



Brazilian Scientists Enlisted to Fight Vineyard Disease

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State and federal agriculture officials have enlisted a team of Brazilian scientists to map the genetic code of the microbe that causes Pierce's disease, a bacterial scourge affecting thousands of acres of California vineyards, in an attempt to stop its spread across the state.

The disease, spread by a flying insect known as the glassy-winged sharpshooter, has wiped out about 500 acres of the Temecula wine grape-growing region and has cost growers around the state an estimated \$40 million in damage.

State officials are now trying to stop the glassy-winged sharpshooter before it invades vineyards in the prestigious wine-producing areas of Northern California by requiring inspections of nursery plants headed north, asking growers to rip out infected plants and researching new deterrents to the pest.

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In mapping the genetic code, known as the genome, officials hope to come up with a more effective way to treat the disease, perhaps by developing grapevines that are resistant to it.

“By working together to identify the microbe’s genetic makeup, we may be able to design new and powerful strategies to thwart it,” said U.S. Agriculture Secretary Dan Glickman.

The partnership is the first attempt by the Department of Agriculture to cooperate with another country on sequencing the genetic code of a plant pathogen, and scientists around the world will be allowed access to the research, said Marcus Vincius Pratini de Moraes, Brazil’s minister of agriculture.

Scientists from the Sao Paulo Research Foundation expect the microbe-mapping project to take less than a year because they have already sequenced the genome of another strain of the same *Xylella* bacterium that wiped out 34% of that Brazilian state’s orange crop.

Last week, California Gov. Gray Davis said that he will sponsor legislation to provide \$14 million in funding for research on Pierce’s disease and aid to those affected by it.

Pierce’s disease is spread when the *Xylella fastidiosa* bacterium carried in the sharpshooter’s stomach is passed into grapevine stems during feeding. Once inside, the bacteria multiplies, blocking the flow of water and nutrients and choking the vine.

In addition to the microbial genomics project, scientists with the USDA's Agricultural Research Service are experimenting with repellents and insecticides such as a fungus, a cinnamon extract and clay-based products, and are searching for insects that would serve as a predator for the sharpshooter.

"People are very nervous about this thing becoming widespread in the state," said Doug Gubler, a plant pathologist with UC Davis.

A single pest was found in Lodi last fall and Gubler says egg casings have been found as far north as Napa Valley.

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