

Improvement in Food Resources



Topic 1

1. One method used for crop production which ensures high yield is plant breeding. It is the science involved in improving the varieties of crops by breeding plants. The plants with desired traits are picked up from different areas, places and then hybridisation or cross-breeding of these varieties is done to obtain a plant/crop of desired characteristics.

The high yield variety crop shows characteristics such as high yield, early maturation, less water requirement for irrigation, better quality of seeds less requirement of fertilisers, adaptations to the environmental conditions.

2. They are major sources of nutrients of plants. They are used to ensure good vegetative growth (leaves, branches and flowers) and production of healthy plants, that results in high crop yield.

3. Advantages of using intercropping are as follows:

- (i) It helps to maintain soil fertility.
- (ii) It increases productivity per unit area.
- (iii) It saves labour and time.
- (iv) Intercropping ensures maximum utilisation of the nutrients supplied and also prevents pests and diseases from spreading to all the plants belonging to one crop in a field.

Advantages of using crop rotation are as follows :

- (i) It improves the soil fertility.
- (ii) It avoids depletion of a particular nutrient from the soil.
- (iii) It minimises pest infestation and diseases.
- (iv) It helps in weed control.
- (v) It prevents change in the chemical nature of the soil.

4. Genetic manipulation is a process of transferring of desirable characters (genes) from one plant to another plant. This is done for production of varieties with desirable characteristics like profuse branching in fodder crops, high yielding varieties in maize, wheat, etc.

Genetic manipulation is useful in developing varieties which have increased yield, better quality, shorter and early maturity period, better adaptability to adverse environmental conditions, as well as desirable characteristics.

Agricultural practices of cultivation and yielding of crops are directly related to agronomic conditions. These conditions are based on weather, soil quality and availability of water resources. Since weather conditions are unpredictable such as drought and flooding situations, therefore, crop varieties have been developed that can be grown in diverse climatic conditions.

5. The factors responsible for loss of grains during storage are:

- (i) Abiotic factors like moisture (present in food grains), humidity (of air) and temperature.
- (ii) Biotic factors like insects, rodents, birds, mites and bacteria.

Topic 2

1. Good animal husbandry practices are beneficial to the farmers in the following ways:

- (i) Improvement of breeds of the domesticated animals.
- (ii) Increasing the yield of foodstuffs such as milk, eggs and meat.
- (iii) Proper management of domestic animals in terms of shelter, feeding care and protection against diseases is helpful in improving the quality as well as quantity of the products obtained from them.

2. Cattle farming is beneficial in the given ways:

- (i) Milk production is increased by high yielding animals.
- (ii) Good quality of meat, fibre and skin can be obtained.
- (iii) Good breed of draught animals can be obtained.

3. Through cross breeding, the production of poultry, fisheries and bee keeping can be increased.

4. Capture fishing : It is the fishing in which fishes are captured from natural resources like pond, sea, estuaries. Mariculture : It is the culture of fishes in marine water on commercial basis. Varieties like prawns, oysters, bhettki, mullets are cultured for fishing.

Aquaculture : It is the production of useful, i.e., high economic value, aquatic plants and animals such as fishes, prawns, crayfish, lobsters, crabs, shrimps, etc., and sea weeds by proper utilisation of available waters in the country. It is done both in fresh water and in marine water.

