

## Ch: 1 Growing Plants

### New Words

- 1] Germination
- 2] Dispersal
- 3] Explosion
- 4] Agriculture
- 5] cotyledon
- 6] Scattering
- 7] Shrink
- 8] Fertilizers
- 9] Cocklebur
- 10] Pesticides

### Define the following

- 1] Cotyledon: - Parts of the seeds that store food for the baby plant are called cotyledon.
- 2] Dispersal: - The process by which seeds are scattered away from the parent plant is called dispersal.
- 3] Agriculture: - The practice of growing plants on a large scale for food or other purposes.

is called agriculture.

4] Crops: - Plants that are grown in large quantities in a particular area or region during a particular season are called crops.

Answer the following questions

Q51] What is a seed coat? What is its function?

Ans → The outer covering of a seed, which protects the baby plant inside it is called the seed coat.

→ 1. It protects the seed from damage.

2. It keeps the seed safe from drying out.

3. It helps the seeds survive, until it gets the right condition to grow.

Q52] What is germination? List the condition necessary for germination to take place.

Ans → The process by which a seed produces a new plant is called germination.

Seeds need air, water and warmth to germinate into seedlings. If a seed does not receive any one of the three, it will not germinate.

Q:3] Mention the different ways in which seeds get dispersed.

Ans → Some ways of seeds dispersal are given below:-

i] Dispersal by wind :- Seeds of certain plants are very light and have wing like structures or hair on them. These seeds are easily carried away by the wind from one place to another  
Ex! - maple and dandelion seeds

ii] Dispersal by water :- Seeds of plants such as lotus and coconut are spongy or have a fibrous covering, which helps them to float on water. Water carries

these seeds from one place to another.

iii] Dispersal by animals:- Seeds of some plants such as cocklebur, have spines or hooks. These seeds stick to the bodies of animals and birds, are thus carried away from the parent plant.

iv] Dispersal by explosion:- The fruits of some plants, such as peas and beans, burst open when they are ripe, scattering the seeds in all directions.

v] How can we grow new plants from stem cuttings?

u> New plants can grow from the stem cuttings of the parent plant.

1. The stem is cut at an appropriate place.

2. The cut portion of the stem is planted in soil.

3. The stem cutting grows into a new plant if watered regularly.

Q.5] Explain the different stages of agriculture.

Ans → The steps involved in agriculture are:

1. The field is ploughed.
2. Manure or fertilizers are added to the soil.
3. Seeds are sown
4. The crops are irrigated
5. The crops are sprayed with chemicals called pesticides to protect them from pests.
6. The crops are harvested.

Q.6] Differentiate between Kharif and rabi crops. Give example of each.

Ans →	Kharif	Rabi
1.	Crops grown from June to October	1. Crops grown from November to April
2.	These crops depend largely on the monsoon rains.	2. These crops do not depend on the monsoon rains.
3.	Example :- Rice, maize	3. Example :- wheat, legumes

## Let's apply

1. Maya threw some seeds out of the window. Some of these seeds fell on the road. She was surprised to see that they all germinated. How did the seeds germinate without soil?

→ Seeds need air, moisture and warmth to germinate. Soil is not essential for germination.

• Last year, there was not enough rainfall. Mohanlal's crops did not do well but his neighbour Shyambal's crops grew very well. What did Shyambal do that Mohanlal did not do?

→ Shyambal must have resorted to irrigation and ensured that his plants were watered regularly.

• How does step farming help in controlling floods on the mountains?

→ The steps prevent soil from being washed away when it rains. It also allows farmers to use more land on the slopes.

## Let's analyse and evaluate

Eating crops that have been sprayed with chemical pesticides can affect our health. Discuss and note the main points.

