

# Variable Rates of Iron: Impacts on Growth and Development of HLB-Affected Trees ‘Bingo’ In Florida

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HLB has been the major cause of declining tree growth and development in citrus production in Florida. A greenhouse experiment was established in 2018 at UF/IFAS CREC to assess the impact of variable rates of Iron (Fe) on the growth and development of 1-year-old HLB-affected ‘Bingo’ (*Citrus reticulata*) trees. This study seeks to generate important data to update micronutrient recommendations focusing on Fe for HLB-affected trees. Fifty percent of the trees were affected by the HLB

pathogen and 8 treatments were applied on a randomized complete block design with 7 replicates. The treatments applied were 0, 1x, 2x and 4x of Mn on the HLB-affected and healthy ‘Bingo’ trees (1x represents UF/IFAS recommendation for citrus). Data including trunk diameter, tree height, and leaf samples were collected, processed, and analyzed at an interval of three months, following treatment application. There was no significant difference recorded on tree height and diameter for both HLB-affected

and healthy trees. Considering leaf nutrient composition, there was significant difference between trees which received Fe (1x, 2x and 4x) and the control (0), with 4x accumulation the highest. The content of Fe in leaves is found to be increasing with increasing rate of soil applied Fe. The averages of leaf Fe contents for all rates of Fe applied, except the control, were found to be within sufficiency range of Fe in plant tissue.

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