

FLORIDA ENTOMOLOGICAL SOCIETY

96TH ANNUAL MEETING PRESENTATION ABSTRACT

[31] **Evaluation of insect repellents to manage the redbay ambrosia beetle, vector of laurel wilt, a lethal disease affecting avocados in Florida.** D. Carrillo, P.E. Kendra, R. E. Duncan, W.S. Montgomery and J.E. Peña. Tropical Research and Education Center, University of Florida, 18905 SW 280th Street, Homestead, FL 33031. ritad@ufl.edu

Production of avocado in Florida is valued at \$30 million a year, accounting for twelve percent of the national production. Over 90 percent of avocado in Florida is grown in the southern tip of the peninsula, and avocado is considered Florida's second most important fruit crop after citrus. The redbay ambrosia beetle (RAB), *Xyleborus glabratus* Eichhoff (Coleoptera: Curculionidae: Scolytinae) vectors the fungal pathogen, *Raffaelea lauricola*, T.C. Harr., which causes laurel wilt, a lethal disease of trees in the family Lauraceae that includes avocado, *Persea americana* Mill. No sexual or aggregation pheromones have been identified from RAB or any other ambrosia beetle. Thus, in this study we evaluate repellent substances in an effort to disrupt the host location behavior, and therefore attack by RAB. Thirteen molecular formulas obtained from Bedoukian Research Inc., classified as "biopesticides" by EPA that are in the process of obtaining registration, were tested. The materials closely resemble naturally occurring molecules, have very low toxicity, and have

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