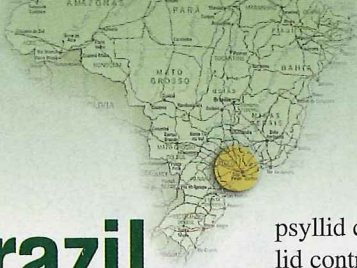




Greening Lessons Learned From Brazil



By Thomas H. Spreen

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Thanks to a grant from the Florida Citrus Production Research Advisory Council, Ron Muraro, Allen Morris, and I just returned from a visit to São Paulo state in Brazil where we were able to visit several citrus farms and Fundecitrus, the research arm of the Brazilian citrus industry.

While citrus greening was first discovered in São Paulo in 2004, it is now generally believed that the disease may have first entered the state as early as 2000, so that it had four years of momentum before discovery and countermeasures were deployed. Many groves in the Araraquara region have either been lost or likely will soon be because of the disease.

Bad Neighbors

Unlike Florida, São Paulo has a mandatory eradication program for trees exhibiting greening symptoms, although it is generally believed that a majority of growers are not following those regulations. The result is a situation known as the “bad neighbor.” A bad neighbor has negative implications for all surrounding farms because they thwart psyllid control programs and provide a source of inoculum for the psyllids to continue to infect trees in well-managed properties.

Researchers at Fundecitrus shared preliminary results from two experiments they were conducting. The first experiment involved several small blocks of trees planted three years ago, some of which had high levels of

psyllid control and others with no psyllid control. There are several blocks located near the experiment site with greening, and some of these are bad neighbors. After three years, 25% of the trees in the no-control blocks exhibited symptoms of greening and 9.5% of trees in the psyllid-control blocks were infected. Even though psyllid control reduced the greening infection rate, a loss of 9.5% in a block before it reaches bearing age is substantial.

In the second experiment, the same design was used with and without psyllid control but with little external pressure (i.e. no bad neighbors). In this case, 42 months after new trees had been planted, infection rates in both psyllid and no psyllid control blocks were less than 1%.

Cooperation Is Key

The Fundecitrus researchers believe (and I think correctly) that these two experiments demonstrate the importance of cooperation among neighbors to both eradicate symptomatic trees and coordinate psyllid control efforts. These experiments provide the basis for the lesson to be learned from São Paulo: Neighbor cooperation is paramount in greening control efforts. In Florida, we have seen cooperative spraying via aerial sprays in Highlands County and elsewhere.

The take-away message is that greening is a devastating disease. If left untreated, it will destroy a citrus block and likely take several nearby citrus blocks with it. With diligent scouting, removal of symptomatic trees, and aggressive psyllid control conducted cooperatively with neighbors, many in São Paulo believe that tree loss from the disease can be reduced to a tolerable level. The disease will become a nuisance disease that growers wish they did not have to deal with, but one that will not kill the economic viability of the industry. **FG**

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