15a18SETEMBRO2013
Bonito Mato Grosso do Sul Brasil
13º Siconbiol
Faça Bonito. Use Controle Biológico.

Predatory ants in the biological control of *Diaphania nitidalis*

Jorgiane B. Parish[2], Marcelo C. Picanço[1,2], Mirian F. Pimentel[1]; Lucas de Paula Arcanjo[1], Joel M. de Oliveira[1];

[1]*Departamento de Entomologia, Laboratório de Manejo Integrado de Pragas da Universidade Federal de Viçosa (UFV). 36570-000, Viçosa, MG, Brasil.* [2]*Departamento de Fitotecnia, Universidade Federal de Viçosa (UFV) 36570-000, Viçosa, MG, Brasil.* E-mail: jorgianebenevenute@gmail.com

Predatory ants (Hymenoptera: Formicidade) are social insects and important natural enemies of pests in agroecosystems. Little is known about the importance of these predators and their role in tropical regions. Among the major Lepidopteran pests of vegetables is *Diaphania nitidalis* (Crambidae). This work was aimed to study the natural biological control of *D. nitidalis*, by ants in cucumber crops in Viçosa, Minas Gerais State, during the dry season. The cultivar used was hybrid Sprint 440 II. The experimental design was randomized blocks with five replications and each repetition had six rows of nine plants. The spacing used was 1 x 0.5m. Pesticides were not used on the crop, and conventional cultivation practices were applied. The pest insects used in the experiment were obtained from the laboratory rearing at the Federal University of Viçosa. At the beginning of the experiment, 10 plants in each repetition were infested with 10 eggs and 10 larvae of each instar of *D. nitidalis*. The plants were about 60 days old when they were infested and the mortalities caused by the ants were monitored. The natural enemies collected were identified in the Museum of Entomology at UFV. From the experimental data the averages of *D. nitidalis* mortality by ants to the eggs, larvae and pupae were calculated. We also calculated the 95% confidence intervals of mortality rates. The *D. nitidalis* were preyed on by ants in both the eggs and pupae stadia. The eggs of *D. nitidalis* are in cucumber leaves that often come into contact with the soil thus enabling their predation by ants. The ants *Labidus coecus* and *Solenopsis* sp. were observed preying on pupae of *D. nitidalis*. The activity of the predatory ants occurred mainly during the night. In conclusion, our results demonstrate the importance of ants as predators of *D. nitidalis.* Therefore, the planning of pest management programs for vegetables should preserve the predatory ants to maximize biological control of pests.

Acknowledgments: CNPq, CAPES E FAPEMIG

Keywords: Social insects, Formicidae, cucumber.