2025

Pierce's Disease Control Program

ANNUAL REPORT

cdfa CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

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This report can be viewed online at cdfa.ca.gov/pdcp/annualreport.html.
To request a printed copy, please email PDCPinfo@cdfa.ca.gov.

Executive Summary

Pierce's disease (PD), a fatal grapevine disease spread by sharpshooters, poses a significant threat to California's grape and wine industry, which drives $73 billion in state and $170.5 billion in national economic activity. Other crops are also at risk, including almonds, citrus and stone fruits.

The invasive glassy-winged sharpshooter (GWSS) spreads PD more aggressively than native sharpshooters, making containment and management critical. Without the protections delivered by comprehensive and coordinated containment and management programs led by the Pierce's Disease Control Program (PDCP), GWSS could quickly spread throughout the state's grape-growing regions.

This annual report provides the public with an update on the California Department of Food and Agriculture's (CDFA) expenditures, progress, ongoing priorities and challenges in combating PD and its vectors in California.

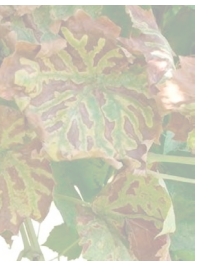
The Double Threat of PD and GWSS

There is no cure for PD; once infected, grapevines can die within two to five years. PD has been present in California for over a century but became a more significant issue after a devastating outbreak in Southern California in the late 1990s, spread by a new non-native vector, GWSS.

The invasive GWSS attacks hundreds of plants, including many used in landscaping, and spreads PD, which kills or damages a variety of agricultural crops, including grapes, almonds, citrus and stone fruit. With everyone's support, neighborhood greenery, landscape plants and crops can be protected. Without control, GWSS could cause major damage to the environment and the economy.

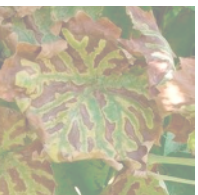
Unlike native sharpshooters, GWSS is larger, lives longer, builds populations quickly, flies and hitchhikes effectively and feeds on a wide range of plant hosts. The pest introduces bacteria that cause PD into grapevines during feeding, and the bacteria spread quickly, causing a systemic and fatal infection.

If the comprehensive efforts to control PD and GWSS ended, it would not be long before grape growers across the state could face GWSS and PD in their vineyards, significantly increasing crop losses and production costs.







The CDFA's PD and GWSS prevention, control and research efforts save California winegrape growers $56 million annually by reducing losses from the fatal grapevine disease, according to a 2025 economic study conducted by the Robert Mondavi Institute Center for Wine Economics at the University of California, Davis.

Without the program's efforts, growers' losses would more than double from $48 million to $104 million. Even with these efforts, PD still costs an estimated $110 million annually in California, including $45 million for control, prevention and research, $48 million in lost winegrape production and vine replacement and $17 million in lost table and raisin grape production and vine replacement. Without these critical programs, the industry's losses in production and vine replacement would be even higher, putting greater financial strain on growers and threatening the long-term stability of California's vineyards. Read the study at: cdfa.ca.gov/pdcp/pdcost.html.

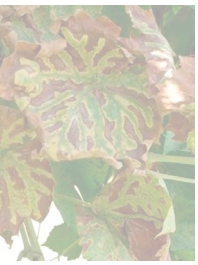
The Pierce's Disease Control Program

The PDCP leads efforts to contain GWSS and minimize PD's impact through five key strategies: containment, statewide monitoring, rapid response, outreach and research. Since its creation in 2000, the PDCP has slowed the spread of GWSS, keeping it primarily in Southern California and the Southern San Joaquin Valley and eradicating 18 infestations elsewhere.

The PDCP collaborates with growers, nurseries, counties and state and federal agencies, including the United States Department of Agriculture, University of California, the Pierce's Disease and Glassy-Winged Sharpshooter Board (PD/GWSS Board) and the Pierce's Disease Advisory Task Force. Funding for the PDCP comes from three primary sources: The USDA's Animal and Plant Health Inspection Service, California's winegrape growers and, on occasion, State funds. Additionally, the PDCP has received support for area-wide activities in the Southern San Joaquin Valley from the Consolidated Central Valley Table Grape Pest and Disease Control District.

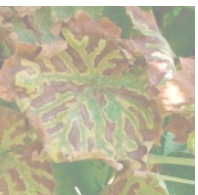
Overview of 2025 Program Activities and Impacts

- **California Winegrape Growers Vote to Continue PD/GWSS Assessment and Programs Through 2031:** With 76.56% of voters casting ballots in favor, the PD/GWSS Assessment, the Pierce's Disease Control Program and the PD/GWSS Board will continue to safeguard California's wine industry for another five years. The assessment funds research, prevention, and control efforts to mitigate the impact of winegrape pests and diseases, including PD, GWSS, viruses, mealybugs and the spotted lanternfly.
- **Rising PD and GWSS Pressure:** PD and GWSS are becoming more difficult to manage because of changing environmental conditions and regulations beyond the PDCP's control. GWSS populations are growing due to warmer temperatures and longer summers, rising organic citrus production limits GWSS treatment options and regulatory restrictions limits conventional pesticide use. While the PDCP cannot control every external factor, the focus remains on proven strategies to contain the spread of GWSS and reduce the impact of PD, including detection, rapid response, outreach and education and research.







