

**Online Training for Master Trainers**  
**on**  
**Milk and Milk Products Processing**  
**28.12.2020 to 01.01.2021**

**Organized by**  
**ICAR - National Dairy Research Institute (NDRI), Karnal**

**in association with**  
**Indian Institute of Food Processing Technology (IIFPT)**



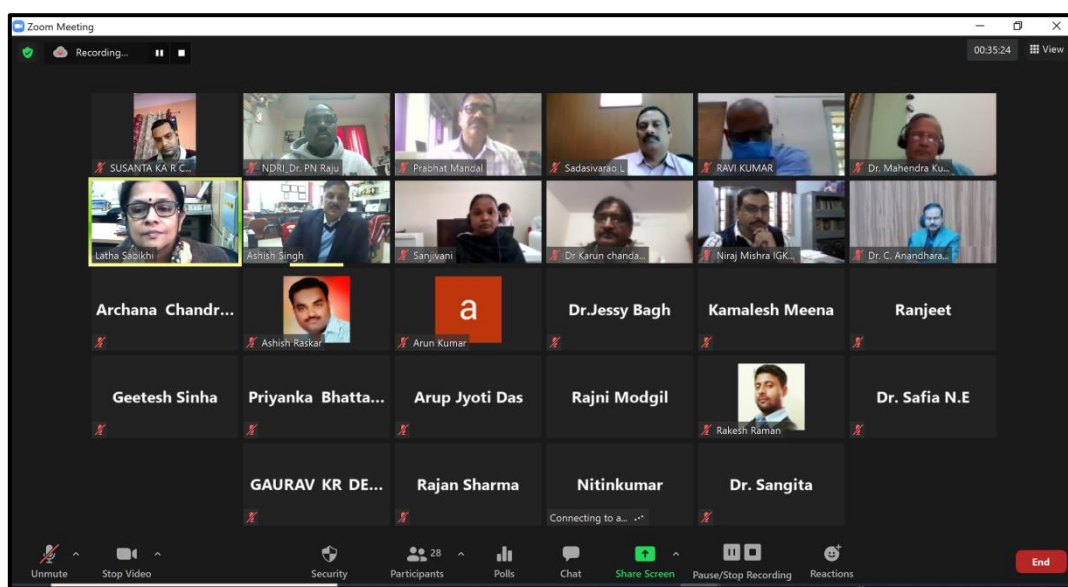
## Session

**Time:** 10.00 am -10.30 am

**Session Topic:** Overview on overall scenario of food processing sector & PMFME scheme, its guidelines, objectives, capacity building framework and its implementation.

**Speaker Detail:** Dr. C. Anandharamkrishnan, Director, IIFPT.

The session was about holistic inputs on food processing sub segments and India's position in those sub segments. The next part of the session provided overview about the PMFME scheme, various guidelines related to capacity building and introducing the concept of ODOP. Various queries were answered related to scheme assistance and ODOP.

