Keeping Plantings Alive under Drought or Water Restrictions

Janet Hartin and Ben Faber
UC Cooperative Extension, ANR

Plants that do not receive enough water due to drought or governmental restrictions aimed at water conservation 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 water-stressed 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 chlorotic (yellow) leaves that may fold or drop, or foliage that becomes grayish and loses its green luster
- new leaves that are smaller than normal
- lawn grasses that retain a footprint for several minutes

Below are suggested methods to maintain various landscape plants 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. One or two deep irrigations with a garden hose several weeks apart in spring and summer will often keep these valued plants alive through summer, especially if roots are relatively deep. 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 will probably be greatly reduced or stop. 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. However, fruit and nut trees can be kept alive with a few early-season water applications, but they may not set much fruit.

Vegetables. Vegetables are difficult to maintain during a drought. Know the critical watering periods for vegetables and you can target the timing and amount of water to add. As a rule of thumb, water is most critical during the first few weeks of 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 to long, dry periods. Viney vegetables

such as squash and zucchini often fare better and can be kept alive with a few waterings once or twice a week through the season.

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

Ground covers. 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 every 3 to 6 weeks from April through September, depending on location and soil conditions.

Lawns. Warm-season lawns planted in 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 blush-gray appearance followed by yellow leaves that will eventually turn brown. Cutting the length of irrigation down to ½ of that recommended in the UC Lawn Watering Guide http://anrcatalog.ucdavis.edu/pdf/8044.pdf and watering only once or twice a week may help get your lawn through the drought. (Once a lawn stops receiving adequate moisture, it will gradually turn brown and go dormant over time. A lawn that recently turned brown from drought can often be revived with regular, thorough watering.