» **New GWSS Infestations:** In 2025, two new GWSS infestations were detected in Kings County in the Central Valley and in Santa Clara County in Northern California. The PDCP supported eradication efforts for these new infestations and three ongoing infestations in El Dorado, Solano and Stanislaus counties, using extensive trapping, surveying, treatment and biological control with parasitic wasps. For the status of GWSS control projects, visit: bit.ly/GWSS-Control.

» **Financial Challenges:** The PDCP is under increasing financial pressure due to increased operational demands and no additional funding. Federal funding has remained at the same level since 2013, annual state funding ended in 2011, and the PDCP has taken on eradication activities in five counties. The PDCP has been fortunate to receive about $7.04 million from the CDFA's Emergency Funds to support the ongoing eradication activities. However, the PDCP faces financial uncertainty going forward, as the reserves of CDFA's Emergency Funds have significantly diminished and may not fully cover anticipated costs, even if approved.

If the PDCP does not receive additional funding to support eradication activities, the infestations in El Dorado, Kings, Santa Clara, Solano and Stanislaus counties will likely become permanently established, increasing the risk of GWSS spreading to neighboring counties. This would significantly increase operational and financial burdens on the counties, the state and the grape, citrus and nursery industries. Newly established populations would substantially elevate the risk of PD outbreaks, jeopardizing $5.54 billion in annual crop value and $73 billion in associated economic activity in California. Unchecked spread would also increase pesticide use, environmental impacts and compliance costs for growers, resulting in irreversible economic and agricultural losses.

» ***Advancing Vineyard Health* Recommendations Implemented:** California's winegrape industry faces increasing pressure from grapevine red blotch and leafroll, prompting the Pierce's Disease and Glassy-Winged Sharpshooter (PD/GWSS) Board to fund an independent National Academies report, *Advancing Vineyard Health*, to identify key knowledge gaps and promising research paths. Building on that roadmap, the Board translated the findings into near-term priorities, including better understanding virus latency, strengthening the clean plant supply chain, improving diagnostics, expanding data sharing and providing clearer guidance for roguing and replanting. These priorities now shape the Board's annual Request for Proposals, emphasizing collaborative projects with clear grower impact and stronger outreach to ensure results reach the field, helping direct grower assessment dollars toward solutions that protect vineyard productivity and reduce economic losses. Learn more at bit.ly/43leCBt.

Contain the Spread

Regulating the movement of host plants and materials, along with controlling GWSS populations, helps prevent the GWSS from reaching new areas of the state. The nursery and citrus industries are essential partners in these prevention efforts. For more information, visit cdfa.ca.gov/pdcp/Guidelines.html.

In 2025, shipments of bulk citrus and nursery stock were comparable to the previous year. Due to financial challenges, the PDCP requested noninfested counties implement reduced trapping seasons in urban and nursery settings.

Nursery Regulatory Program

Nursery stock is a high-risk pathway for GWSS movement, making the nursery industry a critical partner in efforts to prevent the pest's spread. Approximately 43% of California's 12,358 licensed nursery locations are in counties with GWSS infestations, and many of these nurseries ship to noninfested areas of the state. Efforts to prevent GWSS from spreading through nursery stock include inspecting, treating and certifying shipments from infested areas, checking plants at receiving nurseries and trapping in and near shipping nurseries.

INSPECTION RESULTS

- In 2025, there were 32,600 nursery stock shipments from infested to noninfested areas of the state. Origin county inspectors stopped 13 GWSS adults, five nymphs and 57 egg masses from moving in nursery stock shipments.
- Almost all nursery shipments (99.99%) were free of GWSS during destination inspections. However, receiving counties issued three Notices of Rejection due to viable life stages of GWSS found in incoming nursery stock shipments.








ENFORCEMENT ACTIONS

Enforcement actions are taken against nurseries and shipments that violate the regulations. At the origin nursery, shipments may be restricted and shipping privileges may be suspended or revoked. Noncompliant shipments may be treated/reconditioned, returned or destroyed at the destination. Shippers and receivers who violate nursery stock regulations are subject to fines.

Since 2001, over 90% of all rejections have been for viable GWSS egg masses.

2025 Nursery Shipment Destination Actions

Treated/ Reconditioned	Returned	Destroyed
1	2	0

NURSERY STOCK APPROVED TREATMENT PROGRAM

Through the Approved Treatment Program (ATP), nurseries can ship nursery stock treated with specified materials under the supervision of licensed county inspectors to noninfested areas without requiring an origin inspection. In 2025, nine ATP nurseries shipped approximately 1.15 million plants in 6,191 shipments from 25 nursery yards. Thirty-seven counties received shipments from ATP nurseries, and no regulatory actions were taken against any ATP nurseries for viable life stages. One egg mass from an ATP shipment was placed in a protective sleeve for monitoring, but no GWSS emerged.

For quality control, PDCP staff place water-sensitive paper in shipments at each participating nursery at least once per month. In 2025, 6.9% of water-sensitive papers inspected indicated the need to retreat the shipment.

Trapping is conducted at ATP nurseries to monitor pest pressure.

