

1. CROP PRODUCTION AND MANAGEMENT

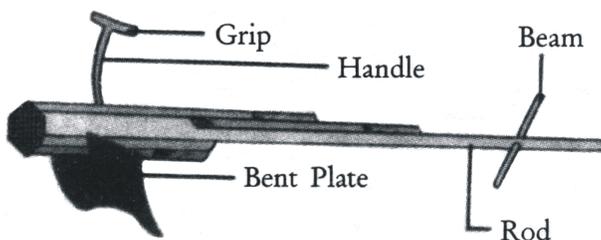
AGRICULTURAL PRACTICES

KEY CONCEPT

- **AGRICULTURE:** A branch of science dealing with the cultivation or growing of plants and raising of animals which are useful to us in the field.
- **Horticulture:** It is the branch of science which deals with the growing of vegetables, fruits and ornamental plants.
- Plants of the same kind grown and cultivated in a field are called **crop plants** or **crops**.
- Crops are mainly cultivated in two seasons— **Rabi** (sown in winter; winter season crops; examples – wheat, barley, gram) and **Kharif** (sown at the beginning of rainy seasons; summer season crops; examples – rice, maize, jowar, pulses.)
- **Ploughing or tilling** helps in many ways – it aerates the soil, improves soil drainage, uproots the weeds and loosens the soil helping in easy root penetration.

SOLVED QUESTIONS

1. Define the following: a. Agricultural practice b. Crop plant c. Tilling
Ans. a. **Agricultural Practice:-** The activities which a farmer performs to cultivate a crop are referred as agricultural practices.
b. **Crop plant:-** Crop plants or crops refer to plants of same kind grown and cultivated at one place on a large scale.
c. **Tilling:-** The process of turning and loosening the soil is called ploughing or tilling.
2. What are the two main crop seasons? Give three examples of the crops grown during each season.
Ans. The two main crop seasons are Rabi and kharif
a. **Rabi crop:-** crops sown in beginning of winters. Ex. wheat, gram, pea.
b. **Kharif crop:-** crops sown in beginning of rainy season. Ex. Rice, Maize, cotton.
3. Name the different agricultural practices.
Ans. Different agricultural practices are:
Preparation of soil → sowing → Manuring → irrigation → weeding → Harvesting → storing.
4. Name the branch of agriculture which deals with growing vegetables, fruits and ornamental plants.
Ans. Horticulture
5. Which of the following is not a Rabi crop? Wheat, gram, maize, pea.
Ans. Maize
6. Give the use of the given device—



Ans. Hoe

TEST YOUR CONCEPT

1. What is horticulture?
2. Differentiate between plough and hoe?
3. What are Kharif season crops? Give examples.
4. What are Rabi season crops? Give examples.
5. Name three natural methods of adding nutrients to soil.

SOWING AND MANURING

KEY CONCEPT

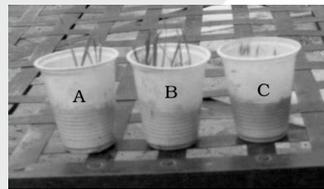
- **SOWING:** It is the method of penetrating seeds into the soil.
- **SEEDS** have to be grown at appropriate distances and depths to get good yield.
- **METHOD OF SOWING:** There are three methods: Broadcasting, transplantation and field following.
- **MANURES** are organic nutrients and provides humus to the soil.
- **FERTILISERS** are inorganic substances and provides specific nutrients to the soil and crop.

ACTIVITY 1

- Take a beaker and fill half of it with water. Put a handful of wheat seeds and stir well. Wait for some time.
- Take *moong* or gram seeds and germinate them. Select three equal sized seedlings out of these. Now take three empty glasses or similar vessels. Mark them A, B and C. To glass A add little amount of soil mixed with a little cow dung manure. In glass B put the same amount of soil mixed with a little urea. Take the same amount of soil in glass C without adding anything. Now pour the same amount of water in each glass and plant the seedlings in them. Keep them in a safe place and water them daily. After 7 to 10 days observe their growth.



