



# Drought Information

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## **MULCHES PROVIDE WEED CONTROL AND HELP CONSERVE SOIL MOISTURE**

by Ed Perry, Farm Advisor, Stanislaus County

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The use of soil-covering mulches in both commercial and home landscapes has increased greatly in the last ten years, mainly because there are far more advantages than disadvantages in using them. I recommend the use of mulches often, both in new and established landscapes and gardens. Mulches benefit both new and established plants, and may be very important if you are trying to improve the vigor of and old tree or shrub.

Simply put, a mulch is anything you place on the ground to cover and protect the soil. Mulches are used to help control weeds, conserve soil moisture, prevent soil compaction, and moderate soil temperatures. The most common are the organic mulches, which include ground redwood bark, wood chips, shredded bark, compost and sawdust. One very important feature of the organic mulches is that they decompose over time, providing mineral elements for plant growth and for improving soil structure. Because they decompose, you will need to replace them from time to time in order to keep them effective.

There are also a number of inorganic mulches, including crushed rock, pebbles and synthetic landscape fabrics. The landscape fabrics, which are porous, allow water and oxygen penetration unlike the old plastic mulches. The landscape fabrics are usually covered with a layer of organic or rock mulch. The inorganic mulches can last for a number of years without replacement, so are best used around permanent plantings like trees and other woody landscape plants.

Mulches help control weeds by shading the soil and preventing weed seed germination. The size of the mulch particles will determine how thick the mulch layer needs to be to adequately shade the soil. Apply a 4 inch layer if you are using a coarse-textured mulch (1/2 inch to 2-1/2 inches in diameter). For fine-textured mulches (1/2 inch diameter and less), only a 2 inch layer of mulch is needed. Keep in mind that fine-textured organic mulches decompose fairly rapidly, especially during the summer months. Once they have decomposed to a fine compost, they provide an excellent media for weed seeds that blow into the area. Be sure to replenish the mulches to continue shading the soil surface, especially if weed control is your main objective. Certain annual weeds that have wind-borne seeds, such as annual sowthistle and common groundsel, often germinate in mulches. These are fairly easy to control with a light raking, since their roots are lightly attached in the mulch layer.

Before you use a mulch, be sure the soil is weed free, especially if there are perennial weeds in the area. It's best to first control weeds such as bermudagrass, field bindweed and nutsedge, since these weeds will grow through both organic and inorganic mulches. You can improve annual weed control in permanent plantings by applying a preemergent herbicide, such as Surflan, to the soil surface before covering the soil with a mulch.

Although most organic mulches improve water penetration and water holding, certain finetextured mulches such as sawdust, peat moss, unshredded leaves and grass clippings can mat and cake and prevent water penetration. With such materials, be sure to apply enough water to penetrate the mulch and the soil, so that water thoroughly wets the root zone. If water runs off, turn your system off for an hour to allow moisture to soak through the mulch and into the soil. You can avoid some of the water penetration problems by using a low-volume irrigation system, such as a soaker hose.

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