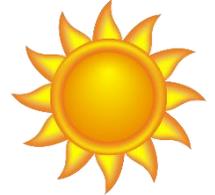




## Preventing Sunburn and Heat Stress in the Garden

by Sharon Plein, UC Master Gardener

Hot summer days and drought mandated water conservation are two challenges for Central Valley gardeners. We all know that sunlight and warm temperatures are necessary for photosynthesis, the food-making process of plants, but sometimes high temperatures and bright sun are too much of a good thing. When this happens, sun burn or leaf scald damage appears on fruit and leaves.



You can recognize sun burn by its effect on leaves and trunks of trees and shrubs. Leaves damaged by sunburn bleach out, turn brown or die. Bark on trees can split, and twigs may die back. Vegetables and fruits may appear scarred or scabbed. Sun damage can also mimic nutrient deficiencies and diseases. Additionally, too much sun and heat interfere with photosynthesis and cause bitter or misshapen fruit.

What's a gardener to do? Since thirsty plants can't pull up their roots and hunt for shade and water, there are several steps that homeowners can take to help their plants survive spates of 100+ degree weather.

### Planning for Shade

The first step should happen even before you plant: make sure you check the sun/shade and water tolerances of the plants. Select heat and drought tolerant varieties. Don't plant a shade-loving plant in full sun, and group plants with similar water needs. Plan ahead for shade shelters. Use existing plants in the landscape to provide shade for smaller plants. Fences and other structures can provide needed shade during the hottest part of the day. Beware of planting next to a white wall or similar surface. The reflective heat and UV radiation can result in a heat blast harmful to plants.

You can also create temporary shade structures by hanging shade "sails" or shade cloth that is available at most hardware and garden centers. Burlap or other cloth types work just as well. Use plant stakes or tomato cages to support the temporary structures. You can also repurpose your rarely-used umbrellas to provide some shade. Pop-up canopies can also offer a larger area of sun protection. We used a pop-up canopy to protect the Master Gardeners' succulent bed in our demonstration garden at Hurley School.

### Watering Tips

The second step to provide relief to plants in our hot drought is to water deeply and regularly. Drip system irrigation effectively conserves water by delivering water to the plants' root zones. This helps plants establish strong root systems. Pay special attention to your "foundation plants." Large trees and shrubs cannot easily be replaced. Avoid excessive pruning and fertilizing. These two practices force new growth that increase water needs in plants that are fighting to survive. The new young leaves and branches that result from over-fertilizing and excessive pruning are more susceptible to sun burn. If you find sunburned leaves and branches on your trees and shrubs, leave them be. They will provide protection for perennial plants. Remove them in the fall when temperatures moderate.

Water during the early morning hours. Watering during the heat of the day results in water waste due to evaporation. Watering at night can create conditions for disease and fungal growth. Check your plants frequently for damage. Wilting naturally occurs in the process of transpiration, but excessive wilting can result in permanent damage. If a plant's leaves do not recover after the temperature subsides for the day, that plant is not receiving enough water. Water-stressed plants are susceptible to insect damage, disease and death. Don't let your plants wilt to the point of no return. Crispy leaves and dead branches cannot be resuscitated.

An important tip to note is that if you use grey water, like recycled water from a shower or washing machine, in your garden, you should make sure that it contains only eco-friendly cleaning products. Do not use grey water on root vegetables or leafy vegetables.

### **Mulching**

Add another layer of mulch even if you have already mulched. Organic mulch decomposes in the soil and needs to be periodically supplemented. Mulch prevents the soil surface from drying out, cools the plants roots, and prevents weeds that steal water from desirable plants. In the vegetable garden, create a dish in the soil around plants by mounding the soil in a circle to prevent water from running off, then try using a mulch of shredded newspaper to prevent the soil surface from crusting over. Mulching is the most effective step you can take to preserve the health and beauty of your garden and landscape.



### **Fall Planting**

Fall is the best time to replant. The Central Valley can expect to experience hot temperatures into September. Wait for the weather to cool before planting, because even drought tolerant plants need more water to become established.

May 20, 2017