# Rapid Estimation of Numbers of Aphids (Homoptera: Aphididae) on Yellow Sticky Traps for Time-Efficient Monitoring

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The presence-absence of cotton aphids, *Aphis gossypii* (Glover), in cells of a grid laid over 8.4cm by 13.8cm yellow sticky traps was used to estimate the population density of *A. gossypii* on traps in two identical cucumber greenhouses. The grid consisted of 4 by 6 cells (24cells per trap), each cell shaped quadrate of $4cm^2$(2cm by 2cm). The traps were shaped into a cylinder and positioned at the canopy level of cucumber throughout this study and changed once or twice a week.

The binomial (presence-absence) model was proposed by Steiner et al. (1999) which is log transformed number of aphids versus occupied cells. The objectives of this model analysis were to model the relationship of the number of cells occupied to the number of aphids.

This method is useful in giving a far more rapid estimate than counting individuals, particularly at high population density.