

EFFECTS OF SOME SELECTED SYNTHETIC INSECTICIDES AND GARLIC EXTRACT AGAINST DIAMONDBACK MOTH ON CABBAGE

By

THUSHANTHINI THURAIRAJAH

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Approved By

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S. Raveendranath

Supervisor
Dr S.Raveendranath.
Dean,
Faculty of Agriculture
Eastern University,
Sri Lanka.

T. Mahendran

Head/Agronomy
Dr.(Mrs).T.Mahendran
Head/Agronomy
Faculty of Agriculture
Eastern University
Sri Lanka

Date. 31/12/2002

Dr. S. RAVEENDRANATH
DEAN
Faculty of Agriculture

Date. 31/12/02

Dr. (Mrs) T. Mahendran
HEAD
Dept. of Agronomy

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ABSTRACT

The efficacy of different chemicals Tebufenozide (Mimic), Chlorfluazuron (Atabron), Etofenprox (Trebon), Profenofos (Selecron) and the Garlic extract (*Allium sativum*) were assessed along with control, for the control of *Plutella xylostella* (DBM), on cabbage leaves under laboratory condition in the Agricultural Biology laboratory of EUSL during the period between August 2002 to November 2002.

Larvae, collected from fields were used in this study. Insecticides were painted on each leaf at rates recommended by the Department of Agriculture and kept in transparent boxes assigned for respective treatments.

All the treatments significantly ($p < 0.01$) reduced the survival, weight and leaf consumption of *Plutella xylostella* (DBM) larvae, over control. The Chlorfluazuron was effective in increasing the larval mortality on 7th day after treatment, followed by Tebufenozide, Garlic extract, Profenofos, and Etofenprox. However there was no significant difference among Tebufenozide, Garlic, and Profenofos. The effect of Etofenprox was lowest among other treatments. Leaf consumption of larvae was significantly reduced by Tebufenozide over other treatments. Efficiency of Garlic was lower in reducing leaf consumption compared to all other treatments. Although Etofenprox was effective than Garlic, the effect was lesser than that of other three chemicals. Tebufenozide, Chlorfluazuron, and Profenofos were significantly effective in reducing the weight of larvae. Etofenprox was effective than Garlic but, lower than other three chemicals. In Tebufenozide and Chlorfluazuron treatments prepupation and malformed adults were observed.

Based on this study Chlorfluazuron, Tebufenozide, Profenofos and Garlic extract were effective in controlling *Plutella xylostella* (DBM) under laboratory condition. However Garlic showed delayed mortality. Etofenprox was not a very effective treatment compared to all the other treatments.

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