SARALA BIRLA PUBLIC SCHOOL

Birla Knowledge City, Mahilong, Ranchi

CLASS-VII, (2020-21)

Sub: Biology

(Assignment-2)

CHAPTER 1

TOPIC - **OTHER MODE OF NUTRITION IN PLANTS**

Most of the plants are autotrophs.Only a few plants adopt other modes of nutrition like parasitic and saprotrophic in which plants depend on the food produced by other plants.They use heterotrophic mode of nutrition. A few plants and all animals which are dependent on others for their nutrition are called **heterotrophs**.

PARASITIC MODE OF NUTRITION -

It is the mode of nutrition in which some plants twine around the stem and branches of the tree to take readymade food.The plant on which it climbs is called a **host**. Since it deprives the host of valuable nutrients,it is called a **parasite**.example- Cuscuta (Amarbel)

INSECTIVOROUS PLANTS

Plants that trap insects with the help of their modified leaves to obtain the supply of nitrogenous compounds from which they make proteins, are called **insectivorous plants**.They are green ,they can make carbohydrates through photosynthesis; example - **Pitcher plant** in which leaf is modified to pitcher like structure and the leaf apex forms a lid which can open and close the mouth of pitcher. Inside the pitcher there are hairs which are directed downwards.When an insect lands in the pitcher,the lid closes and the trapped insect gets entangled in the hair.The insect is digested by the digestive juices secreted in the pitcher.

SAPROTROPHIC MODE OF NUTRITION

The mode of nutrition in which organisms take in nutrients in solution form from dead and decaying matter is called saprotrophic mode of nutrition. Plants which use **saprotrophic mode of nutrition** are called **saprotrophs**. Example - Fungi

SYMBIOTIC RELATIONSHIP

Some organisms live together and share shelter and nutrients. This is called **symbiotic relationship.** Organisms that live together for mutual benefit are called **symbiont**. For example, certain fungi live in the roots of trees. The tree provides nutrients to the fungus and in return, receives help from it to take up water and nutrients from the soil.

Another example is lichen which have chlorophyll containing partner, an algae and a fungus. Both of them live together, in which fungus provides shelter, water and minerals to the algae and in return the algae provides food which it prepares by photosynthesis.

One more symbiont is there that helps to replenish nutrients in the soil i.e. Rhizobium bacteria that lives in the roots of leguminous plants like pea, gram, etc. The bacterium, Rhizobium can take atmospheric nitrogen and convert it into a soluble form; in return, the plants provide food and shelter to the bacteria. It is very helpful in farming.

Questions –

1. Are all the plants autotrophs? Give reasons for your answer.
2. Enlist the number of ways plants take nutrition except autotrophic mode of nutrition.
3. Read pg no. 6 and 7 of the ncert book for class VII and understand the useful and harmful effects of fungi. Tabulate at least five useful and harmful effects of fungi for us.
4. How is Rhizobium helpful in farming?
5. Give one example of insectivorous plant and explain the way it takes food.
6. Differentiate between saprotrophs and symbiont with one example each.
7. How is fungus helpful to the tree in which it lives?
8. Name the following: –

    i)the organism in which algae and fungi live together.

    ii)the plant in which the Rhizobium lives.

    iii) the gas that is converted into a soluble form by the Rhizobium.

    iv)the compound that insects supply to the insectivorous plant.

    v) the organism that feeds on dead and decaying matter.