Soil Fertility and Physical and Chemical Properties

Introduction:

A soil is fertile if all the components of the soil is in it optimum level for a particular plant to grow. There are a number of factors that affect soil fertility, these include:

- Ph

- Aeration

- Temperature

- Moisture

- Stable site

- Essential elements

The fertility of the soil is therefore dependent on organic content, mineral particle, and pH and particle size.

Particle size

This affects drainage, water retention and air movement. Sandy soil tends to be easy to work although they offer no support to plant roots. They allow formation of root tubers. Clay soil is heavy and sticky and encourages root penetration. Loam soil is the most fertile of all the others. It promotes plant growth. They are well aerated drain freely and yet retain enough moisture and soil nutrients.

Mineral Element

These are mainly produced by weathering action on rocks. These minerals are taken up by being dissolved in water and through the plant root. These are macro-elements (required in large amounts) and micro-elements (required in small mounts). Soils are a reservoir for most of the essential elements for plant growth.

Organic content

Consists of the living organisms and humus. Humus is also a reservoir of elements needed by plants. It increases the water holding capacity of the soil and to some extent the amount of air space. It moderates extremes of soil temperature.