

## Chapter 7

# Crop Production and Management

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### I. Choose the best Answer:

#### Question 1.

The process of placing seeds in the soil is called as .....

- (a) ploughing
- (b) sowing
- (c) crop production
- (d) crop rotation

**Answer:**

- (b) sowing

#### Question 2.

Organism that control insects and pests of plant crops is .....

- (a) bio-pesticides
- (b) bio-fertilizers
- (c) earthworms
- (d) neem leaves

**Answer:**

- (a) bio-pesticides

#### Question 3.

The method in which water flows over the soil surface and allow it to infiltrate is .....

- (a) irrigation
- (b) surface irrigation
- (c) springier irrigation
- (d) drip irrigation

**Answer:**

- (b) surface irrigation

#### Question 4.

Effective microorganisms preparation is not used in .....

- (a) seed treatment
- (b) foliar spray
- (c) soil treatment
- (d) bio-predators

**Answer:**

- (a) seed treatment

**Question 5.**

Which of the following is not present in Panchakavya?

- (a) cow dung
- (b) cow's urine
- (c) curd
- (d) sugar

**Answer:**

- (d) sugar

**II. Fill in the blanks:**

1. The process of actively growing seedling from one place and planting in the main field for further growth is called .....
2. .... is a plant growing where it is not wanted.
3. The chemicals used for killing the weeds or inhibiting their growth are called as .....
4. .... seed transfer its unique characteristics to the descents.
5. .... centers serve as the ultimate link between ICAR and farmers.
6. Several popular high yielding varieties of major crops have been developed by .....

**Answer:**

1. Transplantation
2. Weed
3. herbicides
4. Heirloom seeds
5. Krishi Vigyon Kendra
6. IARi (Indian Agricultural Research Institute)

**III. Match the following:**

1. Bio-pesticide – (a) Neem Leaves
2. Bio-predators – (b) Bacillus thuringiensis
3. Bio-fertilizer – (c) Control white flies
4. Bio-indicators – (d) Improve soil fertility
5. Bio-repellants – (e) Quality of environment

**Answer:**

1. b
2. c
3. d
4. e
5. a

## IV. Answer briefly:

### Question 1.

Define ploughing.

#### Answer:

Ploughing or tilling is the process of loosening and turning the soil up and down to facilitate the availability of nutrients in the root zone of that cultivating crop.

### Question 2.

Name the methods of sowing.

#### Answer:

The different methods of sowing are

1. Sowing by hand
2. Seed drill
3. Dibbling

### Question 3.

What is foliar spray?

#### Answer:

1. Foliar feeding is a technique of feeding plants by applying liquid fertilizer directly to their leaves.
  2. Plants are able to absorb essential elements through the stomata in their leaves.
- Give a brief account on Krishi Vigyan Kendra.

### Question 4.

Give a brief account on Krishi Vigyan Kendra.

#### Answer:

1. Krishi Vigyan Kendra is a farm science centre.
2. This centre serve as a ultimate link between ICAR and farmers.
3. They operate small farms to test new technologies.
4. They also provide advice to farmers about weather and pricing of crops.

### Question 5.

What is bio-indicator? How does it help human beings?

#### Answer:

1. A bio-indicator or biological indicator is any species or group of species whose function or status reveals the qualitative status of the environment.
2. Biological indicators are used to document and understand changes in Earth's living systems especially changes caused by the activities of an expanding human population.

**Question 6.**

What do you mean by weeding?

**Answer:**

The undesirable plants growing naturally with crop plants are called weeds. The removal of weeds is called weeding.

**Question 7.**

What is crop rotation?

**Answer:**

Crop rotation is planting a series of different crops in the same field following a defined order. This helps to maintain fertility of the soil.

**Question 8.**

What is green manure?

