

HOW TO APPLY

- Participants should submit their duly filled application form (in the prescribed format) after obtaining necessary approval from the competent authority of their organization. The form should be sent to the Course Director at the address mentioned in the brochure by post, and a scanned copy should also be emailed to dmcaft2025@gmail.com.
- Participants may also submit an advance copy of the application form in the prescribed format by scanning the QR code or accessing the link: <https://forms.ale/jwRawai7niKNJZCB6>
 . however, final acceptance of candidature will be subject to the receipt of the duly filled and approved application form from their competent authority.
- A non-refundable registration fee of Rs. 1,000/- per participant (or Rs. 5,000/- for candidates from private ICAR-accredited Colleges/Universities) must be paid by all applicants. The fee should be paid online to the bank account details provided below, and the payment receipt must be attached with the application form.

Name of Bank and Branch: SBI, NDRI Branch, Karnal.

Account name: ICAR UNIT NDRI Karnal

Account No.: 65270548352 **IFSC Code:** SBIN0050326

KARNAL WEATHER DURING FEBRUARY

During January and early February, Karnal experiences cool to cold winter weather, typical of the North Indian winter season. Daytime temperatures usually range between 22–25°C, while night temperatures can drop to around 9–11°C, occasionally dipping lower during cold waves. Mornings and evenings are often foggy, and humidity levels may be relatively high. Participants are therefore advised to carry adequate winter clothing, including warm jackets, sweaters, and shawls, to stay comfortable during their stay.

Chief Patron

Dr. Dheer Singh
Director & Vice-Chancellor

Patrons

Dr. A.K. Singh **Dr. Rajan Sharma**
Joint Director (Academic) Joint Director (Research)

CAFT Director

Dr. D.N. Yadav, Head, Dairy Technology Division

Course Director

Dr. Shilpa Vij, Head & Principal Scientist
Dairy Microbiology Division

Course Coordinators

Dr. Saurabh Kadyan
Scientist, Dairy Microbiology Division

Dr. Diwas Pradhan
Senior Scientist, Dairy Microbiology Division

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ICAR-NDRI, Karnal (Haryana) – 132001
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Email: dmcaft2025@gmail.com , shilpavijn@gmail.com

Venue

Dairy Microbiology Division, ICAR-NDRI
Karnal (HR)-132001

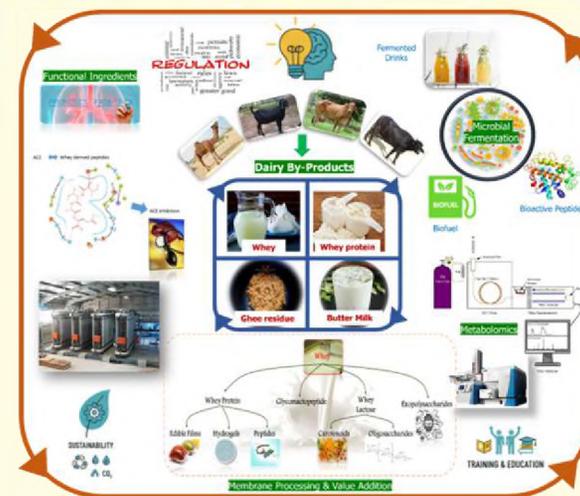


**CAFT in
Dairy Processing 2025-26
National Training Programme**

on

**“Advancements in the Valorization of
Dairy By-products for Strengthening
the Circular Economy”**

3rd February to 23rd February 2026



Sponsored by

**Agricultural Education Division
Indian Council of Agricultural Research**

Under the aegis of

Centre of Advanced Faculty Training in Dairy Processing

Organized by

**Dairy Microbiology Division
ICAR-National Dairy Research Institute
Karnal-132001 (Haryana) INDIA**

www.ndri.res.in



ABOUT ICAR-NDRI

ICAR-National Dairy Research Institute is a premier institution of dairying and acclaimed for its contribution in generating quality human resource, carrying out excellent R&D work and assistance in promotion of Indian Dairy sector. The institute undertakes basic and applied research, teaching and extension activities towards dairy development, animal productivity enhancement, development of new products and processes for the benefit of millions of dairy farmers and consumers. Karnal is located on NH-1, equidistant (~125 Km) from New Delhi and Chandigarh. The city is well connected by road and train. Buses for Karnal can be availed from ISBT Bus Stand, New Delhi.



