

Lecture Sheet: 03 Science (Chapter-06: Transport in Organisms)

Class: IX

Translocation:

Translocation means a change in location.

Translocation in plants:

Translocation in plants represents the movement or flow of water and mineral salts and of the food produced in the leaves.



Xylem transports water and mineral salts from the roots up to other parts of the plant, while phloem transports sucrose and amino acids between the leaves and other parts of the plant.

1) Xylem Translocation



What does the flow chart below, indicate?	Ans:	nis Pericvcle	Leaf Xylem (Vessel) Stem
	Root		(Vessel)
Q. Describe how water reaches to the	leaves.		
	/		
		•••••	

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2) Phloem Translocation:

Phloem transports sucrose and amino acids up and down the plant. This is called phloem translocation.

Q. Describe how prepared food from leaves reaches to the different parts of the plant.



Translocation of organic solutes can occur in the following directions:

1) Downward Translocation:

It is the most common mode of translocation. The leaves manufacture food in excess of their own requirement. The excess food comes out of leaves and is translocated in the downward direction to stem and root system.

2) Upward Translocation:

In deciduous plants renewal of growth and development of new foliage are dependent upon upward transport of food from reserves present in the roots and stems.

3) Lateral Translocation:

It is little except when source and sink lie on the opposite sides.

4) Bidirectional Translocation:

Rabideau and Burr (1945) found that labelled carbohydrates moved out of the leaves in both upward and downward directions. The two types of translocation are believed by many workers to occur in different sieve tubes.



Q. Why is translocation important in plant?

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