2.5 A New Method for Short-Term Rearing of Psyllid Adults and Nymphs on Detached Citrus Leaves and Young Terminal Shoots

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Using whole citrus plants for rearing of psyllids for biological studies or for studying vector relations of huanglongbing disease takes considerable space, time, and other resources. We have developed a new and simpler method for short-term rearing of the Asian citrus psyllid *Diaphorina citri* using detached citrus leaves for psyllid adults and detached young terminal shoots for young nymphs. The cut petioles of young leaves or terminal shoots are immersed in water or moistened cotton in small microfuge tubes. Each leaf or terminal shoot is then ‘caged’ in a clear plastic 50 ml (or larger) tube, and the psyllids are added to it. Young *D. citri* adults and 2nd to 3rd-instar nymphs reared on these detached leaves or terminal shoots were observed feeding and excreting their honey dew regularly, and the adults were observed laying eggs. Survival of young adults was 89, 80, and 75% after 2, 3, and 4 weeks, respectively, on detached leaves changed weekly. Survival and adult emergence of young nymphs were significantly higher in those kept for one week on the youngest fully expanded leaves on detached terminal shoots (78 and 55%, respectively), compared to those kept for the same period on older detached leaves (57 and 26%, respectively). We believe that this new short-term rearing method for psyllids can save time and other resources and enhance various studies on the biology, management, and pathogen-vector interactions of this and other psyllid species.