



**6 Days Hands-on
Entrepreneurship Development Programme
On
“Starter Cultures
and
Production of Fermented Milk Products”
(23rd – 28th May, 2022)**

Organized under:

IDP – NAHEP

ICAR-National Dairy Research Institute (NDRI)

Karnal, Haryana

Organized by:

Dairy Microbiology Division

ICAR-National Dairy Research Institute (NDRI)

Karnal, Haryana

About NDRI

ICAR-National Dairy Research Institute (NDRI) 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 farmers and consumers.

About IDP-NAHEP

National Agricultural Higher Education Project (NAHEP) has been formulated by ICAR for five years starting from 2017. The project is funded jointly by the World Bank and the Government of India. Institutional Development Plan (IDP) is one of the sub-components designed under NAHEP, and ICAR-NDRI is one among a few Agricultural Institutes which secured IDP- NAHEP project on competitive basis. Through this IDP, ICAR-NDRI organizes various industry-oriented trainings and certificate courses which are learning outcome centric to make it more relevant to the stakeholders in the industry and the farming community.



Objective:

To provide basic knowledge and hands-on training on starter culture production, handling and manufacture of fermented milk products.

Registration, fees and accommodation

15-20 participants will be selected at a time, based on the date of registration. First Come First Serve will be the selection criteria. There will be no registration fees.

Food expenses as well as accommodation expenses will be borne by the participants. Participants are requested not to bring their family. The scanned copy of registration form needs to be sent to the email id: idpnahep.training@gmail.com

**Last Date of Registration:
20th May 2022**

Certificates will be provided to the participants after successful completion of the training programme.

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About the Training



Dairy starter cultures are carefully selected groups of microorganisms intentionally added to milk and milk products to bring about desirable fermentations. In other words, they are said to be the heart of fermentation. Starter cultures are widely used in the manufacture of various fermented milk products like, dahi, lassi, yogurt, cultured buttermilk, cheese, etc. The successful manufacture of these fermented milk products relies upon careful and judicious selection of starter cultures, propagation and maintenance. In order to produce superior quality fermented milk products, it is inevitable to use high quality starter cultures. At the same time, handling, maintenance and preservation of these microbes is also a very important step. Over the decades, the demand for fermented milk product in India has increased remarkably. Several small dairy industries and entrepreneurs have started manufacturing indigenous fermented milk products as a profitable venture. Thus, course content is designed in such a way for imparting the knowledge of proper handling of starter cultures for preparation of good quality fermented dairy products.

About NCDC

National Collection of Dairy Cultures (NCDC) has been held in the Division of Dairy Microbiology at ICAR-NDRI, Karnal since 1962. The NCDC has been significantly contributing as a national facility in the manufacture of fermented milk products in India by making available dairy cultures to Indian Dairy Industry. The main interest of the collection lies in the lactic acid bacteria from dairy sources. It has several strains of bacteria, yeast and molds in its collection. In addition to individual strains, the NCDC also holds mixed strain (traditional) and defined strain formulated cultures for making different varieties of cheese and fermented milk.

Website: <http://www.ndri.res.in/ncdc/>



Contact Us

Program Coordinator

Dr. Pradip Behare

Scientist (SS)

Dairy Microbiology Division, NDRI,
Karnal-132001

Co-Coordinator

Dr. A.K. Puniya

Principal Scientist

Dairy Microbiology Division, NDRI,
Karnal-132001

Dr. Chand Ram Grover

Principal Scientist

Dairy Microbiology Division, NDRI,
Karnal-132001

Dr. Shilpa Vij

Principal Scientist

Dairy Microbiology Division, NDRI,
Karnal-132001

Co-ordination

Ms. Harshita Naithani

Dairy Microbiology Division, NDRI,
Karnal-132001 E.Mail:

idpnahep.training@gmail.com

Phone: 0184-2259198

SCHEDULE

(6 days Hands-on Entrepreneurship Development Programme On 'Starter Cultures and Production of Fermented Milk Products')