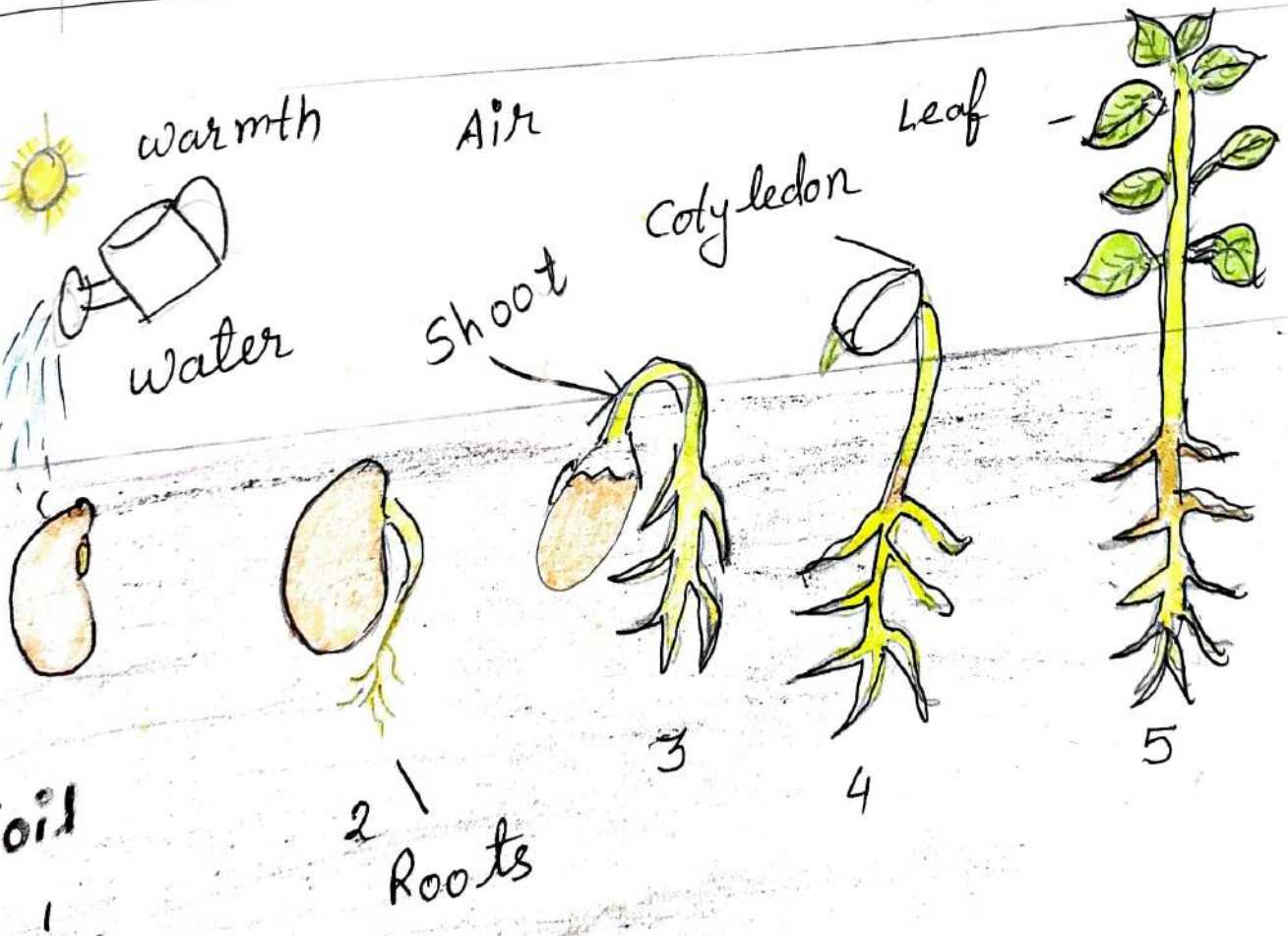
Pesticides are sprayed to kill insects and other pests. It is poisonous. It is a strong possibility that some of it can enter the plant's parts and reach out plates.

So, always wash fruits and vegetables properly before eating.

What would happen if dispersal of seeds did not happen?

