

## Mulches for Enhanced, Low-Maintenance Landscapes

The quality of the food we eat, the water we drink and the air we breathe is determined by the quality of our topsoil. The earth's crucial thin layer of soil must be protected, maintained, built and nourished. A mulch cover of various materials on soil enables, conserves and enhances our precious soil. The right mulch can also become an attractive feature of the home landscape.

### What is mulch?

*Natural mulch* consists of dead leaves, twigs, fallen branches and other plant debris which accumulate on the earth's surface. Bacteria, fungi and other living organisms use the raw organic materials for food, a process we know as decay. In the natural scheme of things, decay is Nature's way of returning to the earth the raw materials borrowed by previous generations of plants.

*Organic mulches* not only conserve moisture, they also feed plants, earthworms, microbes and other beneficial soil life by composting at the moist earth surface. All soil life needs energy. They cannot collect energy directly as green plants do, but they feed on energy released decaying mulch which is their preferred food source.

### What are the benefits of mulch?

Mulch insulates and protects soil from drying and hard-baking effects caused by evaporation of water from soil exposed to hot sun and winds. Mulched soils are cooler than non-mulched soils and have less fluctuation in soil temperature. Optimum soil temperatures and less moisture evaporation from the soil surface enables plants to grow evenly.

Mulches break the force of rain and irrigation water thereby preventing erosion, soil compaction and crusting. Mulched soils absorb water faster. They also prevent splashing of mud and certain plant disease organisms into plants and flowers during rain or overhead irrigation. The mulch covering excludes light that prevents germination of many weed seeds. Fewer weeds provide less competition of available moisture and nutrients. Using mulches to control weeds is safer than applying herbicide or cultivation which can damage tender, newly formed roots.

### Proper Use of Mulch

Apply mulches in a layer 2 to 6 inches thick. Layer thickness depends on mulch material. For example, coarser mulches are applied more thickly. Thicker layers of mulch are placed around trees and shrubs than in flower or vegetable beds. Four inches of loose fibrous materials work well around trees and shrubs. The finer and smaller the particle size, the thinner the layer needs to be. Thick layers of very fine material block air to the roots of plants. In their search for air, roots will grow up into the mulch, which can be harmful to plants if the layer of mulch is not constantly maintained.

In garden beds planted every year, organic mulches can be incorporated into the soil each year to improve the soil structure. New mulch is applied each year. Regardless of the source of the organic matter, two factors are important to the user.

When applying mulch around plants, cover the entire area of soil containing roots. Do not pile mulch against tree trunks. It isn't needed against trunks and may do harm. Donut the mulch around plants to be benefited allowing the plant to be in the hold of the donut structure.

### Does mulch still require watering?

While mulches do retain moisture in the soil it will still be necessary to water plants growing in mulched soils. Water should be targeted beneath the mulch specifically at the root zone of desirable plants. Drip irrigation is the most efficient, effective watering technique.

### When to water?

Soil moisture level is the best criterion for watering. If soil moisture is adequate, don't water if a plant is wilted. To test for soil moisture, probe around plants with your finger. If the soil is moist several inches deep, there is adequate moisture present.

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The sources of this GVST Gardening Guide are Malcolm Beck, founder of Garden-Ville, and Dr. Jerry Parsons, Horticulture Specialist for the Texas Cooperative Extension Service. For more information on using mulch in the landscape, visit this website: <http://aggie-horticulture.tamu.edu/plantanswers/drought/mulches.html>.