Preparation of the experiment



Growing seedlings with manure and fertiliser

CONCLUSION: _____

SOLVED QUESTIONS

1. Why is it necessary to sow seeds at an appropriate depth?

Ans. It is necessary to avoid over crowding between seeds for sunlight, nutrients etc.

2. What are manures and fertilisers? Give examples.

Ans. Manures are organic nutrients whereas fertilizer are inorganic substances. (Ex- NPK, CAN) (Ex. manure – cowdung)

3. What is crop rotation? Mention its advantages.

Ans. Crop rotation is the method of growing different crops alternately on the same kind. Example:- farmers grow crops like wheat in first year this is followed by growing leguminous plants like pea in next season.

TEST YOUR CONCEPT

1. What precautions must be kept in mind while sowing seeds in a field?
2. Discuss two natural methods of manuring.

3. It is necessary to loosen the soil by ploughing before sowing seeds. Why is it necessary to level the soil after ploughing?
4. What is field fallow?

IRRIGATION AND WEEDING

KEY CONCEPT

- **IRRIGATION:** The supply of water to crops at different intervals.
- **METHODS OF IRRIGATION:** Traditional method includes **rahat, moat** and Modern method includes **sprinkler & drip irrigation method**.
- Fields need to be **irrigated** from time to time depending on the need of the crop.
- **WEEDING** involves removal of weeds (unwanted and uncultivated plants.) which can be done by the help of hand, agricultural tools & chemical methods.

SOLVED QUESTIONS

1. Define irrigation. Describe two methods of irrigation which conserve water.

Ans. The supply of water to crops at different intervals is called irrigation two methods which conserve water are drip irrigation and sprinkler method.

2. Why should we remove weeds from the fields? How can we control the weeds?

Ans. Weeds are unwanted and uncultivated plants. Weeds compete with crop plants for nutrients thus affecting growth of crop plants. Weeding can be done by hands by using trowel, Khurpi and by using chemicals weedicides.

TEST YOUR CONCEPT

1. What is waterlogging? How does it harm the crops? How can it be prevented?
2. Discuss two methods of weeding in which in which poisonous chemicals are not used.
3. Differentiate between insecticides, rodenticides and fungicides. Which of these are pesticides?
4. Give three natural sources of irrigation.
5. Which system of irrigation is shown in the given picture?



6. For which purpose the device is used?



7. What is weeding and why is it a necessary process?

HARVESTING AND STORING OF GRAINS

KEY CONCEPT

- **HARVESTING:** The cutting down of the mature crop.
- **THRESHING:** Removal of the grains from the chaff.

- **WINNOWING:** The separation of grains from the chaff by wind.
- Proper storage of grains is necessary to protect them from pests and micro-organisms.
- **LIVESTOCK:** All useful domestic animals.
- Man has been keeping animals since times immemorial. The keeping or rearing of animals for specific purposes is called **domestication**.

ACTIVITY ①

● Make the following Table in your note book and complete it.

S.No.	Food	Sources
1.	Milk	Cow, Buffalo, She-goat, She-camel . . .
2.		
3.		
4.		

CONCLUSION: _____

SOLVED QUESTIONS

1. Name two agencies (Governmental) which are involved in storage of food grains.
Ans. Two agencies which are involved in storage of food grains – FCI, SWC
 a. FCI = Food corporation of india b. SWC = State warehousing corporations.
2. Name the machine shown in the figure given below.



Ans. Thresher

TEST YOUR CONCEPT

1. What do you understand by harvesting and threshing?
2. What do fisheries include?
3. Define animal husbandry and what do you mean by viticulture?

