Seed Dispersal

Introduction to Seed Dispersal

Seed dispersal is the process by which seeds are transported away from the parent plant to new locations. The primary function of dispersal is to ensure the survival and growth of plants by reducing competition for resources such as space, sunlight, water, and minerals.

Importance of Seed Dispersal

- Ensures that plants spread over wide areas.
- Prevents overcrowding and competition among plants.
- Increases the chances of survival in different environmental conditions.
- Helps plants colonize new habitats.

Methods of Seed Dispersal

Seeds are dispersed through various agents, including wind, water, animals, and even self-dispersion mechanisms.

i. Dispersal by Wind (Anemochory)

Some seeds are carried to new locations by the wind. This is common in plants with light seeds, wings, or hair-like structures that help them float.

Grasses: Have very light seeds that are easily carried by the wind.

Dandelion: Has hairy growth resembling small parachutes, which help the seeds float and travel far from the parent plant.

Madar (Aak) and Sunflower: Have hairy fruits that are blown away by the wind to distant places where they germinate.

Poppy: The fruit sways in the wind, releasing seeds as they fall out.

Drumstick and Maple: Their seeds have wing-like structures that allow them to glide through the air to new locations.

ii. Dispersal by Water (Hydrochory)

Plants growing in or near water have seeds adapted for floating and water dispersal.

Water Lily: Seeds float on water and are carried away to new places.

Coconut: Has a tough, fibrous covering filled with air, enabling it to float on water and travel long distances before settling and growing into a new plant.

iii. Dispersal by Animals (Zoochory)

Some seeds rely on animals for transportation. These seeds often have special adaptations to attach to animals or attract them.

Seeds with Hooks or Spines: Such as Xanthium and Urena, which cling to animal fur or clothing and are carried to faraway places.

Edible Fruits: Animals consume fruits and excrete seeds at different locations, aiding in dispersal (e.g., berries and mangoes).

Storage by Animals: Squirrels and birds often collect and store seeds, some of which grow into plants if left uneaten.

iv. Dispersal by Explosion (Self-dispersal or Autochory)

Some plants have seed pods that burst open forcefully, scattering seeds away from the parent plant.

Pea and Bean Plants: Their dry pods split open with a sudden burst, throwing seeds to a distance.

Balsam: When touched, its fruit bursts open, ejecting seeds in different directions.