

The Benefits of Mulch in Your Landscape



Mulch volcano higher than a shopping cart. Top: Removing a mulch volcano reveals girdling roots years after planting. Right: Pile of arborist chips.

If you are looking for something to do in your landscape that will be highly beneficial, mulching your plant beds may be the best investment you can make. Organic mulches will improve the health of your landscape by reducing weeds, maintaining soil moisture, modifying soil temperature, reducing soil erosion and encouraging the biodiversity of the soil.

Most weed seeds need sunlight to germinate. A layer of mulch two to four inches deep will keep many weed seeds from germinating. If the mulch is coarse-textured, weed seeds that land on the top of the mulch will not likely germinate because of inadequate moisture at the surface. If there are persistent, perennial weeds present, they may need to be controlled with an herbicide or pulled by hand before applying the mulch. Weeds such as nutsedge, dollarweed, Florida betony and Bermudagrass will not be inhibited if mulch is placed over them.

A layer of mulch will help maintain soil moisture. Unmulched soil loses moisture through direct evaporation. If the soil is mulched, it blocks the sun's rays and greatly reduces the loss of moisture through evaporation. Landscape beds that are mulched will require much less irrigation, which saves on your water bills.

Mulch also modifies soil temperature. Mulched soil will be cooler in the summer and warmer in the winter. The moderate soil temperatures enhance root growth and reduce plant stress.

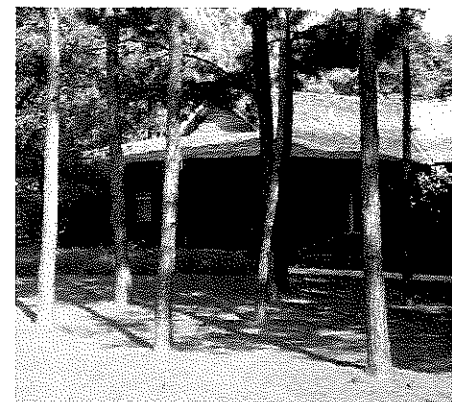
Mulch helps reduce erosion in several ways. First, it absorbs the energy of raindrops that could dislodge soil particles. By encouraging root growth, the root network also holds the soil in place at the surface. Water will also penetrate the soil easier because the soil will not form a crust when under mulch.

Mulch encourages the development of many beneficial soil microorganisms and earthworms, which use mulch as a food

source. As the mulch is broken down, it adds plant nutrients to the soil. The earthworm activity further aerates the soil to enhance air and water penetration. Large populations of beneficial microorganisms help suppress the populations of harmful ones.

Trees planted in turf areas will be much healthier and grow much faster if you get rid of the grass and add mulch out to the drip line of the tree. As the tree grows larger, continue to increase the area of mulch out to the drip line. After several years, when the tree is well-established, shade-loving plants can be planted to enhance the landscape.

Inorganic mulches such as rock or crushed brick will last a long time in the landscape, but they fall short in producing the benefits for plant growth that organic mulches provide. Air temperatures are increased around plants during the summer months, which may stress the plants and encourage certain pests such as scale insects and spidermites.



Pine straw ground cover.

There are many types of materials that can be used for organic mulches.

Pine straw is readily available in the Southeast. It allows good air and water movement to the soil. It will acidify the soil to a degree and will benefit acid-loving plants such as azaleas and camellias. It breaks down into smaller pieces quickly, but is extremely slow to decompose and so has less soil improvement qualities than some other mulches.

Pine bark mulch breaks down slowly and lasts a long time. Coarse-textured barks allow good air and water movement. Shredded barks stay put whereas pine bark nuggets are apt to float away during a heavy downpour. The color fades quickly, but a periodic top-dressing or turning of the mulch will keep it looking good.

Hardwood bark mulches break down more rapidly than pine bark. They have a dark, pleasing color and are stringy enough to stay in place. However, they are more prone to colonization of several decay fungi such as stinkhorns and slime molds that can be unsightly, and in the case of stinkhorns, can have a very unpleasant odor. Another decay fungus that crops up occasionally is



Bird's nest fungi are similar to artillery fungus.

artillery fungus, which can shoot up spores several feet. These spores are sticky and will cling to the siding of a house or cause damage to the finish of cars.

Wood fiber mulches break down more rapidly than bark mulches, except for cypress mulch. Most of these mulches are made from recycled wood pallets and are dyed. I personally do not like their appearance, because they tend to compete with the landscape. I have always thought mulches should blend into the landscape, not become a focal point, but beauty is in the eyes of the beholder.

Grass clippings break down very rapidly. If placed more than an inch thick, they tend to mat together, which sheds water. Grass clippings are best left on the lawn to decompose and provide the lawn with the nutrients to reduce fertilization needs by 25 percent. In addition, some turfgrass herbicides may persist in the clippings, which might impact broadleaf ornamental plants to some degree.

Leaves are free and readily available. They need to be shredded or run over with a mower so they will not mat together and shed water like grass clippings do. They decompose rapidly and add nutrients to the soil.

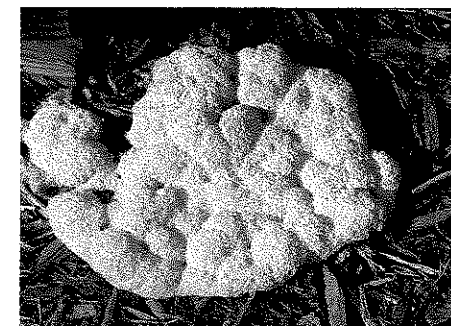
Compost is very finely textured. Weed seeds may germinate on top of the compost. Plant roots will also grow into the compost and may desiccate during dry periods. Compost should be incorporated into the soil and not used as a mulch on top.

Arborist chips are a waste product from right-of-way clearing or general tree pruning. It works great as a mulch material because it contains bark, wood and leaf debris. The biggest drawback is the lack of consistency in appearance, but it is the best mulch for trees and shrubs because it mimics the recycling of nutrients that happens naturally on the forest floor and is an excellent soil builder. In addition, it is often free. An excellent blog that bestows the virtues of arborist chips is: <https://gardenprofessors.com/why-fresh-is-best-when-it-comes-to-mulch/>

Regardless of the mulch you use, it is important to keep it a couple of inches



Fabric does not work over time.



Slime mold is a decay fungi.



Stinkhorn has a very unpleasant odor.

away from the trunk or stem of the plant. Mulch piled against the stem, often referred to as "mulch volcanos," will encourage both the rotting of the trunk and the growth of girdling roots that can eventually strangle a tree.

Mulch should be two to four inches thick, with two inches for finely textured materials and four inches for coarse materials. Weed barrier fabrics do not greatly increase the weed control, which a thick layer of mulch would provide on its own. The fabrics also do not allow the soil to incorporate decayed organic mulches, and weeds eventually germinate in the mulch with the roots growing through the fabric.

So add some mulch to keep your plants and soil healthy and happy, but make sure to use the right amount and keep it away from the plant stems.