

# Effects of Botanical and Chemical Insecticides on the Percentage Mortality of Third Instar Larvae of *Helicoverpa Armigera* (Hubner)

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**Abstract**—The experiment was conducted in the Department of Plant Protection laboratories of SHIATS, Allahabad, during 2012-2013 to evaluate the efficacy of different neem (*Azadirachta indica*) products on percentage mortality of third instar larvae of *Helicoverpa armigera*. Different neem (*Azadirachta indica*) products, Neem leaf extract, neem seed kernel extract and neem oil were used alone and in combination at the concentrations of 5% in each treatment. There were significant differences in the mortality % and all the treatments and were found to be effective. The third instar larvae were more susceptible to the neem products after 72 hours of treatment and a maximum of 39.98% mortality was observed in neem leaf extract + neem oil treatment. Among different synthetic insecticides Indoxacarb 14.5 SC insecticide found to be very effective on third instar larvae at 200 ppm and recorded a maximum mortality of 81.63% after 72 hours. The results reveal that the neem leaf extract + neem oil and Indoxacarb could be utilized in the integrated pest management programme of *Helicoverpa armigera*.

**Keywords:** *Neem products, Insecticides, Indoxacarb14.5 SC, Helicoverpa armigera.*