

[Home](#) » [Volume 11 / 2007](#) »

## Species Of Thrips Associated With Cotton Flowers

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Cotton (*Gossypium hirsutum* L.) flowers are inhabited by many insect species, including common thrips (Thysanoptera: Thripidae). Thrips species have been hypothesized to increase the severity of hardlock in cotton, but it was unclear if their numbers could be managed using insecticide applications. The objectives of this study were to describe the thrips species and other insects found in cotton flowers and to determine how they are affected by insecticide applications. Population characteristics of the thrips were also investigated, including sex ratio, within-season variability, predator interactions, and rates of accumulation in flowers. White, first-day, flowers were sampled from untreated and insecticide-treated plots in 2 locations from 2003 to 2005. Insecticide treatments consisted of foliar applications of spinosad and either acephate or lambda-cyhalothrin depending on location. *Frankliniella tritici* (Fitch) (eastern flower thrips) was the most common species, and females outnumbered males by approximately 3 to 1. Insecticide treatments consistently reduced thrips numbers by 20 to 90%. *Orius insidiosus* (Say) (minute pirate bug), a predator of thrips, sometimes declined in the floral samples when insecticides were applied. Numbers of thrips and *Orius* sp. fluctuated throughout the season in all treatments. The covariation between thrips and *Orius* sp. was further explored and significant correlations were noted. The rate at which thrips enter flowers after opening was monitored and varied in both the starting (1000 h) and peak (1400 to 1800 h) number of thrips. The average relative humidity from 1700 h on the day before to 1000 h of the next day was negatively correlated to thrips numbers at 1000 h. It appears thrips numbers in cotton flowers can be managed while limiting injury to *O. insidiosus*.