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PROTECT YOUR SOIL WITH MULCH

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As this article is being written, temperatures are climbing to the high 90's which means gardens are going to dry out rapidly. In addition to planting the correct plants for our climate, knowing your soil type and adjusting irrigation properly, what else can the gardener do to conserve moisture in the hot summer? Mulch the soil! Mulching is one of the most beneficial yet simple practices you can do for your garden: it consists of placing material on the soil surface around your plants. The addition of mulch not only improves soil structure, it also makes a garden look tidy, prevents weed problems, saves moisture, reduces evaporation, slows erosion and water runoff, moderates soil temperature, reduces soil surface compaction and encourages beneficial micro-organisms and earthworms. That's a lot of benefit from just one action.

Mulches are available in many different types, colors, and textures – and are either organic or inorganic. Organic mulches are derived from matter that was once living; they will continue to break down in your landscape, enriching the soil and enabling you to grow plants at a reduced cost that are healthier and more beautiful. These mulches include bark, wood chips, compost, leaf mold (partially composted leaves), sawdust, straw, lawn clippings, pine needles and so forth. Organic mulches should be renewed annually; make sure you purchase only weed-free material because straw, hay, and manure may contain weed seeds. With all the materials available, your specific needs and aesthetic desires should determine what you purchase and eventually apply in your landscape. Inorganic mulches are defined as any material not composed of or derived from a plant or animal. These low-maintenance mulches include rock, gravel, brick, plastic sheets and landscape cloth. Unfortunately, soil improvement is not an attribute of these mulches.

Weed Prevention: The goal for weed prevention is to stop the sunlight from reaching weed seeds and weed seedlings. Any material applied in a layer 3-4" deep will do, but the coarser your mulch, the deeper your layer must be.

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Water Conservation: Mulch helps conserve soil moisture and reduce evaporation; it also protects the soil from drying out due to wind. Mulch reduces run-off and erosion by slowing water movement and breaking up the impact of water drops. Materials that mesh together or are smaller in size prevent more moisture loss than coarse materials.

Soil Fertility: Organic mulches break down slowly, improving the soil and adding nutrients as they decompose. These nutrients are made available for plant roots either by direct leaching or decomposition. The decomposition rate for most organic mulch is such that a slow, constant supply of nitrogen is delivered to the roots underneath. This decreases the amount of high nitrogen fertilizer that has to be purchased and applied. One note of caution – if you use a material that has a high carbon to nitrogen ratio (such as wood chips or sawdust) you may experience an initial deficiency in nitrogen. This occurs because the microorganisms that are decomposing the mulch experience a population growth and use up all the available nitrogen. Once their food supply is gone, they will die off and their bodies will reintroduce the nitrogen to the soil. In the meantime, if you notice symptoms of deficiency, such as yellowing of foliage or pale new shoots and leaves, simply apply a high nitrogen fertilizer to the area. The long term benefits of decomposed mulch will outweigh any applications you may have to make.

Soil Temperature Control: All mulches moderate soil temperature so that the surface is cooler in summer and warmer in winter. As a result, you can avoid summer heat damage to shallow roots, and freezing and thawing of tender roots in winter.

There are few problems associated with mulching, but one does require mentioning. It is very important to keep tree trunks and plant bases clear of mulch – apply any mulch 4-8" away from all tree trunks and plant bases in your landscape. This will minimize the incidence of root rot from too much moisture.

July is a busy month for all gardeners, so we will have only two public education classes coming up. “Saturdays with Barry” continue July 8, at the Sherwood Demonstration Garden, 6699 Campus Drive, Placerville. A lot of things are happening in the summer vegetable garden! The class time is 9 – 11 am and is free, but on-campus parking is \$2.

“All About Berries” will be on Wednesday, July 12. Master Gardeners/Master Food Preservers Cheryl Knapp and Cindy Young will share their knowledge on the benefits of homegrown berries. Topics will include selection, planting, fertilizing, pruning, and a few ideas on how to use all those berries. The free class is 9am – noon at the Cameron Park Community Center, 2502 Country Club Drive, Cameron Park.

UCCE Master Gardeners of El Dorado County are available to answer home gardening questions Tuesday through Friday, 9:00 a.m. to noon, by calling [\(530\) 621-5512](tel:5306215512). Walk-ins are welcome at our office, located at 311 Fair Lane in Placerville. For more information about our public education classes and activities, go to our UCCE Master Gardeners of El Dorado County website at <http://mgeldorado.ucanr.edu>. Sign up to receive our online notices and e-newsletter at [http://ucanr.edu/mastergardener e-news](http://ucanr.edu/mastergardener-e-news). You can also find us on Facebook.