2025 ATP Nursery Trapping Summary

Nursery Yards Participating	Nursery Acres	Traps Deployed	Traps with >10 GWSS
21	1,153	2,266	299








Bulk Citrus

Bulk citrus

Because citrus trees are year-round hosts for GWSS, the citrus industry is a key partner in preventing the pest's spread to new areas. The insects sometimes end up in picking bags during harvest and travel to processing facilities throughout the state. During the October 2024 through September 2025 citrus shipping season, no rejections were issued for live GWSS out of approximately 21,539 certified destination inspections of bulk citrus. The program achieved a 100% success rate, thanks to the collaborative efforts of participants in the bulk citrus program.

Areawide Management Programs

The areawide management programs coordinate GWSS control in large grape and citrus production areas. Treatment coordinators utilize PDCP trap data to target treatment locations, focusing on treating citrus orchards near vineyards to limit the spread of GWSS over winter.

Due to financial challenges, the PDCP decreased trapping in its areawide control program by 60% for the 2025 season to prioritize treatment funding. Trapping continued in high-priority areas, but only during the peak GWSS season (May – September), with trap checks reduced from twice to once per month.

- **Fresno County**: GWSS detections in 2025 totaled 11,884, with approximately 259 acres of citrus treated.
- **Madera County**: GWSS detections in 2025 totaled 58, with 315.3 acres of citrus treated.
- **Kern County**: GWSS detections in 2025 totaled 37,123, with 7,903.66 acres of citrus treated.
- **Tulare County**: GWSS detections in 2025 totaled 20,315, with 2,761,74 acres of citrus treated








BIOLOGICAL CONTROL

These tiny stingless wasps are natural enemies of GWSS

Since 2001, the PDCP has released more than 2.93 million parasitic wasps across 19 California counties as part of its integrated pest management strategy. These tiny stingless wasps are natural enemies of GWSS, laying their eggs inside GWSS eggs and killing the larvae. For more information, visit cdfa.ca.gov/PDCP/Biological_Control.

Biological control is especially valuable in areas where other control methods may be difficult, expensive or harmful to the environment, such as residential neighborhoods and natural areas. This approach has been key in eliminating 10 of the 18 eradicated GWSS infestations and is essential in slowing the spread of GWSS in the San Joaquin Valley.

In 2025, the PDCP collaborated closely with county officials to rapidly deploy GWSS biological control agents to new detection sites in El Dorado, Kings, Santa Clara and Santa Barbara counties. A total of 80,695 biocontrol wasps were released in commercial shopping complex landscape areas, commercial nurseries, organic citrus and vineyards, residential areas and riparian lands in 12 counties. The number of wasps shipped and released to sites was 72% higher than in 2024, despite emergency repairs and other challenges associated with aging greenhouses and infrastructure.

2025 Updates

- Mass-reared two *Cosmocomoidea* species (*C. ashmeadi* and *C. morrilli*) at the CDFA-PDCP Arvin Biological Control Facility in Kern County.
- Released 80,695 biological control agents at 358 field sites in 12 counties, including El Dorado, Fresno, Kern, Madera, Kings, Santa Clara, San Diego, Santa Barbara, Solano, Stanislaus, Tulare and Ventura.
- Shipped and released 26,650 biocontrol wasps at sites in recently GWSS-infested areas in five counties, including El Dorado, Kings, Santa Clara, Solano and Stanislaus.
- Conducted post-release field surveys in six counties, including Fresno, Kern, Madera, San Diego, Tulare and Ventura, and found five biocontrol species, including *C. ashmeadi*, *C. morrilli* and *Ufens* spp.







