The efficiency of yellow sticky cards to control population of leafminer *Liriomyza sativae* Blanchard (Diptera: Agromyzidae) in greenhouse cucumber

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Abstract

Various species of serpentine leaf miner are serious pests of vegetable crops, especially on cucumber and tomato, in greenhouse and open fields. Reduction of chemical insecticides' use in order to minimize pesticide residues on these crops is one of the most important aspects of food safety. Yellow sticky cards have been used successfully for many pests and can be used for leaf miners too. Therefore, this investigation was performed to find out how to use these cards, including their height and spacing. To find the most proper height in the first step, three different heights (50, 120 and 170 cm from ground level) were considered, based on randomized complete blocks design with five replications, at the beginning of the growing season (plants with 5-6 leaves and less than 50 cm height). Results showed that traps on 50 cm height captured most of the insects, were in the same statistical group with 120 cm high traps, and had significant difference with 170 cm high treatment. In the second step, at which the experiment was replicated in the peak of adult population, when the plants were in their full height (160 cm), the 170 cm high traps adsorbed most of the adult leaf miners in three days. To find out the best trap spacing, the 170 cm high traps were placed at three different spacing of 1, 2 and 3 m and were compared to control (no trap). Results revealed that 1 m spacing treatment had the best efficiency, was in the same group with 2 m spacing treatment, and had significant difference with other treatments.

Keywords: Pest, Greenhouse vegetables, Cucumber.

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