



National Dairy
Development
Board

Mansinh Institute of Training

**Training
Planner
2015-16**



*Shri T Nanda Kumar, Chairman and Shri Sangram Chaudhary,
Executive Director, National Dairy Development Board
inaugurated renovated MIT, Mehsana on 24th August 2015*



Chairman's Message



The business environment is changing rapidly, both globally and domestically. With the projected growth in milk and milk products by 2025, free trade, food regulatory environment and consumer's preference for fair price and quality consciousness are also posing new challenges to the cooperative dairy sector. In such a situation cooperative dairy industry is required to improve its operations by adopting modern management approaches and making use of newer technologies and techniques. There will be an increasing demand for investment, new machinery and trained manpower. NDDB recognises the need for qualified, well trained and motivated personnel for sustainable development and prosperity of the cooperative dairy industry against the backdrop of rapidly changing technological advances. I am happy to note that NDDB-Mansinh Institute of Training (MIT), Mehsana continues to play a significant role in taking care of training needs of dairy cooperatives.

With best wishes,

T Nanda Kumar
Chairman
National Dairy Development Board

Managing Director's Message



Advanced technological adoption, quality consciousness and excellence will be possible by engaging well trained, competent and dedicated human resources in dairy sector across India. The demand for trained manpower has to be met by optimal adoption of theoretical classroom training and hands-on-training in dairy technology. In this context, NDDB has taken proactive steps to develop the competency of dairy professionals who can serve the dairy cooperatives. Mansinh Institute of Training, Mehsana will provide learning environment and platform for the dairy professionals to make positive changes at workplace and sustainable dairy business. I am sure that dairy industry at large will be benefited by NDDB's effort in this area.

With best wishes,

Dilip Rath
Managing Director
National Dairy Development Board

Executive Director's Message



In today's ever changing world, the most important asset for an organisation is its competent, trained and committed human resource. The skills and knowledge need to be upgraded periodically to keep pace with changing technology and innovations. Most benevolent practices for health and safety of consumers have to be adopted to ensure higher standards of quality assurance. Keeping these objectives in mind, NDDDB has designed relevant training courses to augment the capabilities of the dairy cooperatives.

The Mansinh Institute of Training, Mehsana has been renovated by NDDDB to make the learning experience more comfortable. New teaching techniques besides classroom studies and exposure visits to understand Good Manufacturing Practices have been incorporated. I hope this would go a long way in building cutting-edge skills, improving competencies and strengthening core values in service of milk producers by the producers' organisations.

You are invited to depute more and more number of participants to various programmes included in this Training Planner 2015-16.

Sangram Chaudhary
Executive Director
National Dairy Development Board

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Vision

Upgrade the knowledge and technical skills of dairy personnel to improve overall efficiency in Plant Operations, Quality and Food Safety.

Mission

Impart quality training to dairy personnel in consonance with the vision of the National Dairy Development Board by providing state-of-the-art infrastructure and specially develop training programmes in following broad areas:

- Quality & Food Safety
- Dairy Plant Operation and Maintenance
- Minimising Milk Solid Losses & Waste Elimination
- Energy Conservation & Management
- Safety of Plant Personnel
- Conduct on-the-job training

Introduction

The success and growth of dairy cooperatives across the country led to a need to improve efficiency in plant operations for dairy cooperatives to remain competitive. This will ensure better remuneration to the milk producers. The need conceptualized into setting-up of a national level technical training centre - Mansinh Institute of Training, with its foundation stone laid by Late C. Subramanian, erstwhile Minister for Planning, GoI on Oct 22, 1971.

With the changing scenario, MIT has been able to successfully impart training in the areas of Dairy Plant Operation & Maintenance and Quality & Food-Safety Management Systems. Besides, other management systems like Environmental Management System, Energy Management System and Occupational Health and Safety Management System also have been included in its ambit.





