University of California Cooperative Extension

THE GREEN SCENE

Kern County • 1031 S. Mt. Vernon Avenue • Bakersfield, CA 93307 • 661-868-6220

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PRUNING DEMONSTRATION FOR DECIDUOUS FRUIT TREES

The beneficial climate of Kern County allows residential planting of many deciduous fruit tree species. Unlike shade trees, deciduous fruit trees should be pruned every year before bud swell for optimum growth and yield. Pruning need not be complicated, but fruit trees are less forgiving than most shade tree species, and with incorrect pruning the yield of fruit will be reduced or eliminated, and the life of the tree will be shortened. Pruning diagrams or photographs in books or magazines may not be adequate to answer your questions.

Since pruning is a key step in promoting a large crop of tasty, mouth-watering fruit, Mario Viveros of the University of California Cooperative Extension will present two pruning demonstrations for deciduous fruits. Trees include apple, apricot, cherry, and almond, and he will also illustrate pruning of grapevines. The demonstrations will begin at 12:00 noon on both Tuesday, December 13, and Thursday, December 15, at the orchard adjacent to the UCCE office, 1031 S. Mt. Vernon Avenue, Bakersfield. To reach the office, take Highway 58 and exit at Mt. Vernon, then proceed south for about 3/4 mile. Publications on pruning, fertilizer for fruit trees, and fruit tree varieties for the valley portion of Kern County will be available. There is no charge for attendance, nor is pre-registration required.

GREEN KYLLINGA

Green kyllinga, *Kyllinga brevifolia*, is a relative newcomer to Bakersfield but has become increasingly common and is now one of the most frequently encountered weeds in turfgrass. Green kyllinga, often simply called kyllinga, is sedge rather than a broadleaf plant or a grass. Like its cousin nutsedge, it has the typical triangular-shaped stem that makes sedges easy to identify. However, the seed head of kyllinga is round and single, unlike nutsedge with its seed head an open spikelet. Green kyllinga can thrive despite the low mowing heights common in hybrid and common bermudagrasses. It likes wet conditions although moderate irrigation is sufficient. Although it prefers full sun, it will thrive in partial shade. The plant can be introduced by mowing equipment, and that's how I think it arrived where I live.

Making turf competitive through cultural practices is the most important strategy for reducing any weed infestation. Giving turf the advantage includes proper mowing height, sufficient nitrogen, and sufficient--not too much--irrigation. Mowing grass too low causes a reduction in roots that leads to a reduction in stand density; in other words, fewer plants per square foot, allowing weeds to invade. Raising the mowing height allows more turf shoot growth and lateral spread of plants, allowing turf to fill in open spots.

Green kyllinga spreads through growth of underground stems (rhizomes) as well as through seed head formation. Removing solitary plants by hand is effective, but it is important to pull out as much of the main stem as possible.

One reason for the spread of green kyllinga is its resistance to many of the common herbicides used on home lawns. Glyphosate (Roundup™, other tradenames) is not very effective and will also kill turfgrasses so it is not a very good management option. Pre-emergent herbicides are not effective against established plants—green kyllinga is a perennial—but could be used to limit growth from seed. For post-emergent control, MSMA (now difficult to find) can be used, but repeat applications are necessary and MSMA can cause yellowing of turfgrasses at high temperatures or high rates. In recent years, the herbicide halosulfuron (Sedgehammer™, formerly Manage™) has become available. It is more expensive than MSMA, and anecdotal experience suggests more than one application is necessary. Be sure to check the label of any herbicide product to see if it can be applied to the specific turf or site in question; the label is the law. Be sure to follow label directions exactly when using any herbicide.

Descriptions of the biology and control, with photos, are available for both green kyllinga and nutsedge on the UC IPM website, www.ipm.ucdavis.edu.

AUTUMN COLOR DEVELOPMENT IN PLANT FOLIAGE

One of the most colorful displays of nature is a landscape ablaze with fall color. In the northern United States, especially in the hardwood forests from Michigan to New England, each tree may give startling impact to the scene, and no two trees are exactly alike. Some species are noted for fall color, such as the scarlet sumac covering many Midwest hillsides, and around Bakersfield the bright liquidambars.

Why the different shades of color? Chlorophyll is the green pigment that captures the energy of sunlight, making photosynthesis possible, the formation of sugars from carbon dioxide and water. During the growing season chlorophyll is produced as long as a plant remains healthy.

In late summer and early autumn, the spectacular unveiling of color begins as day length triggers the process. Metabolism in the leaf, including chlorophyll production, slows. Nitrogen, phosphorus, and potassium are pulled back into twigs while calcium and magnesium remain in leaves. Cells begin to break down. How much and how fast chlorophyll is destroyed differs among plant species. For example, Norway maple leaves lose almost all their chlorophyll while those of lilac lose only 40 percent. The average chlorophyll loss across many species is about 85 percent.

As chlorophyll breaks down, pigments which have been present during the growing season but were masked by the abundance of chlorophyll begin to be visible. Carotenoids are a class of pigments with over 60 members found in plants and animals. The most familiar carotenoid is carotene, the orange pigment found in carrots. Another closely related chemical group, even more plentiful in plants, is the xanthophylls. Both groups of compounds are yellow-to-orange in color. Tree genera, such as ash and willow, produce carotenoids and xanthophylls and display these characteristic colors when autumn arrives.

But what about the reds and purples? Plants including viburnums, Boston ivy and liquidambar can synthesize new pigments in the autumn. The mechanism to form these compounds isn't active at other times of the year, but in autumn sugars are synthesized to form pigments called anthocyanins, named from the Greek words "anthos," a flower, and "kuanos," azure blue. Each specific compound has a particular color, which may be crimson, scarlet, blue-violet, red, purple or mauve. The color depends on the chemical structure of the pigment.

Sunlight and weather conditions favoring accumulation of sugars also favor production of anthocyanins. The best conditions for glorious fall color are sunny dry weather with cool but not freezing night temperatures. These conditions are more likely to be found in the mountains than on the Valley floor. Frost does not encourage development of fall color. Rather, leaves may be killed or injured before coloring processes are complete.

Liquidambar and Chinese pistache are among the most colorful shade trees found on the southern San Joaquin Valley floor. Willows, birches and poplars contribute yellows. Perhaps the most colorful shrub visible in the Kern Canyon is poison oak, but this plant is not recommended for landscapes!

SPRING 2012 HORTICULTURE STUDY TOUR

Every 10 years the Dutch host a horticulture exposition called the Floriade, and 2012 is again the year! It's a natural to combine a visit to the Floriade with a visit to the neighboring Keukenhof, said to be the most photographed garden in the world, with 7 million tulips, amaryllis, hyacinths, daffodils, and other bulbs. We plan to begin with a starting point in the south of France to allow visits to selected gardens near the Mediterranean having a climate similar to ours. The tour start date is planned for April 15, 2012. For more information about tour content, please contact me at jfkarlik@ucdavis.edu. As in past years, the tour arrangements are being handled by Travel Gallery of Pasadena, and are found at www.travelgallery.com under the heading "Join Your Group."

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