



# Fall tree health after initial trunk-injection treatments

By Frank Giles and Maegan Beatty

**A**s growers deployed their first application of oxytetracycline (OTC) via trunk injection this summer, expectations were high but tempered by the fact the therapy is not expected to turn the massive HLB ship around in just one season.

By this fall, after the seasonal cooldown, growers were still reporting generally positive signs from the treatments. There have been reports of fruit drop in some groves, leading to ongoing discussion of which trees are worthy of treatment or too far gone to bring back. That equation will take time to figure out and will likely be a grove-by-grove determination.

## OVERALL IMPROVEMENT

Ron Mahan with Tamiami Citrus says trees seem to be responding to OTC with improved health. Fruit drop in his groves is significantly lower. There is some drop, but he believes much of that can be attributed to canker.



Mahan

“Our general observations are that tree health has improved, with better

foliage and canopy on injected trees, with the exception of Early Pride tangerines,” Mahan said. “But our Valencia and Vernia trees responded positively, and so did our Sugar Belle and Tango tangerine trees.”

Mahan said they have control trees to compare trunk injection versus no treatment. In all cases, except Early

Pride, treated trees look better.

“Sugar Belle harvests for the past couple of years were marked by significant losses in packouts due to softening fruit, which we believe was a result of HLB disease,” Mahan added. “Our Sugar Belle trees were injected last spring, and packouts have exceeded 70% in all cases. HLB

## Early observations on second applications

Ute Albrecht, associate professor of plant physiology with the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS), has led the way on OTC therapy research. She said in December that since her research trees are mostly



Albrecht

Valencia, it is a bit early to know the full impact of this season’s treatments. But research trees with their second application look promising.

“In the trials where we have injected for the second year, we can definitely see a denser canopy and larger fruit,” she said. “In one of the trials with younger trees (about 5-year-old trees) at the UF/IFAS Southwest Florida Research and Education Center, the trees that have been injected with OTC for the second year look tremendously better. Small trees are clearly and consistently responding to the injections.”

Albrecht recently collected data from a first-year trial on Hamlin trees comparing different OTC rates. The trees were older, planted in 2005, and very variable in size, so she was not too optimistic that measurable effects would be collected.

“While we did not see any major difference by just looking at the trees, across all injection treatments, there was less fruit drop, yield was up by 25%, Brix was better (a half to one Brix percent higher), and fruit size was larger (10%),” Albrecht said. “This is not too bad for Hamlins, considering the age and variability of these trees. Stay tuned for more results.”

impacts are not 100% gone, but there was significant improvement. We think results will improve further after two years of the therapy.

“We ran some Vernia fruit tests for trees that were injected. Our average Brix was nearly 9.5%, and that was in early December. That’s a very good sign, and we believe it is a result of the OTC injections.”

### YOUNGER, BETTER

Brian Randolph of IMG Citrus believes treatments overall went very well in his groves. There is fruit drop but less than in previous years.

“Our 30-plus-year-old trees did not show benefit from the trunk injection, but anything under 10 years old definitely responded well,” Randolph said. “Those trees have better canopy densities and internal maturities. Our non-treated trees have much thinner canopy densities, more fruit drop and inferior internal maturities.”

### ENCOURAGING OUTLOOK

Tim Dooley with Blue Goose Growers reported trees have responded favorably to the therapy.

He, too, is seeing drop in both treated and untreated groves, but said in December it is too early to draw comparison with prior crop years. He is hopeful the initial treatment is setting up trees for a better crop next year, and the second application will bring even more benefits.



Dooley

“Trees responded favorably to the trunk-injection treatment with a healthy, vigorous, vegetative flush resulting in promising fruiting wood for the 2024–25 crop season,” Dooley said. “On our two row beds, we had one row treated and one row untreated. The improvement in tree health and vigor in the treated trees is noticeable.

“The tree health response from the trunk injections in calendar year 2023 is encouraging, and we anticipate the resulting yield from a second round of injections in calendar year 2024 will provide the much-needed increase in yield with the 2024–25 crop.” 🍊

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