

May 28, 2004

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).

## Parlier unit studies wide range of *xylella* diseases

The Exotic and Invasive Diseases and Pests (EIDP) Research Unit of the USDA Agricultural Research Service is located at the San Joaquin Valley Agricultural Sciences Center (SJVASC) in Parlier, Calif.

This Research Unit was established in response to the re-emergence of Pierce's Disease (PD) as a serious economic problem of grapevines associated with the introduction, spread and establishment of the glassy-winged sharpshooter (GWSS).

To date, a multidisciplinary team of research scientists has been assembled. In-house and cooperative research, both basic and applied, has been focused on PD and almond leaf scorch disease caused by *Xylella fastidiosa* (Xf). In addition, research is also conducted on the epidemiology of citrus tristeza, including identification and characterization of citrus tristeza virus genotypes (R. Yokomi).

Research on *xylella* diseases is focused on:

- ♦ disease and insect vector epidemiology (R. Groves, J. Chen; E. Civerolo)
- ♦ microbial ecology of Xf (J. Chen)
- ♦ insect vector biology including feeding behavior, host preference, reproduction and oviposition (R. Groves; E. Backus)

♦ Xf transmission (both acquisition and inoculation) by insect vectors (E. Backus)

♦ genetic, physiological and biochemical nature of grape and almond host-Xf interactions (H. Lin; F. Ryan)

♦ disease management via induced host resistance (E. Civerolo)

Cooperative research is conducted to develop robust methodology to detect and identify Xf in plants and insects (M. Francis); exploit proteins on the surface of Xf to interfere with infection (G. Bruening, UC Davis); and determine the sequences of the genomes of multiple Xf strains (M. Van Sluys, M. Oliveira, FAPESP, Brazil).

Scientists in the EIDP Research Unit cooperate on a wide range of Xf and GWSS research projects with UC scientists at Berkeley, Davis and Riverside, several UCCE farm advisors in the San Joaquin Valley and other ARS scientists around the country.

— Ed Civerolo

USDA-ARS, Pacific West Area  
San Joaquin Valley Agricultural Sciences  
Center  
eciverolo@fresno.ars.usda.gov

### Contact:

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

### Web sites:

- [www.co.kern.ca.us/kernag/](http://www.co.kern.ca.us/kernag/)
- [http://cekern.ucdavis.edu/Custom\\_Program444/](http://cekern.ucdavis.edu/Custom_Program444/)

**“This Research Unit was established in response to the re-emergence of Pierce's Disease as a serious economic problem of grapevines associated with the introduction, spread and establishment of the glassy-winged sharpshooter.”**

— Ed Civerolo  
USDA-ARS,  
San Joaquin Valley  
Agricultural Sciences  
Center