Topsoil in Our Food System

Soil is a nonrenewable resource

Soil is composed of both living and nonliving elements. Soil contains air, water, and minerals as well as plant and animal matter. Organic matter such as leaves, dead plant material, and decaying organisms contribute to the living components of soil.



Farming practices like strip cropping, contour planting, low- or no-till farming, and cover crops are all examples of practices designed to conserve and improve our soil

Organic layer includes leaves, dead plant material, and decaying organisms. <u>Topsoil</u> is the upper layer of soil and the most nutrient-rich layer.

<u>Eluviation Layer</u> includes leached minerals and broken down organic matter. <u>Subsoil</u> includes deposited minerals and metal salts.

<u>Parent Material</u> includes disintegrated or partly weathered rock material. <u>Bedrock</u> includes a hard layer of rock beneath looser rocks and soil.

Topsoil distribution is impacted by climate and geoscience processes.



Ecosystems in hot, dry regions have limited plant growth and animal life. These regions also have limited topsoil depths.



Ecosystems in temperate or subtropical regions with adequate or abundant rainfall have more topsoil due to additional plant and animal life. There is a direct correlation between soil depth and where food is grown. Can you figure out what it is?

U.S. Depth to Bedrock Map



Geoscience processes like surface weathering, deposition from water, ice, and wind, and geochemical reactions impact soil formation.