Pedagogy

- Training at MIT is designed considering the needs of dairy plants and the latest technology available in the dairy industry.
- Training includes brainstorming, case studies, experience-sharing and group exercises thereby making participants to think beyond the mundane norms and procedures.
- The classroom session comprises of ice-breaking session, Q&A session, and group/individual presentations. The sessions are delivered by the experienced professionals from dairy industry & educational institutes.
- Dairy plant visits for exposure to latest technological developments, hands-on training at MIT workshop, e-learning and 3D module.
- Post training support is provided to participants.

Infrastructure

- Picturesque campus with peaceful environment spread over an area of 17.5 acres, with gardens, trees and a variety of flora and fauna.
- Two modern air-conditioned classrooms: with a combined seating capacity of 50 participants including latest teaching aids to make learning a pleasant and memorable experience.
- A good lodging facility for participants.
- In-house Mess: Hygienic food is provided to participants.
- Workshops with demo and functional models of dairy equipment for better understanding of classroom sessions.
- Recreation room: A comfortable place for participants to sit together & discuss day's proceedings or simply relax watching TV or reading newspapers and latest magazines.
- Sports facilities: Indoor and outdoor games are available for participants.
- Library: A well-equipped library with training manuals & related dairy journals.



Training programmes at MIT

Dairy Plant Management (Duration: 4 weeks)

Programme Announcement:

- Period: 24 Aug.-18 Sep. 2015
- Last date for registration: 06-08-2015
- Training Fees : ₹25000 per participant

Objective:

- Focus on milk production, processing and value addition in a cost effective manner
- Optimal utilization of resources

Target Group: Dairy plant professionals

Contents:

1. Sustainable dairy plant operations
 - ⊙ New developments in energy & water management
 - ⊙ Advances in automation in dairy industry
 - ⊙ Waste management in dairy sector
 - ⊙ Total productive maintenance
 - ⊙ Environmental safety management system
2. Product process development
 - ⊙ Cheese
 - ⊙ Ice cream
 - ⊙ Indigenous dairy products
 - ⊙ Milk processing and packaging
3. Food-safety quality and regulatory environment
 - ⊙ Overview of food regulations
 - ⊙ Food safety & Quality management systems
4. Financial and physical performance analysis of dairy cooperative industry
 - ⊙ Finance for non-finance personnel
 - ⊙ Costing tools and techniques for managerial decision-making
 - ⊙ Areas of cost reduction, cost of quality and Kaizen
 - ⊙ Major areas for decision making
 - ⊙ Project Management
5. Human resource development
 - ⊙ Legal compliances in dairy industry
 - ⊙ Business process re-engineering
 - ⊙ Process analysis/management & operation management
 - ⊙ Leadership, team building, motivation & conflict management

- ⊙ Enhancing innovations & its management
 - ⊙ Stress Management
6. Practical/field visits
- ⊙ Equipment operations and maintenance
 - ⊙ Energy management
 - ⊙ Product process development
 - ⊙ Plant automation

Minimizing Milk Solids Losses (Duration: 3 Days)

Programme Announcement:

- Period: 26-28 Oct. 2015
- Last date for registration: 21-10-2015
- Training Fees: ₹3177 per participant

Objective:

- To make dairy business sustainable and maximize profit by reducing milk solid losses leading to improved financial health of dairy
- To enable participants to identify major area of losses and measures to minimize milk solid losses

Target Group: Dairy plant professionals

Contents:

- ⊙ Identifying areas and quantum of losses in dairy plants, recovery systems and its financial implications, good manufacturing practices to be followed for minimising losses, record-keeping and milk solids losses accounting system
- ⊙ Recent innovations for loss reduction
- ⊙ Importance of QA & Good Laboratory Practices in minimizing solid losses
- ⊙ Case studies and classroom calculations
- ⊙ Experience sharing & benchmarks
- ⊙ Dairy plant(s) visit

Clean Milk Production, Operation & Maintenance of AMCU & BMCU (Duration: 3 Days)

Programme Announcement:

- Period: 03-05 Nov. 2015
- Last date for registration: 28-10-2015
- Period: 23-25 Feb. 2016
- Last date for registration: 15-02-2016
- Training Fees: ₹3177 per participant



Objective:

- To enable participants to understand importance of clean milk production & its implementation.
- To impart knowledge of operation & maintenance of AMCU and BMCU.

