Creating Soil for Your Garden Beds

Our local Florida soil is terrible for growing vegetables. It has very little fertility because the topsoil is lighter than the underlying sand and the topsoil gets washed away during heavy downpours. The sandy soil is a wonderful breeding ground for root knot nematodes – tiny worms that seriously damage certain vegetable roots.

Therefore if you want good gardening soil, you either have to buy it or create it. Buying enough quality soil is a very expensive proposition, especially if you're trying to fill a raised bed. You can create your own rich soil at a fraction of the cost. It's a labor-intensive process but your plants will thank you for it and you'll reap bountiful harvests.

One method you can use to create "soil" is called lasagna gardening or sheet mulching. Basically you gather a variety of waste materials such as the following:

Compost

Spanish moss, coarsely chopped so there aren't huge clumps

Plain brown cardboard, with all tape and stickers removed

Straw or hay

Dried grass clippings

Composted horse, chicken or rabbit manure

Partially composted oak leaves

Pine bark fines

Seaweed

Yard weeds

Depending on the size of your garden, you may need to gather your materials in bulk – black trash bags and wheel barrows full of this stuff.

Your base layer is made up of sheets of cardboard. Then you start spreading 1" thick (approximately) layers of alternating materials. It's best if a layer of soil-like compost or composted manure gets placed between the layers of other softer types of materials. That's so that there will be better structure to anchor plant roots.

A note about compost: once compost completely breaks down, it forms a sort of muck that doesn't allow for much aeration in the root zone. It's best to stir some perlite (a volcanic rock) into the compost to establish better aeration and drainage. Perlite is available at many large garden stores. Try to mix 1 part perlite to 9 parts compost.

O.K. Now you've gathered all your materials. You added some perlite to your compost, you shredded your cardboard and you cut up the Spanish moss into more manageable clumps.

Here's a diagram of how you could make the layers of your raised bed:

Hay

Compost

Shredded Spanish moss

Composted horse manure

Old oak leaves

Compost

Shredded cardboard

Composted horse manure

Yard weeds

Compost

Flat sheets of cardboard

These layers would create a raised bed with a depth of approximately eleven inches. After a week you'll notice that the soil level in your raised bed has started to subside. Be ready to add one more layer of compost topped off with some hay for mulch. Before each planting season you can build up the soil level in your raised bed and reinvigorate the soil by adding a couple of fresh lasagna layers.

Why this works: The reason this system works so well is that it mimics the layering of organic debris that builds up over years on a forest floor. The layers create a balance of aeration and moisture for plant roots and microbial life. The roots are able to find all the nutrients they need from among the different layers. Earthworms love these materials and will quickly arrive in large numbers to further aerate and enrich the living soil.