**Answer:**

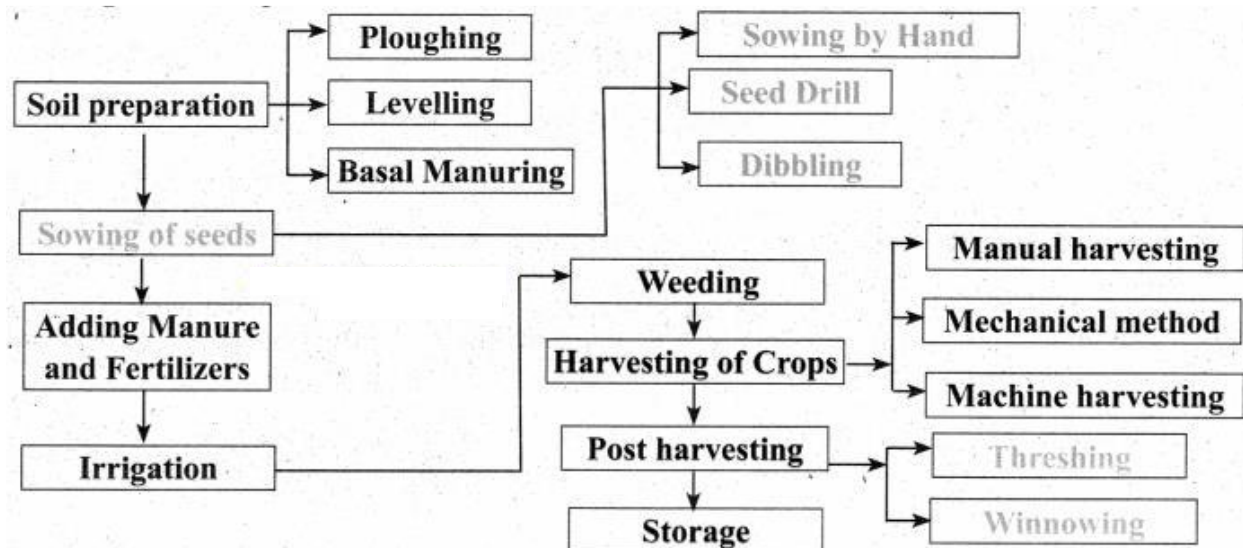
1. Some plants like Sun hemp or guar are grown in the field prior to the sowing of the crop seeds.
2. These plants gradually decompose and turn into green manure which helps in ensuring the soil in nitrogen and phosphorous.
3. Application of green manure always enhance the growth and yield of the crops.

## V. Answer in detail:

**Question 1.**

Explain the agricultural practices.

**Answer:**



1. Soil preparation: (Loosening of top soil)

- Ploughing – Process of loosening and turning the soil up and down to facilitate nutrient availability.
- levelling – Done with leveller and helps in uniform distribution of water for irrigation
- Basal Nianuring – Increase soil fertility by manuring

## 2. Sowing of seeds:

- Hand – Scattering of seeds by hand.
- Seed Drill – Sowing seeds by iron drills attached to a tractor.
- Dibbling – Placing seed in furrow or pits or hole by hand.

## 3. Adding manure and fertilisers:

- Manure is a substance added to the soil in the form of Nutrients to enhance plant growth.
- Organic Sources – Plant and animal waste
- Synthetic Sources – Urea, Super phosphate.

## 4. Irrigation:

Supply of water to crops:

- Traditional method – Irrigation done manually.
- Modern method – Involve two systems. Sprinkler system Drip system

## 5. Harvesting of crops:

- Manual harvesting – Harvested without tools. Eg – Groundnut crop, green gram, black gram, house gram.
- Mechanical method – Harvesting by instruments small sized farms Eg – Sickle.
- Machine harvesting – Used for large sized farms.

## 6. Threshing and Winnowing:

Process of separating the grains from their chaffs or pods.

## 7. Storage:

- Supply of the produce has to be stored properly.
- Grains must be free from moisture to avoid growth of microorganism.
- Need to be dried in Sun before storing.
- Collected in Gunny bags and stored in godowns.

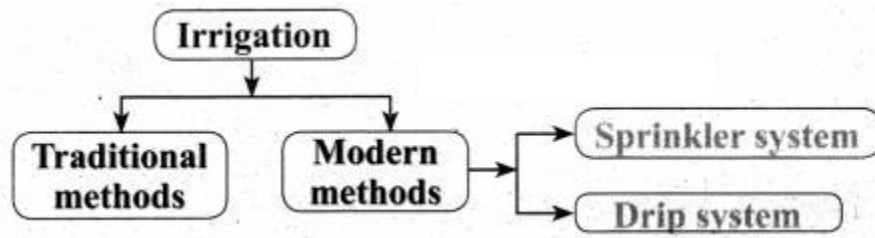
## Question 2.