Target Group: Field supervisors, extension officers, dairy professionals working in areas related to Bulk Milk Cooler Unit and Automatic Milk Collection Unit.

Contents:

- ⊙ Milk, its composition and quality aspects
- ⊙ CMP and its importance in a supply chain
- ⊙ Hazard prevention, Cleaning, Hygiene
- ⊙ Basic concept of milk cooling, Types of Bulk Milk Coolers (BMCs)
- ⊙ Operation & Maintenance, troubleshooting of BMC, voltage stabilizer
- ⊙ Cleaning procedure of BMCU
- ⊙ Investment versus long-term benefits of installing BMCs
- ⊙ Operation & Maintenance of DG Set
- ⊙ Components of Automatic Milk Collection Unit (AMCU), hardware, analyzer, EWS & EMT
- ⊙ Significance of AMCU in procurement, Do's and Don'ts of AMCU operation and tips for data protection
- ⊙ Study visit to village dairy cooperative society

Effective Milk Processing & Packaging (Duration: 4 Days)

Programme Announcement:

- Period: 17-20 Nov. 2015
- Last date for registration: 11-11-2015
- Training Fees: ₹4236 per participant

Objective:

- To improve processing efficiency, minimize losses, leakages and comply with the quality parameters
- O & M and troubleshooting of milk processing and packaging machines

Target Group: Dairy plant professionals

Contents:

- ⊙ Operation and maintenance of milk reception equipment, pasteuriser, separator, CIP system, homogeniser, pneumatic valves, pumps etc.
- ⊙ Modern day technology of milk processing and packaging
- ⊙ Operation and Maintenance of sachet filling machine
- ⊙ Quality parameters, plant and personnel hygiene for food safety
- ⊙ Regulations pertaining to weights & measures deptt.

- ⊙ Minimising milk and packaging material losses and record keeping
- ⊙ Energy conservation in milk processing and packaging operation
- ⊙ Dairy plant(s) visit

Basics of Dairy Technology (Duration: 5 Days)

Programme Announcement:

- Period: 07-11 Dec. 2015
- Last date for registration: 01-12-2015
- Training Fees: ₹5295 per participant

Objective:

- To understand fundamentals of milk processing and product manufacturing.

Target group: Non dairy technologists

Contents:

- ⊙ Fundamentals of Dairy Chemistry, Microbiology, Technology and Engineering.
- ⊙ Various applicable quality and Food safety standards for dairy industry such as FSSAI, ISO and Codex
- ⊙ Good Manufacturing Practices and Good Hygiene Practices in dairy
- ⊙ Understand the milk processing and value-added products manufacturing such as:
 - Liquid milk processing
 - Fermented milk products i.e.Curd, Buttermilk, Cheese, Lassi
 - Fat rich dairy products i.e. Butter and Ghee and AMF
 - Frozen dairy products i.e. Ice Cream
 - Condensed & Dried Milks
 - Long Life Milk & Milk product
 - Indigenous dairy products
- ⊙ Dairy plant(s) visit

Total Quality Management (Duration: 3 Days)

Programme Announcement:

- Period: 15-17 Dec. 2015
- Last date for registration: 10-12-2015
- Training Fees: ₹3177 per participant

Objective:

- To upgrade the available resources and persevere for their continual improvement
- To understand, and implement TQM tools at workplace

Target Group: Dairy plant professionals



Contents:

- ⊙ TQM philosophy, importance and its benefits
- ⊙ Implementation of TQM in dairy
- ⊙ Kaizen
- ⊙ 5's Methodology
- ⊙ Quality control circle
- ⊙ Small group activity
- ⊙ PDCA (Plan, Do, Check, Act)
- ⊙ Statistical tool for process improvement
- ⊙ Dairy plant(s) visit

