



**NATIONAL  
DAIRY  
DEVELOPMENT  
BOARD**

**TRAINING PROGRAMME**

**BUILDING QUALITY  
CONSCIOUS DAIRY COOPERATIVE  
BUSINESS INSTITUTIONS**





## Strengthening approaches to reduce contaminants in milk

The Indian dairying system, be it organised or unorganised, needs to gear up to meet the newer challenges and meet the market requirements. The farmers need to be continually trained and educated about the quality and food safety issues to put India, basically a small-holder dairy farming system, on global dairy market platform.

India is a large consumer market and it is anticipated that global dairy players would want to foray into India. Several challenges will be thrown up by the international players with quality products - low Somatic Cell Count (SCC), low bacterial count, zero antibiotic residues, aflatoxin free, pesticide free etc., which will hold sway on the demanding consumer. National Dairy Development Board (NDDB) is now taking up the initiative to equip the dairy cooperatives, farmers and professionals to build capacities in the following areas:

Aligning the dairy value chain to meet quality standards

Ensuring milk quality in terms of Somatic Cell Count (SCC), Standard Plate Count (SPC) and contaminant carry over (antibiotics, aflatoxins, pesticides and heavy metals)

Introducing alternate approaches for rationalising antibiotic usage

Detecting common adulterants in milk

### Objectives:

- Introspect the current initiatives in improving milk quality.
- Understanding the need to build quality consciousness.
- Learn to adopt approaches that would reduce antibiotic residues , bacterial count and somatic cell counts.
- Learn to inculcate approaches that reduce pesticide, aflatoxin and heavy metal residues in milk.
- Prepare a road map for effective implementation of the take aways from the programme.

**Programme duration:**

The duration of the programme is 3 days for the farmers and 5 days for executives, during which, besides classroom activities, participants will be taken on field visits.

**Target participants:**

The programme is specifically designed to impart training to veterinarians/supervisors/farmer producers.

**Batch size and venue:**

The training will be conducted at NDDB, Anand and the batch size will be around 25.

**Focus areas:**

- FSSAI standards for milk quality.
- Economics of impact of antibiotic residues and high SCC in milk at the farmer and union level.
- Pesticide and aflatoxin residues in milk and its impact.
- Ethnoveterinary practices to reduce antibiotic usage and treatment costs.
- Field methods for detection and control of mastitis.

**Pedagogy:**

Highly interactive pedagogy will be used during the programme which includes:

- Lectures
- Case studies
- Group discussions
- Individual and group hands-on exercises
- Audio visuals
- Field visits
- Take-homes: Extension material and saplings

**Topics:**

The topics for the programme have been carefully designed so as to give impetus on the core issues faced in milk quality and their mitigation measures. The level of the programme would be based on the target group (dairy farmers/supervisors/veterinarians) etc. The brief course content is given on the next page:



### Brief course content:

S.no	Topics
1	The challenges in the domestic dairy sector
2	For veterinarians and supervisors: Introduction to FSSAI standards on contaminants in milk & milk products and its implication on human health
3	For farmers: Discussion on clean milk production, quality assurance, contaminants and its implications
4	Antibiotic usage and its impact on milk quality, animal and human health
5	Need for alternative approaches in Animal Healthcare - importance of Ethno-Veterinary practices (EVP)
6	EVP for managing various ailments in bovines: Mastitis, teat obstruction, udder oedema, cowpox/wart, bloat, diarrhoea, fever, tick infestation, repeat breeding, retention of placenta, prolapse, deworming and FMD (mouth and foot lesions) etc
7	Innovations in dairy cooperatives and demonstration of convergence of development interventions – Field visit
8	Field visit to Sabarkantha Milk Union– success story in EVP implementation at field level (visit on request or else a video clipping)
9	Pesticide residues & aflatoxin residue and its impact in milk and its mitigation measures
10	Hands-on preparation of EVP for common ailments of dairy animals
11	Getting acquainted with common medicinal plants (Visit to NDDDB EVM plot "Sanjeevini")
12	Hands-on demonstration of field tests, which are, detection of sub-clinical mastitis, antibiotic residue, SCC and aflatoxins in milk
13	Field tests for detection of adulterants in milk and in common EVM ingredients
14	Animal nutrition and milk quality
15	Concepts on animal welfare

### Resource persons:

Officers of the animal health, animal nutrition and quality assurance groups of NDDDB, Anand, veterinarians of Sabarkantha Milk Union.

### Programme fee:

The programme fee per participant is as under:

- ₹1,794 for the farmers programme (3 days)
- ₹6,500 for the executive programme (supervisors/veterinarians/officers) (5 days)

The programme fee is inclusive of tuition fee, lodging, boarding and local travel (including service tax). Training fee should be remitted in advance through demand draft, drawn in favour of National Dairy Development Board, payable at Anand, along with a covering letter mentioning the details of participants.

**Medium of training:** Farmers programme - Hindi | Executive programme - English