

PERMANENT REFERENCE.

EVALUATION OF SOME SELECTED BOTANICALS AGAINST
THE LARVAE OF DIAMONDBACK MOTH, *Plutella xylostella* L. ON

CABBAGE

BY

MISS. KRISHNAL SIVASUBRAMANIYAM

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S. Raveendranath
Dr. S. RAVEENDRANATH
SUPERVISOR
DEAN/
FACULTY OF AGRICULTURE
EASTERN UNIVERSITY
SRI LANKA

DATE 31/12/2002

Dr. S. RAVEENDRANATH
DEAN
Faculty of Agriculture
Eastern University, Sri Lanka.

T. Mahendran
Dr. (Mrs). T. MAHENDRAN
HEAD/ AGRONOMY
FACULTY OF AGRICULTURE
EASTERN UNIVERSITY
SRI LANKA

DATE 31/12/2002

HEAD
Dept. of Agronomy
Faculty of Agriculture
Eastern University, Sri Lanka.

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ABSTRACT

A laboratory study was conducted to compare the insecticidal and antifeedant activity of seed aqueous extracts of neem , annona , black pepper and citrus peel at two concentrations (25g/l and 50g/l) against diamondback moth *Plutella xylostella* L. (Lepidoptera: Plutellidae). Number of larvae survived, average weight of the survived larvae and the percentage of leaf area consumed upto the death or pupation of larvae were determined.

Neem at 50g/l concentration significantly reduced ($p < 0.05$) the survival of DBM larvae over the other botanicals. The effect of aqueous extracts of 25g/l black pepper and 25g/l of citrus were significantly lower than the other treatments. 25g/l neem, 50g/l annona, 50g/l black pepper, 25g/l annona and 50g/l citrus, did not show significant differences in reducing the larval population.

Percent survivals due to treatments over control were 45.09%, 58.82% and 58.82% for neem 50g/l, neem 25g/l and annona 50g/l respectively. But for black pepper 25g/l and citrus 25g/l treated leaves the percent survivals due to treatment over control were 79.08% and 71.24% respectively.

All the treatments have reduced significantly the percentage of leaf area consumption over control. However, there was no significant difference among the neem treatments, annona 50g/l and citrus 50g/l.

Black pepper 25g/l and citrus 25g/l treatments showed significantly higher percentage of leaf area consumption by DBM larvae over neem 25g/l, neem 50g/l, annona 50g/l and citrus 50g/l. For other treatments i.e. citrus 25g/l, annona 25g/l and black pepper 50g/l, the mean percentage of leaf area consumed lies within these highest and lowest ranges.

A more or less similar trend was observed in the larval weight, where all the treatments have reduced larval weight except in the control there was an increase in the weight was observed. Within the botanical applied treatments there was a higher weight loss observed in 50g/l neem, 50g/l annona and 50g/l citrus treatments. A quantity of 25g/l black pepper was low in efficiency in reducing larval weight.

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