

Miscellany

***Chrysoperla carnea* Stephens (Chrysopidae: Neuroptera) - a potential biocontrol agent of cardamom aphid (*Pentalonia nigronervosa* f. *caladii* van der Goot)**

Viral diseases such as mosaic (*katte*) and vein clearing disease (*kokke kandu*) of cardamom (*Elettaria cardamomum* Maton) are transmitted by the cardamom aphid (*Pentalonia nigronervosa* f. *caladii* van der Goot) (Homoptera: Aphididae). Insecticides are ineffective in controlling the aphids since their colonies are found in the concealed senile parts of the host and also due to their hyperactivity and subsequent migration and probing to other plants on exposure to insecticides (Rajan *et al.* 1989) which might further increase the spread of the disease. Further, the problem of environmental contamination and the increasing demand for 'zero pesticide residue spices' necessitate the development of alternate vector control strategies. Hence, a laboratory experiment was undertaken to determine the efficacy of the green lace wing, *Chrysoperla carnea* Stephens in reducing the population build up of the cardamom aphid.

The aphids were reared on cardamom leaf funnels in the laboratory. After allowing them to settle and reproduce for a week, 100 aphids (including adults and nymphs) were maintained in each leaf funnel. Ten larvae of *C. carnea*

were introduced into each leaf funnel. A leaf funnel without the predator was maintained as control. The experiment was replicated thrice. Three days later, the aphid populations in the leaf funnels were recorded and the per cent predation and per cent inhibition of population growth over control were worked out.

The mean aphid population in the leaf funnels with the predators was reduced to 18.7 (81.3% predation), 3 days after release, while in control, the mean population increased to 146 aphids. The per cent inhibition of population growth was 87.2. The study indicated the possibility of utilizing *C. carnea* for the control of *P. nigronervosa* on cardamom in an environment - friendly way.

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Reference

Rajan P, Naidu R & Venugopal M N
1989 Effect of insecticides on transmission and acquisition of

'katte' virus of small cardamom and their use in relation to disease spread and vector control
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(M J Mathew, K A Saju & M N Venugopal, Indian Institute of Spices Research, Cardamom Research Centre, Appangala, Madikeri - 571 201, Karnataka, India.)