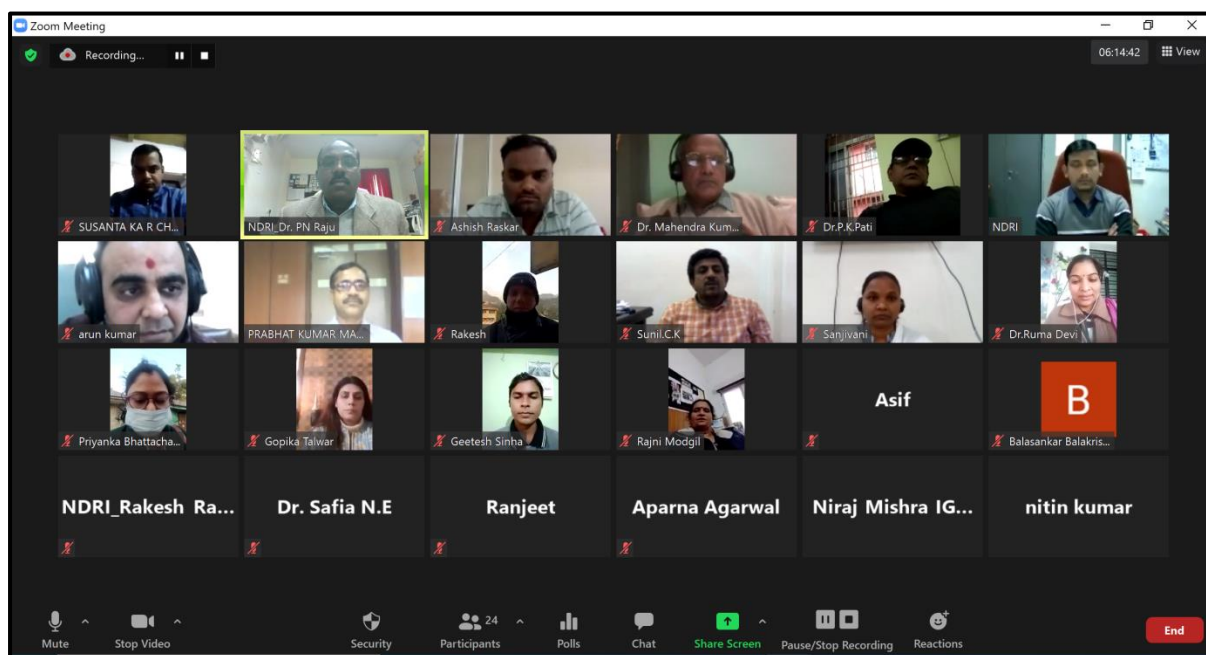


10.30 am -11.30 am	Status, Market Size and Scope of Dairy Processing Industry in India	Dr. Latha Sabikhi Principal Scientist & Head, Dairy Technology Division, ICAR-NDRI, Karnal
11.30 am -01.00 pm	Dairy Processing Equipment: Selection, Specifications and Installation	Prof. S. Ravi Kumar Former Associate Dean, College of Dairy Technology, SVVU, Tirupathi
02.00 pm -03.30 pm	Maintenance of Dairy Processing Equipment	Er. Ankit Deep Scientist, Dairy Engineering Division, ICAR-NDRI, Karnal
03.30 pm -05.00 pm	Practical Aspects of Maintenance of Dairy Equipment - Demo	Er. Ankit Deep Scientist, Dairy Engineering Division, ICAR-NDRI, Karnal

## Day 2: 29.12.2020 (Tuesday)

### Session Details:

09.30 am -11.30 am	Dairy Processing Utility Equipment: Selection, Specifications and Installation	Dr. J.K. Dabas Chief Technical Officer & In- Charge, Maintenance Engg. Section, ICAR-NDRI, Karnal
11.30 am -01.00 pm	Dairy Plant Layout	Er. Ankit Deep Scientist, Dairy Engineering Division, ICAR-NDRI, Karnal
02.00 pm -04.00 pm	Processing of Milk and Value-Added Dairy Products	Mr. Gaurav Kr. Deshwal Scientist, Dairy Technology Division ICAR-NDRI, Karnal
04.00 pm -05.00 pm	Cleaning and Sanitization of Dairy Processing Equipment	Dr. Ganga Sahay Meena Scientist (Sr. Scale), Dairy Technology Division, ICAR-NDRI, Karnal



