

DAIRY SCIENCE & ANIMAL HUSBANDRY

Semester – 6th

EG - 6

DAH (606)

Credit – 2 + 0 = 2

Objectives:

The courses is planned to acquaint the students with.

- (1) Study of nutrients and their nutritional importance in livestock.
- (2) Study of various feed and fodders used in animal feeding.
- (3) Method manufacturing of concentrated and condensed dairy products.
- (4) Fat rich dairy products.

Unit – 1

- Indigenous dairy products.
 - Concentrated and condensed dairy products.
- (A) Khoa : Definition, Composition, Types methods of manufacture, Factors affecting yield, Physico chemical changes during manufacture and storage of khoa, over run. Defects.
- (B) Khoa based sweets: Peda, Barfi, Gulab Jamun, Milk cack, Kalakand, Rabri, Basund i, Khir, Kurchan.

Unit – 2

- Condensed and Evaporated milks:
History, status scope in India, definition composition, method of manufacturing, lactose crystallization, browning, heat stability, gelation, salt, balance and defects.
 - Fat rich dairy products:
- (A) Cream: Definition composition, Methods of cream separation, types of cream factors affecting cream in skimming efficiency, defects.
- (B) Butter: Definition, Composition, Classification, Method of manufacturing, Desi butter, Table butter and white butter.
- (C) Fat losses in butter milk, Theories of changing over run defects.

Unit – 3 Introduction regarding.

- Anatomy of digestive system in ruminants (cattle / buffalo).
- Study of rumen microbiology.

Unit – 4 Study of nutrients and their nutritional importance:

- Water, carbohydrates, proteins, lipids, minerals, vitamins, etc.
- Classification of feeds and fodder.
- Agronomical practices for fodder production.

Reference:

- (1) Outline of Dairy technology by Sukumar De: Oxford university press publication.
- (2) Milk and Dairy products Technologies by Edgar Spreed, Marcel Dekker publication.
- (3) Dairy Technology: Principles of milk properties & processes by P. Walstra, T.J.Geurts, A. Noomen, A Jellema and M.A.J.S. van boekel; Marcel Dekker publication.
- (4) Animal Nutrition & Feeding practices in India, S.K.Ranjhan.
- (5) A text Book of Animal husbandry (8th edi.) G.C. Banerjee.
- (6) Feeds and Feeding; G.B. Morrison.
- (7) A textbook of Animal Nutrition; G.C.Banerjee.