BIOLOGICAL AND ECOLOGICAL STUDIES ON THE MAIN PESTS INFESTING CUCURBITS

BY

ABDELLAH SAID HUSSEIN ABDEL-MONIEM

B. Sc. (Plant Protection), Assuit University, 1987

M. Sc. (Entomology), Ain Shams University, 1994

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ABSTRACT

Abdellah Said Hussein Abdel-Moniem. Biological and ecological studies on the main pests infesting cucurbits. Unpublished Doctor of Philosophy dissertation, Department of Plant Protection, Faculty of Agriculture, Ain Shams University, 2000.

An investigation to study the fluctuations in the population densities and dynamics of insect pests attacking cucurbit plants (watermelon, sweetmelon, cantaloupe, cucumber and squash) in field during 1996 and 1997 growing seasons has been undertaken. Some natural compounds at different concentrations have been evaluated against the key pests of cucurbit plants; the whitefly, *Bemisia tabaci*, the melon aphids *Aphis gossypii*, and the melon ladybird beetle *Epilachna chrysomelina*. The role of predator *Aphidoletes aphidimyza* for reducing the population density of *A. gossypii* in glasshouse has been investigated. Laboratory evaluation was carried out to study the effect of some plant extracts (Neem Azal T/S , Neudosan and Spruzit flüssig) on some biological and toxicological aspects of *B. tabaci* , *A. gossypii* and *E. chrysomelina* . The present results indicate that these compounds showed pesticidal properties against *B. tabaci*, *A. gossypii* and *E. chrysomelina* . The toxicity of both products decreased as their concentrations decreased. The fecundity and longevity of *E. chrysomelina* were greatly affected by these applications.

Key words:

Cucurbit plants - Glasshouse - Natural compounds - Neem extracts - Population densities - Population dynamics - The melon aphid - The melon ladybird beetle - The red pumpkin beetle - Whitefly.

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