

## Chapter – 15

### Improvement In Food Resources

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#### Crops

⇒ Crops are plants that are cultivated by humans for food, fodder, fiber, flowers, timber, etc.

⇒ Rabi crops are called winter crops. These crops are grown from November to April. Ex: wheat, barley, gram, mustard, pea, and linseeds.

⇒ Kharif crops are also called summer crops. These crops are grown from June to October (rainy season). Ex: rice, maize, millet, groundnut, soybean, arhar, gram, cotton, and jute.

⇒ Three major activities are needed to obtain improved crop yields:

- Crop Production Management
- Crop Variety Improvement
- Crop Protection Management

#### Nutrient Management

⇒ Plants need 16 essential nutrients for their growth.

⇒ Air supplies carbon and oxygen and water supply hydrogen. Other 13 nutrients are supplied by the soil.

⇒ Macronutrient - The nutrients which are required in large quantities are macronutrients. Eg: Nitrogen, Phosphorous, Potassium, Calcium, Magnesium, and Sulphur.

⇒ Micronutrients - Some nutrients are used by plants in small quantities are called micronutrients. These are Iron, Manganese, Boron, Zinc, Copper, Molybdenum, and Chlorine.

#### Manure and Fertilizers

◆ Manure:

Manures are natural substances prepared by decomposed animal excreta and plant waste. Since manures supply large quantities of organic matter and small quantities of nutrients to the soil they have to be used in bulk. Manures are classified as follows:

◆ Compost and Vermicompost:

A biological process in which microorganisms decompose the vegetables, kitchen, sewage waste, animal excreta is called composting. The compost which is prepared by using earthworms is called vermicompost.

◆ Green Manure:

Green manure is prepared by growing, mulching (by ploughing) and mixing green crops with soil. It supplies Nitrogen and phosphorous, organic matter.

◆ Fertilizers:

It is a chemical substance produced commercially. Fertilizers are rich in plant nutrients (such as nitrogen, phosphorous, and potassium).

## Organic Farming

⇒ Organic farming is the method of farming using less or no amount of fertilizers, herbicides, and pesticides.

⇒ This method uses only organic matter like manure, biofertilizer, and healthy cropping system like crop rotation, mixed farming, intercropping.

⇒ Advantages of organic farming:

- The food obtained from organic farming is free from pesticides and toxic chemicals.
- Farm wastes are recycled by using organic farming.
- Organic farming maintains soil health.
- Cropping systems of organic farming (crop rotation, mixed farming, intercropping) help in controlling insects, pests, and weeds.
- It prevents our environment from pollution.

## Cropping Patterns

◆ Mixed-cropping:

The practice of growing two or more crops simultaneously in the same field is called mixed cropping. Following combinations of the crops are used by farmers in mixed cropping:

1. maize + urad bran
2. Groundnut + sunflower
3. Wheat + groundnut

Advantage of mixed cropping - It minimizes the risk of crop failure due to abnormal weather conditions.

◆ Intercropping:

The practice of growing two or more crops simultaneously in definite rows in the same field is called intercropping.

Advantages of intercropping are:

- Intercropping increases the productivity of crops.
- Intercropping helps to maintain soil fertility.
- It makes better use of natural resources.

◆ Crop Rotation:

The practice in which different types of crops are grown alternately in the same land in a pre-planned succession is called crop rotation. Depending upon the duration crop rotation is of three types:

1. One-year rotation
2. Two years rotation
3. Three years rotation

## **Animal husbandry**

⇒ It is the branch of agriculture that deals with the feeding, caring, and breeding of domestic animals.

⇒ Cattle husbandry is done for the following purpose: Milk and meat production, agricultural production.

⇒ Draught animals are used for agricultural tasks like tiling, irrigation and carting. The commonly known draught animals are horses, donkeys, mules, camels, elephants, etc.

⇒ Dairy Animals - Milk producing animals is called milch animals or dairy animals. These include cows, buffalo, goat, camel and yak.

⇒ Poultry- It is an industry for the production of egg and meat. An egg-laying poultry is called egger or layer and the poultry reared for obtaining meat is called chicken or broiler.

Exotic breed of poultry having the highest egg-laying capacity is White Leghorn. They produce long white eggs. They have a small body sizes, so need less feed and maintenance.