

# Mulch 101: Mulching Your Soil for a Healthy Garden

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Mulch is any material you use to [cover bare soil](#) in a landscape. But mulching correctly — that is, in a sustainable manner that benefits the plants growing in your garden — can be confusing.

Unlike soil amendments, you should not mix mulches into the soil. Instead, layer mulch over the top of the soil. You can use mulch to modulate soil temperature, retain soil moisture, and suppress weeds. Over time, mulch can also improve soil [tilth](#) and fertility. Different materials will accomplish some of these tasks better than others. That's why we've put together this Mulching 101 primer.

## Good Mulching Materials

The best mulches are organic materials, not in the [USDA-certified sense](#) of “free from synthetic chemicals,” although that is also a good idea.

Organic in this case means “derived from living organisms.” Organic mulches are biodegradable, plant-based materials that add nutrients to the soil as they break down. Nearly any organic material can be used, including [compost](#), bark, wood chips, [leaves](#), seed hulls, grass clippings, nut shells, newspaper, cardboard, or straw. But [each material](#) will function a little differently and impart a different look to your landscape.

## Ground Covers

Sometimes ground cover plants, especially nitrogen-fixing species like clover, are called living mulches. These are useful for overwintering vegetable gardens, where they prevent erosion and improve soil tilth. Be sure to select groundcover that is native to your region.

A few good ground cover options are:

- [Vetch](#)
- [White clover](#)
- [Lupines](#)
- [Comfrey](#)
- [Fava beans](#)

## Compost

Sometimes called a feeding mulch for its high nutrient content, compost is often the mulch of choice in annual beds and newly planted areas where coarse wood chips could damage tender new stems.

Compost encourages soil fauna to thrive. However, compost also encourages weeds. Fortunately, its friable texture makes weeds growing in compost mulch easy to pull.

## Wood Chips

Wood chips are arguably the perfect landscape mulch.

In a [study of 15 materials](#), wood chips were best at retaining moisture, moderating soil temperature, and suppressing weeds. They have also [been found](#) to encourage [mycorrhizal fungi](#) and disease-suppressing microbes. Note that wood chips are not the same as [bark mulch](#), which has different properties and is not as beneficial.



Although decorative bark dust is a popular mulch, wood chips such as those pictured above are much more beneficial to your soil. Photo: Adobe Stock

## Poor Mulch Materials

Like “beauty bark,” many materials sold as mulch do not perform well for that purpose. While gardeners may choose to use them in certain circumstances and locations, these materials are generally not the best choice for most ornamental landscapes.

## Synthetic Materials

Synthetic materials such as landscape fabric (also known as geotextile) and black plastic are commonly used, but they do not perform well for most of the tasks mulch is meant to accomplish. These materials may help warm the soil but they will not

insulate against temperature fluctuations. They can increase runoff from rainfall and, ironically, also trap moisture in waterlogged soils.

Permanent weed control [is a myth](#). Although gardeners frequently use synthetic mulches underneath more aesthetic materials in landscapes intended to be low-maintenance, these materials will eventually break down. But unlike organic mulch, they add no nutrients to the soil. Instead, the pieces must be picked out of the soil and disposed, which negates much of their value as a low-maintenance material. Plastics and fabric are useful for [soil solarization](#) and for seasonal use in vegetable gardens where they are easily pulled up at the end of a growing season.

## Gravel and Rock

Inorganic mulches like gravel and rock are nonbiodegradable natural materials, but they still need to be replenished every few years.

They are most commonly used in Zen gardens and desert xeriscapes as an [alternative to grass](#). But they are not particularly effective in planted gardens.

## How to Mulch

You can use a thick layer of mulch to smother a weedy area. But in a planted bed, you should spread mulch 3-4 inches thick over [well-watered soil](#).

You do not need to remove old mulch from a planting bed — simply layer new material to maintain the desired total thickness on top of old mulch. If your old mulch is still 3-4 inches thick, there is no need to add more.

Keep mulch away from plant stems. Piled against the trunk of a tree or shrub, mulch can cause the stem to rot.

## When to Mulch

Mulch once or twice a year, in spring and fall. In spring, mulch once the soil has thawed, but ideally before weeds have a chance to become established. Do not mulch over soil that is either totally dry or waterlogged.

Apply mulch to [new plantings in fall](#). In areas where the ground stays frozen all winter, allow plants to go dormant before mulching after the first frost. In areas where frost is rare or intermittent, mulch early to avoid freezing soils entirely.

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