

Earth Kind:

Environmental Stewardship Program

Landscape Mulch:



One of the best methods of growing healthy plants and conserving water at the same time is to use mulch in the landscape. Experienced gardeners have long known the secret of mulching the garden and all its benefits.

What is a mulch? It's simply a protective ground covering that saves water, reduces evaporation, prevents erosion, controls weeds, and in the case of organic mulches, enriches the soil. Almost sounds too good to be true!

Mulches can be classified as organic or inorganic. The organic mulches are most popular and include straw, leaves, bark, pine needles, compost and similar materials. Inorganic mulches include rocks, rock chips, synthetic fabrics, and other non-plant materials.

A big advantage of mulching is it reduces soil moisture loss through evaporation. Mulches also reduces the soil's exposure to wind which, in turn, reduces water loss through evaporation.

The insulating quality of mulch helps to keep the soil cooler in the summer and warmer in the winter. By maintaining more even soil moisture and temperature, mulch promotes better root growth and plant health.

Erosion control also is important, especially in steep areas. Mulch helps to reduce rain splash and runoff, which in some cases will also help prevent the spread of plant disease.

Mulch also suppresses the growth of many weeds. A 3- to 4-inch layer of organic mulch should be sufficient to prevent sunlight from reaching the soil, thereby reducing the chance of weed growth. Any weed seedlings that do manage to germinate and break through the layer of mulch are easily pulled. A mix of coarse and fine mulch will help reduce seed germination.

Mulches should not be piled up against the trunks of plants, but rather form a donut around the base of trees and shrubs.

Earth Kind uses research-proven techniques to provide maximum gardening and landscape enjoyment while preserving and protecting our environment.

The objective of Earth Kind is to combine the best of organic and traditional gardening and landscaping principles to create a new horticultural system based on real-world effectiveness and environmental responsibility.

The principal goals of Earth Kind include:

- Water conservation
- The safe use and handling of fertilizers & pesticides
- Reduction of yard wastes entering urban landfills

As your interest and knowledge in these areas grows you will have an increased awareness of the many programs, practices and activities that are Earth Kind. Working together we can make a difference in conserving and protecting our valuable natural resources.

*For more information
see our Web site:*

EarthKind.tamu.edu



Another benefit of organic mulches is that they enrich the soil as they decay, forming a rich, dark organic material called humus that provides nutrients for the soil and improves its texture. Last but not least, mulch has aesthetic value. There is a range of colors and textures. The uniform quality of most mulches when added to the garden floor serves much the same aesthetic purpose as a carpet in a home.

So what are some of these marvelous mulches?



Bark: This mulch is the most popular and widely available. Barks are available in bags or can be purchased some places in bulk. Bark is relatively easy to apply, but some types have a tendency to float away in heavy rains. Pine is the most common, but cypress and redwood are popular. Cypress resists floating.

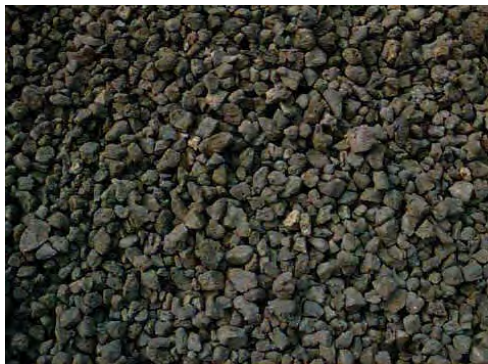
Chipper debris: A mixture of shredded bark, wood chips and leaves from tree-trimming operations, chipper debris is non-uniform so it's not as attractive as many other types. A rustic effect for outlying areas of the yard where fine texture may not be important. Also may create nitrogen deficiency as it breaks down unless first aged.



Partially Decomposed Compost: This makes an excellent mulch. You can make your own compost or buy it. The lack of uniformity may make it less attractive in exposed areas. Compost may also contain some weed seeds that can be objectionable.

Leaves: Readily available and inexpensive, leaves work best if shredded before applying as a mulch. Large, unshredded leaves tend to form an undesirable "mat" which repels water.

Pine Needles: Great mulch, especially for acid-loving plants. Slow to decompose, pine needles, last a long time. Avoid using near wood fences or walls due to potential fire hazard.



Inorganic Mulches: River stones, pebbles and gravel chips are all good mulches. Though they do nothing to improve the soil, these materials can be striking, and should be used carefully so they enhance rather than detract from the overall landscape design. They will not require replenishing as frequently as organic materials, but fallen leaves and other trash can detract from their uniform appearance and be difficult to clean. White rock is very bright and reflective and may make surrounding area hotter.

Landscape Fabrics: Special woven fabrics that allow air and water to pass through, while reducing weeds and evaporation. These materials can be used in conjunction with other mulches. Fabric is laid on the soil and a mulch is placed on top. Do not use solid sheet plastic which inhibits air and water movement and promotes root rot.

Many fresh, undecomposed organic mulches, like sawdust, grass clippings, straw and chipper waste, may draw nitrogen from the soil as the material breaks down, causing a temporary nitrogen deficiency. Microbes tend to out-compete plant roots for the available nutrients released as they break down. So, a recommendation is to allow these materials to partially break down before using them, and/or supplement with nitrogen fertilizer.

Since organic mulches decompose over time, they will need to be replenished or replaced periodically. It's a good idea to check the garden every spring and renew areas where the mulch has gotten thin. There is no need to remove the old and replace with new mulch, since soil organisms will work the decomposing organic matter into the soil, increasing the health of the soil.