

# BioDicyphus

*Dicyphus hesperus*

*Dicyphus hesperus* is a predatory mirid bug. Both adults and nymphs are predatory and very effective in the biological control of whitefly.

## TARGET PESTS

Greenhouse whitefly (*Trialeurodes vaporariorum*) and sweet-potato whitefly (*Bemisia tabaci*). It will also feed on other pests including thrips, aphids, two-spotted spider mite (*Tetranychus urticae*) and moth eggs.

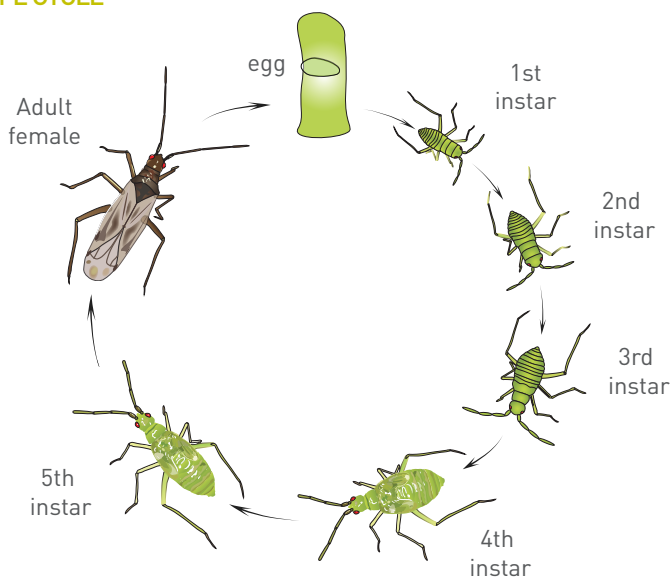


Whitefly damage

## DESCRIPTION

*Dicyphus hesperus* is elongated and adults are about 6mm (1/4 inch) long. Adults have wings, allowing them to fly to their prey. They have large red eyes and are black and green in color. The nymphs resemble the adult, although smaller in size and only green in color with underdeveloped wings. The female lays eggs in the plant tissues. Development from egg to adult takes 42-44 days at 20°C/68°F under suitable conditions.

## LIFE CYCLE



## CROPS

Tomatoes, peppers, cucumbers, eggplants, strawberry, cut and ornamental crops.



Adult BioDicyphus

## ADVANTAGES

- BioDicyphus works well in combination with Muellin banker plants. When prey is scarce Biodicyphus sustains itself on the pollen and plant sap of Mullein, ensuring long term persistence, even at low pest densities.
- Application of supplemental feed such as BioArtFeed or BioEphestia at 10 grams per 100 Mullein plants every 7-14 days increase fecundity.
- Can be combined with BioEncarsia (*E. formosa*) and/or with BioEretmocerus (*E. eremicus*) for additional whitefly suppression.

## THE PRODUCT



- 100 ml bottle containing 50/250 predatory bugs: adults & late instar nymphs.
- Carrier material: paper strips or cardboard tubes



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## APPLICATION & HANDLING

- BioDicyphus is shipped in insulated, chilled boxes. Packaging must be kept intact until placed in the field.
- The predatory mirid bugs should be released as soon as possible.
- Release should occur early morning or late afternoon, when the temperature is milder.
- Release the predatory bugs gently on plants or mullein banker plants
- You can also use a D-box to apply the beneficials.
- **Do not expose the bottles to direct sunlight.**



Mullein banker plant (*Verbascum thapsus*)

## STORAGE

- If the predatory beetle cannot be immediately released, the containers must be stored - for no longer than 24 hours - in their original packaging, in a cool, dark place, at temperatures between 8°C-12°C (47-53°F).
- Store horizontally.

## MONITORING

Scouting and monitoring is crucial.



## DOSAGE

The amount and frequency of predatory bug release is determined by the crop, the degree of infestation, weather conditions and damage inflicted on the crop.

Additional releases might be needed according to the infestation level and scouting information.

- **Preventive:**

Introduce early in the crop cycle, ideally at the start of the crop with Mullein banker plants and supplemental feed.

- **Curative:**

Higher rates may be required in hot spots or when whitefly is already established.

## GENERAL COMMENTS

Before combining BioDicyphus with any chemical pesticide in the crop, please consult your BioBee representative.

## DISCLAIMER

The success of biological pest control is affected by the crop's initial pest population (upon application of the product), weather conditions and chemical residue present in the crop, among other possible aggravating factors.