

What Every Grower Should Know About Pierce's disease and the Glassy-Winged Sharpshooter

What is Pierce's disease?



Pierce's disease (PD), which is caused by the bacterium *Xylella fastidiosa*, is a disease affecting grapevines. PD kills vines quickly, and there is no known cure. California grape growers have battled Pierce's disease since its discovery in the late 1800s. With the introduction of the glassy-winged sharpshooter from the southeastern U.S. in the late 1980s, the spread of PD has increased dramatically.

What is the Glassy-Winged Sharpshooter?



The glassy-winged sharpshooter (GWSS) is a leafhopper insect that infects grapevines with PD when it feeds. Other sharpshooters that are native to California also carry PD, but the GWSS is a bigger threat. Due to their size, GWSS can fly farther than other sharpshooters and feed on woody stems while other sharpshooters feed on leaves only. As of July 2008, there were GWSS infestations in 14 counties, including Fresno, Imperial, Kern, Los Angeles, Orange, Riverside, Sacramento, San Bernardino, San Diego, Santa Barbara, Santa Clara, Tulare, Ventura.

How does PD kill grapevines?

Once a vine is infected with PD, the bacterium *Xylella fastidiosa* builds up in the plant's cells and prevents water from being drawn through the vine. Leaves appear scorched and shoots begin to die. After one to five years, the entire vine dies. Currently, there is no known cure for PD.

What's being done?

Since 2000, over \$300 million has been spent on inspections, containment, treatment and research to combat the double threat of PD and GWSS. In 2001, the California winegrape industry lobbied for a self-assessment to fast-track research efforts. The California Department of Food and Agriculture established the PD/GWSS Board to administer the money raised by the industry for research. Over 100 research projects, investigating everything from GWSS biology to PD management, have been funded. It's been said that the wine industry has learned more about PD in the past five years than it had in the previous one hundred.