

## SCIENCE 8

- Manure and fertilisers are the substances which are added to the soil to provide nutrients to ensure the healthy growth of plants.
- Methods of irrigation can be broadly categorised into traditional and modern methods.
- The removal of undesirable plants which grow along with the crop is called weeding.
- The process of cutting of crops when it is mature is known as harvesting.
- Rearing animals on large scale for food, shelter and care is called animal husbandry.

## KEYWORDS

- **Agriculture** Science or practice of farming, including the rearing of crops and animals
- **Apiculture** The practice of rearing honeybee for honey
- **Crops** Plants of the same kind when grown on a large scale for food, clothing etc.
- **Fertilisers** Chemical substances which are rich in a particular nutrient added to the soil to increase its fertility
- **Irrigation** The process of artificial application of water to the crops at different intervals
- **Levelling** The process of breaking big pieces of soil with wooden or iron planks
- **Manure** An organic substance obtained from the decomposition of plant and animal wastes
- **Pesticides** The chemicals used for killing or destroying the animals which damage the crops
- **Ploughing (tilling)** The process of loosening and turning of the soil
- **Weedicides** The chemicals used for weeding

## Practice Time

### Objective Type Questions

#### A. Fill in the blanks.

1. The science or practice of farming, including the rearing of crops and animals is known as agriculture
2. Plants of the same kind when grown on a large scale for food, clothing etc., are called crop.
3. The process of loosening and turning of the soil is known as ploughing.
4. Sowing can be done manually or with the help of an implement called seed drill.
5. fertiliser are chemical substances which are rich in a particular nutrient.
6. The method for replenishing the soil nutrients is manuring.
7. The animals which damage crops are known as pests and these can be destroyed by chemicals called pesticides.
8. The practice of rearing honeybees for honey is known as apiculture.
9. The drip irrigation method is the most expensive but also the most efficient.

#### B. Write 'T' for true and 'F' for false.

1. Agriculture does not include growing of vegetables and fruits.
2. Humans settled down to live in one place only after they learnt to grow crops.

3. Ploughing causes soil erosion.
4. Depending upon the rainfall <sup>season</sup> the crops can be classified as kharif and rabi crops.
5. It is necessary to have lots of crumbs in the soil for the proper growth of plants.
6. Modern methods of irrigation include sprinkler and drip irrigation.
7. The process of cutting of crops when it is mature is known as winninging.
8. Compost is a fertiliser. <sup>manure</sup> harvesting

C. Match the following.

Column A	Column B
1. kharif crops	3 a. harvesting
2. broadcasting	4 b. silos
3. sickle	5 c. honeybees
4. grains	1 d. rainy season
5. apiculture	2 e. scattering seeds

D. Tick (✓) the correct answer.

1. Which of the following is used for sowing?  
 a. Plough                      b. Sickle                      ✓ c. Seed drill                      d. None of these
2. Which of the following is not a traditional method for irrigation?  
 a. Wells                      b. Canals                      c. Rahat                      d ✓ Sprinklers
3. Which of the following is not true about manure?  
 a. It provides humus to the soil.                      b. It does not cause water pollution.  
 ✓ c. It is rich in one particular nutrient.                      d. None of these
4. The process of cutting the crop when it is ready is called:  
 ✓ a. Harvesting                      b. Storing                      c. Threshing                      d. Winnowing
5. Which of the following is not a method of replenishing the soil nutrients?  
 a. Crop rotation                      b. Adding manure                      c. Adding fertilisers                      d ✓ Levelling

### Very Short-Answer Questions

E. Answer in few words/one line.

- Write the steps of agriculture in the correct order.
- Name the instruments used for sowing seeds.
- How can pests be controlled?
- Name the instruments used for weeding and harvesting.
- What are fertilisers?
- What is irrigation?
- Mention two ways by which weeding can be done.

## Short-Answer Questions

F. Differentiate between the following pairs.

- |   |                              |
|---|------------------------------|
| 1. Rabi and kharif crops                | 2. Weedicides and pesticides |
| 3. Sprinkler system and drip irrigation | 4. Fertiliser and manure     |

G. Define each of the following in one sentence.

- |                          |                          |                  |
|--------------------------|--------------------------|------------------|
| 1. Agriculture           | 2. Animal husbandry      | 3. Crop rotation |
| <del>4. Irrigation</del> | <del>5. Fertiliser</del> |                  |

H. Answer the following in brief.

1. What are organic foods?
2. Which crop replenishes nitrogen and how?
3. What is animal husbandry? What facilities are provided to farm animals?

## Long-Answer Questions

I. Answer the following in detail.

1. What are agricultural practices? List them in the correct sequence.
2. Discuss how the soil is prepared for sowing seeds.
3. What is harvesting? What precautions should be taken while storing harvested grains?
4. What is manuring? List all the differences between fertilisers and manures.
5. Discuss the traditional and modern methods of irrigation in brief, with examples.
- ~~6. What is the difference between rabi and kharif crops? Give one example each.~~

J. HOTS

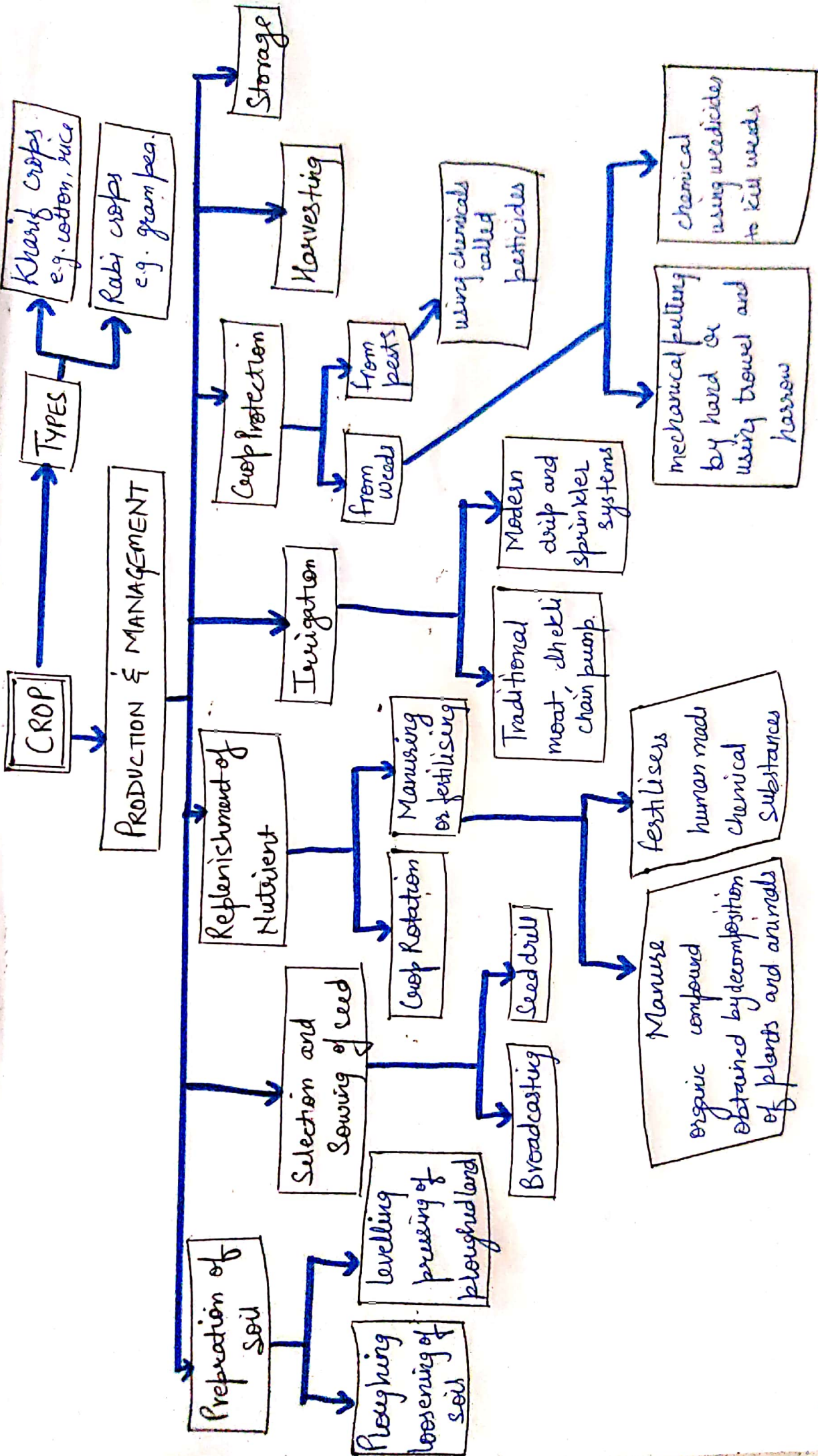
1. Despite favourable climatic conditions, a farmer's crop failed to give good yield. Give the possible reasons for this.
2. As the population increases, the demand for crops also increases. What are the ways in which we can increase the production of crops?
3. How does increasing crop production affect the environment?
4. Sprinklers and drip irrigation are effective ways to conserve water. Yet they are not very popular in India. What could be the reason behind it?

## Assignments

A. Read the passage. Answer the questions that follow.

## Crop Management

One of the first considerations in crop production management is of the determination of the type of crop to be planted in the designated land. The reason why this is important is because



E. Answer in few words / one line

1. Write the steps of agriculture in the correct order.

Ans. Steps included in agriculture are

1. Soil preparation
2. Selection and sowing of seeds
3. Adding manure and fertilisers
4. Irrigation
5. Crop Protection
6. Harvesting
7. Storage

2. Name the instruments used for sowing seeds.

Ans. Instrument used for sowing seeds is seed drill

3. How can pests be controlled.

Ans. Pests are controlled by chemicals called pesticides.