Quality & Food Safety for Dairy Plant (Duration: 3 Days)

Programme Announcement:

- Period: 05-07 Jan. 2016
- Last date for registration: 25-12-2015
- Training Fees: ₹3177 per participant

Objective:

- To create awareness about Quality and Food safety requirement and its implementation

Target Group: Dairy plant professionals

Contents:

- ⊙ Quality and Food-safety management, Total Quality Management concept and principles, related to milk & milk products
- ⊙ Fundamentals and implementation of ISO 9001:2008, ISO 22000:2005 standard. Hazard Analysis and Critical Control Points, prerequisites for implementation of quality and food safety management systems including GHP and GMP
- ⊙ Dairy Microbiology and its importance in dairy industry
- ⊙ Importance of QC & Good Lab Practices for sustainable quality products
- ⊙ FSSAI standards for dairy industry
- ⊙ Food quality issues under CODEX
- ⊙ Personnel and plant hygiene
- ⊙ Cleaning chemicals, sanitizers and their properties. Importance of CIP, cleaning schedule and its implementation
- ⊙ Milk adulterants and their detection
- ⊙ Study visit of QA Laboratory

Efficient Steam Generation and Distribution (Boiler)(Duration: 3 Days)

Programme Announcement:

- Period: 4-6 Feb. 2016
- Last date for registration: 25-01-2016
- Training Fees: ₹3177 per participant

Objective:

- To understand Steam Generation and HP /LP distribution networks
- Energy conservation and cost reduction in steam generation.

Target Group: Dairy plant professionals.

Contents:

- ⊙ Types of boilers, burners, mountings & accessories, different boiler fuels, combustion process, steam generation & distribution, quality of steam and boiler blow-down
- ⊙ Operating parameters affecting boiler performance, boiler efficiency, losses, costing of steam and case studies
- ⊙ Valves and feed water pumps, feed water treatment, operation of water softening plant
- ⊙ Safety measures in boiler operation and maintenance
- ⊙ Recent innovations
- ⊙ Study visit of boiler section of a dairy plant

Energy Conservation & Management (Duration: 3 Days)

Programme Announcement:

- Period: 17-19 Feb. 2016
- Last date for registration: 08-02-2016
- Training Fees: ₹3177 per participant

Objective:

- To understand energy conservation techniques and its management.

Target Group: Dairy plant professionals

Contents:

- ⊙ Sources of energy
- ⊙ Conservation of energy in dairy plant
- ⊙ Energy conservation in steam generation & its distribution, compressed air systems, refrigeration plant and electrical systems, and water conservation
- ⊙ Energy efficient equipment
- ⊙ Non-conventional sources of energy
- ⊙ Study visit of SPRERI / Solar Park/ Dairy Plant



Total Productive Maintenance (Duration: 3 Days)

Programme Announcement:

- Period: 01-03 March 2016
- Last date for registration: 20-02-2016
- Training Fees: ₹3177 per participant

Objective:

- To understand the concept and implementation of TPM at their workplaces

Target Group: Dairy plant professionals

Contents:

- ⊙ Concept & implementation of TPM in a dairy plant
- ⊙ Overall Equipment Efficiency (OEE)
- ⊙ Importance of maintenance, industrial engineering approach, preventive, predictive and breakdown maintenance
- ⊙ Maintenance practices in milk reception, processing, packaging, product manufacturing, condensing & drying plants, refrigeration, boiler, effluent treatment plants and electrical equipment
- ⊙ Study visit of dairy plant(s)

Efficient Operation of Refrigeration Plant (Duration: 4 Days)

Programme Announcement:

- Period: 08-11 March 2016
- Last date for registration: 01-03-2016
- Training Fees: ₹4236 per participant

Objective:

- Introduction to refrigeration systems and its O & M and troubleshooting
- Scope of energy conservation in refrigeration plant and innovative solutions

Target Group: Dairy plant professionals

Contents:

