## 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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