

The control effects of the colored sticky traps, plastic covered, volatile chemicals combined with plant extracts against the *Thrips palmi* Karny in eggplant field

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Abstract

Capture of the southern yellow thrips, *Thrips palmi* Karny on blue or yellow traps when placed in front of violet, pink, black, yellow (or blue), white and red as background color was studied in an eggplant field. The results showed that the blue (or yellow) traps placed in front of a yellow (or blue) background could capture 11.5 thrips, it captured significantly more thrips than traps with other background colors. The attract effects were tested for some volatile chemicals against the southern yellow thrips. Our results showed the attract ratios were 2.56 for p-anisaldehyde and 2.38 folds for ethyl nicotinate than the blank. Further more the volatile chemicals were diluted to a series of various concentrations, such as 1, 5, 12.5, 25, 50 and 100%. The attract effects of different concentrations of p-anisaldehyde and ethyl nicotinate for thrips were 1 to 1.85 and 1.25 to 1.75 folds, separately. It appearance the diluted volatile chemicals didn't decrease the attract effects for the thrips. When sprayed the citronella oil or peppermint oil and combined to yellow plastic covered could decrease 5.10 and 3.47 folds of thrips , separately. It was apparent these control method had repellent effect and could avoid damage from the thrips on the eggplant. The above integrated control methods maybe can apply in non-chemicals to control the thrips in eggplant by the farmers.

Key words: Eggplant, Southern Yellow Thrip, Color Plastics, Volatile Chemicals

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