

## **Keeping Landscape Plantings Alive under Drought or Water Restrictions**

By Janet Hartin and Ben Faber, UC Cooperative Extension

The California drought is a very serious issue that impacts all Californians. Even with the recent rainstorm and snow, we will be fortunate to surpass the rain level of 1976-1977, one of the worst droughts on record in California. Drought restrictions can be complex and confusing. Since voluntary or mandatory drought restrictions are often drafted and implemented locally the best way for you to stay informed is to contact your local water provider.

The purpose of this webpage is to provide you with general information on landscape management during drought conditions. For more specific information, we recommend that you contact your local county UCCE Master Gardener program as indicated in the first link below.

For more specific regional information, refer to the following resources :

For specific information on your particular landscape, please contact a Certified University of California Cooperative Extension Master Gardener serving your county:  
[http://camastergardeners.ucanr.edu/California\\_Counties\\_MG\\_Websites](http://camastergardeners.ucanr.edu/California_Counties_MG_Websites))

For water conservation information by region, please consult the following resource:  
<http://ccuh.ucdavis.edu/public/map>

### **Overview**

Plants that do not receive enough water due to drought or governmental restrictions aimed at water conservation will eventually show signs of water stress. Although plants vary in the amount of water they require for optimal growth and development, most exhibit characteristic symptoms when they are in need of water. Because plants need to be watered at an early stage of water deficit to prevent irreversible damage, it is crucial to check plants regularly for symptoms of drought, preferably during the afternoon when symptoms are most evident.

Common symptoms include:

- wilting or drooping leaves that do not return to normal by evening
- curled or yellow leaves that may fold or drop, or foliage that becomes grayish and loses its green luster
- new leaves that are smaller or stem sections that are closer together than normal
- lawn grasses that retain a footprint for several minutes

Below are suggested methods to keep various landscape plants alive during water restrictions and severe drought.

**Ornamental Trees:** Most homeowners wisely choose to use whatever water is available to save their mature landscape ornamentals and fruit trees. Irrigations several weeks apart in spring and summer will often keep these valued plants alive through summer. Using a garden hose, irrigate for long enough to wet the soil to the depth of the root zone. Consult with your local Master Gardener, garden center or landscape professional for more detailed advice for root zone depth. Sandy soils may require more frequent irrigation, since they do not retain water as well as other soil types. Although mature trees can often survive one season with only one or two deep waterings during the spring and summer, two seasons without enough water can result in severe drought stress and even death. Drought-stressed trees can be more prone to damage from diseases and insects.

**Fruit and Nut Trees:** Keeping fruit and nut trees alive during severe water shortages is also possible, although crop production may be greatly reduced. To produce a good crop, deciduous fruit and nut trees need adequate water in their root zones continuously from bloom until harvest. Citrus trees need adequate soil moisture during spring to set fruit and steady water in summer and fall to produce acceptable size, numbers, and quality of fruit. For all fruit and nut trees experiencing a mild drought, reduction in irrigation may reduce crop yield. In a severe drought, the amount of water available for irrigation may only be enough to keep trees alive and may not support a crop.

**Vegetables:** Vegetables are difficult to maintain during a drought. Know the critical watering periods for vegetables and target the timing and amount of water to add. As a rule of thumb, water is most critical during the first few weeks of seedling or young plant development, immediately after transplanting, and during flowering and fruit production. Tomatoes, beans, and root crops such as carrots require regular watering and are not tolerant of long, dry periods. Vegetables such as squash and zucchini often fare better and can be kept alive with a few watering's once or twice a week through the season. Alternatively, reduce water usage by planting fewer vegetables than usual.

**Shrubs.** Most established shrubs can survive long periods of dry soil. Thorough spring watering and one or two thorough watering's in the summer keeps most well-established shrubs alive for at least one season.

**Groundcovers:** Ground covers often survive on about half the amount of water they would receive under optimal conditions, although some dieback may occur. To avoid serious drought stress, they should be watered at least once every 3 to 6 weeks from April through September, depending on location and soil conditions.

**Lawns:** Warm-season lawns, such as bermudagrass and buffalograss, are more drought-efficient than cool season grasses (e.g. tall fescue and ryegrass) and may come back after several weeks of dryness. Cool-season grasses may die within a month or two of receiving no water. Signs of drought include wilted leaves and a bluish-gray appearance followed by yellow leaves that will eventually turn brown. Cutting the length of irrigation gradually to ½ of that recommended in the **UC Lawn Watering Guide:** <http://anrcatalog.ucdavis.edu/pdf/8044.pdf> may help get your lawn through the drought.

Consult with your local UCCE Master Gardener program, local garden center or a landscape professional for more detailed information on how to water your lawn under specific drought restrictions in your area.

Once a lawn stops receiving adequate moisture, it will gradually turn brown and go dormant. Maintain the deficit irrigation schedule until more water is available, or the lawn will slowly deplete its energy

reserves and struggle to recover later. A lawn that recently turned brown from drought can often be revived with thorough watering, but it may be difficult to revive a lawn that has been deprived of water for a long time. This will depend on the turf variety, soil type, time since last irrigation, weather, and other parameters.

**Other contributors:** Darren Haver, *UC Cooperative Extension*; Loren Oki, *UC Cooperative Extension*; Dave Fujino, *CCUH, Davis*; Anne Schellman, *CCUH, Davis*; and Jennifer Tso, *Dept. of Plant Sciences, UC Davis*