

## Using Mulch Effectively Fact Sheet 14

Wendy Wilber

Mulch is any material placed on the soil surface in and around plants to moderate soil environment and enhance landscape esthetics. Mulches act to conserve soil moisture, moderate soil temperature extremes, reduce weed numbers and prevent soil erosion. As organic mulches decompose they improve soil structure and tilt and release nutrients. Mulches can be inorganic or organic. Some examples of mulches include gravel, rocks or polyethylene plastic films or spun or woven polypropylene fabric; and wood chips, bark, hulls, compost, hay and yard waste (renewable mulches). Materials like carpet pieces and newspaper are also utilized as mulches. Mulches suppress weed growth by preventing weed seed germination and by smothering out existing smaller weeds. Occasionally, a weed may poke through, but mulch covers will make pulling weeds easier.

Mulch covers prevent soil water loss due to evaporation by wind and hot sun. Moisture moves by capillary action to the soil surface and evaporates, if not covered with mulch. Thus, mulching reduces the frequency that soil moisture must be replenished.

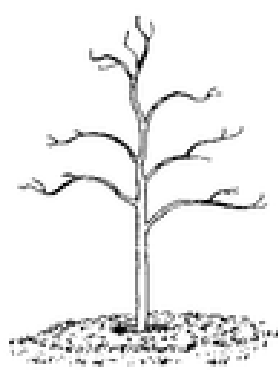
Mulch covers prevent crusting of soil surface: thereby, improving absorption and percolation of water into soil and eliminating erosion. Mulch covers prevent soil compaction from driving rains. Mulch also protects sloping ground from erosion. A mulched plant's roots are not subjected to the extremes in temperature that affect an unmulched plant's roots. Mulch helps to maintain a more uniform soil temperature. Mulch covers insulate the soil and keep it cooler in the summer and warmer in the winter.

As organic mulches decompose the material works down into the topsoil. The decayed

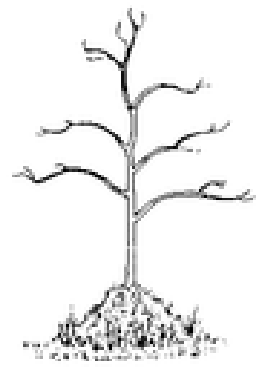
mulch material acts to improve the topsoil soil structure and tilt. Decaying mulch also adds valuable plant nutrients to the soil.

Mulches add beauty to the landscape by providing uniform color and interesting texture. Dark colored mulches widen the pupil of the eye, allowing more sensible light from flowers to enter the eye. Fine textured mulches, like ground yard waste, can add textural contrast to an otherwise course textured landscape.

For best results, apply mulch at a depth of 3-4" at the base of all plants. Pull the mulch back 3" away from the main plant stem or trunk to avoid harboring disease or insect problems. Moisten the mulch to allow it to settle and prevent it from blowing away. Some yard waste materials like small branches and leathery leaves should be shredded before using as a mulch. Place these materials in small piles 6-8" high and 2' wide. Run over the pile with a lawn mower (set at highest cutting height) once or twice to reduce particle size. Mechanical chipper/shredder equipment is required for larger pieces like limbs or trunks.



correctly mulched



mulched too deep

Avoid using grass clippings as grass decomposes very quickly and may contain weed seeds. Also grass clippings tend to mat forming a water impermeable layer. Besides, leaving clippings helps recycle nutrients. Research has shown that each bag of clipping contains up to 1/4 pound of organic nitrogen that could be used by the lawn. Letting the clippings "fall where they may" can replace one of the scheduled lawn fertilizations.

Mulches can be applied any time during the year. Generally, organic mulches will have to be replenished annually by placing a new

layer of mulch on top. Combining 1 1/2" layer of commercially available mulch like pine bark (a by-product mulch) on top of 1 1/2" layer of yard waste (recyclable mulch) is one way to reduce the costs of replenishing organic mulches.

So think before you take the time and energy to collect yard waste and carry them to the curbside for municipal collection. Mulching or composting these materials is an environmentally sound solution to reducing the costs of collection and handling of an otherwise recyclable resource.

### HOW MUCH MULCH DO I NEED?

To calculate the total cubic yards of mulch needed for your landscape project, follow these steps:

1. Multiply the length of your landscape bed by the width to find the square footage.
2. Multiply that square footage by 0.25, which will equate 3 inches of mulch.
3. Divide that value by 27 to yield cubic yards of mulch needed for your project.

The table to the right can be used to quickly estimate the necessary amount of mulch to purchased based on various depths of mulch.

Remember not to pile mulch alongside the stem of plants. Mulch is moist and can lead to rotting around the stem.

Also, remember to break up any mulch that may be dry or clumped together as you spread it over your landscape bed.

Cubic Yards of Mulch	Landscape Bed Square Feet and Mulch Coverage based on Depth		
	1"	2"	3"
1	338 sq. ft.	158 sq. ft.	108 sq. ft.
2	676 sq. ft.	316 sq. ft.	216 sq. ft.
3	1014 sq. ft.	474 sq. ft.	324 sq. ft.
4	1352 sq. ft.	632 sq. ft.	432 sq. ft.
5	1690 sq. ft.	790 sq. ft.	540 sq. ft.
6	2028 sq. ft.	948 sq. ft.	648 sq. ft.
7	2366 sq. ft.	1106 sq. ft.	756 sq. ft.
8	2704 sq. ft.	1264 sq. ft.	864 sq. ft.
9	3042 sq. ft.	1422 sq. ft.	972 sq. ft.
10	3380 sq. ft.	1580 sq. ft.	1080 sq. ft.
11	3718 sq. ft.	1738 sq. ft.	1188 sq. ft.
12	4056 sq. ft.	1896 sq. ft.	1296 sq. ft.

Using the table above, 1 cubic yard of mulch will cover 108 sq. ft. with 3" of mulch.

Source: Clemson University Extension Service