

Soil is Alive!

Healthy soil is not sterile soil. Healthy soil teems with life. Fungi, bacteria, microbes, and insects large and small live in the soil, and without their presence plants would be hard-pressed to survive. The living constituents of the soil break down organic matter to provide nutrition and minerals, aerate the soil, help retain soil moisture, and provide your plants' roots with a healthy environment.

Protect your Soil

Never overwater—doing so will leach out beneficial constituents like nitrogen and phosphorous, as well as drown living organisms such as worms

Avoid Compaction—compaction kills beneficial organisms, damages plant roots, and reduces interstitial air spaces required for life by roots and beneficial organisms

Eliminate Erosion—soil is valuable when it's on your property, NOT when it's in the stream or on the sidewalk.



References:

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Using Manure and Compost as Nutrient Sources for Fruit and Vegetable Crops; Carl J. Rosen and Peter M. Bierman
Department of Soil, Water, and Climate, University of Minnesota,
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<http://blogs.extension.org/mastergardener/emg/soils-2/>

For more information
visit the Master Gardener
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Soil Identification *and* Improvement



Soil Identification and Improvement

Garden and Yard Health

The vigor and beauty of your garden, lawn, flowers, and trees is dependant on the health of the soil you build and provide for them.

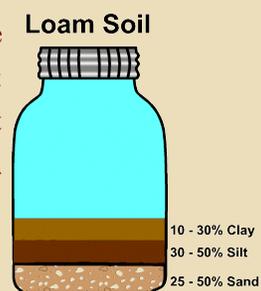
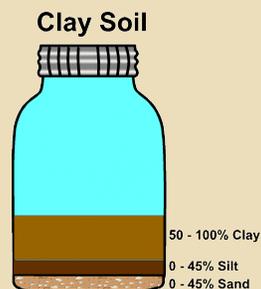
Successful long-term growth cannot be accomplished without your involvement and care.

Soil Texture

Soil types vary greatly across our county, and usually vary even from one part of your property to another. Walk around with your trowel and dig holes in various spots. Do you see gravel? Sand? Clay?

Knowing your soil type is the first step to improving your gardening. After determining whether you have loam, clay, or sandy soils, you may either choose plants that will thrive in that soil or amend the soil to suit the plants you want to grow.

Instructions for performing a “jar test” are available



online.

Dirt vs Soil

Dirt is dead. Dirt has almost no value. Dirt cannot sustain healthy life.

Soil is loaded with nutrients and living organisms. Soil supports life within it, such as fungi, bugs, and bacteria, and healthy soil supports life growing from it, such as plants and trees.

Dirt lacks organic matter, and it's the organic matter that supports the circle of life in the soil. As a plant grows, it is fed by the organic matter, and when the plant dies, the organic matter is returned to the soil. Bugs and other (even tinier!) organisms break down organic matter, making nutrients available for new plant growth.

Nutrient and pH Testing

Testing is performed by a certified lab and generally costs less than \$50. Testing fees are offset by the savings accrued in not buying the wrong amendments or not over-applying the correct amendments. The lab will alert you to problems with pH and nutrients, and will recommend specific additives and application rates.



Composting

Compost is the very best and also the least expensive way to improve poor soils. Compost improves the aeration in clay soils, improves water retention in sandy soils, and adds nutrients and minerals to all soils. Compost brings in the beneficial bacteria, fungi, protozoa, and nematodes required to grow healthy plants and trees. Growing your own compost eliminates worries about what goes into your garden. It also eliminates transportation and purchase costs. Composting can really be as easy as tossing all your plant-based food waste into a pile and letting it decompose on its own.

Composted manure is another invaluable addition to your soil, but is more easily over-applied than other types of compost, sometimes resulting in “burned” plants.

No matter which compost you use, apply at appropriate rate for the plants you grow.

