

Compost Brings Life

by Skip Richter, Travis County Extension Director

We tend to think of our soil based only on its texture and mineral content. Yet a fertile garden soil is literally teeming with life. Billions and in fact trillions of tiny organisms can be found in a spoonful of rich garden soil. Bacteria, actinomycetes, fungi, protozoa and a host of other organisms live in healthy soil.

As we add composted leaves, grass clippings, manure, and other forms of organic matter to the soil these organisms go to work, breaking the materials down into hu-



mus and releasing their nutrients to the growing plants. Living things eat and excrete, they exchange gases from one form to another, they excrete substances into their immediate environment that increase nutrient availability and enhance plant growth. In short, they change their environment. When you add compost or material that can become compost the soil literally comes to life.

Heavy clays become looser and more friable as their structure improves. That clod of dry clay soil that is as hard as a chunk of concrete will instead be a clod that easily breaks apart in your hand. Organic matter interacts with a clay soil to turn the solid mass into loose clumps of particles grouped together like popped kernels in a bowl of popcorn. Aeration is improved, internal drainage is enhanced, and roots are able to more thoroughly fill the soil and mine its nutrients.

Sandy soils cannot hold water and nutrients very well at all. Like crushed glass everything just runs right through a sandy soil. Compost can improve this problem too. Think of organic matter in a sandy soil like tiny sponges mixed in with the finely crushed glass. The soil can now hold water and nutrients for plants to use days and weeks later.

Plants were designed to live with their roots surrounded by the decaying materials they produced in

previous seasons. Like the forest floor or the soil surface in a meadow these materials provide the fuel for soil life that in turn feeds plants.

Compost builds soil. It feeds microbes, earthworms and other organisms that in turn feed our gardens. Soil built with regular additions of compost gets more fertile each



year. These microbes produce glues that hold the particles together into loose clumps, acids that wash over the mineral components releasing more nutrient elements, and growth promoting substances that supercharge plant roots. Some microbes even take nitrogen from the air and turn it into free fertilizer for your plants.

After a few seasons of adding compost I find the need to fertilize limited to occasional slight corrections and perhaps the use of a starting solution for new transplants. Nutrient imbalances in a purely mineral soil can cause some dramatic negative symptoms. In a soil high in organic content they are seldom noticed. All the macro and micronutri-



ents from the leaves, grass clippings and other materials are now available to the growing plants.

As Extension Horticulturist I've exhorted gardeners to add organic matter countless times as a solution to a variety of soil ills. Yet despite seeing it work miracles over and over, I still marvel when I see it again. Compost doesn't completely eliminate the need for supplemental fertilizing especially for some heavy feeding plants. But it is the foundation of a healthy, productive garden.

Remember, when you feed your soil with compost, the soil microbes will feed your plants.

Leaf mold from the forest floor is rich in nutrients

Well-worked soil enriched with compost