

Happy Soil = Happy Garden



Every farmer knows that their crop is only as good as the soil it's grown in. That's why for thousands of years, farmers have added organic matter to their farm fields. The rules haven't changed much since then.

Garden Soil Starts With Sand, Silt, or Clay

The properties of your soil are heavily influenced by the mineral particles it is made of: Sand, silt, or clay. Ideally you want a mixture of soil particle sizes, with sand being the largest, silt being smaller, and clay being smallest. Big particles like sand make your soil loose, which is good but only in moderation. Too much sand and water drains out of your soil, taking nutrients with it. Small particles like silt and clay help your soil hold onto water and nutrients, but clay can also let your soil pack hard so water and nutrients can't get into it in the first place. Thus a mixture is good.

Unfortunately, we are seldom so lucky as to have the perfect mixture. So we have to add other things to give our soil the properties we want. The natural soil on the valley floor in our area of the Willamette Valley is a hardpan clay, which has some good properties but needs to be amended to make up for its shortcomings.

Good Soil Breathes

The bad news about clay is that it packs so densely that neither water or air can move through it, and when it dries out it becomes hard as concrete. Plants need both air and water around their roots, so our major goal when improving our clay based soil is to loosen it up.

We do this by adding organic matter, preferably organic matter with a rough texture or high fiber content to hold open spaces in the soil. So pure composted chicken manure is not a good idea, but ground up and composted wood fibers mixed with other organic matter works well. The fact that these are organic matter instead of simply mineral particles (like sand) has other advantages, as you will see below.

Good Soil Retains Water and Nutrients

The good news about clay is that if we can loosen it up enough to make it permeable, it's pretty good at holding on to nutrients. By "holding on" I mean "holding lightly", so plants can take the nutrients up when they need them. If that sounds kind of magical it's not – it's actually something called "cation exchange capacity" ("cation" pronounced "cat eye-on" if you want to impress people at cocktail parties). If you want you can look that up to understand how the chemistry works.

The reason we especially like to add organic matter is that it improves the texture of the soil, and also adds nutrients that become available to plants as the organic matter decomposes. Even better, decomposed organic matter (humus) has similar nutrient and water retention properties to clay without the difficulties of compaction and impermeability.

Nutrients Get Used Up

Like any other food, organic matter used as a nutrient source gets eaten up by plants and must be replenished. This is why farmers add organic matter to their soil every year. Not only do the nutrients get absorbed, but the fibers eventually decompose and lose their structure so they become less effective at loosening up your soil. So if you want your garden to stay productive, add more to it every year.

Organic Matter Is the Secret Sauce

As you can tell from all the times I've mentioned it above, adding organic matter to your soil is the secret sauce that leads to success in your garden. It loosens up your soil, it adds nutrients, and it helps your soil hold on to water and nutrients until plants need to absorb them.

So Amend Your Soil Every Year

The easiest way to get organic matter to add to your soil is a prepared "soil amendment". These are mixtures of the right kinds of organic matter to give you both texture and nutrients, already composted so the nutrients are available to your plants. Our most popular soil amendment is **Harvest Supreme**, which contains composted ground up wood fibers and 15 percent composted chicken nature. Add it every year!