NCERT EXERCISES

1. Select the correct word from the following list and fill in the blanks.
 float, water, crop, nutrients, preparation
 (a) The same kind of plants grown and cultivated on a large scale at a place is called _____.
 (b) The first step before growing crops is _____ of the soil.
 (c) Damaged seeds would _____ on top of water.
 (d) For growing a crop, sufficient sunlight and _____ and _____ from the soil are essential.

2. Match items in column **A** with those in column **B**.

A

- (i) Kharif crops
- (ii) Rabi crops
- (iii) Chemical fertilisers
- (iv) Organic manure

B

- (a) Food for cattle
- (b) Urea and phosphate
- (c) Animal excreta, cow dung urine and plant waste
- (d) Wheat, gram, pea
- (e) Paddy and maize

3. Give two examples of each.

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

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

- (a) Preparation of soil
- (b) Sowing
- (c) Weeding
- (d) Threshing

5. Explain how fertilisers are different from manure.

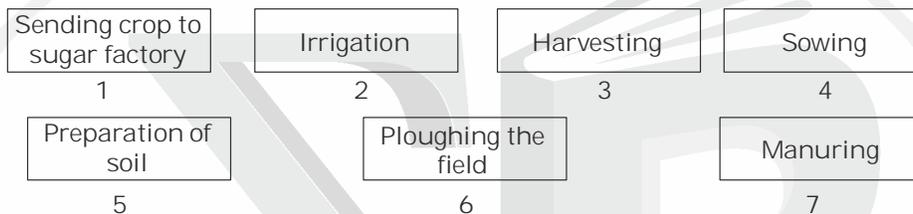
6. What is irrigation? Describe two methods of irrigation which conserve water.

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

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

9. What are weeds? How can we control them?

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



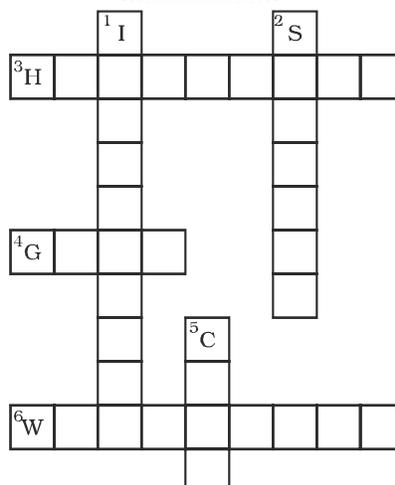
11. Complete the following word puzzle with the help of clues given below.

Down

- 1. Providing water to the crops.
- 2. Keeping crop grains for a long time under proper conditions.
- 5. Certain plants of the same kind grown on a large scale.

Across

- 3. A machine used for cutting the matured crop.
- 4. A *rabi* crop that is also one of the pulses.
- 6. A process of separating the grain from chaff.



