

Kern/Tulare

GWSS Update



A project of the Glassy-winged Sharpshooter Task Force of Kern and Tulare Counties. Participants: Agricultural Commissioner's Offices of Kern and Tulare Counties, California Department of Food and Agriculture, University of California-Cooperative Extension, U.S. Department of Agriculture (APHIS and ARS Divisions).

Almond Leaf Scorch, almond version of Pierce's Disease, increasing in Kern County

Levels of Almond Leaf Scorch, the almond version of Pierce's Disease (PD), are increasing in Kern County, reports UCCE almond farm advisor Mario Viveros.

Viveros has found 15 new cases of Almond Leaf Scorch this year in Kern County, for a total of 20 since 2000. Most of the infected orchards are located in a 4-mile radius of Enos Lane and Rosedale Highway, west of Bakersfield.

No glassy-winged sharpshooters (GWSS) have been found in the area, but there are vineyards with PD nearby, says Jennifer Hashim, UCCE viticulture farm advisor for Kern County.

Viveros says he doesn't know whether the disease is "exploding" or whether its higher incidence is the result of now looking for it.

"My standard recommendation is for growers to identify and remove infected almond trees to prevent the spread of the disease to other trees or orchards," says Viveros. "We're seeing only one tree to maybe 2 percent of the orchard infected, so it's not a drastic management change."

The Sonora variety of almond tree appears to be most susceptible to almond leaf scorch, Viveros says. Symptoms include yellowing leaves and smaller trunk circumference.

What's the culprit? Viveros isn't sure what the culprit is but suspects vectors such as spittle bug, or sharpshooter leafhoppers such as the green or red-headed sharpshooter.

Large acreages of alfalfa are grown in the area west of Bakersfield. That concerns Hashim because, she says, "we do see a connection between vineyards that develop PD and nearby grassy fields like alfalfa that harbor vectors of *Xylella fastidiosa*."

"We also believe there is a connection between the strain of *Xylella* in alfalfa and in grape, and possibly between almond and grape," she adds.

Rising levels of Almond Leaf Scorch

do pose a concern, agree researchers. According to Alexander Purcell, with the Division of Insect Biology at the University of California at Berkeley, all isolates of *Xylella fastidiosa* from grape with PD cause Almond Leaf Scorch.

Xylella connection. "Not all almond isolates can cause PD, however," Purcell notes. "They multiply and move slowly in grape and do not cause disease, then usually die out in winter. This could explain why we don't see PD near orchards with Almond Leaf Scorch."

Adds Purcell, "The reverse situation (almonds without Almond Leaf Scorch near vineyards with PD), however, cannot be explained by strain differences because all PD isolates seem to cause Almond Leaf Scorch. We think this might be explained by the greater difficulty that green (GSS) and redheaded sharpshooters (RHSS) have in inoculating almond compared to grape, and because they may feed on almond less than on grape. Both are entirely accidental, thus, rare feeding hosts for these two sharpshooters."

GWSS is another story, Purcell says, since it has been found feeding on almonds in spring.

All three insects are inefficient vectors of *Xylella fastidiosa* to almond in lab tests, but the greater presence of GWSS in almond compared to GSS and RHSS make GWSS much more of a threat for almond.

Grape strains can survive cold winters in almonds, but not as well as genetically distinct "almond" strains, which also may contribute to the rarity of Almond Leaf Scorch in San Joaquin Valley orchards near PD hot spots.

"The increase in Almond Leaf Scorch is of great concern to me," Viveros says. "It demonstrates the need for increased involvement by the almond industry in the battle against PD. It also demonstrates the need for a centralized tracking system for *Xylella* infections, not just PD only." ■

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- www.co.kern.ca.us/kernag/
- http://cekern.ucdavis.edu/Custom_Program444/

"This demonstrates the need for increased involvement by the almond industry in the battle against PD."

Mario Viveros,
UCCE almond
farm advisor

California to receive \$22 million to fight GWSS

California is expected to receive about \$22 million in federal funding next year to fight GWSS.

Both the U.S. House and Senate recently approved separate appropriations bills to allocate the funds as part of the budget for USDA-APHIS. The bills now go to committee, where a final amount will be negotiated.

GWSS federal funding for 2003 totaled \$17.5 million.