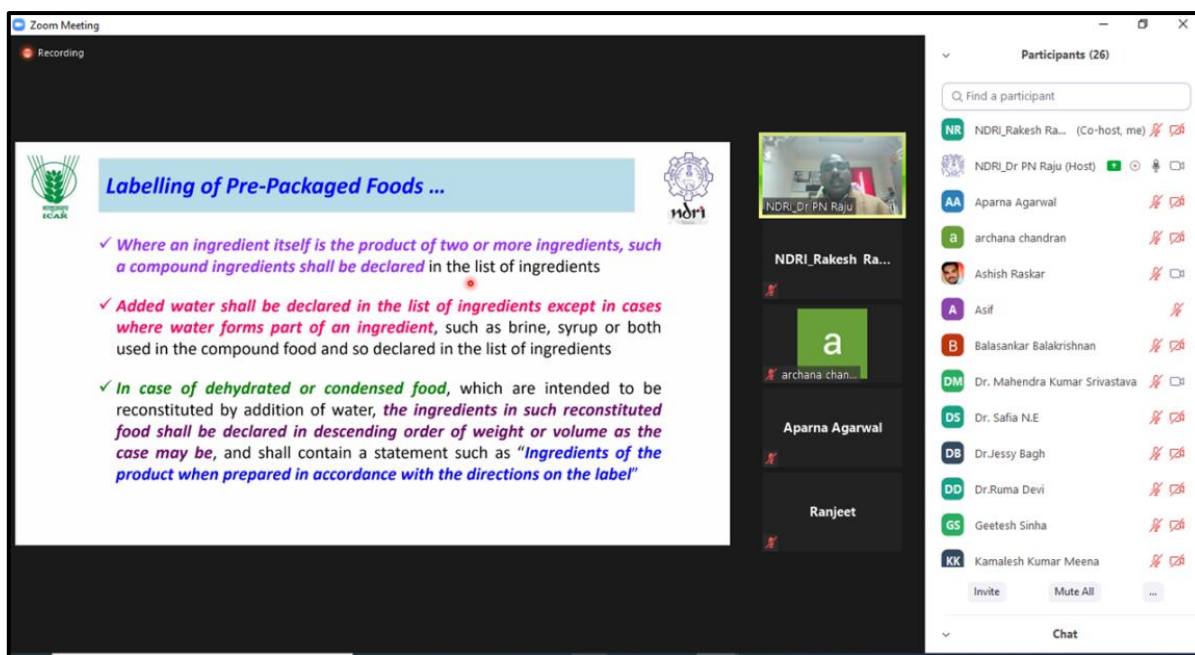
The initial sessions involved overview on refrigeration system, boiler and cold storage with discussion on design, selection and installation of refrigeration and steam generation utility. Further sessions were taken on introduction to cleaning, reasons, various agents of contamination and methods that can be adopted by food business operators for efficient sanitization and details about various Dairy sanitizers. The emphasis was provided on reasons to adopt proper hygiene control.

**Day 3: 30.12.2020 (Wednesday)**

09.30 am -11.00 am	Manufacture of Traditional Indian Dairy Products: An Overview	Dr. Kaushik Khamrui Principal Scientist, Dairy Technology Division, ICAR-NDRI, Karnal
11.30 am -1.00 am	Packaging of Dairy Products	Dr. P. Narender Raju Scientist (Sr. Scale), Dairy Technology Division, ICAR-NDRI, Karnal
2.00 pm -03.15 pm	Processing of Milk and Value-Added Dairy Products (Practical)	Mr. Gaurav Kr. Deshwal Scientist, Dairy Technology Division ICAR-NDRI, Karnal
03.15 pm -04.30 pm	Ice Cream and Frozen Desserts (Practical)	Dr. Shaik Abdul Hussain Scientist, Dairy Technology Division, ICAR-NDRI, Karnal
04.30 pm-05.30 pm	Testing of Packaging Materials and Demonstration of Packaging Techniques	Dr. P. Narender Raju Scientist (Sr. Scale), Dairy Technology Division, ICAR- NDRI, Karnal

The sessions during the day involved discussion and imparting knowledge about the functions, types & levels of food packaging, global vis-à-vis Indian packaging industry, key drivers of packaging, packaging design framework, overview of packaging materials, conventional & emerging packaging techniques, current packaging practices of dairy products, and safety aspects of food contact materials. The practical demo session was carried out on ice cream and frozen dessert processing lines.

The brief discussion was carried out on Terms used in food package labelling & their Regulatory definition, Food Safety and Standards (Labelling & Display) Regulation 2020- Labelling: General Requirements, specific Requirements or Restrictions.