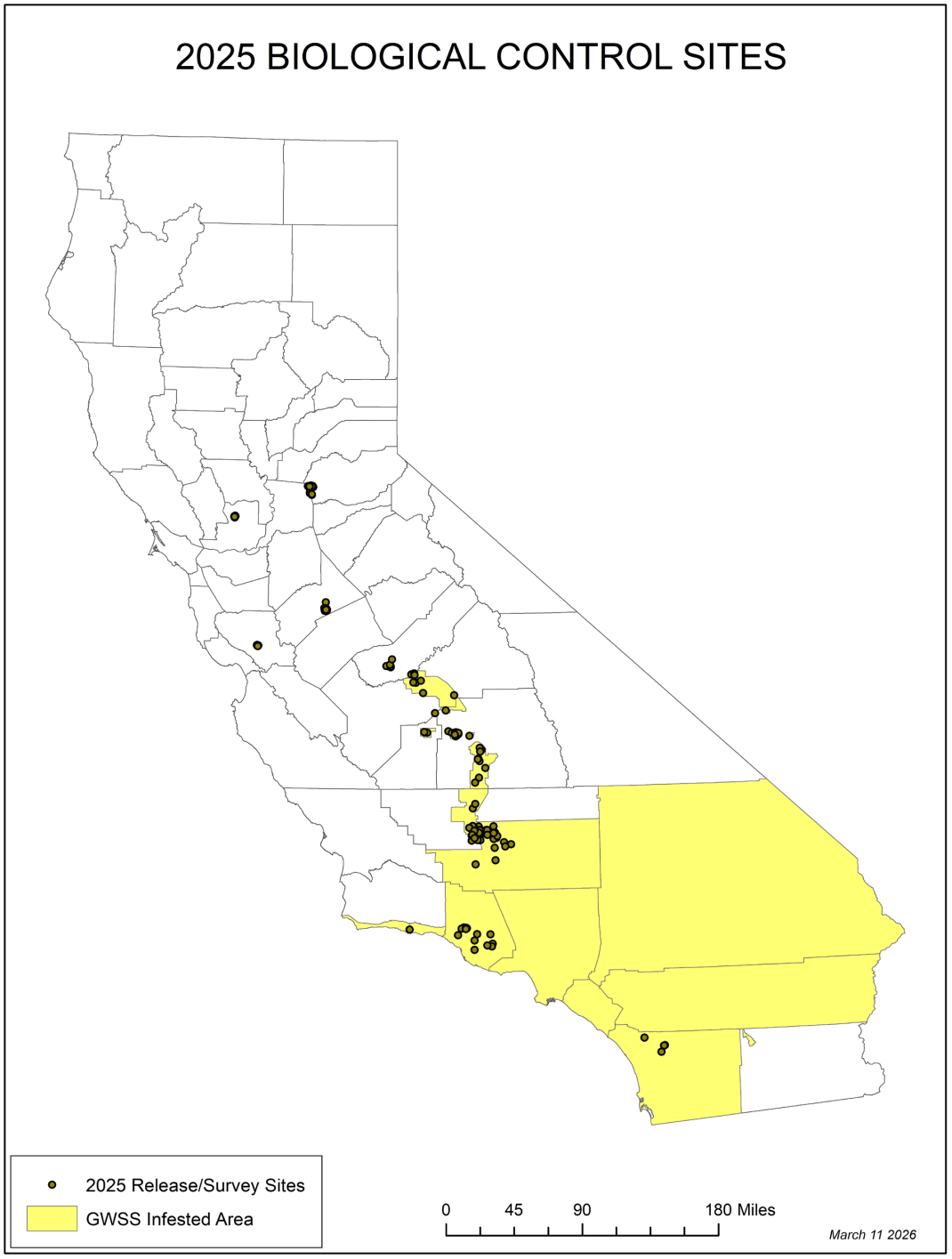

Number of Biological Control Agents Released in 2025

County	Number of Sites	Biological Control Agents		Total
		C. ashmeadi	*C. morrilli*	
El Dorado	105	4,140	2,340	**6,480**
Fresno	5	340	2,800	**3,140**
Kern	37	7,540	11,865	**19,405**
Kings	2	1,640	750	**2,390**
Madera	4	450	3,800	**4,250**
San Diego	5	5,070	1,850	**6,920**
Santa Barbara	2	0	1,770	**1,770**
Santa Clara	29	420	1,020	**1,440**
Solano	96	5,080	2,520	**7,600**
Stanislaus	43	5,410	1,560	**6,970**
Tulare	13	5,550	3,970	**9,520**
Ventura	17	1,635	9,175	**10,810**
TOTAL	**358**	**37,275**	**43,420**	**80,695**







Counties with GWSS Infected Areas:

Portions of county:
El Dorado
Fresno
Imperial
Kern
Kings
Madera
Santa Barbara
Santa Clara
Solano
Stanislaus
Tulare

Full county:
Los Angeles
Orange
Riverside
San Bernardino
San Diego
Ventura

Statewide Survey and Detection

Conducting systematic trapping in urban and residential areas and nurseries quickly finds new GWSS infestations and confirms that noninfested, at-risk areas remain free of GWSS.

Due to financial challenges, the PDCP requested that counties reduce residential trapping in noninfested counties from six months to five months between June and November, when possible. Counties were also encouraged to transition to a three-week service cycle. These changes limit monitoring coverage, decrease the accuracy of potential early detection and increase the risk of delayed response. However, counties were able to set their trapping to coincide with times when pests are most active in their areas.

During the peak of the trapping season (May – September), approximately 33,000 traps were deployed and serviced in 43 counties. Traps are checked every two to three weeks and moved to a new location every six weeks. New infestations in Kings and Santa Clara counties were discovered during this routine trapping.

In 2025, the PDCP provided detection training to 322 employees from 45 counties, CDFA and nurseries. The PDCP conducts quality control inspections to ensure proper target insect identification, trap placement, host selection, servicing schedules and record keeping.

Glassy-Winged Sharpshooter in California

March 2, 2026

Counties with GWSS Infected Areas:

Portions of county:
El Dorado, Fresno, Imperial, Kern, Kings, Madera, Santa Barbara, Santa Clara, Solano, Stanislaus, Tulare

Full county:
Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura

Counties at risk from PD/GWSS:

Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Imperial, Kern, Kings, Lake, Madera, Marin, Mariposa, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Sacramento, San Benito, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, Yuba

Rapid Response

The PDCP responds quickly to GWSS detections in new areas by working with county agricultural officials to coordinate trapping, surveying, treatment and biological control. For more information, visit bit.ly/GWSS-Control.

