

Plant Nutrition

These notes are your ultimate revision weapon to revise Plant Nutrition. We've distilled years of previous exam questions (PYQs) into one powerful, concise resource. Everything you need to know, nothing you don't.

- **PYQs, Decoded:** All key concepts from past exams, organized and simplified.
- **Revise in Record Time:** Short, precise, and designed for last-minute review.
- **Focus on What Matters:** Master high-probability topics and boost your confidence.

Plant Water and Nutrient Transport

Water Absorption and Conduction

- **Site of Absorption:** Root hairs are the primary site for water absorption.
- **Conduction Tissue:** Water is conducted throughout the plant by the xylem tissue.
- **Function of Xylem:** The main function of xylem is the transportation of water.
- **Girdling Effect:** Removing a ring of bark (girdling) around a tree base kills the tree. This is because the phloem, which transports food, is destroyed, starving the roots of energy.

Food and Nutrient Conduction

- **Conduction Tissue:** Phloem is the living tissue responsible for transporting organic nutrients (food).
- **Function of Phloem:** The primary function of phloem is the transportation of food.

Plant Nutrition and Nutrients

Essential Nutrients

Essential nutrients are divided into two categories based on the quantity required by plants:

- **Macronutrients:** Required in larger quantities.
 - Examples: Potassium (K), Calcium (Ca), Magnesium (Mg), Sulphur (S).
 - **Note:** Sulphur (S) is important for enhancing oil content in crops like mustard.
- **Micronutrients:** Required in trace amounts.
 - Examples: Iron (Fe), Manganese (Mn), Copper (Cu), Zinc (Zn), Boron (B), Chlorine (Cl).

Non-Essential and Special Cases

- **Non-Essential Nutrient:** Sodium (Na) is not considered an essential nutrient for plant growth.
- **Nodule Formation:** For nodule formation in legume plants (which house nitrogen-fixing bacteria), a specific nutrient like nitrogen or boron is **not** necessary. The process relies on a symbiotic relationship.
- **Assessment Method:** Crop logging is a method of plant analysis used to assess nutrient requirements for crop production.

Plant Adaptations and Interactions

Parasitic Plants

- **Example:** *Cuscuta* (Amarbel) is a parasitic angiosperm.
- **Nutrition Source:** It derives its nutrition from the stem of the host plant, not the leaves.
- **Contrasting Adaptations:** Other plants like the Pitcher plant and Bladderwort are insectivorous and are not typically classified as parasites in the same way as *Cuscuta*.

Know More About Plant Nutrition:

- [Plant Nutrition – Old Year Questions](#)
- [Plant Nutrition One Liner Questions & Answers](#)

