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# **Chapter - 1<sup>st</sup>**

# **Crop Production**

# **&**

# **Management**

## **Crop**

**When plants of the same kind are grown and cultivated at one place on a large scale, it is called a crop. Crops are of different types like cereals, vegetables and fruits. These can be classified on the basis of the season in which they grow.**

## **Kharif Crops**

**Kharif Crops: The crops which are sown in the rainy season are called kharif crops.**

**The rainy season in India is generally from June to September.**

**Paddy, maize, soyabean, groundnut, cotton, etc., are kharif crops.**

## **Rabi Crops**

**Rabi Crops: The crops grown in the winter season are called rabi crops.**

**Their time period is generally from October to March.**

**Examples of Rabi crops are wheat, gram, pea, mustard and linseed**

## **Agricultural Practices**

**Cultivation of crops involves several activities undertaken by farmers over a period of time.**

**These activities or tasks are referred to as agricultural practices. These activities are listed below.**

**(i) Preparation of soil**

**(ii) Sowing**

**(iii) Adding manure and fertilizers**

**(iv) Irrigation**

**(v) Protecting from weeds**

**(vi) Harvesting**

**(vii) Storage**

## **Preparation of Soil**

**One of the most important tasks in agriculture is to turn the soil and loosen it. This allows the roots to penetrate deep into the soil. The loose soil allows the roots to breathe easily even when they go deep into the Soil.**

**The process of loosening and turning of the soil is called tilling or ploughing.**

**This is done by using a plough.**

## **Sowing**

**Sowing is the most important part of crop production. Before sowing, good quality seeds are selected. Before sowing, one of the important tasks is to know about the tools used for sowing seeds. The tool used traditionally for sowing seeds is shaped like a funnel. Nowadays the seed drill is used for sowing with the help of tractors. This tool sows the seeds uniformly at proper distances and depths. Sowing by using a seed drill saves time and labour.**

## **Adding Manure and Fertilizers**

**The substances which are added to the soil in the form of nutrients for the healthy growth of plants are called manure and fertilisers.**

**Soil supplies mineral nutrients to the crop. These nutrients are essential for the growth of plants. Continuous growing of crops makes the soil poorer in certain nutrients. Therefore, farmers have to add**

**manure to the fields to replenish the soil with nutrients. This process is called manuring.**

## **Fertilizers**

**Fertilizers are chemical substances which are rich in a particular nutrient.**

**Fertilizers are produced in factories. Some examples of fertilizers are— urea, ammonium sulphate, super phosphate, potash, NPK (Nitrogen, Phosphorus, Potassium).**

**The use of fertilizers has helped farmers to get better yield of crops such as wheat, paddy and maize.**

**But excessive use of fertilisers has made the soil less fertile. Fertilizers have also become a source of water pollution.**

## **Irrigation**

**The supply of water to crops at different intervals is called irrigation. The time and frequency of irrigation varies from crop to crop, soil to soil and season to season.**

### **Sources of irrigation:**

**The sources of irrigation are—**

**Wells,**

**Tube wells**

**Ponds**

**Lakes**

**Rivers**

**Dams**

## **Canals**

### **Traditional Methods of Irrigation**

**The water available in wells, lakes and canals is lifted up by different methods in different regions, for taking it to the fields. Cattle or human labour is used in these methods. So these methods are cheaper, but less efficient.**

**The various traditional ways are:**

**(i) moat (pulley-system)**

**(ii) chain pump**

**iii) dhekli**

**(iv) rahat**

### **Modern Methods of Irrigation**

#### **Sprinkler System**

**This system is more useful on the uneven land where sufficient water is not available. The perpendicular pipes, having rotating nozzles on top, are joined to the main pipeline at regular intervals. When water is allowed to flow through the main pipe under pressure with the help of a pump, it escapes from the rotating nozzles. It gets sprinkled on the crop as if it is raining. Sprinkler is very useful for sandy soil**

#### **Drip system**

**In this system, the water falls drop by drop just at the position of the roots. So it is called drip system. It is the best technique for watering fruit plants, gardens and trees. The system provides water to plants drop by drop . Water is not wasted at all.**

## **Protection from Weeds**

**In a field many other undesirable plants may grow naturally along with the crop. These undesirable plants are called weeds.**

**The removal of weeds is called weeding. Weeding is necessary since weeds compete with the crop plants for water, nutrients, space and light.**

**Thus, they affect the growth of the crop.**

## **Harvesting**

**Harvesting of a crop is an important task. The cutting of crop after it is mature is called harvesting. In harvesting, crops are pulled out or cut close to the ground. It usually takes 3 to 4 months for a cereal crop to mature. Harvesting in our country is either done manually by sickle or by a machine called harvester.**

**From the harvested crop, the grain seeds need to be separated from the chaff. This process is called threshing.**

## **Storage**

**Storage of produce is an important task. If the crop grains are to be kept for longer time, they should be safe from moisture, insects, rats and microorganisms.**

**The fresh crop has more moisture. If freshly harvested grains (seeds) are stored without drying, they may get spoilt or attacked by organisms, losing their germination capacity.**

**Hence, before storing them, the grains are properly dried in the sun to reduce the moisture in them. This prevents the attack by insect pests, bacteria and fungi.**

**Dried neem leaves are used for storing food grains at home. For storing large quantities of grains in big godowns, specific chemical**

**treatments are required to protect them from pests and microorganisms.**

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