

Insecticidal activity of *Peganum harmala* seed extract against the diamondback moth, *Plutella xylostella*

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Abstract

The diamondback moth, *Plutella xylostella* (L.) (Lepidoptera Plutellidae) is a key pest in cruciferous plants. Ethanol extract of *Peganum harmala* L. (seed) have shown pronounced effect on larval mortality, larval and pupal weight, oviposition deterrence, percent pupation, egg hatching and adult emergence of the diamondback moth, *P. xylostella*. A mortality of 66 and 100% was found in the third instar larvae that had fed for two days on the cabbage leaves treated with the ethanol extract at concentrations of 30 and 40 mg/ml, respectively. Significant dose response was observed on larval and pupal weight; pupal and adult emergence rate. Significant differences were also observed on oviposition. Percentage of egg hatching was reduced significantly in 30 and 40 mg/ml but not in 10 and 20 mg/ml concentrations. Obtained results showed that ethanol extract of *P. harmala* had a good insecticidal activity on *P. xylostella*.

Key words: *Plutella xylostella*, diamondback moth, seed extract, *Peganum harmala*, harmal, insecticidal effects.

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Received April 23, 2010. Accepted October 25, 2010.