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Evaluation of enhanced nutritional programs for mitigating HLB damage

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Florida growers have reported that enhanced nutritional programs (ENPs) maintain productivity of HLB-infected trees. However, efficacy and sustainability of the nutritional approach for HLB disease management remains uncertain. Complementary studies of multiple ENPs and their individual components compared to the standard nutritional program (SNP) on nursery and field trees were initiated in 2010. Two independent nursery trials were initiated with final data collection of the second trial currently underway. The field site was chosen for its mix of healthy, presymptomatic, and HLB symptomatic trees to determine if observed differences resulted from effects on healthy or infected trees. We have found no evidence of reduced phloem plugging in ENP treated nursery trees. *Candidatus Liberibacter asiaticus* (Las) populations are similar for ENPs and the SNP. Minor differences in Las movement have been observed. Las invaded new flush tissue faster in ENP treated trees than SNP trees. Phosphite treatments have caused Las to favor early invasion of root tissue compared to other treatments. Preliminary observations of the second nursery trial suggest that foliar symptoms are more apparent on the standard nutrient program compared to ENPs; however, root and canopy decline are unaffected. Fruit yield and HLB symptoms in field trees treated with ENPs have not differed significantly from the standard nutritional program after two years. Third year yield data will be presented.