Rising Pressure from PD and GWSS

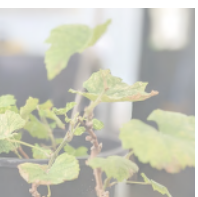
PD and GWSS are becoming increasingly difficult to manage due to changing environmental conditions and regulations beyond the PDCP's control. Factors driving the increase include:

- 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 the development of insecticide resistance is always a risk.

GWSS Control Projects

In 2025, the PDCP led the response to five active GWSS infestations. Eradication projects can span several years. Infestations are declared eradicated when there have been no GWSS finds in the area for approximately two years since the last treatment. The PDCP has eradicated 18 GWSS infestations since 2001.

The PDCP received $1,467,008 in FY 24/25 and $6,823,119 in FY 25/26 of CDFA's Emergency Funds to support the eradication activities. Although PDCP is hopeful that the eradication project in Solano County is nearing completion, funding needs for ongoing eradication efforts are expected to increase. The projects in Kings and Santa Clara counties began in late 2025, and the FY 25/26 budget does not account for their full-year associated costs.



The following data is for 2025 only.

- **El Dorado County — El Dorado Hills (*found October 2024*):** 465 adults, 241 nymphs and 142 egg masses (25 viable, 90 emerged and 27 parasitized) detected; foliar treatments applied to 496 residential properties; soil treatments applied to 821 residential properties; 6,480 biocontrol wasps released.
- **Kings County — Hanford (*found July 2025*):** 34 adults detected; foliar treatments applied to 331 residential properties; soil treatments applied to 375 residential properties; 2,390 biocontrol wasps released.
- **Santa Clara County — Morgan Hill (*found September 2025*):** 29 adults, 17 nymphs and 7 egg masses (6 viable and 1 emerged) detected; 1,440 biocontrol wasps released.
- **Solano County — Vacaville (*found October 2021*):** The likelihood of eradication is high. 1 adult and 10 emerged egg masses detected; foliar treatments applied to 19 residential properties; soil treatments applied to 824 residential properties; 7,630 biocontrol wasps released.
- **Stanislaus County — Turlock (*found August 2024*):** 168 adults, 4 nymphs and 7 emerged egg masses detected; foliar treatments applied to 4,038 residential properties; soil treatments applied to 3,094 residential properties; 7,000 biocontrol wasps released.

GWSS suppression efforts continued in the Southern San Joaquin Valley in response to urban GWSS detections in 2025. In addition to area-wide treatments, urban treatments are ongoing in the following areas:

- **Fresno County:** 2,416 properties were treated in Fowler, Reedley, South Fresno and West Fresno.
- **Madera County:** 90 properties were treated in southeast Madera County.
- **Tulare County:** 2,817 properties were treated in Dinuba, Exeter, Tulare and Visalia.

Treatment

Public safety is the CDFA's top priority whenever treatments are applied. Extensive public outreach and communication ensure residents in affected areas are well informed about treatment activities.

To help protect local wildlife, a database of threatened and endangered species is consulted to determine if any listed species are in the treatment area. All relevant federal and state agencies are notified before treatment.

PDCP staff and cooperators ensure that only registered materials are applied, strictly adhering to labels and other restrictions. The Environmental Monitoring Branch of the California Department of Pesticide Regulation (CDPR) monitors pesticide treatments to determine resulting residue levels. The PDCP uses this information to assess application rates and coverage. Sampling results and related monitoring reports are available on the CDPR's website at cdpr.ca.gov/environmental-monitoring/.

Outreach and Education

The PDCP raises awareness about PD and its vectors by providing information, answering questions and responding to the concerns of growers and the public through outreach and education activities.

County Agricultural Commissioner Outreach Activities

Local county agricultural staff and industry members play a key role in maintaining program visibility and stakeholder awareness. Outreach and education efforts included distributing PD and GWSS informational material to local retail, production and shipping nurseries, landscape companies, grape growers and others. Industry trade publications, cooperative extension newsletters and media interviews were successful outreach methods. Some counties also participated in continuing education seminars and conducted training sessions for landscapers, pest control operators, nursery employees and members of the nursery association.

Pierce's Disease and Glassy-winged Sharpshooter Board's Outreach Program

» **Newsletters:** Quarterly online-only newsletters highlight PD/GWSS Board actions, research advances and research project reports. A companion news postcard is mailed to over 7,000 winegrape growers, industry stakeholders and elected officials. It has a URL and QR code that invite readers to view the full newsletter online. Issues can be viewed at cdfa.ca.gov/pdcp/newsletters.html. In 2025, online newsletters were viewed over 400 times.

Top feature stories:

- **Winter 2025:** bit.ly/3CTShjA
  - 25 Years of Turning Challenges into Progress
  - New Research Priorities Chart Path for Grapevine Health
  - Improving PD Management in Northern California
  - PD/GWSS Referendum Vote – April 2025


CALIFORNIA PD/GWSS BOARD
Partnership for Winegrape Pest Solutions

2025 – ISSUE 2

bulletin

cdfa

INSIDE THIS ISSUE

Vineyard Health Boosted with $2.2 Million Research Investment

To build up the California winegrape industry's protections against pests and diseases, the Pierce's Disease and Glassy-Winged Sharpshooter Board is investing $2.2 million in new research funding. The funds will support 11 research projects over the next three years.

