



The Fine Art Of Mulching

Mulch The RIGHT Way So You Don't Kill Your Plants

Used correctly, mulch is one of gardening's greatest allies. It prevents weeds. It holds moisture in the soil. It stabilizes soil temperature. It adds organic matter to the soil as it breaks down. It prevents soil erosion. And it just plain makes garden beds look neat and clean. But like all good things, mulch in the hands of untrained practitioners can do more harm than good. Different situations also call for different types of mulch.

Mulch is anything added to the soil surface for the above reasons. It can be organic materials that break down fairly quickly (such as tree bark or leaves) or inorganic materials (such as plastic sheeting, stones or weed fabric). All have a place in the landscape, but the choice depends on such factors as the type of plants, the site and your reason for using mulch.

Organic mulches are by far the most widely used. Of them, shredded hardwood or "tanbark" is the most popular because it's available inexpensively in bulk. Many homeowners routinely add a truckload of mulch to their garden beds every spring, which leads us to the first common mulching miscue — overdoing it.

Too much of a good thing

Once you start getting deeper than 3 to 4 inches TOTAL (including the mulch that hasn't completely broken down from previous years), mulch starts interfering with the exchange of oxygen and carbon dioxide between soil and air, and it prevents rain from getting down to the plant roots. Check for yourself sometime. After a rain, pull back the mulch around a tree or shrub and see how much of the moisture actually made it into the soil.

Around trees and shrubs, 3 to 4 inches of mulch is plenty. Around flowers, 2 to 3 inches is fine. If you already have more, cultivate it and move the excess somewhere else where you need a light topping. Or add it to your compost pile or stockpile it for next year.

Shredded hardwood also has a tendency to mat down over the growing season, so it's a good idea to cultivate it once or twice even in correct amounts to help rain penetrate through it.

Too much mulch also can be a problem in rainy weather. Especially in our poorly drained clay soils, excessive mulch keeps the soil underneath cool and soggy -- the perfect condition for root rot. Soil with less mulch warms up and dries out faster, which is a good reason NOT to mulch too early in spring. From mid-April on is usually ideal. If you really MUST do something sooner than that, spend your time clearing the beds of weeds first.

Don't pack it too close

A second serious mulching miscue is packing mulch right up against the trunks or stems of plants. That leads to bark and stem rot by trapping moisture and by bringing wood-rotting bacteria and fungi into contact with the plant.

Always keep mulch at least 2 or 3 inches away from the base of your plants. It's also a good idea to use mulch to make a mini trough or basin around the plant. That helps retain water so it can be directed into the root zone instead of running off.

A few other things can go wrong in mulching. Some plants are sensitive to the tannins that leach from wood mulches, so if wilting or yellowing occurs soon after mulching, switch to a leaf or compost mulch.

If large piles of mulch are left unturned for more than a few weeks, the lack of oxygen can produce alcohols and ammonia that are toxic to plants. This so-called "sour mulch" is easy to detect because it has a strong ammonia odor. Don't apply sour mulch until it's been spread out and sufficiently aired out. Several types of fungi also commonly grow on wood mulches. One of the

most common is slime mold — orangish or white-gray blobs that turn a powder-filled black. There's also a bird's nest fungus that leaves behind tiny little bowl-like structures filled with what look like seeds. Both of these are harmless and can be raked off or raked in if they bug you.

More of a problem is "artillery" or "shotgun" fungus, which has fruiting bodies that shoot tiny, tarry black spores up to 20 feet away. These are the hard-to-remove black spots that mysteriously show up on siding or on cars parked near mulched pathways. Penn State research suggests that this fungus is not as likely to grow in bark mulch or cedar or cypress mulch as in shredded hardwood. A few other points. Sometimes wood mulch can temporarily rob nitrogen from the soil while breaking down, so you might consider counteracting that by adding nitrogen fertilizer to the beds before mulching. Also, mulch may alter the soil's acidity level over the long haul, so a periodic pH test is worth doing to see if lime or sulfur should be added.

