**Course: Water Management in Horticultural Crops 2(1+1),**

**Class: 1st year, 2nd semester**

**Topic: Water Budget of India**

**Prepared by: Dr. Vikas Gupta, College of Horticulture, Rehli**

**Water Budget of India**

The average rainfall of India is 119 cm annually. When considered over the geographical area of 328 m ha, this rainfall amounts to 392 million-hectare-metre (m ha m). This may be rounded off to 400 m ha m by including the contribution of snowfall which is not yet fully determined. Out of the 400 m ha m of rainfall, 75% of it is received during the south-west monsoon period (June to September) and the rest in the remaining eight months. That means 300 m ha m received during monsoon season and 100 m ha m received during rest of the year. Out of 400 m ha m, 215 m ha m soaks into the soil infiltration, 70 m ha m lost as evapo-transpiration and rest of the 115 m ha m flowed as runoff. 105 m ha m rainfall and 10 m ha m snowfall contributed to form surface flow of 115 m ha m. Out of 215 m ha m water which is infiltrated in the soil, 165 m ha m water is retained as soil moisture and 50 m ha m stored as ground water. On full harnessing & mobilized of these water resources by 2025 AD.; it is envisaged that 70 m ha m of surface water and 35 m ha m of ground water can be mobilized for utilization. The projected use of this 105 m ha m of water is 77 m ha m for irrigation and 28 m ha m for domestic and industrial water supply and all other purposes.

**Different Types of Water Flow:**

1. **Infiltration:** It is a process of water entry into the soil generally through the soil surface and vertically downward.
2. **Infiltration Rate:** It is the rate of water entry into the soil when the flow is nondivergent.
3. **Seepage:** The slow movement of water through small cracks, pores, interstices etc. in the surface of unsaturated material.
4. **Leaching:** Downward movement of nutrients and salts from the root zone with the water is called Leaching.
5. **Percolation:** Vertical movement of water in the soil due to gravitational force under saturated condition.