

ST. MICHAEL'S SCHOOL, MURI

Study material for class - VIII

Sub - SCIENCE

Chapter 1 Crop Production and Management

In order to provide food to a large population regular production, proper management and distribution of food is necessary.

Crop : When plants of the same kind are grown and cultivated at one place on a large scale, it is called a crop.

* In India crops can be broadly categorised into two types based on seasons - Rabi and Kharif crops.

* Sowing of seeds at appropriate depth and distances gives good yield, good variety of seeds are sown after selection of healthy seeds. Sowing is done by seed drills.

* Soil needs replenishment and enrichment through the use of organic manure and fertilisers. Use of chemical fertilisers has increased tremendously with the introduction of new crop varieties.

Basic properties of crop production :

i. **Preparation of soil** - One of the most important tasks in agriculture is to turn the soil and loosen it. The process of loosening and turning of the soil is called tilling or ploughing.

ii. **Sowing** - Sowing of seeds at appropriate depth and distances gives good yield.

iii. **Adding manure and fertilisers** - Soil needs replenishment and enrichment through the use of manure and fertilisers.

Fertiliser : The inorganic compounds containing nutrients such as nitrogen, potassium and phosphorus. They are made in the factories. For Example - urea, ammonium sulphate, potash, etc.

Manures : A natural substance prepared from decomposition of plants and animals waste (cow dung, animal bones, dead leaves, dead insects and vegetable wastes) by the action of microbes.

iv. **Irrigation** - Supply of water to crops at appropriate intervals is called irrigation.

Method of Irrigation :

a. **Traditional methods of Irrigation** : Moat, chain pump, dheki, rahat.

b. **Modern methods of Irrigation** : Sprinkler system, drip system.

v. **Protection from Weeds** : Weeding involves removal of unwanted and uncultivated called weeds.

vi. **Harvesting** : Harvesting is the cutting of crop manually or by machines.

vii. **Storage** : Proper storage of grains is necessary to protect them from pests and germs. Harvested food grains contain more moisture than required for storage. Farmers store grains in jute bags or metallic bins.

* Food is also obtained from animals for which animals are reared. This is called **Animals Husbandry**.

Home Assignment

1. Define crop along with examples.
2. What do you mean by preparation of soil?
3. Differentiate between manure and fertilisers.
4. How could we prepare organic manure?
5. What is Irrigation?
6. What do you understand by weeds and weedicides?
7. Fill in the blanks :
 - a. Ploughing is done by _____.
 - b. Hoe is a simple tool which is used for removing _____.
 - c. Continuous growing of crops makes the soil poorer in certain _____.
 - d. Weedicides sprayer should cover their _____ and _____ with a piece of cloth during spraying of these chemicals.

Chapter 2 Micro-organisms : Friend and Foe

- * **Micro-organisms** : Micro-organisms are too small and are not visible to the unaided eye.
- * They can survive under all types of environment, ranging from ice-cold climate to hot spring and deserts to marshy lands. They are also found inside the bodies of animals including humans.
- * They may be unicellular or multicellular.
- * Micro-organisms are classified into four major groups. These groups are **bacteria, fungi, protozoa and some algae**.
- * **Viruses** are quite different from other micro-organisms. They reproduce only inside the host organisms, bacterium, plant or animal cell.
- * **Useful micro-organisms** :
 - i. **Bacteria** - Most bacteria act as decomposers and release nutrients into soil. It help in nitrogen fixation which maintain fertility of the soil. These are also helpful in the manufacturing of antibiotics like penicilin.
 - ii. **Fungi** - It is used in making antibiotics, in making alcoholic beverages, bread, idli, etc.
 - iii. **Algae** - Red algae is edible in certain country. It is used to make toothpaste jelly.
- * **Pathogens** - Disease causing micro-organisms are called pathogens. It includes bacteria, viruses, fungi and protozoa.
- * **Communicable disease** - The disease that can spread through sick to healthy person are called communicable disease. Ex - flu, cold, AIDS.
- * **Non-communicable disease** - The disease that do not spread through sick to healthy person. Ex - lung cancer, liver damage.
- * **Cleaning of Environment** - The micro-organisms decompose dead organic waste of plants and animals converting them into simple substances. These substances are again used by other plants and animals. Micro-organisms can be used to degrade the harmful and smelly substances and thereby clean up the environment.

Home Assignments

1. Micro-organisms are classified into four major groups. Name them.
2. Define antibiotics.
3. Define pathogens.
4. What do you mean by communicable disease?
5. How micro-organisms are helpful to clean the environment?
6. Fill in the blanks :
 - i. Female Anopheles mosquito carries the parasite of _____.
 - ii. Female _____ mosquito acts as carrier of dengue virus.
 - iii. Alcohol is produced with the help of _____.
