

Antifeedant Activity of Nux-vomica, *Strychnus nux-vomica* L, (Loganiaceae: Gentianales) Plant Extracts against Diamond back Moth, *Plutella xylostella* L. (Plutellidae: Lepidoptera) Infesting Cauliflower

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Abstract—Botanicals act not only as insecticides but also function as antifeedant, oviposition deterrent and ovicides. The present investigation reports on the antifeedant action of plant extracts of nux-vomica. Nux-vomica is a perennial tree which has alkaloids such as strychnine, brucine, vomisin, etc. In this investigation shade dried and powdered nux-vomica plant samples (leaves, root bark, stem bark, seed and fruit rind) were extracted with organic solvents ethanol, methanol, acetone, hexane and chloroform and also formulated as Emulsifiable Concentrates (EC) using surfactant and solvents. This formulated plant extracts were tested against third instar larvae of *Plutella xylostella* L. for antifeedant action using leaf disc no choice bioassay method under laboratory condition against third instar larvae of *Plutella xylostella* L. and unconsumed leaf area were measured in Leaf area meter. Among the five solvent extracts tested, chloroform recorded maximum antifeedant activity of 87.95 % in root bark 11.11 EC@ 2 % followed by seed 11.11 EC, leaf 20.00 EC, stem bark 12.55 EC and fruit rind 10.00 EC @ 2 % recording 75.28, 71.00, 60.56 and 43.74 per cent respectively. Solvent control showed only 07.85 per cent antifeedant activity. It means more or less entire leaf disc were consumed by larvae in control. From these experiments we can conclude that nux-vomica extracts possessing antifeedant action against insect pest. So explore this plant extracts to pesticide industry to prepare pesticides.

Keywords: *Nux-vomica*, alkaloids, solvent extracts, EC, *Plutella xylostella*, antifeedant activity