

**Spatial distribution of the Asian citrus psyllid, *Diaphorina citri* Kuwayama
(Homoptera: Psyllidae) on citrus and orange jasmine**

ABSTRACT

The analysis of spatial distribution of the psyllid *Diaphorina citri* (Homoptera: Psyllidae) on citrus and orange jasmine analyzed using various mathematical indices of dispersion and regression models showed an aggregated distribution. Taylor's power law and Iwao's regression model fitted very well to all data sets, while the regression of $k = c + dm$ [$k = m^2/(s^2 \pm m)$] was an inadequate model for the aggregation of the citrus psyllid since k was unstable and dependent upon the density of the insect. In general, Taylor's power law fitted the data better, yielding higher values of R^2 than the Iwao's model for all cases, whether citrus only, orange jasmine only or pooled. The population of *D. citri* on the tree quadrants, i.e. north, west, south and east, did not differ significantly. However, distribution between the upper and lower half of the canopy was significantly different where the upper canopy harbored more psyllids than the lower half.

Keyword: Spatial distribution; Host plants; *Diaphorina citri*; Dispersion