CALIFORNIA
PD/GWSS BOARD
Partnership for Winegrape Pest Solutions

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bulletin

cdfa CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

Glassy-Winged Sharpshooters Found in Kings and Santa Clara Counties

RISING GWSS THREAT HIGHLIGHTS THE NEED FOR SHARED ACTION

Two new glassy-winged sharpshooter (GWSS) infestations were detected this year, one in Kings County and another in Santa Clara County, underscoring the ongoing threat of Pierce's disease (PD) to California's vineyards. The Pierce's Disease Control Program (PDCP) is now overseeing eradication efforts in five counties: El Dorado, Kings, Santa Clara, Solano and Stanislaus.

"These newly detected infestations underscore how critical our trapping network is for early detection and timely treatment to contain GWSS," said Joseph Damiano, the PDCP statewide coordinator. "We must remain diligent in our prevention and early-detection efforts or GWSS could spread quickly to new areas. We cannot let our guard down."

Without the PDCP's leadership and grower-supported funding, grower losses would more than double from $48 million to $104 million annually statewide, according to a 2025 UC Davis study. Even with current efforts, PD still costs California an estimated $110 million each year.

An inspector surveys landscape plants for glassy-winged sharpshooters

The PDCP and its partners have successfully eradicated 18 GWSS infestations since 2001, protecting California's vineyards and giving researchers time to develop long-term solutions. But climate change, reduced funding and evolving agricultural practices are making the fight tougher.

PDCP LEADS ERADICATION OPERATIONS IN FIVE COUNTIES

Working with county agricultural officials, the PDCP coordinates trapping, surveying, treatment and biological control to eradicate infestations.

"A single eradication can cost more than $1 million," said Damiano. "Prevention is critical to avoid those costs before infestations take root."

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This year, eradication projects are underway in five counties. Each project can span several years, and the figures below reflect detections and eradication work from January to October 2025.

- **El Dorado County** *(found October 2024)*: 448 adults, 247 nymphs and 141 egg masses (15 viable, 100 emerged and 26 parasitized) detected. Foliar treatments applied to 498 residential properties and 10 acres of common area. Soil treatments applied to 821 residential properties and 50 acres of common area, with 6,480 biocontrol wasps released.
- **Kings County** *(found July 2025)*: 34 adults detected on 23 properties and 2,390 biocontrol wasps released.
- **Santa Clara County** *(found September 2025)*: 25 adults, 20 nymphs and 8 egg masses detected on 39 properties and 1,440 biocontrol wasps released.
- **Solano County** *(found 2022)*: Eradication nearly complete with only one adult detected, 11 properties treated and 7,630 biocontrol wasps released.
- **Stanislaus County** *(found August 2024)*: 162 adults, 3 nymphs and 8 egg masses detected, treatments conducted on nearly 3,300 properties and 7,000 biocontrol wasps released.

RISING PRESSURE FROM PD AND GWSS

PD and GWSS are becoming more difficult to manage because of changing environmental conditions and regulations beyond the PDCP's control.

"Cold winters can cure vines with PD," said Dr. Matthew Kaiser of the PDCP. "We are concerned that warmer winters might lead to more disease risk further north and at elevations that used to be considered safe."

Factors Driving the Increase

- Warmer temperatures and longer summers allow GWSS to reproduce more often, resulting in multiple generations each year.
- Rising organic citrus production limits treatment options, as there are no long-lasting organic pesticides effective against GWSS.
- Regulatory restrictions limit conventional pesticide use, and development of insecticide resistance is always a risk.

EVERYONE HAS A ROLE TO PLAY

Containing and controlling GWSS requires shared effort among growers, counties, nurseries and the citrus industry. The PDCP leads statewide coordination, with trapping, surveys and treatment, but and community participation is essential.

Trapping remains the first line of defense against new infestations. The PDCP has adjusted its trapping work to stay within budget without compromising results. Still, any further funding gaps could make it harder to keep the program successful.

What Counties Do

- Conduct routine trapping and inspections.
- Ensure consistent program implementation and rapid response to detections.
- Educate residents about PD and GWSS.
- Collaborate with growers, nurseries and industry to strengthen coordinated action.

What Growers Can Do

- Report GWSS sightings and PD symptoms to your county agricultural commissioner.
- Remove diseased vines promptly.
- Treat vineyards for GWSS following local guidance.
- Follow pest management tips from your local UCCE office (bit.ly/3LqXK5d) or viticulture specialist (bit.ly/4nDtykE)

What Nurseries Can Do

- Consider applying preventative treatments during peak GWSS seasons, February – March and July – September.
- Follow shipping regulations and best practices for receiving plant material.
- Review the PDCP's best-practice guidelines: cdfa.ca.gov/pdcp/Guidelines.html
- Partner with county officials on inspections and treatments.

