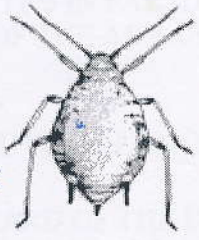
THE EFFECT OF BOTANICALS ON APHIDS, *Aphis craccivora* AND THEIR PREDATORS, *Menochilus sexmaculatus* ON COWPEA.



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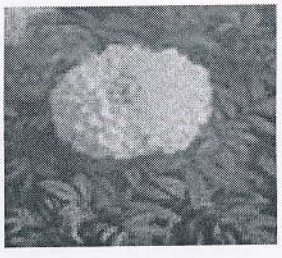

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ABSTRACT

The study was carried out in the Eastern University Sri Lanka, Batticaloa, to evaluate the role of extracts of four Botanicals namely Garlic bulb, Marigold flower, Lantana leave and Dimethoate on *Aphis craccivora,* with the comparison of natural control condition by predator in field. The study also aimed at finding the effect of these botanicals and chemical insecticide on survival or longevity of the predator *Menichilus sexmaculatus.*

In the laboratory condition, the effects of two different aqueous extracts (40g/40ml and 20g/20ml) of botanical, and recommended 400g/l EC Dimethoate (910-1820ml/ha) were tested. It was found that Dimethoate significantly ($p<0.05$) suppressed the survival of aphid over other treatments except Marigold 40g / 40ml and Marigold 20g / 40ml.

A similar study was carried out in plant house: However in plant house predators were used along with the control. Findings from this experiment showed that, Dimethoate 400g /lit EC, significantly ($p<0.05$) reduced the aphid number over other treatments, Garlic 20g / 40ml, Lantana 20g / 40ml and Lantana 40g / 40ml. Although predator plays a major role in reducing the aphid population, but it does not significantly ($p<0.05$) reduce the population compared with treatments such as Dimethoate 400g/l EC, Marigold 40g/40ml, Marigold 20g/40ml and Garlic 40g/40ml.

Among these treatments Lantana 40g/40ml significantly ($p<0.05$) increased the aphid population for 4 days over the treatments. Among the treatments with botanicals marigold 40g/40ml, marigold 20g/40ml and garlic 20g/40ml significantly ($p<0.05$) reduced the aphid number over Lantana 20g/40ml and Lantana 40g/40ml. Dimethoate 400g/l EC significantly ($p<0.05$) reduced the aphid number and survival or longevity of predator during the 4 days.

Based on the findings Dimethoate efficiently suppresses the aphids but adversely affected the survival or longevity of predator. But marigold 40g/40ml aqueous extract could be recommended as an alternate to synthetic insecticide to control cowpea aphid in the Eastern region of Sri Lanka and also it does not affect the survival of predator and might be considered as an environmentally friendly insecticide.

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