

**Faculty of Science**  
**Dairy Science (Optional Subject)**  
**I Year I Semester**  
**Paper 1: Dairy Husbandry - I**  
**Theory Syllabus (4 Credits)**

**60 Lectures**

- Unit 1:** Introduction, Common terms and Definitions in Animal Husbandry. Cattle and Buffalo population and its distribution; Milk production Statistics; Breeds of Dairy cattle, Buffaloes and Goats. Indigenous, Exotic and Cross bred Cattle breeds. (15)
- Unit 2:** Anatomy of Udder; Development of Udder; Lactogenesis & Galactopoieses; Let down of milk. Milking procedure and practices for clean milk production: Cleanliness of animal, utensils, milkers, health condition of cows, proper cleaning of milking area. (15)
- Unit 3:** Methods of milking: Stripping, Full hand Knuckling and Machine milking. Economic traits of Dairy cattle. Methods of selection of Dairy animals: Individual, Pedigree, Family, Progeny. Unified Score Card system, Body Condition Score system. (15)
- Unit 4:** Systems of Dairy cattle breeding. Inbreeding, Outbreeding, Cross breeding, Grading up. Breeding systems suitable to enhance milk production in India (Cross breeding of cattle and Grading up of buffaloes). Multiovation and Embryo transfer technique. Cloning and Transgenic animals. (15)

**B.Sc. Dairy Science (Vocational Subject)**  
**I Year I Semester**  
**Paper 1: Dairy Husbandry - I**  
**Practical Syllabus (1 Credit)**

1. Confirmation Points of dairy cow.
2. Identification of different breeds of dairy cattle and buffaloes.
3. Classification and study of distinguishing characters of Indian and Exotic cattle.
4. Study of descriptive and productive features of different Indian cattle breeds.
5. Classification and study of distinguishing characters of Buffalo breeds.
6. To study the comparative merits of cows and buffaloes; Zebu and crossbred cows.

**Reference Books:**

1. Text Book of Animal Husbandry – G.C. Banerjee.
2. Hand Book of Animal Husbandry – ICAR Edition.
3. Principles and practices of Dairy farm – Jagdish Prasad.
4. Livestock production Management in tropics – Verma, D.N.