



University of California Cooperative Extension

THE GREEN SCENE

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LATE SUMMER TURF MANAGEMENT

Bermudagrasses and other warm season grasses are usually at their peak in July and August, so little extra attention is needed. Cutting height should be appropriate for the individual turf species, since low cutting heights lead to open spots and weed invasion.

Although days are becoming shorter, water use by turfgrasses remains high, about 0.25 inches per day on the Valley floor of Kern County, as a reference value for cool season grasses such as tall fescue. Toward the end of August it is usually possible to reduce irrigation on both cool and warm season turf types, as we move toward the 0.16 inch per day average reference value for autumn. Ideally, soil within the root zone should be brought to field capacity at each irrigation. If runoff occurs, multiple short cycles may be necessary to apply the needed amount of water. Turf indicates water stress by color change that appears as a bluish cast, or in more advanced condition by wilting. Soils can be checked with a soil probe or screwdriver to monitor soil moisture.

Although turf diseases are uncommon in landscapes in autumn, *Pythium* blight may appear on tall fescue. In the past, *Pythium* species were considered to be part of the Phycomycetes, or water mold class of fungi. Although botanical classification of these organisms has changed (now in the kingdom Protista), their former designation as water molds is still helpful in understanding the conditions favorable for their growth. This disease group is favored by water on the surface of turf plants, both as free water on leaves, high temperatures, and high humidity. Warm night temperatures in particular cause turf to use stored carbohydrates via respiration, and this loss as well as stress from the temperatures themselves renders turf plants susceptible. The pattern of warm (>100 F) days and warm (>75 F) nights is more likely to be seen on the Valley floor rather than in the mountains or desert, where nights are often cooler. Under favorable conditions spots of dead turf from 1-3 inches in size may appear and rapidly increase in size. The dead turf turns brown, and dead areas may increase in size following drainage patterns as water from irrigation carries the pathogen. It is not uncommon to see a stand of turf with enlarging brown areas that coalesce and lead to the loss of half or more of the turf stand.

Although limited control may be obtained with fungicides, the more effective strategy is to reduce stress on turf through proper irrigation, fertilization, and mowing. For tall fescue, cutting heights should be raised in July and August to at least two and as much as three inches. Nitrogen fertilizer should be applied at a half-rate, if at all, and better to delay fertilization until September. Early morning is the best time of day to irrigate the landscape to minimize water loss from wind and evaporation, since late afternoon irrigation can result in wet plants and disease development during the night. However, it is possible to cool the turf in mid-afternoon by irrigating for a few minutes. (Water droplets in full sun cannot cause leaf burn on plants.)

Experience says that the Rosedale area is perhaps the most difficult Bakersfield neighborhood in which to grow tall fescue. On very sandy soils tall fescue may not survive despite the best efforts, and so if turf is lost, changing to a different species, e.g. hybrid bermudagrass or 'El Toro' zoysia, may be a good alternative.

SPIDER MITES IN KERN COUNTY LANDSCAPES

Spider mites are related to insects, and include plant-feeding species that cause yellow stippling or bronzing of leaves. We often see effects of their feeding on landscape plants during summer. Small herbaceous plants can be killed, but most larger trees and shrubs can withstand a high spider mite population without long-term effects. The population can often be reduced without the use of chemicals.

Spider mites, often referred to as mites, are common in low rainfall areas of the West. Spider mites are less than 1/16 inch in length and are visible to the unaided eye, but a magnifying glass or hand lens makes them easier to see. Mite eggs are very small, appearing as translucent white spheres. Several mite species are common in Kern County, especially two-spotted mites, recognizable by the red spots on their backs, and Pacific mites, which spin fine webs which can envelop small plants such as marigolds. Like spiders, mites have two body segments and eight legs. They have a rasping mouthpart with which they scrape the leaf surface and ingest the contents of ruptured cells, causing plant foliage to be bronzed in color, or the leaf surface to be stippled in a pattern of yellow and green. Spider mites feed on many species of landscape plants including needle evergreens, fruit and nut trees, citrus, roses, marigolds, and sycamores.

One reason mites are a relatively greater problem in the arid Southwest than in the eastern U.S. is that absence of rain accompanied by warm temperatures allows rapid reproduction, and time from one generation to the next can be as short as 10 days. Dust and dirt on leaf surfaces reduce the cooling effect of transpiration and favor buildup of mite numbers. Rain or overhead irrigation washes dust and mites from leaves to the ground.