If dispersal of seeds did not happen, plants <sup>would</sup> grow too close <sup>to each other</sup>, compete for sunlight, water and nutrients, cannot spread to new places and may become weak or die. <sup>unable to</sup>

## Seed germination (stages)





LET'S UNDERSTAND



**Objective type questions**

**I. Fill in the blanks with the correct words.**

- The seed coat has tiny hole (seed leaves/a tiny hole) for water to enter and help the seed germinate.
- To ensure that plants do not grow too close to one another, some plants scatter their seeds far away multiply using roots and stems/scatter their seeds far away).
- Roots of dahlia (dahlia/potato) can grow into new plants.
- Manure and fertilizers add nutrients (water/nutrients) to the soil.
- Crops grown from June to October are known as kharif (kharif/rabi) crops.

**II. Write T for the true and F for the false statement.**

- A young seedling gets its food from the cotyledons. T
- All seeds need air, water, and warmth to germinate into seedlings. T
- A maple seed is dispersed by explosion. F
- Carrots store extra food in their stems. F
- Farmers use scarecrows to keep birds away from the fields. T

**III. Choose the correct option.**

- Which of these can help us to grow new plants?
  - Seeds
  - Stem cuttings
  - Roots and leaves
  - All of these
- What do seeds need to germinate?
  - Air
  - Water
  - Warmth
  - All of these
- Which of these parts of a seed store food for the baby plant?
  - Root
  - Seed leaves
  - Stems
  - Seed hole
- Which of these can be grown from roots?
  - Turnip
  - Beetroot
  - Radish
  - All of these
- Which of these can be grown from stem cuttings?
  - Potato
  - Rose
  - Dahlia
  - Ginger
- Which of these is not a stage of agriculture?
  - The field is ploughed.
  - Seeds are sown.

7. Which of these protects crops from pests?

a. Pesticides

b. Manure

c. Fertilizers

d. Irrigation

8. Which of these crops do not depend on the monsoon rains?

a. Crops grown on terrace farms

b. Kharif crops

d. All of these

c. Rabi crops

**IV. Match the columns.**

Column A

Column B

1. Radish

a. Spines

1 c

2. Bryophyllum

b. Stem

2 e

3. Potato

c. Root

3 b

4. Cocklebur

d. Explosion

4 a

5. Bean seeds

e. Leaves

5 d

**B. Very short answer questions**

**I. Give two examples of the following.**

1. Seeds dispersed by wind
2. Seeds dispersed by explosion
3. Features of seeds dispersed by animals
4. Plants that store food in their roots
5. Plants that multiply through stem cuttings

Dandelion      Maple  
 Peas              Beans  
 Spines            Hooks  
 Carrot            Radish  
 Money plant    Hibiscus

**II. Give one word for the following.**

1. The outer covering of the seed that protects the baby plant inside it
2. The process by which a seed produces a new plant
3. The process by which seeds are scattered away from the parent plant
4. Buds of a potato that can grow into a new plant
5. The practice of growing plants on a large scale for food or other purposes

seed coat  
 germination  
 Dispersal  
 Eyes  
 Agriculture

**C. Answer the following.**

1. What is a seed coat? What is its function?
2. What is germination? List the conditions necessary for germination to take place.
3. Mention the different ways in which seeds get dispersed.

Recall and complete the concept map given below

Plants grow from

stem

Roots

seeds

leaves

Stages of agriculture

1 Field is ploughed

3 Seeds are sown.

4 Crops irrigated

6 Crops harvested

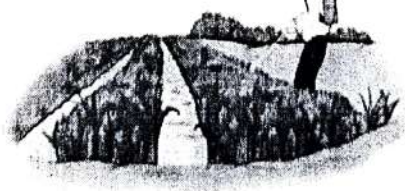
2 Manure and fertilizers added

5 Pesticides sprayed

LET'S OBSERVE



Arrange the different stages of agriculture in the right order by numbering them from 1 to 5.



6

5

2

1

Number the different stages of germination in the correct order from 1 to 5.



3

2

4

5

1