

Use Compost to Improve Soil Structure

Compost is a mixture of partially decomposed plant material and other organic wastes used in gardens to improve soil structure by amending soil and fertilizing plants. Good garden soil is loose and has a high water-holding capacity with adequate drainage, characteristics that the addition of compost can improve in heavy clay soils. Compost also absorbs water and improves the water-holding capacity of sandy soils. The addition of compost to garden soils before planting in spring is an excellent way to improve soil texture.

Decomposing compost will also slowly release plant nutrients. Unless applied in very large amounts, compost won't provide all the nitrogen highly productive crops require. Organic gardeners can supplement compost applications with manure to produce good yields without the addition of other fertilizers. Making and using compost allows gardeners to recycle garden wastes and reduce the burdens of trash disposal.

Most organic materials will decompose, but not all belong in compost piles. Yard wastes, such as leaves, grass clippings, straw and non-woody plant trimmings can be composted. Kitchen wastes such as vegetable scraps, coffee grounds and eggshells also may be added. Sawdust may be added in moderate amounts if additional nitrogen also is added. Meat, bones, grease, whole eggs and dairy products shouldn't be added because they can attract rodents.

To save space and keep the yard looking neat, contain compost piles in holding structures such as trash cans or wooden boxes. Non-woody materials such as grass clippings, crop wastes, garden weeds and leaves work best in these systems.

Decomposition can take from six months to two years, depending on how actively the pile is managed. In a passive pile, finished compost will be found near the bottom and partially decomposed materials near the top. Once the compost at the bottom is finished, it can be removed and used.

A compost pile should be large enough to hold heat and small enough to admit air to its center. The maximum dimensions should be five feet tall by five feet wide and as long as needed. Moisture content should be 40 to 60 percent. The material needs to be damp to the touch, with just a drop or two of liquid being released when it's tightly squeezed by hand. To build a compost pile, start with a four to six inch layer of coarse material set on top of the soil. Next, add a three to four inch layer of damp, low carbon organic material such as grass clippings. On top of this, add a one inch layer of garden soil or finished compost. This layer will introduce the microorganisms needed to break down the organic matter. Repeat layering until the bin is full.

Maintenance of the pile involves turning and adding water to maintain conditions conducive to the composting process. The temperature will increase rapidly to about 110 degrees. After a week, open the bin and loosen compacted material. Then reconstruct the pile; material previously on the top and sides of the pile should be moved to the center. Turn the pile each week until it cools off and decreases to about one-third of its original volume. Finished compost is dark, crumbly and has an earthy odor.

If you don't have room in your landscape to create your own compost, then buying bagged compost at your local nursery or garden center is a good option.