

DR. R. N. INTERNATIONAL SCHOOL

UNDER THE AGIS OF S. S. SITARAMSINGH EDUCATIONAL AND CHARITABLE TRUST
MOHANPUR, SITAMARHI- 843302

1. How Plants Grow

Word Meaning

- Embryo - भ्रूण
- Germination - अंकुरण
- Seed Coat - बीज आवरण
- Adequate - पर्याप्त
- Moisture - नमी/नमी
- Absorbed - अवशोषित
- Shoot (प्ररोह): पौधे का वह भाग जो मिट्टी के ऊपर उगता है
- Vegetative Propagation (कायिक प्रवर्धन): बीज के बिना तने, जड़ या पत्तियों से नए पौधे उगाना।
- Spores - बीजाणु
- Propagation Techniques - प्रसार की तकनीकें
- Stem Cutting (तना कर्तन): तने के हिस्से को काटकर मिट्टी में लगाना।
- Layering (परत लगाना/दाब लगाना): पौधे की शाखा को जमीन में दबाकर नई जड़ें उगाना।
- Grafting (कलम लगाना): दो अलग पौधों के हिस्सों को जोड़कर एक बनाना।
- Fuse - जुड़ना
- Seed Dispersal (बीज प्रकीर्णन): बीजों का एक स्थान से दूसरे स्थान पर फैलना।
- Competition (प्रतिस्पर्धा): जगह, धूप और पानी के लिए पौधों के बीच होने वाली होड़।
- Scattered (बिखरे हुए): चारों ओर फैला हुआ।
- Fibrous Husk (रेशेदार छिलका): नारियल का बाहरी रेशेदार हिस्सा जो उसे तैरने में मदद करता है।
- Bursting (फटना): फल का पककर तेजी से खुलना जिससे बीज बाहर गिरें।
- Agriculture (कृषि/खेती): भोजन और अन्य उत्पादों के लिए फसल उगाने का कार्य।
- Cultivating (खेती करना): फसलें उगाना और उनकी देखभाल करना।
- Tilling (जुताई): मिट्टी को ढीला करने के लिए उसे खोदना या उलटना।

- **Irrigation (सिंचाई):** फसलों को कृत्रिम रूप से पानी देना ।
- **Fertilisers (उर्वरक):** मिट्टी को उपजाऊ बनाने के लिए मिलाए जाने वाले पदार्थ ।
- **Pesticides (कीटनाशक):** कीड़ों से फसल बचाने वाली दवाएँ ।
- **Harvesting (कटाई):** पकी हुई फसल को काटना ।
- **Topography (स्थलाकृति):** किसी क्षेत्र की जमीन की बनावट या आकार ।

A. Tick (✓) the correct option

1. **How do some plants reproduce without seeds?**
 - Answer: a) Through stem cutting
2. **What is the main purpose of the seed coat?**
 - Answer: b) To protect the embryo
3. **Which method of vegetative propagation involves bending a branch to the ground?**
 - Answer: b) Layering
4. **Why do some seeds have hooks or wings?**
 - Answer: b) To help in seed dispersal
5. **What is the first step in agriculture?**
 - Answer: c) Land preparation

B. Fill in the blanks

1. **Germination** is the process through which a seed embryo transforms into a new plant.
2. Plants like sweet potato and carrot grow from their **roots**.
3. Stem cutting involves planting a piece of stem with attached **leaves or buds** in soil.
4. Some seeds are dispersed by **wind** when seeds float in the air.
5. **Irrigation** is essential in agriculture to provide water to crops.

C. Match the columns

Agricultural steps	Tools used
1. Land preparation	c) Ploughs and harrows
2. Planting	d) Seed drills
3. Irrigation	e) Sprinkler
4. Harvesting	a) Harvesters or sickles/knives
5. Spreading fertiliser	b) Fertiliser spreaders or sprayers

D. Answer the following questions

1. **What does germination mean?**

- Germination is the process through which a seed embryo transforms into a new plant when provided with adequate moisture, air, and suitable temperatures.

2. **Explain at least two methods of vegetative propagation.**

- **Stem Cutting:** Planting a piece of stem with leaves or buds into the soil to grow a new plant (e.g., mint).
- **Grafting:** Inserting a stem piece from one plant into another so they fuse and grow together (e.g., rose).

3. **Differentiate between layering and cutting.**

- In **cutting**, a piece of the plant is removed and planted separately. In **layering**, a branch remains attached to the parent plant while it is bent to the ground to develop roots.

4. **Explain various methods of seed dispersal with examples.**

- **Wind:** Lightweight seeds with wings or hair (e.g., dandelion).
- **Water:** Seeds that float (e.g., coconut, lotus).
- **Animals:** Seeds with hooks that stick to fur or seeds eaten and passed through waste (e.g., burdock).

- **Bursting:** Fruits that pop open when ripe (e.g., peas, ladyfinger).

5. **List the factors affecting crops in agriculture.**

- The factors include climate (temperature/weather), quality of soil, availability of water, and the topography of the land.

E. Label the parts of a seed

Based on the diagram provided:

- **Top label:** Seed coat (outer layer)
- **Middle label:** Stored food (large inner area)
- **Bottom label:** Embryo (small baby plant part)