Characterization of the feeding behavior of the Asian citrus psyllid, *Diaphorina citri* (Hemiptera: Liviidae) on finger limes and finger lime hybrids using Electropenetrography

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The Asian Citrus psyllid, *Diaphorina citri* Kurayama (Hemiptera: Liviidae) is the vector of *Candidatus* Liberibacter asiaticus (*C*Las) a phloem-limited bacterium responsible for the disease called Huanglongbing (HLB) or citrus greening. The use of insecticides is the main method implemented to control the vector in Florida. Other strategies such as the production of tolerant and/or resistant host plants are being investigated to develop more sustainable programs for long-term management. Recently, finger limes and their hybrids have displayed tolerance to HLB suggesting that acquisition and/or inoculation of *C*Las by *D. citri* may be different than for susceptible host plants. The goal of this study was to compare the probing behavior of *D. citri* adults and *C*Las transmission on finger limes (*Citrus australasica* F. Muell) and three hybrids (PFL1-11; PFL1-3; PRL1-55) with susceptible Valencia sweet orange (*Citrus* × *sinensis* (L.) Osbeck) using Electropenetrography (EPG). 24-h EPG recordings were done with AC-DC monitors at 10^9 Ω input resistance (Ri). Results showed that the feeding behavior of *D. citri* was different on finger limes compared to Valencia with a reduction in the number of probes (10.5 and 20.6 probs/recording, respectively), and an increase in time spent not feeding (1h 41 min and 37 min/recording in non-probing event, respectively) and ingesting xylem (32% and 18% of the probing event, respectively). Finally, the percentage of phloem ingestion was significantly lower on finger limes and all the hybrids tested compared to Valencia (9 to 11% compared to 29%, respectively) suggesting that *C*las acquisition might be reduced due to decreased phloem ingestion.