Despite these potential drawbacks, the many advantages of mulch more than justify its use in most cases. The following chart will give you a mulch-by-mulch look at the pros, cons and best uses of various mulches:

The pros, cons and uses of different types of mulches

Shredded hardwood Knits together and so stays in place well on banks or in wind or heavy rains. Does good job of preventing weeds and cooling the soil in summer, but can pack down and repel water if not cultivated. Also can rob the soil of nitrogen as it breaks down. Good for paths and banks.

Bark mulch or nuggets Slow to break down when chips are medium and large sizes. Good at letting water and air through because it doesn't compact. Usually available only in bags. Since most bark chips are from pines, firs and spruce, they'll acidify soil. Good for flowers and acid-loving plants.

Leaves When shredded, they do a great job at cooling soil in summer and allowing air and water to pass through. Whole leaves tend to mat. Excellent for adding nutrients to soil but break down quickly as mulch. Then again, they're free. Available only in fall, so you'll have to save leaves in bags for spring use. Especially good as winter insulator for perennials.

Grass clippings High in nitrogen and micronutrients. Also free and readily available. Problem is clippings will mat if used alone in quantity. Best mixed with shredded leaves or bark. Fresh clips also can get hot and burn plants, so use as mulch near plants only after they've browned. Don't use if herbicide has been used recently on the lawn. Grass also breaks down very quickly.

Compost Great at adding nutrients to soil and looks natural, too. Fairly good as a weed-blocker and moisture-holder, but if weed seeds blow on top and germinate, you'll end up with the healthiest weeds you've ever seen. Fair as mulch but probably better used mixed into the soil.

Straw Good insulator, good weed-preventer, cheap and will last most of the growing season, but can blow away. It also looks a bit unnatural around ornamental plantings, can harbor grain or weed seeds, makes a nice habitat for rodents, is flammable and robs the soil of nitrogen as it decomposes. Best used in vegetable gardens or as a winter insulator over bulb and perennial beds.

Pine needles Fairly slow to break down, good at letting air and water pass through and free if you've got pine trees around and don't mind raking. Good at insulating bulbs and perennials over winter but only fair at soil-cooling and weed-preventing. Nutritious and slightly acidic when they break down and so are good for around acid-loving plants.

Newspaper Excellent at blocking weeds. Ditto with cardboard and grocery bags. Newsprint ink -- black and colored -- is harmless to plants. Just avoid slick paper. Main drawback is it'll blow away and look unnatural unless you top it with something. (Shredded paper stays in place better.) Lasts all season, free and readily available. Best in vegetable gardens or around trees and shrubs with bark mulch topping.

Cocoa bean hulls Fragrant (smells like chocolate when fresh), slow to break down, good at letting air and water pass through and looks good in the garden. Main drawback is expense. And it's prone to blowing off in windy areas unless kept moist.

Stone or gravel Decorative, they don't break down and they won't blow away. Also good at letting air and water pass through. They tend to work their way into the ground unless a barrier is laid down first. They're also expensive and not as natural looking as wood mulches. Small stones can be thrown around by lawn-mowers, too. Good choice for paths.

Black plastic Excellent at stopping weeds and cheap. Good at holding in soil moisture, but also repels rain and so can be a hindrance in drought years. Very unnatural looking and needs to be covered in ornamental beds. No soil-nutrition value and not a renewable resource. Best in vegetable garden.

Weed fabric Good at moisture-holding and weed-blocking, at least initially. But weeds can poke through the microscopic holes in the fabric or germinate on top, leading to a tangled mess of weeds, roots and fabric in a few years. Looks unnatural and so needs to be covered and secured. Long-lasting. Best used in paths and topped with stone.

Peat moss Not good mulch because it repels water when dry. However, it's excellent for improving soil when dug in.

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