



Green lacewing larvae

Recommendation

- 1000 eggs/ acre two times at an interval of one week

Mode of release

- The chrysopid eggs are supplied in the form of egg cards, which may be stapled to the underside of terminal leaves (2nd or 3rd leaf)
- Affix egg cards as soon as thrips are noticed. In case of severe infestation, take up a spray with water or Dimethoate 30 EC (3ml/l) followed by release of chrysopid 8 to 10 days after the spray of insecticide
- Release should be made in early hours
- Do not spray any pesticide after the release of the bio-control agents



Green lacewing cocoons

Availability of Chrysopid:

CSRTI- Mysuru, Ph: 0821-2903285
 RSRS-CSB, Salem, Ph: 0427-2295374
 National Bureau of Agricultural Insect Resources (NBAIR)
 Bangalore, Ph: 080-2351 1982
 SRK Bio-control, Hosur, Tamil Nadu
 Ph: 099946 22647

Text:

J. B. Narendra Kumar, S. Mahiba Helen,
 V. Sivaprasad

For further details Contact:

DIRECTOR
 Central Sericultural Research & Training Institute
 (ISO 9001 : 2015 Certified)
 Central Silk Board, Min. of Textiles
 Govt. of India, Srirampura, Mysuru - 570 008
 Tel: 0821-2362757, 2362406
 Fax: 0821-2362845
 Web: www.csrtimys.res.in
 Email: csrtimys.csb@nic.in

**Green Lacewing (Chrysopid)
 A Promising Bio-control agent
 against Thrips in Mulberry**



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Adult green lacewing

After the era of indiscriminate use of synthetic pesticides, inundative release of natural enemies has become very popular in the field of insect pest management. In sericulture, natural enemies such as *Scymnus* & *Cryptolaemus* lady bird beetles against pink mealybug, *Acerophagus papayae* against papaya mealybug, *Trichogramma chilonis* against lepidopteran pests and *Nesolynx thymus* against uzi fly are recommended.

Now, a chrysopid (Chrysopidae: Neuroptera), a broad spectrum predator which feeds on thrips is being recommended in mulberry.

In India, 65 species of chrysopids belonging to 21 genera have been recorded from various crop ecosystems. Amongst them, species belonging to *Chrysoperla* and *Mallada* are predominant. Green lacewings are reported to be relatively tolerant to pesticides among insects.

Chrysopids are commonly known as green lacewings or aphid lions. The adults are delicate light green colored insects with net-like wings. They feed on honeydew, pollen and other sugar sources. They lay about 600-800 stalked eggs in small groups on the leaves, other parts of plants or in the middle of colony of the pest, which hatch in 3 to 4 days.



Thrips infested mulberry

Thrips nymphs



Green lacewing eggs

Upon hatching, the lacewing larvae, which possess sickle shaped mouth parts, actively search for soft bodied insects such as aphids, thrips, mealybugs, white flies, soft scales, mites, *etc.*, and prey voraciously on them. They also feed on the eggs and freshly hatched larvae of several lepidopteran pests. Larval stage comprises of 3 stages and lasts for 8 to 10 days after which they form silky cocoons. From this, adults will emerge in 5 to 7 days. Total life cycle takes about 16 to 21 days. Males live for 30-35 days and females up to 60 days.



Chrysopids emerging from eggs