

Crop Production and Management

Question 3:

Explain how the use of CNG in automobiles has reduced pollution in our cities.

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Question 2:

Match items in column A with those in column B.

A	B
(i) <i>Kharif</i> crops	(a) Food for cattle
(ii) <i>Rabi</i> crops	(b) Urea and super phosphate
(iii) Chemical fertilisers	(c) Animal excreta, cow dung, urine and plant waste
(iv) Organic manure	(d) Wheat, gram, pea
	(e) Paddy and maize

Answer:

A	B
(i) <i>Kharif</i> crops	(e) Paddy and maize
(ii) <i>Rabi</i> crops	(d) Wheat, gram, pea
(iii) Chemical fertilisers	(b) Urea and super phosphate
(iv) Organic manure	(c) Animal excreta, cow dung, urine and plant waste

Question 3:

Give two examples of each.

- (a) *Kharif* crop
- (b) *Rabi* crop

Answer:

- (a) *Kharif* crop → Paddy, maize
- (b) *Rabi* crop → Wheat, gram

Question 4:

Write a paragraph in your own words on each of the following.

(a) Preparation of soil (b) Sowing

(c) Weeding (d) Threshing

Answer:

(a) Preparation of soil:

It is the first method to be followed before growing a crop. This method is usually employed for loosening the soil to allow the root to penetrate deep into it. The loosening of the soil helps in the growth of several soil microbes, earthworms etc., which enrich the soil with humus and other essential nutrients. Plants require nutrients for their proper growth and functioning. The process of loosening is called tilling or ploughing the soil. Tilling of soil brings the nutrient-rich soil to the top. This helps the plants to utilize the nutrients for their growth.

(b) Sowing:

Sowing is another important step in crop production. It is the process of placing the seed in or on the soil for future growth. The seeds that are selected for growing should be of good quality. This will improve the net yield of the crop. Sowing is usually done with the help of either a traditional tool or a seed drill. The traditional tool is shaped like a funnel. It was used earlier for sowing seeds. Nowadays, seed drills that make the use of tractors are used for sowing seeds. This tool disperses seeds uniformly and sows seeds at proper depth. Sowing by this method saves time and also protects the seeds from birds.

(c) Weeding:

Undesirable plants that grow along with the crop are known as weeds. Weeding is the process of removing these weeds. *Xanthium*, *Parthenium*, etc. are some common weeds. Weeds compete with the crop for nutrients, light, and space. As a result, crop plants get lesser nutrients, light, and space for their development. This in turn, reduces their productivity. Thus, various weeding methods are employed.

Some important weeding methods are:

(i) Weeds can be controlled using weedicides. It is a chemical, which is sprayed in the fields to kill all available weeds. Weedicides are not harmful to crops.

(ii) Tilling before sowing of crops also helps in removing weeds. Tilling uproots the weeds. The best time for removal of weeds is before they produce flowers and seeds.

(iii) The manual method of removing weeds is with the help of a *khurpi*. It involves regular uprooting or cutting of weeds close to the ground.

(d) Threshing:

Threshing is the process of separating grains or seeds from chaff. It is done after harvesting the crop. It is usually carried out with the help of a machine known as 'Combine'. This machine is a combined harvester and thresher. It harvests plants as well as cleans grains.

Question 5:

Explain how fertilisers are different from manure.

Answer:

Differences between fertilisers and manure:

Fertiliser	Manure
Fertilisers are commercially available plant nutrients.	Manure is a natural substance prepared by the decomposition of animal excreta and plant wastes.
They can be organic or inorganic in nature.	Manure is known to have a large quantity of organic materials and very little amount of plant nutrients.
They ensure healthy growth and development of plants by providing them with nitrogen, phosphorus, potassium, etc.	They help in enriching the soil with organic matter and nutrients.
The addition of fertilisers to the soil requires special guidelines such as dose time, post addition precautions, etc., to be followed.	The addition of manure does not require any special guidelines.
A fertiliser does not provide any humus to the soil.	Manure provides humus to the soil and increases soil fertility.
Its excessive use causes water pollution. It cannot replenish organic matter of soil.	It protects the environment and helps in recycling farm waste.

Question 6:

What is irrigation? Describe two methods of irrigation which conserve water.

Answer:

Irrigation is the process by which water is supplied to crops at different intervals. The time and frequency of irrigation varies according to different seasons, crops, and soil types. There are various sources of irrigation such as wells, canals, rivers, dams, ponds, and lakes.

Two methods of irrigation which help in conservation of water are:

a) Sprinkler system:

This system is more useful on uneven land, having fewer water supplies. In this method, water is supplied using pipes to one or more central locations within the field. When water is allowed to flow under high pressure with the help of a pump, it gets sprinkled on the crops.

b) Drip system:

In this system, water is delivered at or near the roots of plants, drop by drop. This is the most efficient method of irrigation as there is no wastage of water at all. This method is important in areas where water availability is poor.

Question 7:

If wheat is sown in the *kharif* season, what would happen? Discuss.

Answer:

If wheat is sown in the *kharif* season (from June to October), then the whole crop might get destroyed because of many factors such as lack of optimum temperature, adaptability, availability of pests, etc. *Kharif* season includes the rainy season, which is not favourable for the growth of wheat crop. Therefore, wheat crop should not be sown during this season.

Question 8:

Explain how soil gets affected by the continuous plantation of crops in a field.

Answer:

Continuous plantation of crops in a field makes the soil poor in certain nutrients such as nitrogen, phosphorus, potassium, etc. Plants require nutrients for their proper growth and functioning. When a farmer continues to grow crops one after the other, then all nutrients available in the soil reduce and the crop yield decreases automatically.

Question 9:

What are weeds? How can we control them?

Answer:

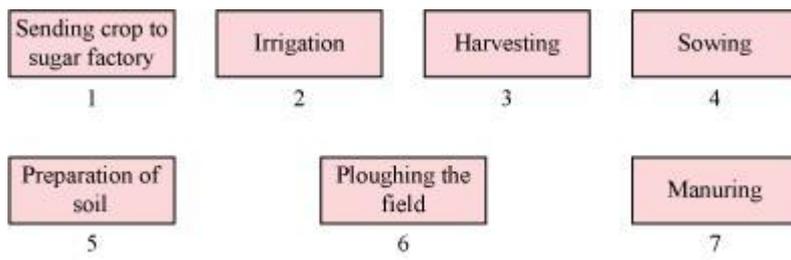
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- ii. Tilling before sowing of crops also helps in removing weeds. Tilling uproots the weeds. The best time for the removal of weeds is before they produce flowers and seeds.
- iii. The manual method of removing weeds is with the help of a *khurpi*. It involves regular uprooting or cutting of weeds close to the ground.

Question 10:

Arrange the following boxes in proper order to make a flow chart of sugarcane crop production.



Answer:

Flow chart of sugarcane crop production:

