

Could mapped citrus greening genome save the Florida orange?

A University of Florida researcher has mapped the DNA genome of a new strain of citrus greening that could further threaten Florida's beleaguered \$9 billion citrus industry. Knowing the genetic makeup of the various strains is critical to finding a cure.

Dean Gabriel, a plant bacteriology specialist with the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS), helped sequence and map the genome of the most prevalent form of the disease in Florida, and now he and colleagues have done the same for a new strain of the disease discovered in Brazil.

There is no cure for either strain, although researchers believe that knowing the genetic makeup of the disease is critical to finding one. Gabriel said by having that "roadmap" of the bacteria genome, they will be certain there are no surprises in the Brazilian species, which has now been found in Texas. In addition, the mapping should help guide them to improvements in control methods and toward more usable genes and treatments.

In the battle against greening, UF/IFAS researchers have tried everything from working on ways to eradicate the psyllid to grafting trees that show better resistance to greening.

Frederick Gmitter, a citrus breeder and faculty member at IFAS' Citrus REC, said his research team has found new experimental rootstocks that seem to be supporting healthier trees – even ones with citrus greening. In addition, his team is studying "escape trees," which are trees that remain unscathed, even when surrounded by thousands of infected trees.

Read the full, original press release: UF/IFAS scientist's work with Brazilian citrus greening genome could aid Florida industry

Additional Resources:

- [Fate of Florida oranges rests on whether activists succeed in debasing GM debate](#), New York Times
- [Saving the orange tree with genetic engineering](#), Los Angeles Times
- [Survey shows Floridians support genetic modification to save citrus industry](#), Center for Public Issues Education