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Whitefly Predatory Bug: *Dicyphus hesperus*

Product:

Dicyphus hesperus is a species of true bug in the family Miridae. It is a generalist predator of other insects and also feeds on plant tissues. It is native to North America and has been used there in biological control of agricultural pests, especially whitefly on tomatoes. *Dicyphus* should not be used on its own to replace other biological control agents. It is best used along with other biological control agents in greenhouse tomato crops that have, or (because of past history) are expected to have whitefly, spider mite, or thrips problems.

The development from egg to adult takes 5 weeks at 25°C and 8 weeks at 20°C. The adult females lay 3 eggs per day, for a total of 88 eggs over 20-30 days. The eggs are laid in the tissue of plant stems and leaf veins and hatch in 2 weeks.

Target:

Greenhouse whitefly (*Trialeurodes vaporariorum*), Tobacco whitefly (*Bemisia tabaci*). *Dicyphus* will feed on two-spotted spider mite (*Tetranychus urticae*), Thrips and Moth eggs but will not control these pests.

Note: Since Dicyphus is also a plant feeder it should not be used on crops such as Gerbera which can be damaged. Most of the work with Dicyphus has been on vegetable crops such as tomato, pepper and eggplant where it will not cause plant damage by plant feeding.

Rate:

Release Dicyphus as soon as whiteflies are found, early in the season at a rate of 0.25-0.5 bugs/m^2 (10 ft^2) of the infested area; repeat in 2-3 weeks. Batches of 100 *Dicyphus* should be released in one area where whitefly is present or add supplementary food (frozen moth eggs: i.e. Sitotroga sp., Ephestia sp.) to these areas weekly. *Dicyphus* needs large numbers of prey (+100) to reproduce so releases should only be made in areas where pests have been detected or where supplementary food is being added.

This predator obtains water from plant feeding and can survive for long periods without food but must have insect food to reproduce. Feeding damage to the plant or tomato fruit is superficial and not usually noticeable unless population levels exceed 100 Dicyphus/plant.

The use of banker plants such as mullein (*Verbascum thapsus*) and eggplant is useful for increasing Dicyphus numbers as well as monitoring for pests.

Monitoring Tips:

• Adults and nymphs move quickly and hide in plant material when approached.

• On mature tomato plants adults and nymphs are often found on the middle leaves

Phone: 905-382-2904; Email: info@nicniagara.com Pleaselet NIC know within 24 hoursuponreceipt if there are any problems with yourlive insect order.

For further Information Contact: **NATURAL INSECT CONTROL**, 3737 Netherby Road, Stevensville, Ontario, L0S 1S0
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For further information on all NIC, Beneficial Insects go to **www.naturalinsectcontrol.com**