- ⊙ Refrigeration cycle & different types of refrigerants
- ⊙ Types of evaporators, compressors, condensers, cooling tower
- ⊙ Efficient operation of refrigeration plant
- ⊙ Refrigerant charging, air-purging, oil separator
- ⊙ Breakdown and preventive maintenance
- ⊙ Safety precautions
- ⊙ Energy conservation techniques and measures in refrigeration plant
- ⊙ Study visit of refrigeration section of a dairy plant

Electrical Systems & Automation (Duration: 3 Days)

Programme Announcement:

- Period: 29-31 March 2016
- Last date for registration: 15-10-2015
- Training Fees: ₹3177 per participant

Objective:

- Introduction to electrical distribution networks and concept of electrical safety and troubleshooting
- To understand the concept of control through PLC and DCS system including MIS in modern dairy plants

Target Group: Dairy plant professionals

Contents:

- ⊙ Electrical substation & distribution system
- ⊙ Application of single and three phase motors
- ⊙ Autotransformer, Star-delta and DOL starters, testing and polarity test. Air, oil and vacuum circuit breakers, control and power wiring
- ⊙ Control of maximum demand, improving power factor, capacitor assessment. Economic lighting in a dairy plant
- ⊙ Interlocking of equipment, solenoid control, single phasing preventer, timer switches
- ⊙ Essential components of plant automation- Basics of measuring techniques, Introduction to Smart PCC & MCC and Basics of Programmable Logic Controllers (PLC) and DCS.
- ⊙ Safety norms for electrical systems and earthing of systems
- ⊙ Operation, maintenance and troubleshooting of DG set
- ⊙ Study visit of electrical section of a dairy plant

Customized training programme/On-the-job training

Based on milk unions' requirement, MIT conducts training programmes on different areas of dairy operations. Few such programmes are as under:

- Hygiene and Sanitation
- Utility Management
- Solid Waste Management

Every year MIT organizes customized training programme for the dairy science college students of Vidya Dairy.

For on-the-job training programmes, a client has to arrange to & fro travel, board & lodging facilities for the faculty.



Training Calendar

Month	Date	Training programme
August '15	24/08/2015 to 18/09/2015	Dairy Plant Management
September	24/08/2015 to 18/09/2015	Dairy Plant Management
October	26/10/2015 to 28/10/2015	Minimizing milk solid losses
November	03/11/2015 to 05/11/2015	Clean Milk Production, Operation and Maintenance of BMCU and AMCU
	17/11/2015 to 20/11/2015	Effective Milk Processing & Packaging
December	07/12/2015 to 11/12/2015	Basics of Dairy Technology
	15/12/2015 to 17/12/2015	Total Quality Management
January '16	05/01/2016 to 07/01/2016	Quality & Food Safety for Dairy Plant
	18/01/2016 to 22/01/2016	Customized training programme for Vidya Dairy (Dairy Science College students)
February	01/02/2016 to 05/02/2016	Customized training programme for Vidya Dairy (Dairy Science College students)
	04/02/2016 to 06/02/2016	Efficient Steam Generation and Distribution (Boiler)
	23/02/2016 to 25/02/2016	Clean Milk Production, Operation and Maintenance of BMCU and AMCU
	17/02/2016 to 19/02/2016	Energy Conservation and Management
March	01/03/2016 to 03/03/2016	Total Productive Maintenance
	08/03/2016 to 11/03/2016	Efficient Operation of Refrigeration Plants
	29/03/2016 to 31/03/2016	Electrical systems & Automation

Training Charges

- The training charges applicable shall be ₹1064 (Including Service Tax @ 14% and Swachh Bharat Cess @ 0.5%) per participant per day. (For 3 days - ₹3192, for 4 days - ₹4256 & for 5 days - ₹5320). Please note that any change in Government taxes, levies will impact training charges accordingly.
- The training charges are inclusive of board & lodging and travel charges to plant/DCS.
- All efforts will be made to inform changes in fees, if any, to participants/milk union beforehand. However, charges effective at the time of training will be applicable.
- DD or Cheque (at par) towards training charges should be drawn in favour of "National Dairy Development Board" payable at Mehsana.

