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**STUDIES ON THE EFFICACY OF LAKADA (*Gardenia cramerii*)  
AGAINST COWPEA APHID (*Aphis craccivora*)**

BY

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FACULTY OF AGRICULTURE  
EASTERN UNIVERSITY  
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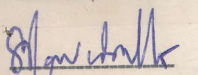
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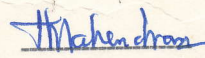


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### ABSTRACT

This study was carried out in the Eastern University to evaluate the efficacy of lakada (*Gardenia cramerii*) on the survival and fecundity of the cowpea aphid *Aphis craccivora*. For the comparison neem oil (as a botanical) and dimethoate (as a recommended insecticide) were used. Moreover, the efficacy of effective botanical and chemical on the longevity and searching efficiency of its predator *Menochilus sexmaculatus* was also evaluated.

Different aqueous suspension of lakada at various concentrations were tested against cowpea aphids in the laboratory. Findings from laboratory showed that 25g lak/100 ml water was the most effective and economical dose among the lakada concentrations in controlling aphids ( $p < 0.0001$ ).

Further studies were carried out to confirm the laboratory findings along with neem oil under plant house conditions. It was found that botanicals significantly ( $p < 0.0001$ ) suppressed the survival and reduced the fecundity of aphids over control. Among the botanicals 30g lak/100ml water showed the best performance. Eventhough the recommended insecticide, dimethoate significantly ( $p < 0.0001$ ) reduced the survival and fecundity of aphids over botanicals, they showed some adverse effects on the predator *Menochilus sexmaculatus*. Dimethoate significantly ( $p < 0.01$ ) reduced the longevity and the searching efficiency of the *M.sexmaculatus* compared to lakada.

Based on these findings, aqueous suspension of lakada (30g/100 ml H<sub>2</sub>O) could be recommended as an alternative to synthetic insecticides to control cowpea aphids in the Eastern region of Sri Lanka during Yala season.

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