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University of California
Agriculture and Natural Resources
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The Green Scene

UC CE

May 2017

Meetings and Announcements

New County Publication

Thanks to the help of several collaborators, we now have an expanded and revised version of our county publication *Shade and Ornamental Trees for Kern County*. The revision reflects the incursion of diseases that are killing liquidambar and purpleleaf plum, which should no longer be considered reliable for the Valley portion of Kern County. One item that did not need revision is the rating of coast redwood trees for the Valley area. They're not well adapted, and even a casual drive through Bakersfield shows dozens of redwoods on the way toward removal. The new tree publication is available on our website, cekern.ucanr.edu/.

Food Preservation Class—Please respond if interested

Margaret Johns, our Advisor for foods and nutrition presented a class session in our spring Horticulture V class on food preservation and food safety. She has offered to arrange for a more extensive session if there is interest. If you are interested in this topic and would likely attend a class on food preservation, please send me an email (jfkarlik@ucdavis.edu) or call 661 868-6220 and let me know that a) you are interested, and b) the meeting time that would work best for you. If we do a one-time class on this topic, I would guess it would be sometime in the July-August time frame.

Fall Horticulture Classes

I expect to offer a Horticulture I class this fall, beginning late August, and also a Horticulture IV class, beginning about the same time. The horticulture classes we offer are not sequential, but rather cover a variety of specific topics. In other words, it's not necessary to have taken Horticulture III to benefit from Horticulture IV. More details later this summer.

Early Announcement--2018 Horticultural Study Tour destination: Thailand

I am in the process of drafting an itinerary for our next (10th) Horticultural Study Tour, this time to Thailand. We will aim for late February, 2018, since the weather in Thailand then is cool and dry.

Thailand is home to a number of botanic gardens, and a visit would provide exposure to the fascinating culture of Asia. The best definition I have ever seen of sustainable agriculture comes from the demonstration farm at Mae Rim, near Chiang Mai. I would expect that our group would visit Bangkok and Chiang Mai, and we may also arrange a side trip to Angkor Wat in Cambodia. Lodging and other expenses are relatively low in Thailand.

Tree Problems in the Bakersfield Area

Because of the incidence of disease in specific tree species in Bakersfield landscapes, I am reprinting an article from the July, 2016, Greenscene.

by John Karlik, UCCE Kern County, and Jim Downer, UCCE Ventura County

Diseases appear to be affecting several species of trees found in the Bakersfield area.

Liquidambar has been one of the most reliable shade trees in the Bakersfield and greater Kern area, but no more. For the past several years, and especially since 2015, liquidambar (*Liquidambar styraciflua*, sweetgum) trees in many locations are dying from outer top branches to lower branches (two photos right and below). These symptoms match those resulting from infection by a bacterium, *Xylella fastidiosa*, which is the same bacterium that causes Pierce's disease of grapes and also oleander scorch. Both of those diseases also occur in Kern County.

Xylella is transmitted by sharphooters, particularly the glassy winged sharpshooter (*Homalodisca vitripennis*) which feeds on leaf tissue. The insect acquires bacteria from infected plants and then injects them into uninfected plants during feeding. As bacteria multiply, they plug the water-conducting tissue (xylem) leading to symptoms of drought stress followed by leaf loss.

Disease progression in liquidambar seems to be similar in that trees die back and eventually succumb over a period of several years. Unfortunately, there is no control, chemical or otherwise. Extra water may help a tree temporarily, but since the disease blocks water transmission within the plant, extra water won't be absorbed as the disease progresses. Samples taken in May from symptomatic liquidambars were negative for the pathogen, but we plan to resample toward the end of summer when the bacteria have had time to multiply.

Xylella also affects purpleleaf plum (*Prunus cerasifera* 'Krauter Vesuvius'), another mainstay of local landscapes. Affected trees lose leaves and die back even though they receive adequate water (photo at right).

Botryosphaeria spp., more simply referred to as bot, is a fungal canker disease of trees that is opportunistic; that is, it attacks stressed trees. It, too, can cause twig and branch dieback. We suspect bot is also playing a role in the dieback of liquidambar.

In oleander, the corresponding disease is called oleander scorch, and it typically kills a plant in 3-5 years. The photo to the right shows an oleander with scorch symptoms. (Also see the UC IPM Pest Note *Oleander Leaf Scorch* found at http://ipm.ucanr.edu/PMG/PESTNOTES/pn7480.html)

Another shade tree that has been reliable is Raywood ash, *Fraxinus oxycarpa*. Until recently, we have not seen the dieback problems in Raywood ash that have been reported in northern California. But now we see numerous Raywood ash exhibiting dieback symptoms (photo at right). The fungus *Botryospheria* spp. has been associated with these dieback symptoms. Again, there is no chemical or other control for this problem other than normal reasonable irrigation and perhaps a little nitrogen fertilizer in spring and pruning out affected branches below the cankered or dead tissue.

Loss of at least some of raywood ash, liquidambar, and purpleleaf plum will certainly change the appearance of Bakersfield and Kern landscapes. These species now should be planted with more caution and, for large landscapes, with other species mixed in. Greater allocation of water resources will forestall disease as will removal of competing trees and shrubs.

John Karlik
Environmental Horticulture/Environmental Science