



# NEET · CBSE eBOOKS

CLASS 11 & 12th



Learning Inquiry  
8929 803 804

**CLASS 12<sup>th</sup>**

**Strategies For  
Enhancement In Food  
Production**

**misostudy**



## 01. Introduction

Ever increasing population of the world has necessitated the enhancement of food production.

## 02. Animal Husbandry

Animal husbandry is the agricultural practice of breeding and raising livestock. Domesticated animals which are raised for our use or profit are collectively called **livestock**. As such, it is a vital skill for farmers and is as much a science as it is an art. Animal husbandry deals with the care and breeding of livestock like buffaloes, cows, pigs, horses, cattle, sheep, camels, goats, etc., that are useful to humans. Extended, it includes poultry farming and fisheries. It is estimated that **more than 70 percent of the world livestock population is in India and China.**

## 03. Management of Farms and Farm Animals

In dairy farm management, we deal with processes and systems that increase yield and improve quality of milk.

- (a) **Selection of Breed** : Milk yield is primarily dependent on the quality of breeds in the farm. Selection of good breeds having high-yielding potential (under the climatic conditions of the area), combined with resistance to diseases is very important.
- (b) **Housing** : For the yield potential to be realised the cattle have to be well looked after – they have to be housed well, should have adequate water and be disease free.
- (c) **Feed** : The feeding of cattle should be carried out in a scientific manner – with special emphasis on the quality and quantity of fodder. **The prepared feed** given to them is classified into:
  - Roughages** which include fodder, silage, hay and straw. This feed has a high fibre content.
  - Concentrates** which include cereals, millets, forage crops with high leaf protein and oil cake, oil seeds, and animal by-products. Although low in fibre content, the concentrates have high nutrient value and digestibility.
- (d) **Cleanliness** : The cattle should be regularly cleaned. Cleanliness and hygiene (both of the cattle and the handlers) is of paramount importance while milking, storage and transport of the milk and its products. Now a days, much of these processes have become mechanised, reducing chance of direct contact between produce and the handler.
- (e) Ensuring these stringent measures, require regular inspections, with proper record keeping. It also helps to identify and rectify the problems as early as possible. Regular visits by a veterinary doctor is mandatory.

Animals suffer from several bacterial diseases. For example, **cattle suffer from anthrax, mastitis pneumonia**, etc.

### Bacterial Diseases :

- (i) **Anthrax** : Anthrax is caused by the bacterium, *Bacillus anthracis*. This disease is contagious and affects cattle, buffaloes, horse, sheep and goats; it can also spread to human beings.

In animals, anthrax spreads through contaminated food, water and pastures. **Prevention and control** : The general measures for prevention of infectious diseases should be followed. The healthy animals should be vaccinated. Animals that have come in contact with diseased animals should be given anthrax antiserum to protect them from the disease.

- (ii) **Mastitis** : It is the inflammation of udder that often occurs in dry cows due to infection of bacterium "*Corynebacterium pyogenes*".

### Viral Diseases :

**Rinderpest or Cattle plague** : The virus is present in all the fluids and secretions of the body of diseased animal. The disease spreads rapidly by direct contact with patient animals, through contaminated food, water, workers and their clothes and by flies

**Prevention** : All the measures for prevention of infectious diseases should be implemented. It is highly desirable to vaccinate the animals against rinderpest. In 1954, a massive vaccination programme was initiated in India. This project has been highly successful, and rinderpest is no longer a dreaded disease.

**Poultry farm management** : Poultry is the class of domesticated fowl (birds) used for food and for their eggs. They typically include chicken and ducks, and sometimes turkey and geese. The word poultry is often used to refer the meat of only these birds, but in a more general sense it may refer to the meat of other birds too.

### Management of Sheep and Goats

- (i) **Goat** : In our country sheep are reared for wool, skin, and meat, and goats for meat, milk, hair and skin. Goat is called 'poor man's cow' because it yields only a small quantity of milk. '**Pashmina**' the under fur from Kashmiri goats is a fine and soft wool used for Kashmiri shawls.
- (ii) **Sheep** : Is a gregarious, ruminant and often horned mammal which belongs to genus *Ovis* and species *aries*. There are 40 breeds of sheep in India. They are generally named after their place of origin or on the basis of prominent characteristics.

## 04. Animal Breeding

Breeding of animals is an important aspect of animal husbandry. Animal breeding aims at increasing the yield of animals and improving the desirable qualities of the produce.

### Objectives of Animal Breeding

The main objectives of animal breeding are :

- (i) Improved growth rate,
- (ii) Increased production of milk, meat, egg, wool, etc,
- (iii) Superior quality of milk, meat, eggs, wool, etc.,
- (iv) Improved resistance to various diseases,
- (v) Increased productive life and (vi) increased or, at least, acceptable reproduction rate, etc.