Evaluation of some selected botanicals against the early instar larvae of Diamondback moth, *Plutella xylostella L.* on cabbage

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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 (25 g/ L and 50 g/ L) and to determine the effective concentration against the larvae of diamondback moth *Plutella xylostella* L. (Lepidoptrea: Plutellidae). This laboratory experiment was carried out in a Completely Randomized Design (CRD) with 3 replicates. Survival of larvae, weight changes in the survived larvae and percentage of leaf area consumed upto the death or pupation of larvae was determined.

Neem at 50 g/ L concentration significantly reduced ($p<0.05$) the survival of DBM larvae over the other botanicals. The effect of aqueous extracts of 25 g/ L Black pepper and 25 g/ L of Citrus was significantly lower than the other treatments. 25 g/ L Neem, 50 g/ L Annona, 50 g/ L Black pepper, 25 g/ L Annona and 50 g/ L Citrus, did not show any significant variation in reducing the larval population.

Consumption of leaves by DBM was significantly reduced by all the treatments than in the control. However, there was no significant difference among the Neem treatments, Annona 50 g/ L and Citrus 50 g/ L. All the treatments have reduced larval weight except in the control where an increase in weight was observed. In addition, within the botanical applied treatments there was a higher weight loss observed in the leaves treated 50 g/ L Neem, 50 g/ L Annona and 50 g/ L Citrus.

Neem, Annona, Black pepper and Citrus at a concentration of 50 g/ L appears to be effective in reducing the larval damage of DBM. However, within these Neem and Annona are highly effective at 50 g/ L concentration.

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