



NEWSPAPER ARTICLES

Preventing Sunburn and Heat Stress in the Garden (July 13, 2024)

by Sharon Plein, Tulare/Kings Counties 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, sunburn or leaf scald damage appears on fruit and leaves.

You can recognize sunburn by its effect on the 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.



Heat waves such as those we've been experiencing this summer can be especially dangerous to our gardens. Not only does it accelerate a plant's water loss through transpiration, but it also raises the temperature of the soil, which can be damaging to a plant's roots. The signs of heat stress in a plant include wilting leaves, drying and browning leaves, leaf drop, branch dieback, and reduced growth.

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 that is harmful to plants.

You can also create temporary shade structures by hanging shade "sails" or shade cloth, which are available at most hardware and garden centers. Burlap or other cloth types work just as well. Plant stakes or tomato cages can be used 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.

Watering Tips

The second step to provide relief to plants in our hot drought climate 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 increases 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 sunburn. 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.

Mulching

Add another layer of mulch--even if you have already mulched. Organic mulch decomposes in the soil and needs to be periodically supplemented. A layer of mulch 2-3 inches deep prevents the soil surface from drying out, cools the plant's 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

If you do lose some plants to the heat this summer, wait until fall to replant. The Central Valley can expect to experience hot temperatures into September. Wait for the weather to cool- especially at night-time temperatures- before planting. The cooler winter months will give the plants time to develop a deep root system and allow them to become better established before the heat returns next summer.

In the meantime, hand-water those plants that you do notice become heat-stressed with a deep soaking every week. Then, stay cool inside while browsing gardening books and magazines and planning for your fall planting.

The Tulare-Kings Counties Master Gardeners will answer your questions in person:

Visalia Farmer's Market, 1st & 3rd Saturdays, 8 - 11 am, Tulare Co. Courthouse North parking lot

July 25 - Hanford Thursday Night Farmers' Market, 219 W Lacey Blvd, Hanford, 5:30 pm

Questions? Call the Master Gardeners:

Tulare County: (559) 684-3325, Tues & Thurs, 9:30-11:30;

Kings County: (559) 852-2736, Thursday Only, 9:30-11:30 a.m

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