LATENT PERIOD OF '*CANDIDATUS* LIBERIBACTER ASIATICUS' IN *DIAPHORINA CITRI*

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'*Candidatus* Liberibacter asiaticus' (LAS) is the prevalent liberibacter species associated with citrus huanglongbing (HLB), one of the most devastating diseases for citrus production worldwide. The bacterium is transmitted by the Asian citrus psyllid, *Diaphorina citri* kuwayama (Hemiptera: Psyllidae). After acquisition from infected plants a latent period is required before inoculation of the pathogen in healthy plants. However, previous reports of latent periods for LAS are inconsistent, with durations ranging from 1 day to 3 weeks. Considering the importance of this information to understanding transmission mechanisms and HLB epidemiology, we conducted an experiment to examine the latency of LAS after acquisition by *D. citri* nymphs or adults. Groups of 1st instar nymphs and 1-week old adults obtained from a healthy laboratory colony were confined on LAS-infected sweet orange plants for a 48-h acquisition access period (AAP) at 25^{o}C. Next, 25 insects of each age group were individually and serially transferred to healthy sweet orange seedlings for successive inoculations access periods (IAPs) of 48 h at 25^{o}C, until 37 days after the beginning of the AAP. Inoculated test plants were kept in a vector-proof screened greenhouse. To assess successful inoculations, TaqMan® Real-time PCR detection assays with LAS-specific primers were performed on DNA extracts from test plants 10 months later. First transmission events were observed after 11 and 13 days from beginning of the AAP by 1st instar nymphs and adults, respectively. All nymphs inoculated the pathogen for the first time between 11 to 19 days. In contrast, first transmission events by adults were observed at more variables times, at 13, 15, 29, 31 and 33 days from beginning of the AAP. The results indicate that the mean latent period of LAS in *D. citri* is approximately 2 weeks at 25°C, varying with the insect development stage during acquisition.

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