CHECK YOURSELF

MULTIPLE CHOICE QUESTIONS

- Sunflower seeds provide us mainly with :-
a. fats b. carbohydrates c. proteins d. vitamins
- Most commonly grown cereal crop is/are :-
a. rice b. maize c. wheat d. all the above
- Crops sown during winters are :-
a. rabi crops b. kharif crops c. mixed crops d. cereal crops
- The method of scattering seeds in the field by hand is :-
a. hand picking b. transplantation c. broadcasting d. leveling
- Which of the following is used as a biofuel:-
a. Ethanol b. Gammoxene c. Manure d. Amaranthus
- Rearing of honeybees for products like honey and wax is called:-
a. Sericulture b. Aquaculture c. Pisciculture d. Apiculture
- Which of the following is a milch animal:-
a. Camel b. Sheep c. Honeybee d. Silkworm
- Cod liver oil from fish is found to be rich in :-
a. Vitamin A b. Vitamin D c. Vitamin C d. Vitamin B
- Which of the following are harmful for crop plants:-
a. too little water b. too much of water c. both a & b d. too much light
- The irrigation method in which water enters the field through channels made between two rows of crop plants is:-
a. Sprinkler irrigation method b. Basin irrigation method
c. Furrow irrigation method d. Drip irrigation method
- The Crops which are grown in rainy season are called
a. Rabi crop b. Seasonal crop c. Monsoon crop d. Kharif crop
- Rabi Crops are grown in _____ season
a. Summer b. Spring c. Winter d. rainy
- Now a days seed is sown in the field using
a. Seed Tractor b. Seed drill c. Seed Tiller d. Seed Plough
- Which of the following description is true for describing 'fertiliser' ?
a. Used in large quantity b. Organic in nature
c. Does not cause pollution d. Produced in factories
- Rhizobium Bacteria which fixes atmospheric nitrogen are found in nodules growing in
a. Roots of leguminous plants b. Leaves of leguminous plants
c. Stem of Leguminous plants d. All of the above.
- Before sowing the seeds, it is necessary to break soil to the size of grains to get better yield. The main tools used for such are
a. Tractor, Hoe, Seed drill b. Bullock, tiller, tractor
c. Plough, Hoe, Cultivator d. Plough, Seed Drill, Tractor
- Growing different crops alternately on the same land is technically called
a. Crop Alternation b. Crop Rotation c. Crop Revolution d. Crop Change
- Moat, Dhekli and Rahat are different
a. Traditional methods of cultivation b. Traditional methods of Weeding
c. Traditional methods of Seed sowing d. Traditional methods of irrigation
- In the harvested crop the grain seed is separated from the chaff. This process is called
a. Threshing b. Seeding c. Ploughing d. Weeding
- The farm appliance 'Combine' is a
a. Plough and Harvester b. Seed drill cum Thresher
c. Harvester and Thresher d. Harvester cum Sprayer

ORAL QUESTIONS

1. Why storage of food is done?
2. Write any two sources of irrigation.
3. What are the two common forms by which we add nutrients in soil?
4. What do you mean by Agriculture?
5. What is sowing?

TRUE/FALSE

1. All crops require approximately the same amount of water at roughly the same time periods of their growth.
2. Pesticides are used to kill small pests, but they are not strong enough to cause harm to humans .
3. Some bacteria can convert nitrate salts in the soil to free nitrogen.
4. Crop rotation does not add nutrients to the soil.
5. Nitrogen assimilation is the process of conversion of inorganic nitrogen compounds into organic compounds .
6. Maize and cotton are kharif crops.

FILL IN THE BLANKS

1. Large grasses cultivated for their nutritious seeds are called _____
2. Preparation of the soil involves _____ and _____.
3. The agricultural implement used to sow seeds is called a _____.
4. Allowing a field to remain free of crops for one or more seasons is called field _____. It allows the field to regain _____
5. Conversion of proteins into ammonia is called _____
6. A milch animal is one that yields _____
7. Rearing honeybees for honey is called _____
8. _____ are unwanted plants that grow along with the crops.
9. If a field is supplied with excess water it is said to be _____
10. _____ is a manure obtained by the decomposition of dead plants and animals waste.

SUMMATIVE ASSESSMENT

SHORT ANSWER TYPE QUESTIONS

1. What do you understand by the term preparation of soil?
2. What do you mean by animal husbandry and what it is use?
3. What are the various safety measures use for store the grain for longer time?
4. What do you understand by weeds and what are the different methods use by the farmers to remove weeds?
5. What are the various activities come under agricultural practices?
6. What are the traditional tools we used for sowing the seeds?
7. How is tilling or ploughing are useful in agriculture?
8. Why is it necessary to sow seeds at an appropriate depth and distance?
9. Discuss two natural methods of manuring .
10. Draw a labelled diagram to illustrate the nitrogen cycle.

LONG ANSWER TYPE QUESTIONS

1. Define irrigation and also mention the traditional and modern methods use for irrigation?
2. How can we say that manure is better than fertilizers?
3. What are the different measures which help to increase crop yield?
4. a. Why grains should be properly dried before storing?
b. Why storage of grains is done in silos and granaries on a large scale?