

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).

Progress seen in understanding PD in Coachella Valley

Researchers in the Coachella Valley are making progress in understanding Pierce's Disease (PD) in vineyards, reports Carmen Gispert, area viticulture advisor with the University of California.

They have found that PD infection is more common close to the trunks of grape vines. This discovery was made after intensified sampling efforts in Coachella Valley vineyards this year.

"We actually crawled under the vines to take samples close to the trunk, not just from the leaves on top," Gispert says.

Gispert hopes the discovery will advance researchers' ability to define ways to sample for PD, which is caused by the bacterium, *Xylella fastidiosa*. The bacterium blocks the xylem, the water- and nutrient-conducting vessels of plants. The typical symptom is a drying or scorching of leaves on the plant. Infected vines can die in as little as one to two years. There is no cure for PD.

Since 13 PD-infected vines were found in Coachella Valley in July 2002, growers and researchers have zeroed in on managing the disease and its GWSS vector. The infected vines were quickly removed by growers. GWSS levels have fallen to almost undetectable levels since the California Department of Food and Agriculture's Pierce's Disease Control Program and the Riverside County Agricultural Commissioner's office launched an area vector reduction program on citrus groves in February 2003.

"Still, we found two vineyards with PD this year, so we know PD is present here," Gispert says. "We have to remain vigilant."

Studying environmental conditions. Gispert and her associate, Tom Perring of UC-Riverside's Department of Entomology, have been studying vineyards in the Coachella Valley to characterize PD symptoms in the desert. Gispert says the Coachella Valley poses its own challenges.

"Vineyards are heavily irrigated and fertilized here in the desert," Gispert says. "Because of the heat, growers have to keep a lot of canopy on the plant. That creates essentially a green wall of canes. It isn't easy to detect PD symptoms on one cane alone since one symptomatic cane may belong to a vine located several feet away."

The research team also has been studying the incidence of PD and GWSS in the Coachella Valley. Researchers are exploring which factors may play an important role in the distribution of PD in vineyards with the goal of developing strategies to manage the disease and prevent its spread.

Persistence of Admire® in old vines. With help from Dr. Nick Toscano of UC Riverside, Gispert also has been studying Coachella Valley vineyards to see how plant age, soil type and irrigation may influence Admire uptake in old vines.

Admire (imidacloprid) belongs to a class of chemicals called neonicotinoids.

The researchers also have been looking at the persistence of Admire and its impact on both GWSS and the vine mealybug, another vineyard pest.

"We're looking at treatment schedules for the vine mealybug and for GWSS," she says. "We also want to know whether the age of area vines, which are 25 to 45 years old, plays a role, and if soil conditions might influence the behavior of Admire."

Toscano's studies revealed that levels of Admire in the sap of Coachella Valley grape vines from the spring treatment were very low and the persistence of the material was very short.

"Our concern is that old vines may not be protected against GWSS," Gispert says.

Vine mealybug numbers soar in May and June in the Coachella Valley.

"It's a real challenge to determine when is a convenient time to apply Admire

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—Carmen Gispert,
University of
California

Luvisi has new e-mail address

Please note that Kern-Tulare GWSS Task Force project coordinator Don Luvisi has a new e-mail address: dluvisi@bak.rr.com.



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for effective protection for vine mealybug and for GWSS," Gispert says.

The Coachella Valley is home to 99,000 acres of diversified farmland. Top crops are citrus, with 12,000 acres, and table grapes, with 10,400 acres. Coachella Valley has the largest citrus-grape interface in Riverside County.

Gispert has high praise for area grape growers, who have helped fund this year's research efforts. "They really focus on

what's needed," she says. "They are such a progressive group."

The year's research activities have motivated Gispert and her colleagues. "This has been an exciting opportunity to bring researchers to work together to find new ways to manage this disease," she says.

You can reach Gispert at cgispert@ucdavis.edu.

— Catherine Merlo

Special thanks

A special thanks to the California Table Grape Commission and the GWSS Task Force of Kern and Tulare Counties for their support of this newsletter.

Fax changes? E-mail?

If you'd prefer to receive *GWSS Update* via e-mail or at a different fax number, please contact Catherine Merlo at (661) 588-0561 or cmm55@aol.com.

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