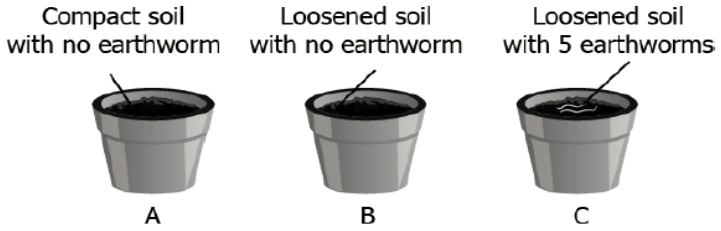
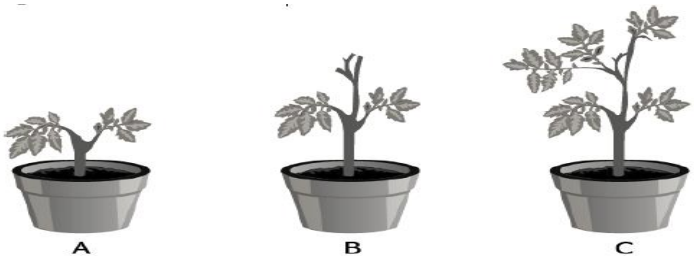
INDIAN SCHOOL AL WADI AL KABIR		
Class: VIII	**DEPARTMENT: SCIENCE 2023-24**	**DATE: 18-04-2023**
WORKSHEET NO: 1 WITH ANSWERS	**TOPIC: CROP PRODUCTION AND MANAGEMENT**	**NOTE: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS & SEC:**	**ROLL NO.**

I. OBJECTIVE-TYPE QUESTIONS

1. A student set up an experiment to study the growth of plants using three different soil types.



The student plants a pea seed in each of the three pots. After 2 months, the student observes the growth of the plants as shown.



What can be the student's conclusion from this experiment?
(a) Earthworms restrict the growth of plants by consuming them.
(b) Compact soil increases the amount of nutrients in the soil
(c) Earthworm increases the fertility of the soil.
(d) Loosened soil with no earthworm allows maximum growth of the plant.

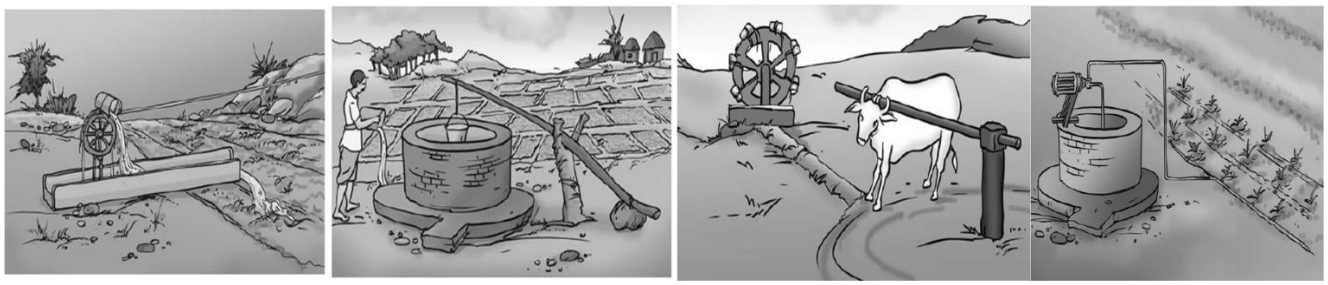
2. The cutting and gathering of the crop after it is matured are called X. After this, grains are separated from the crop by a process called Y. Z is the process of separating the hay and chaff from the grains. Which of the following statements is/are correct regarding X, Y, and Z?

(a) Z is done with the help of wind in which grains along with husk are allowed to fall from a height.
(b) X is done mechanically by combining and manually by plough and harrow.
(c) X is the process known as threshing whereas Y is the process known as winnowing.
(d) Both (a) and (b)

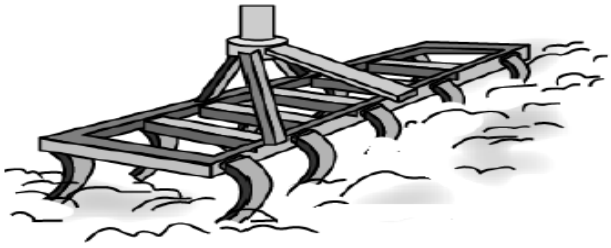
3. A farmer uses three different types of tools for tilling the soil in three different fields. The farmer records the time it took to complete the tilling in each field using different tools.

