

## Class 08 Chapter 01 Crop production and Management Book Science Mission

A. Multiple choice questions.

1. To control and destroy pests, we use  
(a) Fertilizers (b) Grazing animals  
(c) Pesticides (d) Weedicides
2. Weeds are  
(a) Microbes (b) Unwanted herbs  
(c) Insects (d) Fungal pests
3. Rabi crops include (a) Wheat (b) Paddy(c) Corn (maize)(d) Melons
4. Raising both, plant crop and livestock in farm is  
(a) Mixed farming (b) Intercropping (c) Mixed cropping  
(d) Rotation of crops
5. Bins, silos and granaries are used to store  
(a) Vegetables (b) Grains (c) Fruits (d) Bulbs (onion)

Ans: 1. c      2. b      3. a      4. a      5. b

B. Match the following.

Column 'A'	Ans	Column 'B'
1. Maize crop	1. c	a. Decay of the dead by microbes.
2. Wheat crop	2. b	b. Rabi crop
3. Trifolium crop	3. e	C. Kharif crop
4. Blue-green alga	4. f	d. Release of nitrogen by bacteria from decaying matter
5. Nitrification	5. a	e. Intercrop
6. Denitrification	6.	f. Nitrogen fixing

C. State whether 'true' or 'false'.

1. Crop rotation helps in enriching soil with nitrogen. True
  2. Sprinkler irrigation leads to wastage of water. False
  3. Process of removing weeds is called tilling. False
  4. Excessive use of fertilizers is harmful. True
  5. Honey is nothing else but a concentrated solution of sugar. False
  6. Fixing of air nitrogen is denitrification. False
- D. Give one word answer.

1. Task performed by a farmer for loosening the soil.
2. Chemical compounds added to the soil for increasing soil fertility.
3. Rearing fish.
4. Rearing honeybees for honey
5. Task performed by a farmer for exposing seeds, worms and insects in a field.
6. Rearing birds for flesh and eggs.
7. Harmful organisms that attack and damage crops.
8. Task performed by a farmer for turning the soil upside down.
9. Growing a leguminous crop in between two cereal crops.
10. Growing two crops together.

- Ans: 1. Ploughing      2. Fertilizers      3. Pisciculture  
 4. Apiculture      5. Tilling      6. Poultry  
 7. Pests      8. Ploughing or tilling  
 9. Crop rotation      10. Mixed cropping

## Theoretical Questions

### A. Short answer type questions.

1. Differentiate between the following:

i. Compost and green manure

**Compost:** Compost is the decomposed plant and animal waste which may include waste food, excreta, dried leaves and other organic matter. It is made in a compost pit using microbes.

**Green Manure:** The green leguminous plants with their root nodules is ploughed along with the soil. The green plants and the root nodules left in the soil decompose to form green manure.

ii. Compost and fertilizers

Compost is a manure prepared by a biological decomposition of organic waste. It takes longer period to be absorbed by plants. It is lacking in nitrogen, Phosphorous and potash

Fertilizer is manure prepared in factories from chemicals (mineral). It is easily absorbed by soil. It is rich in nitrogen, Phosphorous and potash

iii. Pesticides and weedicides

Pesticides are substances that are meant to control pests, may be fungus, bacteria or animal germs (harmful insects). Weedicides are the chemicals which are sprayed over field to get rid of weeds. Weedicides are poisonous for weeds but not for the crop.

iv. Nitrification and denitrification

Conversion of dead decaying matter into ammonia and then into nitrites and nitrates by nitrifying microbes is called nitrification.

Conversion of nitrites and nitrates from decaying organic matter into gaseous nitrogen by denitrifying microbes is called denitrification.

v. Crops and intercrop

A crop is a plant or animal product that can be grown and harvested extensively for profit or subsistence.

Growing of Trifolium or any other leguminous crop (as green manure) during intervening period in between Kharif and Rabi is intercropping.

2. List the tasks a farmer needs to perform for the cultivation of a crop.

Main tasks to be performed by Farmers before cultivation of crops are

(a) Preparation of soil. (b) Procuring and selection of seeds, (c) Improving soil fertility (d) Irrigation (e) Weeding (f) Protection of crops (g) Harvesting (h) Storage of farm produce.

3. Name one plant each from a kharif crop, rabi crop and the season (month) in which each one of them is (i) sown and (ii) harvested?

Ans: Kharif crop: paddy (rice); It is summer crop. Sown in summer season (May/June and harvested well before onset of winter(September).

Rabi crop: wheat. It is winter crop. Sown well before winter (November end) and harvested in March/April that before onset of summer.

4. What are the different foods which we get from animals?

Ans: Some of the food products obtained from animals are milk, meat including fish, eggs and honey.

5. List some animal sources of sea food.

Ans : Some animals as source of sea food are prawn, crab, oyster etc.

B. Long answer type questions.

1. How and why did humans start practicing agriculture?

Ans: Man was basically a food gatherer. At times when the weather got rough, he and his family had to eat stale food or had to go without food. This made him to change his habit to domesticating animals and growing plants along his dwelling units. This was the beginning of farming by man.

2. How do we separate healthy seeds from a mixture of seeds?

Ans: Healthy seeds are separated from the mixture of seeds by following :

a. Manually by seeing the physical condition of the seed, damaged seeds are often broken or damaged in other ways.

B. by soaking them in water, damaged seeds are not able for germination process after soaking them.

3. What is intercropping? Name a few crops cultivated as intercrops.

Ans: Planting a leguminous crop in between two major crops in a field such as planting of Trifolium in between Kharif and Rabi is called intercropping. This way, soil is enriched with nitrogenous nutrients for the next crop in addition to obtaining fodder for the farm animals rich in nutrients.