#### **Day 4: 31.12.2020 (Thursday)**

09.30 am -10.30 am	Need for Testing of Food and Notified NABL and Reference Labs in India	Dr. Rajan Sharma Principal Scientist & In-Charge, National Reference Centre, for Milk Quality and Safety, ICAR-NDRI, Karnal
10.30 am -12.00 pm	Food Quality and Safety Management Practices Relevant to Dairy Industry	Dr. Raghu H.V. Scientist (Sr. Scale) Dairy Microbiology Division ICAR-NDRI, Karnal
12.00 pm -01.00 pm	FSSAI Food Packaging and Labelling Requirements	Dr. P. Narender Raju Scientist (Sr. Scale), Dairy Technology Division, ICAR-NDRI, Karnal
02.00 pm -03.00 pm	FSSAI and FBOs Registration and Licensing Procedure	Dr. Richa Singh Scientist, Dairy Chemistry Division ICAR-NDRI, Karnal
03.00 pm -04.00 pm	Requirements for Establishment of a Chemical Quality Assurance Laboratory	Dr. Rajan Sharma Principal Scientist & In-Charge, National Reference Centre, for Milk Quality and Safety, ICAR-NDRI, Karnal

04.00 pm -05.00 pm

Requirements for Establishment of a Microbial Quality Assurance Laboratory

Dr. Raghu H.V.  
Scientist (Sr. Scale)  
Dairy Microbiology Division  
ICAR-NDRI, Karnal

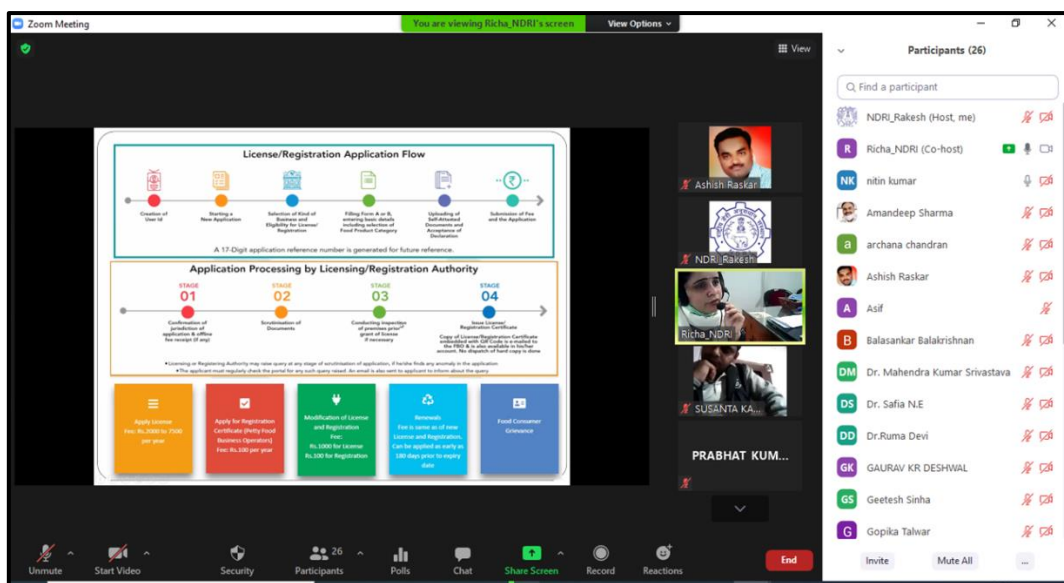
**Instrumentation required at different level of laboratories**

S. No.	Level	Product Handled/ Scope	Instrument required
1	Level 1	Raw milk	Gerber centrifuge, Lactometer, Automatic milk testing equipment (Milko-Screen, Milko-Scan), pH meter
2	Level 2	Processed milk	+ Kjeldahl apparatus, hot air oven
3	Level 3	Processed milk and milk products	+ milk powder testing equipment, muffle furnace
4	Level 4	Micronutrient analysis	+ GC, HPLC, Spectrophotometer, EUSA Reader, Lateral flow type
5	Level 5	Contaminants/ Residues	+ GC-MS, AAS, Charm Rosa Reader type

**Biosafety Issues (con't.)**

- Respiratory Protection
- Bioterrorism and Select agents
- Mold and indoor air quality
- Occupational safety and health in the use of research animals
- Biohazards used in animal models

The sessions covering various aspects of FSSAI Registration and Licensing Regulations, FSSAI Packaging and Labelling Regulations was discussed in detail. The critical aspects of quality assurance and adherence to quality standards, with detailed discussion on testing facilities was also discussed.