TOOL USED	TIME TAKEN
Plough	5 hours
Hoe	4 hours and 20 minutes
Cultivator	1 hour and 30 minutes

Which tool the farmer should use to till his fields?
(a) Hoe as it is more efficient.
(b) Plough as it takes the least time.
(c) Cultivator as it saves time.
(d) Hoe as it is more efficient than plough and cultivator
4. Observe the given methods of irrigation and answer the following question.



Identify the correct statement:
(a) A, C, and D are the modern methods of irrigation.
(b) B, C, and D are the traditional methods of irrigation
(c) A, B, and D are the modern methods of irrigation.
(d) A, B, and C are the traditional methods of irrigation.
5. Choose the correct option with respect to the given agricultural implementation.



(i) Makes holes in the soil to drop seeds.
(ii) Covers the sown seeds with soil.
(iii) Sows the seeds at proper distances
(iv) water the seeds

(a) Only i
(b) Both i and ii
(c) i, ii and iii
(d) ii, iii and iv

6. Combines are used for:
(a) sowing of seeds
(b) harvesting the crops
(c) threshing
(d) harvesting and threshing both.

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii), and (iv) as given below
i) Both A and R are true and R is the correct explanation of the assertion.
ii) Both A and R are true but R is not the correct explanation of the assertion.
iii) A is true but R is false.
iv) A is false but R is true

7**. Assertion (A):** Earthworms are known as friends of farmers.
Reason (R): Earthworms turn and loosen the soil. They also add humus to it.
i) Both A and R are true and R is the correct explanation of the assertion.

8**. Assertion (A):** Seed drill ensures that seeds get covered by the soil after sowing.
Reason (R): Sowing by seed drill takes a lot of time.
iii) A is true but R is false.

9. **Assertion (A):** The grains are properly dried in the sun to reduce the moisture in them.
Reason (R): Large-scale storage of grains is done in silos and granaries.
ii) Both A and R are true but R is not the correct explanation of the assertion.

10. **Assertion (A):** Farmers have to add manure to the fields to replenish the soil with nutrients.
Reason (R): Continuous cultivation of crops makes the soil rich in nutrients.
iii) A is true but R is false.

II. VERY SHORT QUESTIONS (2M):

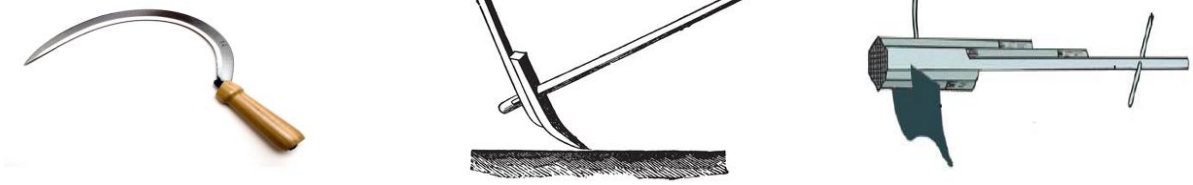
1. What is meant by crop rotation? How is it helpful? **[Hint: The method of growing crops alternatively on the same land is known as crop rotation. E.g.-Legumes (peas, beans, grams, and pulses) are grown in the first season and wheat should be grown next to it. It is helpful because- the land gets utilised in a better way, soil fertility is maintained, and a farmer has a variety of crops for selling.]**

2. Why is it necessary to level the field before sowing the seeds? **[Hint: The ploughed field may have big pieces of soil called crumbs. The process of breaking the big lumps of soil with a plank (leveller) is called levelling. The field is levelled for sowing as well as for irrigation purposes.]**

3. In the nursery, some plant saplings are kept in small bags. Why? **[Hint-In some crops (like rice, and tomatoes), the seeds are sown in a small area called the nursery. When they germinate into small seedlings, these are transferred to the main field. This is called transplantation. These small plants are kept in bags to protect them from the outer environment and pamper them with suitable growth conditions.]**

4. Identify the following agricultural implements and their use.

A B C



[Hint- A- sickle- Harvesting B- Plough-Tilling, adding fertilisers to the crop, removing weeds C- Hoe-Removing weeds, used for ploughing.]

