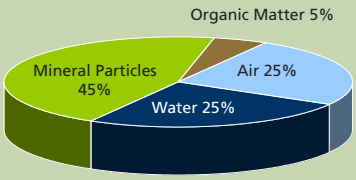
Tree Specialists, Inc.

Conservation | Preservation | Restoration



Soil Management

Soil isn't just dirt. It contains air, water, dead organic matter, and various types of living organisms. The formation of a soil is influenced by organisms, climate, topography, parent material, and time. Most of our New England soils are nutrient deficient. Tree Specialists recommends soil testing, which enables us to identify and apply materials that are needed for your landscape's optimal plant health. Healthy soils grow healthy plants!

Tree Preservation: Rooted In Science

Caring for the quality of the soil is a critical component of landscape maintenance, particularly for plants that are under stress from construction, drought, insect/disease infestation, or simply old age. Healthy soil is a composite of mineral particles, organic matter, water, and air. It also contains a living element that includes thousands of species of bacteria, fungi, insects, and worms. This living element is responsible for breaking down the organic matter in the soil, releasing the trapped nutrients that nourish plants.

Remember: 50% of the plant is below ground

Soil microbes and the roots they feed require adequate moisture and air for optimum growth and development. Construction equipment, vehicular and pedestrian traffic, and even lawnmower use can compact the soil structure resulting in sterile, droughty soils. Harsh synthetic fertilizers and chemicals intended to kill unwanted pests in your lawn can also reduce healthy microbial populations.

To restore soil health we recommend:

Soil testing

Lab testing is the only way to identify which nutrients are deficient, and also yields important information about soil depth, texture, pH, and organic matter content. Most of the soils in our region are deficient in magnesium, calcium, and boron — critical for good plant nutrition but rarely included in the fertilizer formulations typically used by homeowners and landscapers.

Bio-Stimulants, Compost Teas

These are products that supplement and nourish the living element of a soil. Disturbed, droughty, or compacted soils generally lack a healthy microbial population. These natural organic products contain important food materials that help nourish and multiply these organisms. Compost Teas actually contain the living microorganisms themselves and can provide a rapid boost for struggling plants. Research also indicates that these materials can provide natural protection from insect and disease damage.

Soil De-compaction and Rejuvenation

For trees and shrubs that are suffering the effects of soil compaction, we utilize a specialized tool called an Airspade. This tool uses compressed air to break up the soil without causing significant injury to existing roots. We can then integrate compost into the backfill, effectively changing the soil environment in which the plant is growing. This technique is especially useful for treating trees that have been affected by construction activity.

Mulching

Mulching is one of the best ways to improve plant health. When properly applied, mulch can:

- *reduce water loss from the soil*
- *moderate soil temperature*
- *minimize weed competition*
- *improve soil structure*

In order to get the full benefits of mulch, we suggest using a quality product such as our Forest Floor Mix. This material most closely resembles the forest floor environment that most woody plants are adapted to. For more information, see our fact sheet on mulching.

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