Intercropping is also a system of cropping where two or more crops are grown in proximity along ridges (as in mixed cropping).

Non-leguminous plant (such as one of Maize (corn), sorghum, millets, potato, cabbage, cauliflower, brinjal) and leguminous plant (such as one of pulses, beans including groundnut) are cultivated alternately as intercrops.

4. What is 'Rotation of crops? How is it similar or dissimilar to intercropping?

After harvesting a cereal or vegetable crop farmer grow leguminous crop for one season (instead of growing and harvesting a regular crop) in the field . This is called the Rotation of Crops.

It is similar to inter cropping as legumes plants are grown in field to increase fertility of soil.

It is different from intercropping as one regular crop was replaced with a leguminous crop and the farmer had to go without a crop of grains or fruit/vegetable.

5. How do we save runaway water for irrigation purpose?

Ans: Runaway water may be saved by adopting water harvesting, digging wells on local scale or raising mud-dams to store water in lakes or ponds and its use by any method including canal irrigation.

6. Give the advantages and disadvantages of using chemical fertilizers for the cultivation of crop.

Ans: Fertilizers used for the cultivation of crop has helped farmers in getting better yield in comparison to the use of organic manure but the prolonged and excessive use of chemical fertilizers has resulted in leaving the soil less fertile in the long run, also it results in poisoning the groundwater.

7. Why should we make use of sprinklers or drip for irrigating crops instead of flood irrigation?

Ans: We make use of sprinklers or drip for irrigating crops instead of flood irrigation to save water.

Sprinkler system: This system is useful for sandy soil and uneven land where sufficient water is not available. Water is sprinkled similar to rain from the revolving nozzles on the crops.

Drip system: In this system, water comes out drop by drop near the roots of the plants. This technique minimizes the wastage of water due to evaporation. This technique is finest technique for watering, gardens, trees and fruit plants.

8. Why it is necessary to preserve and maintain water bodies?

Ans: Water bodies like lakes, wells, ponds and puddles are an evergreen source of soil water. It enriches greenery and also serves as a source of water for man and animals. Water bodies also saves soil from going sandy. Thus, it is necessary to preserve and maintain water bodies

9. What are the different ways in which a farmer draws groundwater for irrigation?

Ans: Traditional method of irrigation includes drawing of water from wells by different methods such as moat, chain pump, rahat or dhekli.

Nowadays, drawing groundwater through tube-well is being practiced. Tube wells are operated with the help of a motor run on electricity or diesel. With the lowering of the level of groundwater, the wells may not serve the purpose of irrigation and therefore, some other methods are being adopted.

10. How do leguminous crops help in increasing soil fertility?

Ans: Rhizobium bacteri present in the root nodules of leguminous plants. Rhizobium is capable of absorbing nitrogen and oxygen from the air and form nitrogen oxide. This nitrogen oxide enriches soil with nitrogenous mineral in a natural way.

We need not add fertilizer to the soil on which leguminous plants are growing. The roots of leguminous plants left behind in the soil continue to add nitrogen mineral to the soil.

11. Discuss the necessity of weeding. How this can be done?

Ans: Crop Plants require a good amount of mineral nutrition and water from the soil. Weeds are unwanted plants grow alongside the crop plants and share their nutrients and water. Thus, most weeds are harmful for the healthy growth of crop plants.

The removal of weeds from crop field is called weeding. Hence, weeding is essential to have better crop.

Weeding is done manually by the using trowel or with machine called seed drill or Using chemicals called weedicide.

Weedicides are chemicals which are poisonous for the weeds but are not harmful for crop plants.

Weeding can also be done using biological control. Some worms and insects feed on certain weeds and help in destroying them.

12. What is Nitrogen fixation? List all the ways in which nitrogen fixation takes place in nature.

Ans: Fixation of nitrogen is the conversion of atmospheric nitrogen into compounds of nitrogen by certain microorganisms. (a) Rhizobium bacteria present in the root nodules of leguminous plants help in nitrogen fixation. They absorb nitrogen and oxygen from the air and combines the two to form nitrogen oxide. This nitrogen oxide used by plants to make plants protein(ammonia). The roots of leguminous plants left behind in the soil continue to add nitrogen mineral to the soil.

(b) Blue-green algae which is common found in paddy fields and other wet places are also capable of fixing air nitrogen into soil.

13. How biological control on weeds is practiced?

Ans: Some worms and insects have a special affinity to certain weeds with which they flourish well. They eat, kill and eliminate the weeds, without harming the crop plants. Such worms and insects are cultured to destroy weeds.

14. How do earthworms help the farmers?

Ans: Worms, especially the white or red worms and the earthworms, are a great friend of farmers. They feed on decaying organic matter and convert them into compost.

When the earthworms move through the soil they inadvertently dig canals and leave behind the soft and airy casts (vermicompost). Vermicompost is the best nutrient for a crop since the worms keep the manure warm and airy.

15. In what way white worms are more effective than earthworms?

Ans: Red and white worms are smaller in size to earthworms and they multiply fast to grow in large numbers. They enrich the soil with vermicompost faster than the normal earthworms.

16. What are the aims and objectives of animal husbandry?

Ans: Rearing of animals on a large scale at home or on a farm, taking care of their shelter, proper food, health and breeding is called Animal husbandry.

The aims and objectives of animal husbandry are

- (a) Provide fresh water and clean shelter to animals
- (b) Provide nutritional food
- (c) Proper facility for Breeding and multiplication of animals.
- (d) proper care of health and protection against disease