5. Which activity of the farmer can promote the growth of earthworms and microbes in the field?
[**Hint- Ploughing of the soil during soil preparation creates spaces in the soil thus, leading to aeration and soil also loosen which promotes the growth and survival of earthworms and microbes and release of nutrients in the soil.]**

6. What are weedicides? Name one commonly used weedicide. **[Hint- The chemicals used to control weeds are known as weedicides. E.g.- 2,4-D.]**

III. SHORT ANSWER TYPE QUESTIONS: (3M)

1. Why is manure considered to be better than fertilisers**? [Hint- Manure is considered better than fertilisers because it- enhances the water-holding capacity of the soil, makes the soil porous due to which exchange of gases becomes easy, increases the number of friendly microbes, and improves the texture of the soil.]**

2. Why is it essential to irrigate our fields? **[Hint: Irrigation of fields is essential because- (a) seeds do not germinate in the absence of water, (b) plants can absorb minerals and fertilisers along with water, (c) nutrients dissolved in the water get transported to each part of the plant, (d) water protects the crop from both frost and hot air currents.]**

3. How are grains stored and preserved? **[Hint- Farmers store grains in jute bags or metallic bins. Large-scale storage of grains is done in silos and granaries to protect them from pests like rats and insects. Dried neem leaves are also used in storing food grains at home. For**

storing large quantities in big godowns, specific chemical treatments are required to protect them from pests and microorganisms.]

4. If you are given a dry piece of land for cultivation, what will you do before sowing the seeds? **[Hint- If the field is dry for the cultivation of crops, the soil preparation is done accordingly before the sowing of crops. Preparation of dry soil includes adequate watering to restore the moisture content and then ploughed to allow growth of microbes and aeration, Finally, the soil is turned and its crumbs are levelled and manures are mixed. The soil is ready for sowing of crops in the field.]**

IV. LONG ANSWER TYPE QUESTIONS. (5M)

(a) What is meant by Animal husbandry?

(b) Mention the names of a few animal products used as food.

(c) What facilities are provided to farm animals? **[Hint-(a) The science of rearing, caring, breeding, and improvement of domesticated animals is known as animal husbandry. It is the practice of breeding and raising livestock like cows, buffaloes, horses, sheep, etc. This practice requires good care and management of livestock. (b)Fish, meat, milk, egg honey. (c) The animals or livestock in animal husbandry practice should be provided with appropriate shelter facilities, food, and water, good hygienic practices, medical facilities, etc.]**

V. SOURCE-BASED/ CASE STUDY-BASED QUESTIONS

Read the passage and answer the following questions:

The substances which are added to the soil in the form of nutrients for the healthy growth of plants are called manure and fertilisers. Manures are organic substances obtained from the decomposition of dead plants and animal wastes. Fertilisers are man-made mineral salts that are added to the soil to provide specific nutrients like nitrogen, phosphorous, and potassium. Take moong or gram seeds and germinate them. Select three equal-sized seedlings out of these. Take three beakers and mark them A, B, and C. Take some soil in beaker A. To beaker, B add some soil mixed with some amount of manure. In beaker C, put some amount of soil mixed with a little urea. Now pour some water and plant seedlings in each of them. Keep them in a safe place and water them daily. Observe the growth for 7-10 days. We will notice that the growth of plants in beaker B is better than others. The growth occurs much faster in beaker C. The use of manure improves soil texture as well as its water-retaining capacity. It replenishes the soil with all the nutrients. The use of fertilisers helps in the fast growth of plants. But they are made from chemicals. The excessive use of fertilisers changes the chemical nature of the soil and makes the soil less fertile. The excessive use of fertilisers causes water pollution in ponds, lakes, and rivers when they enter the lakes and ponds through runoff and soil erosion.

i. Which beaker will show fast growth of seedlings and why? [Hint- **Beaker C, the use of fertilisers helps in the fast growth of plants.]**

ii. What is meant by manure? **[Hint-A manure is a natural substance obtained by the decomposition of organic matter such as cattle dung, human waste, and plant residues.]**

iii. A farmer uses fertilisers on his land for a long period of time and plans to start using manure. What will be the likely benefit of this change? **[Hint- The addition of manure will improve the soil texture and water retaining capacity]**

iv. What are the harmful effects of using excessive fertilisers in the field? **[Hint-The excessive use of fertilisers changes the chemical nature of the soil and makes the soil less fertile. The excessive use of fertilisers causes water pollution in ponds, lakes, and rivers when they enter the lakes and ponds through runoff and soil erosion.**]

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