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Monitoring of *Candidatus Liberibacter asiaticus* in Citrus Seedlings at Greenhouse Conditions and Commercial Orchards of Sweet Orange and Tahiti Lime in the Northwest of Parana State, Brazil

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This study aimed to monitor the behavior of *Ca. Liberibacter asiaticus* in grafted seedlings in the greenhouse and in commercial orchards of sweet orange and Tahiti lime. Plants of sweet orange and Tahiti lime naturally infected with HLB were protected with screens aphid-proof to prevent the spread of disease. In greenhouse we used 17 Pêra variety seedlings that were inoculated in 2008 with infected budwood. The detection of HLB in the plants was carried out using conventional PCR. Ten leaves of each plant were collected for DNA extraction and for their full monitoring of the bacterial population by quantitative PCR for a period of 19 months. We observed erratic behavior of the bacterium. Even after the bacterium detection in the plant it was not possible to verify the presence of the etiologic agent in the same place after a few months. In the seedlings the bacterium was not detected in 82.3% of the plants in certain months, coinciding with the warmer months of the year in Brazil, despite its presence has being detected at earlier dates. For the plants in commercial orchards, the detected Ct values were between 18 and 33. The pathogen was even found when the expression of symptoms was small. The study of the population behavior of this agent contributes to the understanding of the epidemiology of this disease.

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Topic Categories: Survey, Detection and Diagnosis