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Analysis and evaluation of China-native citrus and citrus related germplasm on their susceptibility to the infestation by *Diaphorina citri* Kuwayama (Homotera: Psyllidae)

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Huanglongbing (HLB) is the most devastating disease of citrus worldwide and vectored by the Asian citrus psyllid (ACP), *Diaphorina citri* Kuwayama (Hemiptera: Psyllidae). The pathogen associated with HLB maintains uncultural in vitro, and there are few effective options against HLB-affected plants. Identification and deployment of ACP- resistance traits of citrus and citrus related germplasm to suppress ACP populations may be a potential management strategy for the management of HLB. In the present study, the susceptibilities of 71 Chinese citrus genotypes to ACP infestation were evaluated and analyzed in a free-choice situation under field conditions by using the method of systematic clustering and dynamic clustering. The results showed that there was significant difference in susceptibility to ACP infestation among the genotypes of citrus. These genotypes can be graded according to the number of psyllids on the trees. Grade I: highly susceptible with a total of 8 genotypes. Grade II: moderately susceptible with a total of 18 genotypes. Grade III: lower susceptibility with a total of 45 genotypes. The 71 genotypes of citrus are used to be classified into 8 groups according to the Chinese classification system "Citrus Varieties in China" (Chinese Citrus Association). There existed significant differences among the 8 groups. Lemons and Pummelos were highly susceptible hosts to ACP, with no significant difference from *Murraya panciculata* L., which was the most suitable host to ACP. Mandarins, Hybrid citrus, Sweet oranges and Tangerines were moderately susceptible hosts. Kumquat and Sour oranges were lower susceptible hosts. Some genotypes of Kumquat, like *Citrus medurenisi* var. Variegated Calamondin, *Fortunella hindsii* var. Chintou, and Sour orange, *Citrus aurantium* var. Variegated sour orange, had the lowest susceptiblility to ACP infection. Further experiment will be done to confirm the low ACP- susceptibility of genotypes from Kumquat and Sour orange.

Keywords: *Diaphorina citri* Kuwayama; Huanglongbing, Susceptibility, Citrus and Citrus related germplasm