Olfactory & Visual response of Asian Citrus Psyllid *Diaphorina citri* Kuwayama (Hemiptera: Psylidae) in a choice arena.

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ABSTRACT

Diaphorina citri Kuwayama (Hemiptera: Psyllidae) is the primary vector of *Candidatus* Liberibacter spp. bacteria that cause citrus greening, a disease of worldwide importance and considered the most devastating disease of citrus trees. General models for host searching behavior by herbivorous insects support that host location is a sequential process in which vision, olfaction and mechanoreception signals are in play (Vinson, 1976; Marohasy, 1998).

In our case we use a “Choice Arena” developed in the Entomology lab of Citrus Center-Weslaco in 2012. Using this system we measure the response of ACP adults to different odors (volatiles) and colors emitted by 7 different host plants [Valley lemon (VL), Grapefruit (VL), Orange jasmine (OJ), Mexican lime (ML), Tangerine (TANG), Sweet orange (SO) and Yellow chapote (YCH)]. We measured the response to 10 different blends developed and base previously and results obtained using the Choice Arena trails.

Currently, we are trying to find a better attractant blend to improve the ACP trap which is available in the market. We know that the use of this system can define the next generation of attractants or repellents and ACP traps. This way the citrus growers can use them to control the populations of the ACP citrus psyllids in the orchards. This trap can also be use for residential use without danger.