

Antifeedant Activity of *Ageratum conyzoides* (L.) (Asteraceae) Extracts against Diamondback Moth *Plutella xylostella* (L.) (Lepidoptera: Plutellidae)

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Abstract : Antifeedant activity of aqueous, methanolic and hexane crude extracts of powdered leaves of *Ageratum conyzoides* (L.) was evaluated against the last instar larvae of *Plutella xylostella* (L.), an oligophagous pest of Crucifer crops. Cauliflower leaf discs treated with different concentrations of extracts were provided to last instar larvae in both no-choice and choice bioassays under the standard laboratory conditions. All three extracts showed antifeedant effects in both the test conditions. In no-choice condition, hexane extract was found to significantly reduce the leaf area consumption at all the tested concentrations (0.5%, 1%, 2%, 3%, 4% and 5%). Also, aqueous and methanol extracts significantly reduced the leaf area consumption at different concentrations ($P < 0.05$). In choice tests, effect of aqueous extract was significantly higher at 3%, 4% and 5% concentrations as compared to control. However, significant activities of methanol and hexane extracts were recorded even at lowest concentrations of 1% ($P < 0.05$). Complete feeding inhibition of larvae was observed at 2% concentration of hexane extract. Antifeedant index values (AFI) obtained were found to increase in a dose dependent manner, i.e. higher the concentration, more the activity. The results clearly indicate the potential of *A. conyzoides* extracts for its use in the integrated management of *P. xylostella*, which will be ecofriendly and sustainable.

Keywords : *ageratum conyzoides*, *plutella xylostella*, crucifer, antifeedant index

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