

If you bring up the topic of mulches to a group of veteran gardeners, be prepared. Every gardener has their own idea on the what, how and why of mulch. So what is mulch? Mulch is a layer of material spread uniformly on top of the soil around plants. There are mulches for almost every landscape situation ranging from organic (grass, bark) to inorganic (minerals, plastics). Due to inexpensiveness, ease of application and other benefits, organic mulches have become the favorite of most gardeners.

WHY USE ORGANIC MULCHES?

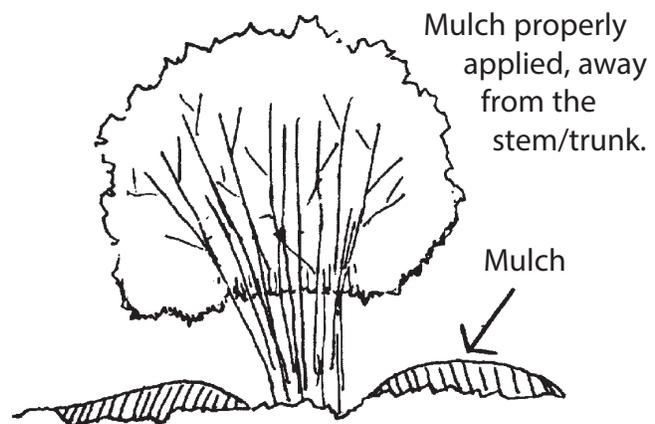
There are a couple of reasons why it is beneficial to use organic mulches.

- ◆ Mulch adds nutrients and organic material to the soil as it decomposes. Over time, mulch can lighten and aerate heavy clay soils.
- ◆ Mulch acts as a barrier to slow down water evaporation from the soil. This benefits the roots of plants.
- ◆ Mulch inhibits weed growth. For trees it is used to limit competition with grass for water.
- ◆ A ring of mulch around trees limits the amount of mower damage to the tree trunk.
- ◆ Mulch acts as an insulator, moderating soil temperature extremes, thus protecting plant roots.
- ◆ Mulch reduces heaving, erosion, and compaction of soil.

APPLYING MULCH

Proper mulch application helps ensure healthy, long-lived plants. There are a few things to keep in mind for proper mulch application. Timing is important. Apply mulch in the spring after the soil has had a chance to warm up. If applied too soon the mulch keeps the soil cool, slowing the development of roots. Depending on type and texture of the material, do not use more than 2" - 3" (depth). Too much mulch can prevent

oxygen and water from reaching the soil. Because of this, roots will rise to the surface of the mulch and dry out faster. Do not put mulch in direct contact with a plant's stem/trunk. This will make the stem/trunk continuously wet which in turn can lead to canker diseases and rot. Applying slowly decomposing mulches, such as cedar, every year can be detrimental because you end up with too deep of a mulch layer.



MULCHES TO USE WITH CAUTION

In the past, materials like sawdust and peat moss have been used as mulch. Sawdust's fine texture compacts too easily and the microbes that break it down draw nitrogen from the soil. Peat moss forms an impenetrable layer, hindering water movement to the soil below. Pine straw (from long needle pines like loblolly) is commonly used in the south and can be used in our climate. However, with pine straw there are some economical and environmental concerns. Make sure that any pine straw used comes from certified, plantation sources. Some sources will use needles that are from clear-cutting operations or wild-collected. Another concern is the economic feasibility of shipping pine straw to our area. When using dyed wood chips make sure it is not made from waste wood (pressure-treated wood, chemical laden pallets) and that dye is environmentally safe.

Material	Uses	Application Depth
Bark	Contains waxes that shed water moving it into the soil. Great to use in ornamental beds.	2" Small chips/nuggets 3" Large chips/nuggets
Wood Chips	Compost fresh chips for a couple of months before use. Use in ornamental beds.	2" Small chips/nuggets 3" Large chips/nuggets
Leaves	Use dry, aged and shredded leaves. Use either in vegetable garden or ornamental bed.	4" loose 1" - 2" settled
Grass Clippings	Only use grass from a herbicide free lawn. It is best when dried for a few days. A good source of nitrogen. Use in vegetable garden.	4" loose 1" - 2" compressed
Compost	Inhibits plant disease, builds the soil, and provides plants with nutrients. Use in vegetable or ornamental beds.	1" - 2"
Straw	Inhibits plant disease and is a good insulator. Use in vegetable gardens.	4" loose

CONCERNS & SOLUTIONS

When an overly deep wood mulch layer decomposes quickly it attracts fungi and molds. These molds and fungi can make the mulch water repellent leading to drought symptoms. This can be prevented by applying the correct amount of mulch, raking to break up the fungus (if it appears) and watering the mulch after application.

Mulch stored under low-oxygen conditions (in large, sopping wet piles) will emit a rotten egg,

vinegar, or ammonia smell, a toxic, microbial by-product. If applied to plants, it can lead to leaf chlorosis, scorch, defoliation or even death. This can be avoided by storing piles no taller than 4-6 ft. in well-drained areas and by aerating them. Aeration is as simple as turning the pile with a garden fork every so often. When applying mulch it has been suggested to wear a pollen mask to prevent the inhalation of microbes that inhabit mulch piles. These microbes can cause allergic reactions in 5% to 10% of people.

References

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