2025 RESEARCH FUNDING

$2.2M for 11 new projects

$726,394 for 7 continuing projects

$60.1M invested in research since 2001

The Board continued funding seven previously approved multi-year projects for $726,394 for fiscal year 2025-26. Thirteen additional projects are continuing, with no-cost extensions.

"We carefully and strategically invest grower funds with top-notch researchers focused on pest and disease challenges facing California winegrape growers," said Randy Hanson, Board chair. "While not every issue affects every region, our Board includes growers from across the state, so we consider a broad range of threats—from PD to red blotch and grapevine leafroll-associated viruses to spotted lanternfly."

The Board's research funding focuses on preventing the spread of pests and diseases and delivering practical, sustainable solutions. Projects address disease management strategies, genetic and biotechnological solutions, vector and disease transmission, virus detection and management and industry preparedness. View the full list of new research projects on the next page.

The Board invites researchers to submit proposals yearly. This year, 29 proposals were evaluated by independent scientific review panels, the Board's research coordinator and the Research Screening Committee before being discussed by the full Board. The Board's funding recommendations were approved by Secretary of Agriculture Karen Ross.

Funded by the industry, for the industry, the research program is supported by the PD/GWSS assessment and directed by the grower-led Board. Since 2001, the Board has funded 311 research grants, investing $44.1 million in PD and GWSS research and $15.9 million in research on other pests and diseases. Learn more at bit.ly/3wZ7mtc

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List of New Research Projects

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2024 PD/GWSS Board Research Projects at a Glance

On the Research Front

- Early and Autonomous Field-Detection of Virus Infections in White and Black Grape Vines
- Virus-Based Delivery of Interfering RNAs Targeting Grapevine Leafroll-Associated Viruses)

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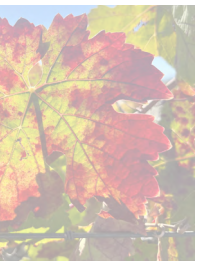
New Study Shows Pierce's Disease Investment Saves Winegrape Growers $56 Million Annually

Growers Urged to Vote on PD/GWSS Referendum by June 12

Spring 2025 newsletter





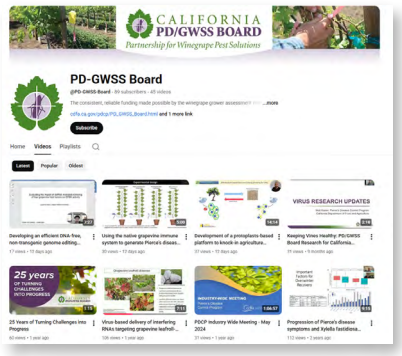



- **Spring 2025:** bit.ly/3ZtJSeo
  - Vineyard Health Boosted with $2.2 Million Research Investment
  - New Research Funding in 2025
  - New Study Shows Pierce's Disease Investment Saves Winegrape Growers $56 Million Annually
  - Growers Urged to Vote on PD/GWSS Referendum by June 12
- **Summer 2025:** bit.ly/4eXoCVe
  - California Winegrape Growers Vote to Continue PD/GWSS Assessment and Programs Through 2031
  - PD/GWSS Winegrape Assessment Holds at $1.25 for 2025 Harvest
  - Staying Ahead of GWSS: Eradications Continue in 3 Counties
  - New Research Projects Starting this Summer
- **Fall 2025:** bit.ly/3MMIpMV
  - Glassy-Winged Sharpshooters Found in Kings and Santa Clara Counties
  - California Remains Spotted Lanternfly–Free, but Prevention Is Key
  - Honoring the Life and Service of Dr. Youngsoo Son

» **Monthly E-newsletter:** Email newsletters share PD/GWSS Board activities, PDCP reports on containment and treatments and relevant media coverage. The monthly e-newsletter is sent to over 1,200 winegrape growers and industry stakeholders, with an average open rate of 43% — a 10% increase from 2024 and well above the average across all industries. In 2025, the e-newsletters had an average click rate of 3.4%, which is also higher than the industry average.

» **Website:** The PD/GWSS Board website provides comprehensive information on the Board, PD/GWSS winegrape assessment, nine winegrape pests and diseases and Board-funded research. Visit the website at cdfa.ca.gov/pdcp/PD_GWSS_Board.html. In 2025, the website was visited over 4,700 times.

» **Research on Demand Videos:** Published researchers' presentations sharing the latest research and management insights on winegrape pests and diseases, and news and information from the PD/GWSS Board and PDCP. The videos are available on youtube.com/@PD-GWSS-Board and were viewed over 1,580 times, with over 46 hours of watch time in 2025.

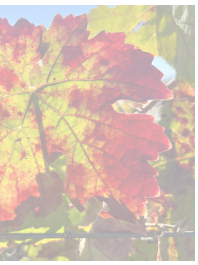


YouTube page

» **Industry Meeting and Tradeshows:**

- Participated in four in-person industry trade shows, engaging with growers and industry colleagues in the North Coast, Central Coast and Central Valley. Attendees who stopped by the booth were most interested in learning more about the PD/GWSS Board's research program, new GWSS infestations and the spotted lanternfly.