Give a detailed account on irrigation.

**Answer:**

Irrigation:

1. The supply of water to crops at regular intervals is called irrigation.
2. Source of irrigation – Wells, tube wells, ponds, lakes, rivers, dams and canal.



#### Traditional Methods:

1. Irrigation is done manually.
2. Here, a farmer pulls out water from wells or canals by himself or using cattle and carries to farming fields.
3. Pumps used for lifting water from various sources.
4. Diesel, biogas, electricity and solar energy are the sources of energy needed to run these pumps.

#### Modern Methods:

1. It helps to overcome the problems exist in the traditional methods.
2. It also facilitates the even distribution of moisture in the field.

#### Sprinkler system:

1. Sprinkles water over the crop and helps in an even distribution of water.
2. This method is advisable in areas facing water scarcity.
3. Pump is connected to pipes which generate pressure and water is sprinkled through the fine nozzles of pipes.

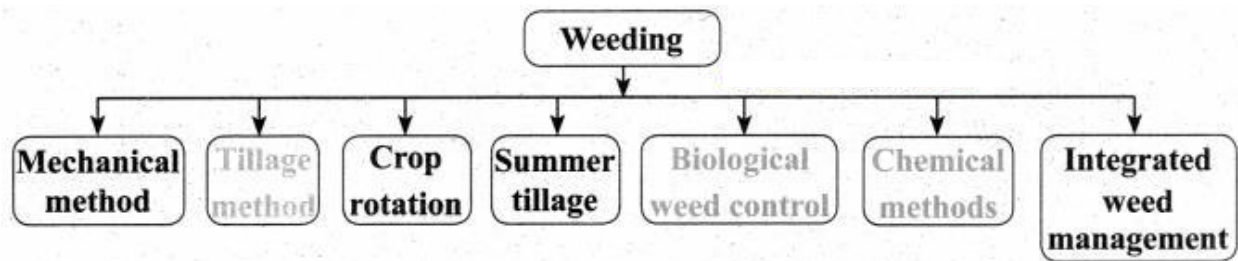
#### Drip System:

1. Here, water is released drop by drop exactly at root zone using a hose or pipe.
2. This method is effective one in regions where the availability of water is less.

#### Question 3.

What is weed? Explain the different methods of weed control.

**Answer:**



**Weed:**

The undesirable plants may grow naturally along with the main crop, and these undesirable plants are called weeds.

**Weeding:**

The removal of weeds is called weeding. It is an important process because weeds compete with the crop plants for the nutrients, sunlight, water, space and other resources. It results in the undernourishment of crops and it leads to low yield.

**Mechanical methods:**

1. Here, weeds are destroyed physically.
2. Hand pulling or weeding with the help of weeding hoe is the oldest and most efficient method for controlling weeds.

**Tillage methods:**

1. It is the practical methods of destroying weeds of all categories.
2. Weeds are buried in the soil and also exposed to Sun heat by deep ploughing.

**Crop Rotation:**

Proper rotation of crops is followed for controlling crop associated and parasitic weeds.

**Summer tillage:**

Deep ploughing after harvest of Rabi crop and exposing underground parts of weeds to strong sunlight during summer months is useful for destroying many annual and perennial weeds.

**Biological weed control:**

1. Bio agents like insects and pathogens are used to control weeds.
2. The objectives are not eradication, but reduction and regulation of the weed population.

**Chemical methods:**

1. Very effective in certain cases and have great scope in weed control.
2. The chemicals used for killing the weeds or inhibiting their growth are called herbicides.
3. Chemicals are mixed with water and sprayed over the crops.

Integrated weed management:

1. Integrated weed management combines different agronomic practices and herbicides use to manage weeds, so that the reliance on any one weed control technique is reduced.
2. Mechanical, biological, cultural and chemical methods are included in integrated weed managements.