

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).

Contact:

Don Luvisi
Project coordinator
(661) 868-6226
dluvisi@bak.rr.com

Catherine Merlo, Editor
(661) 588-0561
cmm55@aol.com

Web site:

http://cekern.ucdavis.edu/Custom_Program444/

Temecula, Coachella must continue GWSS area-wide management program

Population increases of the glassy-winged sharpshooter (GWSS) in the Coachella Valley in the last three years have increased the danger of Pierce's Disease (PD) occurrence in the area, reflecting similar situations in the Temecula and San Joaquin Valleys.

That's what Nick Toscano, a UC-Riverside entomologist, and Carmen Gispert, UCCE viticulture advisor, point out in a recent report on the Area-wide Management Program in the Coachella and Temecula Valleys.

In July 2002, the occurrence of *X. fastidiosa*, the PD bacterium, was found in 13 vines from two adjacent vineyards in the southeastern part of Coachella Valley. With this discovery and the increasing GWSS populations, Toscano and Gispert say, there was—and is—a real need to continue an area-wide GWSS/PD management program. It's needed, they say, to prevent an economic disaster to the work forces and connecting small businesses of Mecca, Thermal, Coachella, Indio, and other nearby towns that depend upon the vineyards for a big portion of their incomes.

"Only a continuation of an area-wide GWSS/PD management program will keep the vineyards viable in Coachella," the Toscano-Gispert report says.

At present, there are no apparent bio-



logical or climatological factors that will limit the spread of GWSS or PD in the area.

GWSS has the potential to develop high population densities in citrus, the report notes. What's needed are insecticide treatments in citrus groves, preceded and followed by trapping and visual inspections to determine the effectiveness of those treatments. This protocol can manage this devastating insect vector and bacterium.

About 5,200 acres of citrus in Riverside County were treated for GWSS from February through July 2005. The treatments ran under a cooperative agreement with USDA-APHIS and the Riverside Agricultural Commissioner's Office for the "Area-Wide Management of the Glassy-Winged Sharpshooter in the Coachella and Temecula Valleys."

The cost of Riverside County GWSS treatments was close to \$1 million, Toscano and Gispert report.

Increases in GWSS populations in the Coachella Valley in the last three years have increased the danger of PD occurrence in area vineyards. (Photo: Carmen Gispert)

GWSS and PD update on the Coachella Valley

by Dr. Carmen Gispert,
Viticulture/Pest Management Advisor
UC Cooperative Extension-Riverside County

Pierce's disease was first identified in the Coachella Valley in 1983. At that time, other sharpshooters were responsible of spreading *Xylella fastidiosa*, the pathogen that causes Pierce's disease (PD) on grapevines. Grape growers learned that

keeping vineyards without grasses helped to reduce the presence of these sharpshooters and the potential of infection.

Around 1989, this scenario changed when the glassy-winged sharpshooter (GWSS) was introduced in the state, and this insect became the most significant vector of PD. The GWSS was identified in the Coachella Valley in the early 1990s, but

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GWSS and PD update in the Coachella Valley

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there was no concern because there was no record of the presence of the bacterium since 1985.

The surveys for PD in the Coachella Valley initiated in 2001, but it wasn't until 2002 when the first vines infected with the disease were found. Summer surveys since 2002 have identified new sites with infected vines in the valley, and, to this date, infected vines have been found in 14 vineyards. This represents a low proportion of the total vineyards in the Coachella Valley. Except for the two infected vineyards identified in 2002, sharpshooter densities have been low near the sites that had PD.

Populations of GWSS increased from 2001-2002, and, in 2003, the CDFA area-wide spraying program started. If the trend of increasing GWSS would have been allowed, it is possible that Coachella Valley might have faced spread of the bacterium to neighboring vineyards.

Evidence suggests that the area-wide program effectively reduced the abundance of GWSS and the spread of PD. Citrus groves and vineyards within the GWSS/PD management areas have been monitored weekly to determine the need and effect of insecticide treatments. Approximately 4,000 acres of citrus were treated with a single application of Admire at 32 oz/acre. Organic groves were treated with PyGanic (1.4% Pyrethrins) at 7 pints/acre. Approximately 1% of the groves were treated with Assail (acetamiprid) at the rate of 2 oz/acre.

While the GWSS population remains low, the potential of PD spread is reduced. It is important, however, to take into account that the pathogen that causes PD may still be present in some vineyards.

With this scenario, only a constant inspection of the vineyards, laboratory analysis of plant tissue and removal of infected vines will reduce the spread of this devastating disease on grapevines in the Coachella Valley.

PD Research Symposium set for Dec. 5-7

The 2005 Pierce's Disease Research Symposium will be held Dec. 5-7, 2005, at the Marriott San Diego Hotel and Marina in San Diego, Calif. For more information, contact Athar Tariq at (916) 322-2804 or atariq@cdfa.ca.gov.

GWSS Update archives

Past issues of *GWSS Update*, going back to 2001, can be found at <http://cekern.ucdavis.edu/newsletterfiles/newsletter667.htm>.