- PDCP and PD/GWSS Board representatives also presented at industry meetings, including:
  - "The Winegrape Update" with California Association of Winegrape Growers
  - "Virus Research Updates" at the American Society for Enology and Viticulture Annual Conference (youtu.be/jQMKn91vVvw)
  - "Pierce's Disease Program Updates for Grape" at the Crop Consultant Conference
  - "CDFA PD/GWSS Board Research Summaries" at the Sustainable Ag Expo

» **Spotted Lanternfly Outreach Campaign:** Continued a print and digital advertising campaign in English and Spanish to raise awareness of the invasive pest. Print ads ran five times in industry publications, and online ads ran three times on one winegrape industry media website. Social media advertising reached over 1.7 million people in 2025, with 3,525 people engaging with the posts and 3,385 people clicking through to the PD/GWSS Board's spotted lanternfly webpage (cdfa.ca.gov/pdcp/slf) for more information.

» **Social Media:** Shared PD/GWSS Board news, research advancements and applications, and relevant media coverage through Facebook, YouTube and LinkedIn.

Social media post promoting PD/GWSS referendum

- The PD/GWSS Board Facebook page (facebook.com/PDGWSSBoard) has over 391 followers and was visited over 700 times in 2025, a 20% increase compared to the previous year.
- The PD/GWSS Board YouTube channel (youtube.com/@PD-GWSS-Board) has increased its subscribers by 9%, to 76 subscribers. Videos were viewed over 1,580 times, with over 46 hours of watch time in 2025.
- The PD/GWSS Board LinkedIn page (linkedin.com/company/pd-gwss-board) followers grew by 48% over the last year to 77, and content earned over 2,300 impressions.

» **Media Outreach:** Maintained regular relations and shared information and images with key wine and agricultural media to keep them informed of story opportunities, research successes and PD/GWSS Board activities. In 2025, there were 64 news articles about the PD/GWSS Board, almost double the number from the previous year. Coverage included the PD/GWSS Referendum, economic impact study, GWSS infestations, the annual assessment rate, and research funding, projects and advances.

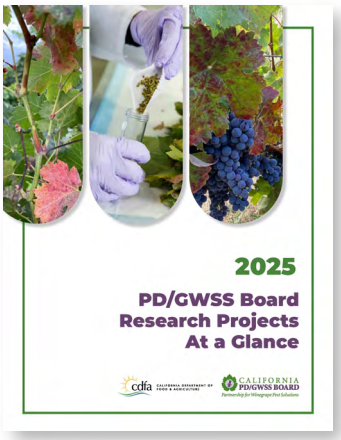
Research

Investing in and guiding innovative research and development advances long-term, sustainable solutions to winegrape pests and diseases.

Research is an integral part of PDCP, accelerating knowledge to combat nine pests and diseases, enhancing pest and disease management practices, and driving progress and innovation through over 311 research grants since 2001. Funded by the PD/GWSS winegrape assessment, $60.1 million has been invested in research.

2025 Research Projects

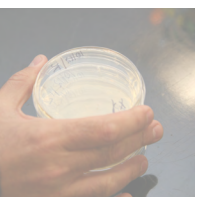
The Board invites researchers to submit proposals yearly, and 29 project proposals were submitted for funding in 2025. The proposals were evaluated by independent scientific review panels, the PD/GWSS Board's research coordinator and the research screening committee before being discussed by the full Board. The PD/GWSS Board invested $2.2 million in 11 new research projects over the next three years, as well as $726,394 in seven continuing projects. Additionally, 13 research projects continued in 2025 with no-cost extensions.



2025 Research Projects at a Glance Report

This year's research investments focused on providing growers with better tools, earlier warnings and stronger long-term protection. In addition to continuing critical work on PD and grapevine viruses, the Board funded projects that improve early detection in the field, strengthen diagnostic testing and develop more effective ways to interrupt disease transmission. Researchers are also advancing next-generation technologies, including gene-editing tools and precision breeding approaches, to enhance grapevines' durability. The goal is simple: help growers stay ahead of emerging threats and protect vineyard productivity for the long haul.

View the Research Projects at a Glance online at bit.ly/PD-Board-research-projects for summaries of the research projects below.



PD/GWSS RESEARCH PROJECTS

» PD Management Strategies

- Evaluating biopesticides and novel antimicrobial treatments
- Understanding how PD symptoms progress under field conditions
- Enhancing grapevine immune responses to infection
- Developing precise breeding tools for resistant grape varieties
- Gene editing for disease-resistant grapevines
- Evaluating rootstock-mediated protection strategies

» Vector and Disease Transmission Research

- Studying GWSS feeding, transmission biology and control strategies
- Blocking bacterial acquisition and transmission by GWSS using genetic tools
- Evaluating biological control approaches to disrupt vector feeding and spread
- Assessing pesticide efficacy for GWSS regulatory treatments
- Identifying new PD vectors

» Industry and Economic Impact

- Assessing costs of PD and benefits of control efforts
- Supporting data-driven decision making for long-term management

RESEARCH PROJECTS ON OTHER PESTS AND DISEASES

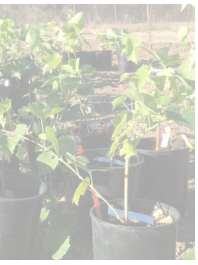
» Virus Detection

- Building autonomous and remote sensing tools for early field detection
- Developing high-throughput diagnostic assays for laboratories
- Understanding virus infection levels and symptom progression

