

SOIL AS A COMPONENT OF ENVIRONMENT

We all know that our surroundings make up our environment. Our environment is composed of many biotic and abiotic components. Soil is one of the major abiotic components of the environment. Soil is the topmost part of the earth's crust which contains humus and it can support both plants and animals.

According to R.F. Daubenmire, "soil is the upper part of earth crust in which plants are anchored." He defines soil as weathered superficial layer of earth crust with which are mingled living organisms and products of their decay.

According to Raman, 1928 (German school), "soil is the upper weathering layer (i.e., layer subjected to physical and chemical changes) of the solid earth crust."

Soil consists of many minerals. The mineral constituents of the soil are derived from the parental rocks or regolith. They may be found in the form of particles of different sizes; from clay (.0002 mm or less in diameter) to large pebbles and gravels. The minerals represent about 90% of the total weight of the soil. Important elements which are found in compound state are Oxygen, Si, Fe, Al, N, P, K, Ca, Mg, C, H, etc. In soil, nitrogen comes from atmosphere in the form of nitrogen salts. Thus soil consist of nitrogen which is vital for the growth of plants upon which other organisms depend for food.

Soil also contains the humus which is actually derived from the organic dead remains which is highly helpful for the growth of plants and even it makes the soil highly porous.

The soil atmosphere contains three main gases, namely oxygen, carbon dioxide and nitrogen. In soil atmosphere, oxygen is 20%, nitrogen is approximately 79 per cent and carbon dioxide is 0.15 to 0.65 per cent by volume. In the cultivated land, percentage of CO₂ is much higher than that of atmospheric CO₂, but oxygen content in such soil is poorer than the percentage of oxygen in atmospheric air.

It can be said in conclusion that soil forms an inseparable part of the environment which contains gases, minerals, humus which is capable of supporting the plants and animals which indirectly binds up together the environment.