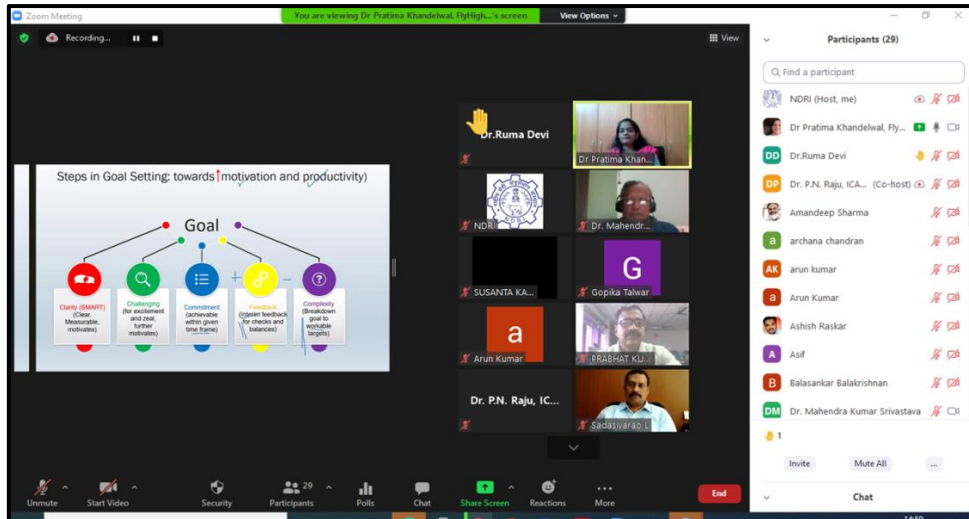
### **Day 5: 01.01.2021 (Friday)**

09.30 am -10.30 am	Importance of Soft Skills and Communication for Dairy Entrepreneurs
10.30 am -11.30 am	Networking Skills, Creative and Innovative Thinking and Problem Management
11.45 am -01.00 pm	Leadership and Team Building
02.00 pm -03.00 pm	Dairy Entrepreneur Competencies: Risk taking and Goal Settings
03.00 pm -04.30 pm	Team Building and Effective Communication Skills

Dr Pratima Khandelwal,  
Lead Facilitator-  
Life Skills and  
Faculty  
Mentor, Founder-  
FlyHigh (MSME U  
nit), Bengaluru

The session involved illustrative images to brainstorm the participants, videos engaging the participants on how to be innovative, overview on difference between creativity and innovation, mind mapping, reframing, assumption reversal, analogies and metaphorical thinking, discontinuity, brainstorming, discussion and possible barriers. Towards the end, various mental exercises were carried out with participants with a briefing on goal setting.

The assessment by FICSI was carried out on 02.02.2021 (Saturday)



**State wise participant details for milk and milk products processing training program:**

State/ U.T	Number of Participants
Andhra Pradesh	1
Chhattisgarh	3
Dadra and Nagar Haveli and Daman and Diu	1
Delhi	1
Gujarat	1
Haryana	1
Himachal Pradesh	1
Karnataka	2
Kerala	2
Maharashtra	2
Meghalaya	1
Nagaland	1
Odisha	2
Puducherry	1
Punjab	2
Rajasthan	3
Sikkim	1
Tamil Nadu	3
Telangana	2
Tripura	2
Uttar Pradesh	2
<b>Total</b>	<b>35</b>

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