

PERMANENT REFERENCE

STUDIES ON THE EFFECTS OF INSECTICIDES
ON APHID PREDATOR,
Menochilus sexmaculatus Fabr. FORAGING ON
COWPEA APHIDS, *Aphis craccivora* Koch.

BY

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Abstract

The lethal effects of chemical insecticides and botanicals on the survivorship and predatory activity of adult ladybird beetle, *Menochilus sexmaculatus* Fabr. on cowpea aphids, *Aphis craccivora* Koch. was investigated in the Agronomy farm of Eastern University, Sri Lanka.

The efficiency of two recommended chemical insecticides, dimethoate and imidacloprid on cowpea aphids was also evaluated and compared with the efficiency of neem oil.

There were significant ($p < 0.01$) differences between treatments in causing mortality in aphids. It was found that the above two chemical insecticides effectively controlled aphid population compared to neem oil.

Even though, the recommended insecticides (dimethoate & imidacloprid) significantly ($p < 0.01$) caused higher mortality in cowpea aphids, they showed detrimental effects on the ladybird beetle (*Menochilus sexmaculatus*). Dimethoate and imidacloprid significantly ($p < 0.01$) reduced the survival of *Menochilus sexmaculatus*, the aphid predator, compared to neem oil, which caused an increased mortality in the aphid population.

Based on these findings, it is clearly understood that the chemical insecticides are lethal to natural enemies like ladybird beetles (*Menochilus sexmaculatus*), hence, botanicals such as neem oil could be recommended as an alternative to chemical insecticides to protect ladybird beetles in the study region. Further studies are necessary on the evaluation of effective rate of neem oil application in the same region to control cowpea aphids.

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