

MINISTRY OF EDUCATION
SECONDARY ENGAGEMENT PROGRAMME
INTEGRATED SCIENCE
GRADE 9

WEEK 13

LESSON 1

Topic: Terrestrial environment

Sub-topic: Uses of soil

Objectives: After readings and observing students will accurately

- Describe how soil is an ideal medium for growing plants
- Explain how the chemical properties of soil affect plant growth

Content

Why is soil ideal for planting?

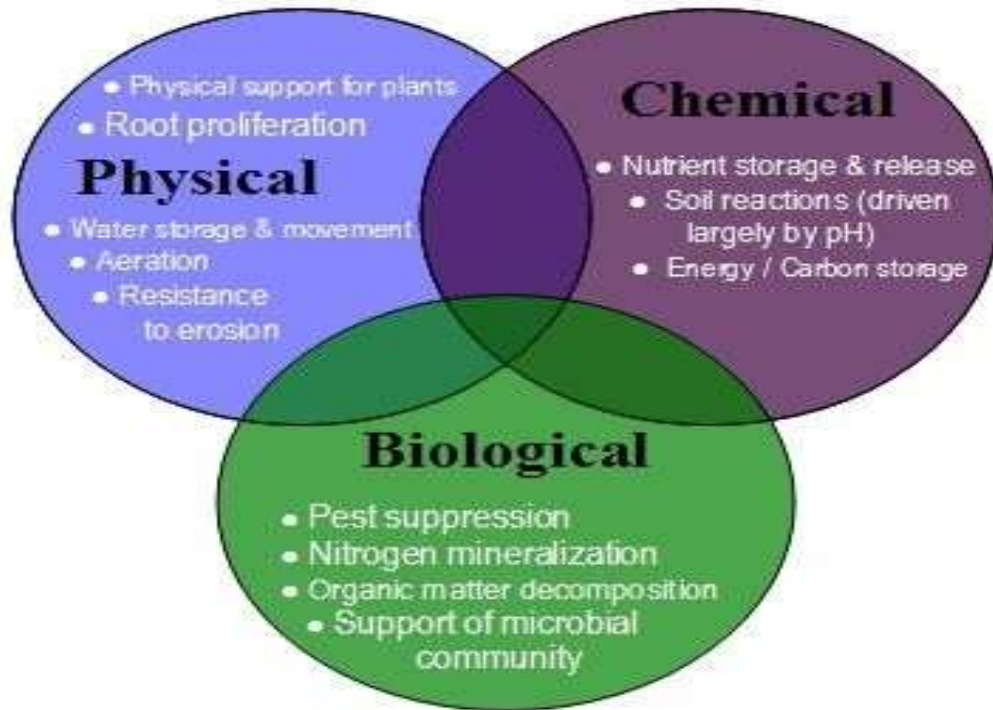
Soil is the foundation on which various plants such as shrubs, grass, vegetables, fruits, trees, etc. grow. Soil not only holds the plants firmly on the ground but also provides all the essential nutrients to the plants to grow and thrive. The health of the plant is directly related to the quality of the soil. Therefore, it is crucial and important to choose the right kind of soil for the plants that you wish to grow.

The type of soil you choose for your plants will also depend on where you plan to grow the plants. For example, big potted plants in your patio or large pots require more nutrient-rich soil than the plants that are planted in your lawn. The potting soil contains special components that prevent under-watering or over-watering in the plants. Make sure you invest in good quality soil as sometimes the cheaper options may not be able to provide ample nutrients to the soil.

Chemical properties of soil

Behavior of Nutrients in Soil

Soil chemical properties are important in planning fertigation; pH has a great effect on the availability of residual nutrients in the soil as well as on those added via fertigation.



Venn diagram comparing characteristics of soil

Homework

- List some other chemical properties of soil.

References

Bernard, Myrna et al (2003) Science in Daily Life Book 3 (Unit 5) Ministry of Education
<https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/soil-chemical-properties>