A Short Guide to Mulch in the Landscape Eydie Shafer, Master Gardener

Spring and fall are times when homeowners consider methods to refresh and enhance landscaping. Adding mulch is one way to do so. With spring on the way, it is time for a short lesson on mulch and its use. This article will highlight the use of mulch on landscape plants (trees and shrubs), not on vegetables and annuals as these plants have slightly different requirements and different reactions to certain mulches.

We mulch to conserve soil moisture around and under plants, to keep soil more uniformly cool in the summer and warm in the winter, to prevent heaving when temperatures freeze the soil, to block weed growth, to prevent soil erosion, to reduce compaction of soil, to reduce the exposure of plants to disease and, for esthetic purposes. We mulch in the spring after the soil has warmed up and again in the fall after the soil has cooled. Mostly, we mulch with permanency in mind. Once the initial mulching has been done, it only needs to be refreshed and added to, if necessary, season by season.

There are many different types of mulch available in the marketplace. Each has its good points and negative points. There are organic mulches and inorganic mulches.

On the organic side of things, shredded bark and bark chunks are most often used in landscape plantings. They are the byproducts of the milling of hardwoods, Douglas fir, redwood and spruce. Shredded bark has a smoother look than the chunks. Neither compact too much, are slow to decay and are less likely to be displaced by wind or water. To maintain these two mulches, gently stir them every now and then and top off with new material as needed to no deeper than 3” to 4”. Sometimes artillery fungus (small black dots appear on nearby surfaces), stinkhorn fungus or slime mold (yellowish and slimy looking) appear on the bark mulches. They are generally not a concern and can be dealt with by simply breaking them up with a rake.

Wood chips can also be used as a mulch. They have many of the attributes of the bark mulches and can be gotten for little or no cost from local recycling venues. These chips may contain seeds of weeds and other plants and may need to be aged before use but there are ways to deal with these problems. Washington State University and the University of Vermont both have factsheets which discuss the pros and cons of wood chips used as mulch.

In our area cocoa hulls are available. They smell good when first put down and look good, but they are usually more expensive and, because of their light weight, tend to blow and float away. Cocoa hulls also have a high potassium content which will be harmful to some plants.

Leaves can be shredded by a mower and used as a mulch. They decompose quickly and will add organic matter to soil. Leaves are nature’s mulch. Solitary bees can create ground nests beneath them, birds can forage for insects, and lightning bug larvae live under leaf litter. If available, pine needles can be used as well. They decompose

slowly, resist compaction and if you have pine trees in your landscape already the needles can be very inexpensive.

Straw and sawdust are not good mulches for landscape areas. Straw doesn't last long, and sawdust tends to cake and is low in nitrogen which means it takes nitrogen from the soil as it decomposes.

Inorganic mulches (mineral mulches such as gravel, crushed stone and rocks; landscape fabric; black plastic) are good in the right places, but in landscapes, they can present some problems. Mineral mulches do well in landscape situations where plants are not needed. Mineral mulches can get imbedded in the soil and be hard to remove if needed. They also can become weaponized when run over by a mower. The bad thing about them is that they absorb heat from the sun all day and continuously radiate that heat up in to the above ground structure of plants and, more importantly, radiate it down into the soil affecting the fine roots and root hairs of the plants. This heat transference continues well into the night, so the roots get little relief. It is like they are in a drying oven 24/7. If you remember how hot pavements feel to your bare feet in the summer and how long the pavement stays hot into the night, you will appreciate the problem.

Landscape fabrics (geotextiles) can be woven or not woven. They are constructed to allow water, nutrients and air to pass through them to the soil beneath. There are downsides to using fabric. Organic matter cannot pass through the fabric to enrich the soil. Mulch is commonly placed on top of the fabric where weeds readily grow, often sending roots down through the fabric where they become very difficult to pull. Landscape plants sometimes find the mulch layer preferable to the soil under the fabric and can send their roots upward into the mulch where they are vulnerable to drought. Lastly, solitary bees do not have access to the soil to create their nests. (Bees also have trouble nesting under hardwood mulch.)

The last inorganic mulch to consider is plain old black plastic. While black plastic can be helpful in vegetable beds, it really has no place in a landscape bed. It absorbs heat and does not allow water and nutrients through so the soil beneath is hot and dry. It is also ugly.

As you drive around our county, you will see many mulch volcanoes on home and commercial properties. There seems to be a feeling that the more mulch is piled at the base of a tree, the better the tree will be. This assumption leads to the final and most important point to be made about mulch in landscape beds. Mulch should NEVER touch the trunk of a tree or the stems of a shrub…NEVER. Mulch should be pulled away from trunks and stems to expose the root flair. When mulch is against trunks and stems, it provides a haven for voles, mice and other critters which chew the bark. It keeps bark wet which leads to rot, and it inhibits the ability of the plant to breathe. All of these factors allow the invasion of pathogens which cause great distress and eventually the death of the plant. Improperly mulched plants don't die overnight, but over several

years. Whatever mulch you use, save money and plants, keep the mulch away from the trunks.

“Mulching Landscape Trees” is an excellent factsheet published online by Penn State. Additional information on types of mulch can be found online by Googling “mulch.edu”.

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