientist and In-charge, CSIR-CFTRI Resource Centre Hyderabad
- Dr Chetana R, Principal Technical Officer, TFAN Dept.

Ph.D.s Awarded by AcSIR



Bincy K (2026). Biorational potential of *Ocimum* spp. for control of stored grain insects [Guide: Dr. C S Vivek Babu, Senior Principal Scientist, Department of Food Protectants & Infestation Control]

Divya Priya A (2026). Studies on the nutritional and functional characterization of *Rhodomyrtus tomentosa* fruit [Guide: Dr. Asha Martin, Senior Principal Scientist, Department of Biochemistry]



Patole Reshma Prabhakar (2026). Development of post-harvest grain storage bags for control of stored grain insect pests. [Guide: Dr. C S Vivek Babu, Senior Principal Scientist, Department of Food Protectants & Infestation Control]





Lijina P (2026). Structural and functional characterization of oligosaccharides from chia seed mucilage [Guide: Dr. Gnanesh Kumar B, Senior Scientist, Department of Biochemistry]



Srinivasulu Korra (2026). Development and Characterization of Cardanol and Amine Functionalized Graphene incorporated Bioplastic Films for Food Packaging Applications [Guide: Dr. Jeevan Prasad Reddy, Senior Scientist, Department of Food Packaging Technology; Co-Guide: Dr. A.V. Sesha Sainath, CSIR-Indian Institute of Chemical Technology, Hyderabad]

Aswathi K S (2026). Development of potential biofumigation process using phytochemical volatile for the control of *Sitophilus oryzae* and *Callosobruchus maculatus* [Guide: Dr. Ezil Vendan S, Principal Scientist, Department of Food Protectants & Infestation Control]





Neelu S Babu (2026). Preparation of *Lactobacillus* fermented bio-functional meat protein hydrolysate and their food applications [Guide: Dr. Tanaji G Kudre, Principal Scientist, Department of Meat & Marine Science]

Select Publications

- Sundarappa, Sharneetha; Dharmaraj, Usha; Sakhare, Suresh Diliprao, *A comparative study on the nutraceutical potentials of little and barnyard millet varieties* (2026), Journal of Cereal Science, 128, art. no. 104409 **(IF: 3.7)**
- Bangalore Ramachandra, Annapoorna ; Perumal, Madan Kumar Phyllanthus niruri potentiates apoptosis in Huh-7 cells and mitigates diethylnitrosamine-induced hepatocarcinogenesis via Hippo-YAP pathway modulation (2026) Medical Oncology, 43 (2), art. no. 112 **(IF: 3.5)**
- Divya ; Jayadeep, A. ; Joshi, Shruti, *Impact of black rice (Chakhao) polishing and cooking on phenolic and anthocyanin compounds profiling by using ESI-high resolution mass spectroscopy (LC-HRMS) (2026).* European Food Research and Technology, 252 (3), art. no. 129 DOI: 10.1007/s00217-025-04926-4 **(IF: 3.2)**
- Biswas, Anisha; Dasalkar, Akshay H. ; Murthy, Pushpa S. ; Yannam, Sudheer Kumar ; Chaudhari, Sachin R., *Utilizing Electronic Sensory Technologies to Detect Barley Malt Syrup Adulteration in Honey: E-Nose and E-Tongue Applications* (2026), ACS Food Science and Technology, 6 (3), pp. 656 – 668 **(IF: 3)**



International Symposium on "Sensory Strategies for Sodium Reduction in Indian TraditionalFoods"



Wondervogel India 2026

Published by

DIRECTOR
CSIR-CFTRI, Mysuru
director.cftri@csir.res.in

Visit us @
www.cftri.res.in