In agriculture, mites can be a serious problem, webbing over leaves, causing premature defoliation, loss of vigor, and sunburn. Fortunately, most landscape plants are fairly tolerant of high populations of mites. Sycamores typically harbor large numbers, one reason leaves turn the yellow-green and bronze colors of late summer. Roses may show a loss of vigor, some leaf drop, discoloration of leaves, and occasionally sunburn. Marigolds and other annual flowers can be killed by mites.

Overhead irrigation or periodically washing plants can often provide sufficient control of mites in landscape settings, even on susceptible plants. Predatory mites and many other insects, such as minute pirate bugs, big-eyed bugs, and western flower thrips, feed on spider mites. Use of broad spectrum insecticides such as carbaryl (Sevin™) or malathion may kill predators, allowing a mite flareup. Selective control of mites is available with miticides, but in residential landscapes, without washing plants, frequent miticide sprays may be necessary and not very effective.

POWDERY MILDEW ON ROSES

Powdery mildew is a common disease problem on outdoor roses, and appears to be off to an early start in 2005 in Kern County. Susceptibility varies greatly among rose varieties, and most outdoor plantings usually withstand the disease without treatment.

Powdery mildew, caused by the fungus *Sphaerotheca pannosa* var. *rosae*, is recognized by its white to gray powdery growth on leaves, shoots, sepals, buds, and occasionally on petals. Leaves may distort and drop. Unlike most fungus diseases, powdery mildew does not require free water on the plant surfaces to develop and is active during warm, dry summer months. Overhead sprinkling (irrigation or washing) during midday may limit the disease by disrupting the daily spore-release cycle, yet allows time for foliage to dry. The pathogen requires living tissue in order to survive, so pruning, collecting, and disposing of leaves during the dormant season can limit infestations, but may not entirely eradicate them; airborne spores from other locations can provide fresh inoculations. Rose varieties vary greatly in resistance; landscape (shrub) rose varieties are among the most resistant. Glossy-foliaged varieties of hybrid teas and grandifloras often have good resistance to powdery mildew as well. Plants grown in sunny locations with good air circulation are less likely to have serious problems.

Fungicides containing triforine or other effective fungicides as active ingredients may be helpful, but generally must be applied to prevent rather than to eradicate infections, so timing is critical and repeat applications are necessary. In addition to synthetic fungicides, sodium bicarbonate (baking soda) in combination with horticultural oils has been shown to control powdery mildew of roses when used in a solution of about 4 teaspoons of baking soda per gallon of water with a 1% solution (about 1 oz per gallon) of a narrow range oil. The best time to apply this solution to avoid problems with phytotoxicity is during cool weather. Sodium bicarbonate is deleterious to maintenance of soil pH and soil structure and may leave white foliar deposits, so numerous applications with resulting runoff should be avoided. Commercial fungicides containing potassium bicarbonate (Kaligreen™, Remedy™) have been available. Commercial formulations of neem oil are also reported to control powdery mildew.

HORTICULTURE CLASSES FALL 2009

UC Cooperative Extension, Kern County, plans to again offer classes in horticulture in autumn, 2009. These classes will cover the science and culture of landscape and garden plants, and have been known as Master Gardener classes. While we no longer have a formal (i.e., volunteer) Master Gardener Program, we continue to offer classes as an educational outreach.

Landscape and Gardening I (Master Gardener I) Class:

This class will be offered Tuesday nights, 5:30-8:30 p.m., beginning August 25 and extending 16 weeks. Topics will include plant selection, soil science, landscape design principles, and pest management with an emphasis on organic and IPM methods, as well as sessions on vegetable crops, deciduous fruits, and citrus. A syllabus is available upon request.

Landscape and Gardening II (Master Gardener II) Class:

This class is planned for Thursday nights, also 5:30-8:30 p.m., beginning August 27, also for 16 weeks. Topics will be additions to those covered in MG I, such as roses. A syllabus is available upon request.

Registration Information:

Cost of each class will be \$70, continuing the price of recent years. We ask those interested in either class to call the Cooperative Extension office, 661-868-6200, to pre-register to reserve a space and help us track class size. Actual registration will be handled at the first class meeting.

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