ABOUT DAIRY MICROBIOLOGY DIVISION

The Division focuses on research, teaching, consultancy, and technology transfer in Dairy Microbiology. Key research areas include starter cultures and fermented milk products, indigenous probiotics and gut microbiota, prebiotics and synbiotics, bioactive peptides, microbial metabolites, food safety, and biosensors, supported by advanced metagenomic, metabolomic and culturomic tools. It houses the National Collection of Dairy Cultures (NCDC) with over 800 cultures. The Division offers M. Tech. and Ph.D. programs in Dairy Microbiology and contributes to B. Tech. (Dairy Technology / Food Technology / Biotechnology) education. It provides consultancy and services including starter culture supply, culture freeze-drying, microbiological analysis and regulatory compliance support. The Division also organizes specialized training events to strengthen national capacity in dairy microbiology, food safety, and fermented health foods.

ABOUT THE COURSE

Dairy by-products, particularly whey, are generated in large volumes and pose both environmental and economic

challenges due to high organic content and disposal regulations. This training focuses on innovative strategies for valorizing dairy by-products, transforming them into value-added ingredients, functional foods, bioactive compounds, and sustainable materials. Participants will gain insights into microbial fermentation, bioactive protein and peptide production, lactose-based bioprocesses, functional beverages, dairy-based biomaterials, and advanced applications such as smart packaging, nutraceuticals, and bioenergy recovery. The program also emphasizes health-promoting applications, regulatory compliance, and emerging technologies to strengthen the circular economy in the dairy sector.

COURSE CONTENTS

- **Functional Foods and Beverages:** Development of high-protein functional dairy products, whey-based beverages, fermented whey drinks, and co-fermented lactic-yeast products.
- **Bioactive Proteins and Peptides:** Extraction and applications of whey proteins, casein-derived peptides, lactoferrin, mineral-binding proteins, and colostrum bioactives for health.
- **Dairy By-products in Biomaterials and Packaging:** Use of whey proteins in biomaterial production and emerging sustainable packaging systems.
- **Microbial and Bioprocessing Applications:** Production of value-added metabolites, oligosaccharides, microbial exopolysaccharides, lactobionic acid, vitamin B12, and other bioactives from whey and dairy by-products.
- **Probiotics and Fermentation Technologies:** Production of direct-vat-set (DVS) probiotics and using dairy by-products as nutrient media
- **Valorization of Traditional Dairy Residues:** Conversion of buttermilk, ghee residues, and cheese by-products into powders, functional ingredients, and bioactive formulations.
- **Advanced Processing and Analytical Techniques:** Application of 3D printing, artificial neural networks,

SAS-based data analysis, and validation of nutritional claims in dairy products.

- **Sustainability and Circular Economy:** Bioenergy recovery from dairy waste, biopreservation, and strategies for strengthening sustainable utilization of dairy by-products.

WHO CAN APPLY

The training program is open to Assistant Professors/ Scientists or equivalent professionals working in the ICAR–AU system, including ICAR Institutes, SAUs, CAUs, Central Universities, and ICAR-accredited private colleges/universities. Preference will be given to faculty members from Dairy Science, Food Science and Technology, Agriculture, Veterinary Sciences, and Home Science.

TRAVEL AND ACCOMMODATION

- Selected participants will receive full coverage for lodging, boarding, and travel expenses under the training program budget. The lodging and boarding facility will be provided at the Institute's Guest House.
- Participants are eligible for travel allowance up to AC-II tier (AC-III tier for Rajdhani / Durgam Cheruvu trains) fare on the shortest route for train travel. Train tickets must be booked through the IRCTC website only. Air travel is permitted in economy class at the lowest fare, booked exclusively through IRCTC website or authorized ICAR travel agents (Ashoka Travels and Tour or Balmer Lawrie Tours and Travels). However, the maximum reimbursable amount will remain capped at the equivalent AC-II train fare. Travel expenses will be reimbursed based on the participant's pay scale, with a maximum of AC-II train fare.
- No TA will be admissible for air tickets booked other than the above-mentioned websites. Participants are required to produce original tickets in support of their claim.

**Application Form For Participation in
National Training Programme on**
***“Advancements in the Valorization of Dairy
By-products for Strengthening the Circular Economy”***

February 3–23, 2026

1. Name (in block letters) :
2. Designation :
3. Present employer address :
4. Address to which reply should be sent (in block letters) :
5. Permanent address :
6. Date of birth :
7. Sex :
8. Marital Status :
9. Teaching/research/professional experience (mention post held) during last five years and numbers of publications :
10. Mention if you have participated in any research seminar, Summer/Winter/Short Course etc. during last five (5) years under I.C.A.R./ Other organizations. :
11. Online Payment/Transaction Details (attach copy of payment receipt) :
12. Academic Record

Sr. no.	Degree	Discipline	Year	Class	University
1.	Ph.D				
2.	Master				
3.	Bachelor				
4.	Others				

Signature of the applicant Date Place

13. Recommendation by forwarding Institute :

Signature Designation

Address Date

Certificate

It is certified that the information was furnished by the office record and was found corrected.