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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).

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Research mission: Curtailing GWSS oviposition on nursery plants

UC-Riverside researchers seek to assist nurseries by studying impact of insecticides, specific plant susceptibility

With the return of hot weather and heightened sharpshooter activity, University of California researchers Matthew Blua and Richard Redak are ready to study ways to curtail glassy-winged sharpshooter (GWSS) oviposition in plant nurseries.

"The ornamental nursery industry needs new, cost-effective solutions to the problem of transporting GWSS, especially as eggs, on nursery stock to non-infested areas of California," says Blua, who, along with Redak, works in the Department of Entomology at UC-Riverside.

Blua and Redak believe that effective solutions might be immediately integrated into current production systems. Those can result from understanding just how much registered insecticides curtail oviposition, and knowing the relative susceptibility of various nursery plants to oviposition by GWSS.

Their two-year study is funded by the California Department of Food and Agriculture's Pierce's Disease Control Program. Field trials will be conducted at UC-Riverside, with plants provided by two California wholesale nurseries: Valley Crest Tree Company in Fillmore, and Bordier's Nursery in Irvine.

Southern California nurseries need new, cost-effective solutions for transporting GWSS-free stock, researchers say. (Photo courtesy of Rick Redak)

Nurseries join in GWSS battle

Like the grape and citrus industries, California's plant nursery is heavily involved in the battle against the sharpshooter. Nursery stock is considered a high-risk commodity for spreading GWSS.

As a result, California has imposed strict regulations on the nursery industry to restrict GWSS movement on containerized ornamentals that are transported from infested to non-infested counties. These regu-

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Special thanks

A special thanks to the California Table Grape Commission for its support of this newsletter.

Tuning in to Valley's table-grape pest and disease control district, GWSS efforts

Six months into her new position as manager of the Consolidated Central Valley Table Grape Pest and Disease Control District, Judy Stewart-Leslie is working closely with her board of directors "to get things done for the district and industry."

Formed by a grower referendum in 2005, the district encompasses Kern and Tulare counties. The two areas account for most of California's table-grape production, with some 100,000 acres of the crop's production between them.

The district's mission is to watch for and respond to any introduction of invasive pests or diseases that threaten the local table-grape industry. Paul Giboney of M.Caratan, Inc. chairs the nine-member board.

Here, Stewart-Leslie gives a progress report on the district's activities.

Judy Stewart-Leslie

What's happening with the district these days?

Stewart-Leslie: We're getting settled in and getting down to work. We're verifying

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lations require thorough inspection by county agricultural commissioners' offices at both the origin of plants destined for transport and at their destination.

Local disinfestation protocols using repeated insecticide applications are required at the majority of nurseries shipping materials out of a quarantine area.

"When GWSS are detected at a destination nursery, costly insecticide treatments of the surrounding area, as well as destruction of the infested material, are required," Blua says. "Inspections and treatments are labor-intensive, time consuming, and result in substantial extra costs to growers, counties and ultimately the state."

Nursery shipments can be rejected due to the presence of egg masses. In many cases, Blua notes, the presence of an old empty egg-mass scar on the foliage, has been sufficient to trigger crop destruction, pesticide applications, and additional costly monitoring and surveillance.

A step farther

Although solutions such as screen houses or barriers to exclude GWSS and intensive insecticide applications to induce GWSS mortality exist, Blua says their expense and other logistical issues may prevent many nurseries from employing such tactics.

"We hope our research will aid nursery managers in making decisions regarding the treatment and transport of plants based on the likelihood of infestation by GWSS eggs," he says.

"Likewise, the knowledge we generate will allow managers to segregate plants that are most susceptible to GWSS oviposition into smaller cost-manageable screen houses for durations to insure they are protected from oviposition, or into areas where they can be efficiently treated intensively with insecticides," he adds.

The project also will provide information to landscape horticulturalists that can be used to create ornamental plantings that do not generate high GWSS population densities. The latter, says Blua, will become more important with the discovery of more diseases of ornamentals caused by *X. fastidiosa* and transmitted by the GWSS.

Blua and Redak also hope to generate information on the relationship between the time after an insecticide treatment and susceptibility to GWSS oviposition. ■

"The research we propose will aid nursery managers in making decisions regarding the treatment and transport of plants based on the likelihood of infestation by GWSS eggs."

Matthew Blua, University of California-Riverside

Tuning in to Valley's table-grape district, GWSS efforts

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table-grape parcels to make sure growers aren't charged an assessment if they're not currently growing table grapes. Also, the district has become a member of the state's PD/GWSS Task Force, and we're pursuing some research projects.

What are the district's objectives and budget?

Stewart-Leslie: Our primary focus remains GWSS and Pierce's Disease. We will be supportive in any way we can, whether in the GWSS area-wide management program or at state and local levels. We are involved in funding research, education, contingency plans and communication with government agencies, industry groups and growers.

Our 2005-06 budget stands at between $700,000 and $800,000, with the per-acre assessments already collected from property taxes. We're setting aside a significant portion of our budget for emergency funding for any new pests or table-grape threats so we can help support state efforts or be there from the first minute.

Are there any new pests or diseases in particular that you're watching?

Stewart-Leslie: We're still focusing on GWSS and PD. To a small degree, we're also keeping an eye on the vine mealybug, although most growers are controlling that locally. We're also staying tuned in to the Japanese beetle. It's a threat to grapes, but it's not in California now.

What research projects is the district funding at present?

Stewart-Leslie: We're cost-sharing on research with the University of California-Pierce's Disease Research Program. The project is, "Breeding PD-resistant table and raisin grapes, and the development of markers for additional sources of resistance." It's a two-year project. USDA/ARS and UC-Davis are working on it with researchers David Ramming and Andrew Walker. It will start this summer. ■

Find GWSS program maps online

For online maps showing GWSS trap locations and finds, go to: http://www.cdfa.ca.gov/phpps/pdcp/gwMaps/gwMgmtMaps.htm.