

Perspective

Different types of soil used for plant cultivation

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ABOUT THE STUDY

Soil is defined as the organic and inorganic materials on the earth's crust that provide a medium for plant growth. It gradually evolves over time, is made up of various materials, and varies due to its composition and structure. It is essential for the long-term viability of an ecosystem because it acts as a natural medium for vegetation growth. Soil is classified as a non-renewable resource, and its formation is a slow process. Soil types include sandy soil, silty soil, clay soil, peaty soil, saline soil, and loam soil.

Types of soil

Sandy soil: The largest particles are found in sandy soil. When touched, it feels gritty and dry due to the large spaces between the particles, and it will not be able to hold water. Water drains quickly and directly to places where the roots, particularly those of seedlings, cannot reach. Plants have no chance of utilizing the nutrients present in this soil since they are carried away by runoff. The top side of the sandy soil is light to work with in the spring and also warms quickly. The soil type is assessed by moistening the soil and rolling it into a ball to determine the predominant soil particle. When wet sandy soil is rolled between our palms, there should be no ball formation and it should crumble easily through our fingers. Sandy soil is composed of tiny particles weathered from rocks. It's also low in nutrients and water retention, making it one of the worst types of farming soil.

Silty soil: Silty soil is smaller in size, smoother, and becomes soapy slick when moistened. When we roll silty soil between our fingers, it gives dirt on our skin. Silt, as opposed to sand, has smaller particles. It also has rock and mineral

fragments in it. Because of its fine texture, it also holds water better than sand. Because of the aforementioned properties, it is also beneficial to agriculture.

Clay soil: Clay soil has the smallest particle size and good water storage properties. Due to the obvious tiny size of its particles and their tendency to settle together, only a small amount of air can pass through its spaces. Because of its slower draining tendency, plant nutrients will be tightly held, and thus this soil is rich in plant food for better growth. The smallest particles are found in clay. Because the particles are so closely packed, there is very little or no airspace. As a result, this property efficiently retains moisture. However, moisture and air permeation become difficult, limiting plant growth.

Peaty soil: The peaty soil will be either black or dark brown in colour. It compresses easily due to its high water content and feels soft when touched; it is also high in organic matter. These soil growers use it to control disease by governing pH levels or soil chemistry, and it also contains acidic water.

Saline soil: Because of its high salt content, this soil is usually brackish in extremely dry conditions. Saline soil can harm and even halt plant growth, make irrigation difficult and impede germination.

Loam soil: Loam soil is said to be the ideal type of soil for gardens and gardeners. This soil contains a balance of three materials: silt, clay and even with hummus, and sand. It will have higher calcium and pH levels due to its previous organic matter content. This soil is dark in colour, dry, and crumbles while touched. The air moves freely down to the roots between the soils particles.

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