What the Citrus Industry Can Do

- Follow shipping and risk-mitigation protocols.
- Partner with county officials for inspections.
- Agree to orchard treatments to reduce overwintering GWSS populations.

on the RESEARCH FRONT

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Each tube contains an independent Chardonnay or Merlot regenerated clone with an inserted gene (knock-ins). *Photo credit: J. Debernardi*

Development of a Protoplasts-Based Platform to Knock-in Agriculture Relevant Genes into Grapevines

Project leaders: Juan Debernardi and Dario Cantu, University of California, Davis

The research team developed a new, precise way to add relevant genes directly into winegrape varieties, without using traditional genetic modification. They've already grown grapevines with added traits, and are now testing genes from *Vitis arizonica* that could protect against Pierce's disease. This promising work could help growers develop hardier vines and reduce losses from disease in the future.

Epidemiology of Grapevine Leafroll-Associated Virus 3 and RNA Interference Against the Virus and its Major Mealybug Vectors

Project leader: Marc Fuchs, Cornell University

Researchers are studying how grapevine leafroll-associated virus 3 (leafroll-3) spreads in vineyards and how growers limit its spread. In several Lodi vineyards, new infections have shown unexpected patterns, suggesting the virus may move differently than expected. The team is mapping leafroll-3 strains and tracking vine mealybugs to better understand how the disease spreads. They're also developing grapevines that can resist both the virus and its key insect vectors, the vine and grape mealybugs, using RNA interference (RNAi) technology to support long-term, sustainable control.

The spread of vine mealybugs sprayed with a fluorescence dye are tracked with ultraviolet flashlights at night. *Photo credit: M. Fuchs*

A Cabernet franc vine displaying typical red blotch disease symptoms. *Photo credit: M. Fuchs.*

Investigating the Impact of Grapevine Red Blotch Virus on Grape Skin Cell Wall Metabolism and Soluble Pathogenesis-Related Proteins in Relation to Phenolic Extractability Disease

Project leader: Ben Montpetit, University of California, Davis

Researchers are studying how grapevine red blotch virus (GRBV) changes the makeup of grape skins and cell walls, which can influence color, flavor, and tannin levels in wine. The team is continuing work previsouly led by Anita Oberholster and has collected and analyzed grape and wine samples to measure phenolics, proteins, and minerals, and is testing how GRBV affects enzymes involved in ripening. This work will help explain how the virus alters grape chemistry and provide insight for winemakers looking to reduce its impact on wine quality.

The CDFA PD/GWSS Board partners with other organizations to leverage funding for research and outreach projects. Funding partners include the American Vineyard Foundation, the Consolidated Central Valley Table Grape Pest and Disease Control District, the USDA Agricultural Research Service, and other organizations.

California Remains Spotted Lanternfly-Free, but Prevention Is Key

As the spotted lanternfly advances westward, California's prevention actions continue to deliver results. No live lanternflies were detected during this year's surveys, but researchers and growers are already preparing for what's next by studying whether the pest could spread Pierce's disease (PD) and how to block its path before it takes hold.

The invasive spotted lanternfly has now spread to 19 states and the District of Columbia, all east of the Mississippi River. To keep it out of California, the Department of Food and Agriculture (CDFA) continues to focus on prevention and early detection.

From August through October 2025, the CDFA surveyed 807 high-risk sites in 14 counties and found no spotted lanternflies. Inspectors also intercepted 12 dead adults and one egg mass at border stations and air cargo facilities. The CDFA's SLF program includes a statewide exterior quarantine, inspections, visual surveys, research, training, outreach and education.

As the grape-loving pest continues its push across the country, grape growers are asking: could it spread PD? While SLF isn't confirmed to transmit the *Xylella fastidiosa* bacterium that causes PD, early studies suggest it might be able to at low levels. Because infestations can reach hundreds of insects per vine, even a weak vector could still pose a serious risk. Researchers are also watching how SLF feeding might worsen PD symptoms by stressing vines and reducing water use.

Growers in other parts of the country are looking to California's sharpshooter control programs for guidance. The same systemic insecticides used early in the season to manage sharpshooters may also help control young SLF nymphs. However, additional sprays may be needed for adults later in the season, raising concerns about cost and timing near harvest.

To better understand and prepare for the threat, the Pierce's Disease and Glassy-Winged Sharpshooter Board is funding three research projects focused on SLF. One team is investigating whether SLF can transmit *Xf*. Another is developing multimodal lures that mimic SLF's natural communication signals to improve early detection. A third is refining predictive models and digital tools to map SLF's potential spread in California and provide actionable data for local survey and control efforts.

Growers and the public can help by learning what the pest looks like in its various life stages at cdfa.ca.gov/pdcp/slf. If you spot SLF, call the CDFA Pest Hotline at 1-800-491-1899 or report it online at cdfa.ca.gov/plant/reportapest.

Honoring the Life and Service of Dr. Youngsoo Son

By Dr. David Morgan, Pierce's Disease Control Program

Dr. Youngsoo Son, my colleague at the Pierce's Disease Control Program, was a very special person. He was a kind, friendly, considerate and intelligent man, and it was an honor to know and work with him.

Over the past 20 years, Youngsoo has been an essential part of California's drive to adopt and implement sustainable pest control practices in both the grape and citrus industries. His work has enabled us to use biological control strategies rather than chemical intervention to control invasive pests in California. He truly made California a better place.

Youngsoo passed away on Oct. 17. He leaves a wife, Chunsun, two children, Theresa and Alex, and a large group of friends and colleagues who will miss him deeply.