

## Hesperusline

### *Fundamental for a full program of Whitefly control*

Hesperusline biological control agent contains the predatory bug, *Dicyphus hesperus*. *Dicyphus hesperus* is a generalist predatory bug that is primarily released for whitefly control, but will feed on other pests such as Thrips, moth eggs and mites.

#### **Key Features**

- All five *Dicyphus* nymph stages also predatory.
- Considered a generalist predator also feeding on mites, moth eggs and other pests.
- Takes 8 to 12 weeks to establish population.
- Feeding Ephestia eggs (BugFood E) will enhance the establishment of *Dicyphus* due to increased fecundity.

#### **Target Pests**

- Whitefly
- Thrips spp
- Moth eggs
- TSSM (Two Spotted Spider Mite)



#### **How it works**

- All mobile stages are voracious predators of whitefly larva and pupa.
- Adults and juveniles will actively hunt for prey
- Used in combination with the wasps *Encarsia formosa* and *Eretmocerus eremicus* as part of a full IPM program for whitefly control.
- Once established, will feed on other pests such as thrips, moth eggs and mites.

#### **Available delivery systems**

- Supplied in 8oz (250ml) bottles that contain 250 adults and late instar nymphs.
- Packed in containers with paper towel strips and a sugar food source plug.
- Protein food source (some Ephestia eggs) in ventilated bottles ensures optimal condition of the bugs on delivery.

#### **Instructions for use**

- Apply in cool morning or evening.
- Avoid application in bright sunlight.
- Open bottle keeping it horizontal.
- Distribute contents evenly onto the mullein banker plants by gently shaking and rotating the bottle.
- Best practice is to make eight smaller introductions each week to create overlapping *Dicyphus* generations (8 applications of 3-4 *Dicyphus* per mullein plant per week).
- Use 40 mullein plants per acre (100 per Ha).
- Seed Mullein plants 10 weeks prior to first release date of Hesperusline.
- Use Ephestia eggs (Bugfood E) at 4 grams per acre per week on Mullein plants for 10 weeks.



***Storage & Transport***

- Transport and store at 6-10°C / 43-50°F.
- Keep out of direct sunlight.
- Use within 18 hours of receipt.