Nomination

- Nominations complete with name, designation and other relevant details of the participants *should be sent on or before the specified last registration date mentioned against each particular programme.*
- The nomination form is enclosed.
- The cancellation of nomination needs to be intimated before the registration date.
- Please *ensure that candidates are deputed for training programmes only after receiving a prior confirmation from MIT* (training dates might change due to unavoidable circumstances or even cancelled). NDDB will not be liable for any reimbursement of expenditure in case the programme is not confirmed by the participant before departure.



**National Dairy Development Board
Mansinh Institute of Training**

Name of training programme: _____

Duration: _____

NOMINATION FORM

NAME OF THE MILK UNION:

NAME OF THE PARTICIPANT: MR./MRS./MS.

GENDER: MALE FEMALE **AGE**

DESIGNATION:

QUALIFICATION:

EXPERIENCE: YEARS

MAIN RESPONSIBILITIES/ DUTIES IN DAIRY PLANT:

- 1.
- 2.
- 3.

CONTACT DETAILS OF THE PARTICIPANT:

EMAIL ID: _____ CONTACT NO.: _____

AMOUNT PAID:

CHEQUE/DD*/E-BANKING NO.:

DATE OF PAYMENT:

**Cheque/DD to be drawn in favour of "National Dairy Development Board" payable at Mehsana*

**Signature of Managing Director
Seal of the Milk Union**

Nominations to be addressed & emailed to:

Principal,
Mansinh Institute of Training,
National Dairy Development Board,
Post Box No. 2, Radhanpur Road, Mehsana 384002,
Gujarat, India, Ph: 02762-252589 • Email: sssinha@nddb.coop

Suggestion Form

Name: _____

Designation: _____

Department: _____

Name of Milk Union: _____

Address: _____

Phone No.: _____

E-mail Id: _____

Suggestion:

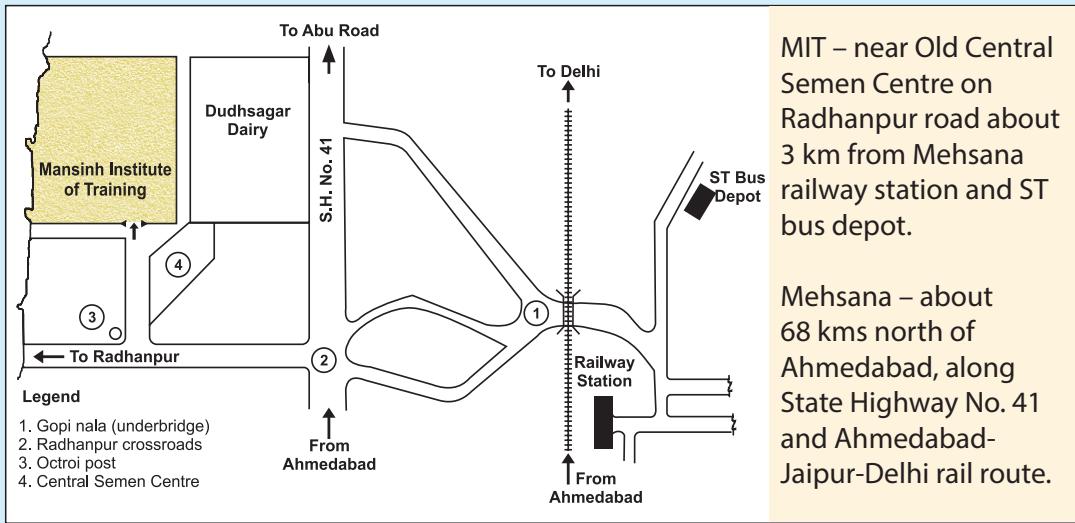
Training needs of Milk Union:

Place:

Date:

Signature

Location of MIT





**Mansinh Institute of Training
National Dairy Development Board**

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