

The Curse of Clay Soil...?

When the city moved our historic family home out of the path of destruction, they said they would replace anything we had but would not give us anything new. They lived up to their deal, recreating our hidden bootlegger's cellar, digging a garden well, and seeding a lawn. Unfortunately, mature trees didn't come with the deal, nor did our fabulous loamy soil that had been amended by family gardeners for the past seventy years. When grandma shucked corn, all the husks stayed right in the garden. After supper, vegetable scraps were flung out into the same area. Back then we thought that was rather primitive; now that it's called composting, many of us do it. It certainly produced lovely soil.

When we went around the room in master gardener class identifying our soil types, I was among very few who could smugly say, "Sandy loam." I think it could only have been from the amendments that the soil was so good, because across the road, behind the greenhouse, dad talked about having "nosebleed soil." That was one I hadn't heard about before so I asked what he meant. He said the soil had so much clay that it stuck to your shoes. So much stuck to your shoes, in fact, that by the time you crossed a field you were at such a high altitude it would give you a nosebleed.

Well, now we're on that side of the street. We have a yard made up of fill dirt and clay. This is the stuff that after you dig a hole and put in the plant (which pitifully struggles and tries to retract its roots) you don't sweep the soil back into the hole. Instead, you pick up the chunks and try to fit them in around the plant without mangling it. It's awful. We planted three squash plants. One was dead by the next day. The stuff is killer. My inclination is to say, "We need compost!" The mantra around here is, "If it's too clay, compost helps; if it's too sandy, compost helps."

I decided to do some research, and I found out that compost is the correct answer. However, it's not the only answer. A big factor is not to work clay when it's wet. That causes it to clump into irreducible boulders. I also learned that clay is composed of tiny particles that not only stick together, but also have an electrical charge that causes necessary minerals to bind to them. That means that clay soil is much richer soil than sandy soil. It's a good thing! So by continuing to add organic material and work it in when the soil is dry, I can wind up with some really good stuff. And then, when a nice friability is reached, I should stop tilling and just top dress from then on.

Compost can be made from lots of different things: earthworm castings, desalted kelp, the growing medium left behind after mushrooms are harvested, aged manure from herbivores—not dogs or cats, grass clippings, shredded leaves, vegetables scraps. Our *Back to Earth* Compost is made from cotton burr. A cotton burr is the bud leaf or sepal of the cotton plant. It is a natural waste product of the cotton gin. Cotton burrs are rich in carbon and protein. They also contain significant amounts of plant macro and micro nutrients.

This compost is especially good at breaking up clay soils because the coarse texture of cotton burr compost creates large pore spaces in the soil. The high food value of cotton burr compost results in a rapid increase in the beneficial soil organism population. It is these organisms that break up the clay.

It holds as much moisture as peat moss, but, unlike peat moss (that sheds water when it has gotten really dry), this compost is easy to wet and rewet. It can significantly reduce the amount of water necessary to maintain a healthy growing environment. Cotton burr compost is highly endorsed by Organic Gardening for Life. And because this compost is maintained at temperatures approaching 160 degrees for four months, insects, weed seeds and harmful organisms are "cooked out." Apparently the only time not to use compost is in the hole when planting a tree. Studies have shown that tree roots can find it so comfy in the compost, they won't venture out into the nasty surrounding soil and they never get really sturdy. It is okay to top dress with compost after the hole is filled, but don't put it up against the trunk.

Maybe my clay soil isn't going to be such a curse after all. If I till in enough compost, add a cover crop in the fall and cut it down a few weeks before planting to let it add bio-mass to my garden, I should be able to ensure soil into which the plants want to sink their roots!