Day 1 (23 rd May 2022, Monday)		
9:30-11:00	Registration, Inauguration and overview of training course	Organizing committee
11:00-13:00	Visit to experimental dairy	
14:00-15:00	Starter culture, probiotics and fermented milks	Dr. Pradip Behare
15:00-17:00	Preparation of microbiological media, sterilized reconstituted skim milk and reagents (Practical)	Mrs. Yogita Sharma / Ms. Harshita Naithani
Day 2 (24 th May 2022, Tuesday)		
9:30-11:00	Propagation of Starter Cultures (Theory+Practical)	Dr. Pradip Behare/ Ms. Harshita Naithani
11:00-13:00	Chemical quality of milk for preparation of fermented milk products (Theory+Practical)	Dr. Kamal Gandhi
14:00-16:00	Microbial quality of milk for preparation of fermented milk products (Theory+Practical)	Dr. Raghu H.V.
16:00-17:00	Exopolysaccharides production by starter cultures (Theory)	Dr. Pradip Behare/ Ms. Harshita Naithani
Day 3 (25 th May 2022, Wednesday)		
9:30-11:00	Activity and Purity tests for Starter cultures (Theory+Practical)	Dr. Pradip Behare / Ms. Harshita Naithani
11:00-12:00	Visit to Model Dairy Plant	
12:00-13:00	Preservation of starter culture and probiotics by freeze drying (Theory)	Mrs. Yogita Sharma
14:00-17:00	Preparation of Dahi, Mishti dahi, Probiotic dahi and Yogurt (Theory+Practical)	Dr. Pradip Behare/ Ms. Harshita Naithani
Day 4 (26 th May 2022, Thursday)		
9:30-10:30	Evaluation of physicochemical and sensory properties of Dahi, Mishti dahi, Probiotic dahi and Yogurt	Dr. Pradip Behare/ Ms. Harshita Naithani
10:30-13:00	Preparation of Lassi, buttermilk and Shrikhand (Theory+Practical)	Dr. Chand Ram Grover
14:00-17:00	Preparation of fermented whey beverages (Theory+Practical)	Dr. Shilpa Vij
Day 5 (27 th May 2022, Friday)		
9:30-11:00	Evaluation of physicochemical and sensory properties of Shrikhand	Dr. Chand Ram Grover
11:00-11:30	Evaluation of physicochemical and sensory properties of fermented whey beverages	Dr. Shilpa Vij

11:30-13:00	Entrepreneurship Opportunities in Dairy Industry: Emerging technologies and marketing options	Dr. Heena Sharma
14:00-17:00	Preparation and quality evaluation of Shrikhand (Theory+Practical)	Dr. Pradip Behare/ Ms. Harshita Naithani
Day 6 (28 th May 2022, Saturday)		
9:30-13:00	Cheese technology and manufacturing (Theory+Practical)	Dr. Yogesh Khetra
14:00-15:30	Packaging & Labeling of Fermented Milk Products	Dr. P. N. Raju
15:30-17:00	Valedictory Function	Organizing committee

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on
**“STARTER CULTURES AND PRODUCTION OF FERMENTED MILK
PRODUCTS”**

ICAR-National Dairy Research Institute, Karnal
(May 23rd-28th, 2022)

REGISTRATION FORM

Name:	
Designation:	
Address:	
Phone:	Email:
Educational Qualification (Tick appropriate)*	Undergraduate / Postgraduate / Others (specify below) _____
Occupation	
Purpose of attending training	
Accommodation required	☐ Yes ☐ No
Date:	Signature:

**Preferences will be given to budding entrepreneurs (Dairy business)*

Send the completed form to:
Dr. Pradip V. Behare
NCDC Lab, Dairy Microbiology Division
Room No.: 112
ICAR- National Dairy Research Institute
Karnal, Haryana-132001
Phone: 0184-2259198
Email: idpnahep.training@gmail.com