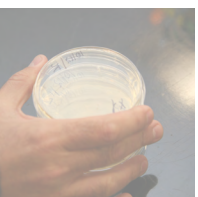
» Virus Management

- Applying practical grower tools for rapid identification and regional management
- Supporting propagation and protection of foundation nursery stock
- Building foundations for resistance to fanleaf decline
- Investigating resistance mechanisms for red blotch and leafroll viruses
- Exploring gene editing and RNA-based technologies for virus control
- Investigating effects on grape quality and phenolic development







» **Vector and Disease Transmission Research**

- Studying the ecology and spread of grapevine viruses
- Investigating mealybug identification, tracking and insecticide resistance
- Evaluating host plant resistance to vine mealybug
- Examining nematode transmission of fanleaf virus
- Identifying new vectors of red blotch virus
- Improving understanding of virus–vector interactions

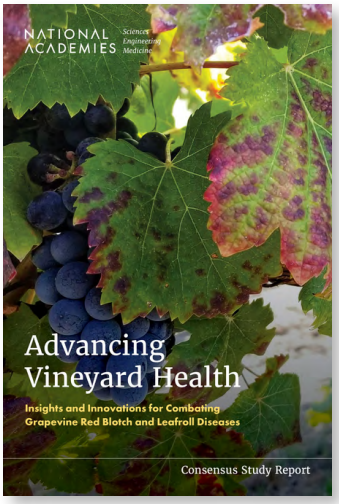
» **Spotted Lanternfly Detection and Preparedness**

- Developing multimodal lures for early spotted lanternfly detection
- Improving models of spotted lanternfly spread specific to California
- Engaging growers about the value of coordinated area-wide responses
- Determining if spotted lanternfly can spread diseases

Research Priorities Chart the Path for Grapevine Health

California's winegrape industry faces growing pressure from grapevine red blotch and leafroll, two diseases that threaten vineyard productivity and profitability. To help chart a path forward, the PD/GWSS Board funded an independent National Academies report, *Advancing Vineyard Health*, which outlines what is known, what gaps remain and which research priorities offer the greatest potential to curb virus spread and reduce economic losses for growers.

View the report online at cdfa.ca.gov/pdcp/avhr.html.



Advancing Vineyard Health Report

To turn that roadmap into action, the Grapevine Virus Committee, comprised of industry representatives and scientists, distilled the report's findings into near-term priorities that would deliver measurable progress within three to five years. Key focus areas include understanding virus latency, strengthening the clean plant supply chain, improving affordable and reliable diagnostics, expanding regional data sharing and area-wide management and providing clearer guidance for roguing and replanting decisions.

The Board incorporated these priorities into its updated Request for Proposals, emphasizing multi-year, collaborative projects with clear grower impact. The committee also advanced recommendations to strengthen outreach and communication so research findings reach a broader segment of the industry. Together, these actions ensure that grower assessment dollars are strategically invested in research and education that protect vineyard productivity, reduce long-term economic losses and provide practical tools to manage grapevine viruses statewide.

Environmental Compliance

In 2025, the CDFA continued to ensure that the PDCP's activities are environmentally responsible. This included holding public meetings before treatment activities, following a special notification and consultation process with federal and state environmental agencies and ensuring that pesticide applications are performed by licensed pest control professionals in strict accordance with California pesticide laws and regulations.

The CDFA remains committed to fulfilling its legislative mandate to prevent the spread of harmful pests while complying with the California Environmental Quality Act to ensure the protection of agriculture, the environment and other natural resources. The PDCP and CDFA plan to continue to revise the previous statewide programmatic environmental impact report in 2026.

Financial Statement

Industry Fund (PD/GWSS Board Winegrape Assessment)

REVENUE

FY 2024-25 (Actual)	FY 2025-26 (Projected)
$4,381,970	$3,980,000

EXPENDITURES

Expenditure Type	FY 2024-25 (Actual)	FY 2025-26 (Projected)
Personal Services	$340,983	$242,564
Operating Expenses	$269,538	$310,436
Research and Outreach	$2,291,394	$2,719,752
County Payments	$2,473,156	$1,520,000
TOTAL EXPENDITURES	**$5,375,071**	**$4,792,752**








Other Funds

REVENUE

Revenue Source	FY 2024-25 (Actual)	FY 2025-26 (Projected)
Federal (United States Department of Agriculture)*	$15,574,754	$15,574,754
CDFA (Emergency Fund)**	$1,702,259	$6,641,797
CTGPDCD (The District)	$300,000	$300,000
TOTAL EXPENDITURES	**$17,577,013**	**$22,516,551**

EXPENDITURES

Expenditure Type	FY 2024-25 (Actual)	FY 2025-26 (Projected)
Personal Services	$3,454,809	$3,318,771
Operating Expenses	$2,683,506	$2,100,000
County Payments	$10,582,528	$17,207,559
TOTAL EXPENDITURES	**$16,720,844**	**$22,626,330**

** Federal funding received based on federal year (October 1, 2024, through September 30, 2025).*

*** FY 24/25 funding through CDFA and CTGPDCD for specific activities was not fully exhausted.*