

Chilli Thrips Seasonal Pressure in Citrus Under Protective Screen

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Summary: Chilli thrips are a pest of citrus production in greenhouses and screenhouses. They cause rind damage to developing fruit, leaf damage, and death of growth terminals. The objectives of this study were to document seasonal population patterns to time management actions and develop an understanding of the spatial patterns of infestation in screenhouses. Chilli thrips populations have been sampled for two consecutive years in three locations. In the spring, we see an increase in the adult chilli thrips without an increase in juveniles, suggesting that this may be a period of migration into the citrus under protective screen (CUPS)

houses. If this is correct, management timed to migration should reduce the population of chilli thrips that remain in the house to mate and grow the resident population. We also saw an increase in both the adult and juvenile populations in the late summer of 2023, though the adult population increase is not as drastic as it is in the spring, suggesting that this increase may be due to reproduction inside of the CUPS houses. The extreme heat of late summer 2023 negatively impacted thrips populations and reduced the overall pressure for the remainder of the sampling period. By mapping the data with GPS coordinates, we see that the chilli

thrips pressure begins in the field edges and migrates into the center of CUPS over several months, suggesting that early season management could focus on the edges to reduce population build up, but after June, all trees should be treated as the insects are actively moving through and have the potential to cause damage.

Take Home Message:

- Chilli thrips has two primary seasonal peaks corresponding to periods of heavy flush.
- Chilli thrips populations build on edges of CUPS plantings early in the season.
- Chilli thrips migrate throughout CUPS by mid-summer.

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