

## **Dairy Husbandry I**

The student is exposed and given an introductory output on dairying in India in comparison to the global scenario.

Recent data on livestock census and of various breeds of dairy cattle, buffaloes, goats etc,

Anatomy of udder and milk secretion process in addition to the composition of milk, colostrum.

The importance of artificial insemination in cows and buffaloes. And also in pregnancy diagnosis and other related topics.

Economic traits of dairy cattle, selection of dairy animals and progeny testing.

Systems of breeding - crossbreeding of cattle and grading up of buffaloes

## **Dairy Husbandry II**

In this course all the students are given enough exposure to various systems of housing of dairy cattle, selection of site for establishing dairy farm, and water management.

Diseases of Dairy animals such as bacterial, viral, parasitic and nutritional disorders.

Management of different classes of dairy animals, quarantine, sanitation and hygiene etc

Various methods of identification, dehorning, castration, deworming, vaccination schedule, disinfection and milking management.

Maintaining high level fertility in the herd.

### **Dairy Cattle Nutrition III**

The student is given exposure on various cattle feeds and fodders, importance of proteins, fats and carbohydrates in cattle feeding in livestock feeding.

Conservation of fodder ( Hay and Silage)

Different feeding standards and balanced ration for dairy cattle.

Cultivation practices for growing various fodder crops including legumes, non-legumes, seasonal and perennial fodders.

Industrial wastes and agricultural byproducts - as a substitute to green fodder.

### **Dairy cooperatives IV**

The students are made to understand various principles involved in successful dairying and on advantages of dairying.

Different methods of procuring, transporting, pricing and marketing of milk are communicated to the students.

Anand pattern of cooperative dairy industry. The role of private dairies in India. Various dairy development programmes which are implemented in India including Operation Flood Program, Key Village Scheme and also on the statistical analytical picture on dairy industry in India.

Economics of maintaining a dairy farm and number of cost estimate problems on milk production are solved by the students in this course.

## **Dairy Chemistry V**

Students are given exposure to

Composition of Milk, colostrum ( Cattle , buffalo, goat and human). Differences in cow- buffalo Milk and normal milk - colostrum.

Factors affecting composition and yield of Milk

Physico Chemical properties of Milk

Chemistry of Major constituents of Milk and Nutritive value of Milk

Platform tests ( Tests of adulteration, preservation and neutralizers).  
FSSAI( Milk)

## **Dairy Microbiology VI**

Students are given exposure to

Types of Microorganisms present in Milk

Sources of contamination of Milk

Microbiological examination of Milk - DMC, SPC, MBRT, RRT, MPN

Cleaning and sanitization of Dairy equipment

Milk borne diseases - Bacterial , Viral and other diseases

## **VII (A) Technology of Dairy products I**

Students are given exposure to

Reception of Milk- unloading , grading , sampling, testing, weighing and recording.

Storage of Milk. Straining , filtration and clarification of Milk

Cooling of Milk

Pasterization of milk. Objects , methods

Homogenization , standardization , packaging of milk

Disposal of dairy waste

Market Milk- standards and methods of manufacture

Cream - Types and Methods of separation

## **VII (B) Technology of Dairy products II**

Students are given exposure to

Butter - Classification , composition and method of manufacture

Cheese- Classification , composition and method of manufacture

Ice cream -Classification , composition and method of manufacture

Condensed and evaporated milks- Types , standard and method of manufacture

Indigenous Milk products - Khoa, channa, ghee, dahi and kulfi method of manufacture

## **Oppourtunities ( Outcome of the course)**

As far as the application part is concerned the students on getting enriched with the basic principles will be able to know

How to start a dairy farm,

Identify and know the cultivation practices of various fodder crops

Hands on experience on chemical and bacteriological tests to work as laboratory Assistants and in Quality control (QC).

In depth knowledge of Dairy Products - Start their own stalls or in dairy product sector.