4. Name the instrument used for weeding and harvesting

Ans. Instrument used for weeding: Trowel and harrow  
Instrument used for harvesting: Sickle

5. What are fertilisers?

Ans. Fertilisers are human-made chemical substances which are rich in one or more nutrients.

6. What is irrigation?

Ans. The process of supplying water to the crops at different intervals is known as irrigation.

7. Mention two ways by which weeding can be done.

Ans. 1. Weeding can be done manually using implements such as trowel, hoe or harrow

2. Weeding can be done using chemicals called weedicides.

F. Differentiate between the following pairs

1. Rabi and Kharif crop.

### Kharif Crop

1. They are sown in rainy season
2. They are harvested in October.
3. They depend on monsoon rains for growth
4. ex- rice, maize.

2. Weedicides & Pesticides

### Weedicides

1. Chemicals used to remove weeds are called weedicides
2. It harms the crop if too much sprayed.
3. ex- 2,4-D, metachlor

3. Sprinkler and Drip irrigation

### Sprinkler System

1. Water is sprayed using sprinkler in all direction in sprinkler system
2. There may be loss of water
3. An area of a circle is wetted which covers number of plants
4. Spray guns and nozzles are used in this system

### Rabi crop

1. They are sown in winter season
2. They are harvested in April
3. They don't depend upon monsoon rains for growth
4. ex- wheat, pea.

### Pesticides.

1. Chemicals used to kill pests which damage crops are called pesticides.
2. It doesn't harm the crop
3. ex- malathion, BHC.

### Drip Irrigation

1. In this system pipes with holes allow water to fall drop by drop just at position of roots
2. There is no wastage of water at all
3. Only root is wetted in this system
4. Dripping valves are present in this system

## 9. Fertiliser and Manure

### Fertiliser

1. Fertiliser are chemical compound made using chemicals
2. They are prepared in factories
3. They do not provide any humus to the soil
4. They are costly
5. These are rich in plant nutrients

### Manure

1. Manure are organic compound obtained from decomposition of plants and animal waste by microbes.
2. They are prepared in field
3. They provide a lot of humus to the soil
4. They are not costly
5. They are relatively less rich in plant nutrients

9. Define each of the following in one sentence

1. Agriculture - The science or practice of farming, including the rearing of crops and animals is known as agriculture.
2. Animal husbandry - Rearing animals on large scale for food and other useful things is called animal husbandry.
3. Crop rotation - It is the process of growing two or more crops on the same land alternatively to replenish nutrients

11. Answer the following in brief

1. What are organic foods?

Ans Organic food are food items grown and processed naturally in safe soil and are not genetically modified.

2. Which crop replenish nitrogen and how?

Ans Leguminous crops like peas or gram replenish nitrogen due to presence of Rhizobium bacteria on their roots. which

convert atmospheric nitrogen into simpler nitrogen compounds which can be easily absorbed by the plants.

3. What is animal husbandry? What facilities are provided to farm animals.

Ans Rearing animals on large scale for food and other useful things is called animal husbandry.  
Farm animals are provided with shelter, fodder on time vaccination and are kept clean.

I. Answer the following in detail

1. What are agricultural practices? List them in correct sequence.

Ans The activities in a particular sequence undertaken by farmers over a period of time to cultivate good crop are called agricultural practices.

Agricultural practices in sequence are as follow

1. Preparation of Soil
2. Selection and Sowing of seed
3. Adding manure and fertiliser
4. Irrigation
5. Crop protection
6. Harvesting
7. Storage

2. Discuss how soil is prepared for sowing seeds.

Ans Soil is prepared by ploughing and levelling

a. Ploughing - It is the process of loosening and turning of the soil done with the help of plough or



tractor

b) levelling: It is process of breaking big pieces of soil called crumbs using a leveller.

After ploughing and levelling soil is ready to be sown.

3. What is harvesting? what precautions should be taken while storing harvested grains?

Ans The process of cutting of crops when it is ready is known as harvesting.

while storing harvested crops it must be checked that crop is safe from moisture, insects, rats and microorganism

4. What is manuring? list all difference between fertiliser and manure

Ans The process of replenishing the soil with nutrients using manure and fertiliser is called manuring

for difference refer to part 4 of question 4.

5. Discuss the traditional and modern methods of irrigation in brief with examples.

Ans Traditional method of irrigation used cattle and human labour to lift water from wells, lakes and canals. These include chain pump, pulley system, dhekli etc.

Modern method of irrigation include

a) sprinkler system: In this system water is sprayed using sprinkler that rotate in all directions to

provide an even supply.

b) Drip Irrigation - In this system, holes in pipes allow water to fall drop by drop just at the location position of roots, and no water is wasted at all.