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Effect of ecofriendly indigenous products with chemical insecticides on mortality percentage of 3rd instar larvae of *Helicoverpa armigera* (Hubner)

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ABSTRACT

Gram pod borer (*Helicoverpa armigera*) is the most serious pest responsible for higher yield losses in chickpea, cotton and red gram in India. *Helicoverpa armigera* is the major pest of many crops and considered as the main pest of chickpea. No plant seems to be strong enough to avoid attack of *Helicoverpa armigera* in affected field. Larvae of *Helicoverpa armigera* (Hubner) were collected from the nearby fields of chickpea. Present study was conducted to determine the susceptibility of *Helicoverpa armigera* (Hubner) for indigenous products and insecticide at various treatment. Seven treatments and five replication in indigenous products along with four treatment and five replication were taken up for the experiments. The data collected was analyzed using CRD design. Mortality of third instar *Helicoverpa armigera* (Hubner) was evalatued using tobacco leaf extract 10 per cent, Neem seed kernel extract 10 per cent, Neem leaf extract 10 per cent, cow urine 10 per cent, cow dung 10per cent and cow urine + cow dung 5 per cent and plain water as control. The result revealed that T_1= tobacco leaf extract 10 per cent gave minimum mortality (7.37%) and T_6= Cow urine + cow dung 5 per cent gave maximum mortality (26.32%) third instar larvae *Helicoverpa armigera* (Hubner) and Mortality of third instar of *Helicoverpa armigera* was evaluated using Quinolphos 0.01 per cent, Cypermethrin 0.01 per cent and Chlorpyrifos 0.01 per cent and plain water as control. The results revealed that T_2= Cypermethrin gave minimum mortality (48.91%) and T_3 = Chlorpyrifos gave maximum mortality (77.66) third instar larvae of *Helicoverpa armigera*.

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