

Best Soil for Planting: Garden Soil Basics



Soil is a key component to a beautiful and productive garden. Healthy soil for gardens provides plants with nutrients, water, and oxygen, and allows helpful biological organisms to thrive. Good garden soil can help reduce or slow runoff and helps improve water infiltration. Better water infiltration and drainage is important because waterlogged soils aren't conducive to plant growth.

Good soil increases the chances your plants will not only thrive, but will live longer. It also reduces fertilizer needs. Spending time improving your soil will have rewarding payoffs.

When it comes to working with existing soil, adding topsoil, or working with a potting mix, what may be best? We share the basics to help you make the best decisions for your garden beds and containers.



What to know about soil in your lawn or gardening beds

Most soils have three distinct layers: the surface or topsoil, the subsoil, and decomposed rock as the lower layer. They vary in depth. The top layer is usually darker than the other two layers. It is what you need to focus on. Even if you start out with poor soil, it's possible to improve it by adding organic matter.

Soils vary from region to region across the country and even within individual states. They typically contain sand, silt, and clay, and the amounts of each vary depending on where you live. If you live in the part of the country that has rich, loamy soils, consider yourself with a head start in growing healthy plants. For the rest of us, adding organic matter on a regular basis will work wonders in building a healthy soil that will keep plants happy.

It's one thing to mix in organic matter to new garden beds when you don't have to be concerned about disturbing plant roots, but what about existing beds and lawns? For existing beds, simply add a one-inch layer of organic matter around the base of plants without disturbing the roots. The organic matter will settle into the ground and enrich it. For existing lawns, they also can benefit from a thin layer, about an inch, of very fine particulate organic matter, which will work its way into the ground.

Build better soil with organic matter

Organic matter is the go-to ingredient for improving soil, whether the soil is on the sandy side or is heavy clay. Organic matter helps sandy soil better hold moisture and nutrients and it helps loosen clay soil and facilitates better drainage.

Organic matter is any plant or animal residue that has decomposed beyond recognition. Cow manure, for example, that has completely broken down and is soil-like in texture is one example. Other organic material includes wood chips (the smaller the particles the better), compost, mushroom compost, worm castings, and mulch. While organic material can often be purchased in bulk or in bags, don't overlook what may already be in your landscape. Grass clippings and shredded leaves can be used to add nutrients to garden beds.

To build your soil, plan on putting down about an inch of organic matter every year in and around your garden beds. If you have lots of leaves in the fall, shred them up with your lawn mower and then add them to shrub beds. They will decompose, adding nutrients to the soil.

Little by little, by adding organic matter to your garden beds every year, you will be building good soil.

Considerations when purchasing topsoil

Purchasing large bags or a load of topsoil to fill in low spots can be an option but may not be the best suited for growing grass or other plants. Many areas have topsoil suppliers that have blends of topsoil and compost or other amendments, which will likely be more desirable for your garden than topsoil only. Ask your local extension office for a list of reputable sources.

It's important to know what you're buying. The University of New Hampshire Extension recommends asking your supplier about the source of the topsoil. Ask if amendments have been added and, if so, what the "recipe" is. Any reputable garden center or other supplier should be able to provide you with a soil analysis of bulk material or it should be on the label of purchased bags. New Hampshire Extension recommends a pH between 5.5 and 7.5. They also advise that when purchasing in bulk you inquire whether the loam has been screened because unscreened can be full of rocks and roots. Keep in mind that if you purchase **topsoil only**, you will likely need to add organic matter such as compost, shredded chips, or another organic material.

Get your soil tested

Soil that has been built with lots of organic matter may also reduce fertilizer costs. The best way to check the soil chemistry of your soil is to do a soil test. Soil test kits are usually available through your county extension office. Check with local county government for contact information. In some states the kits are free and in others there may be a nominal fee.

The soil test kits will come with instructions on how to take a sample. Typically, it is best to dig small amounts of soil from 10 to 12 different places in your garden and then mix the soil together before placing into the sample box. You will need to specify what will be grown, for example turf, vegetables, or flowers. Take the soil sample box to your nearest extension office or mail to the state lab specified on the instruction sheet that comes with each box.

The soil test kit results will provide information on the pH of your soil, whether it's acidic or alkaline. The results will also make recommendations on how to balance the soil chemistry for optimal fertility and nutrient uptake by plants.

If you are a new gardener who has not tested your soil recently, it is well worth the time and money to do so. If you have not tested your soil in several years, it may be time to do so again. Plan on testing your soil every year for three or four years until you have reached a point where you are comfortable with consistent tests that show your soil chemistry is in balance.

Bed preparation

A **garden bed** is often the better route to go when planting in the landscape rather than digging small holes. A garden bed facilitates better root growth. As you start preparing garden beds for planting, keep in mind that extra attention to the **soil** will reap benefits. Cultivate the soil thoroughly by loosening it and breaking it up, removing any weeds or stones. Give the soil a boost by adding organic matter such as humus, compost, cow manure, or other amendments. Mix thoroughly into the bed. After you add plants, plan on adding a one-inch layer of mulch around the plants that will decompose through the season.

Repeat the process

If you repeat this process every year, you will be well on your way to building rich, fertile soil that plants will love.





Soil for containers

When it comes to filling **your containers** with soil, bypass adding soil from your garden beds. It likely will be too heavy and will not drain adequately in a container. Instead, use a commercial, **all-purpose potting mix** that has been formulated to perform well in containers by draining well and allowing air flow to roots.

Specialty soils

Most potting mixes will work for most plants. However, plants such as succulents often like a sandier soil. Look for a specialty potting mix specifically for them. Orchids and African violets are a couple of other plants that may prefer their own specialty mix.