**2.12 P**

## Efficiency of different set of primers in PCR detection of *'Candidatus* Liberibacter asiaticus'

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Huanglongbing (HLB), caused by the bacteria '*Candidatus* Liberibacter spp', is one of the most destructive diseases for citrus production around the world. Early diagnosis of diseased citrus trees is of utmost importance for the control of HLB. Molecular techniques, such as PCR, offer quick and specific detection and identification of '*Ca*. Liberibacter spp.'. Furthermore, different sets of primers have been used for detection of '*Ca*. Liberibacter asiaticus', the main agent of HLB. However, neither of the described sets of primers may detect all cases of HLB. Thus, conventional PCR using three common sets of primers, A2/J5, OI1/OI2c, and Lp1c/HP1, which amplify fragments of 703 pb, 1200 pb, and 2400 pb, respectively, were examined for HLB diagnosis. A total of 969 samples from different citrus cultivars, tree ages and regions of the State of Paraná, Brazil, were included in this study. The total number of samples tested positive for HLB by any set of primers were 598, representing 61.7% of the samples examined. Among these positive samples, 96.7% were identified with the primers A2/J5, 86.6% with OI2c/OI1, and 81.4% with HP1/Lp1c. When combined, 99.8% of the samples were HLB positive based on the sets of primers A2/J5 and OI2c/OI1. Based on the results obtained, the set of primers A2/J5 showed the highest efficiency in the detection of HLB for the bacterium that occurs in the State of Parana, Brazil.

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