

Matricariae-System

Technical sheet



Target pests

The parasitic wasp *Aphidius matricariae* can parasitize about 40 aphid species. It is mainly an excellent parasitoid of the green peach aphid (*Myzus persicae*) and closely related species, the tobacco aphid (*Myzus persicae* var. *nicotianae*) and the peach potato aphid (*Myzus persicae* var. *persicae*). It has also a contributing effect in disturbing the population of the greenhouse potato aphids (*Aulacorthum solani*).

Crops

A. matricariae is used in protected solanaceous crops and berry crops, especially in organic sweet pepper and strawberry crops where aphid control is a big challenge. It can also be used in ornamental crops and herbs.

Aphidius matricariae



Aphidius matricariae is a slender, black insect with brown legs, long antennae and a suspicious wing venation. Its size depends on the size of the parasitized aphid, but is usually about 2-3 mm (1/8 inch). The female *Aphidius* injects an egg in the aphid with her ovipositor. This takes only a fraction of a second.

The wasp parasitizes adult aphids and nymphs. During the egg stage of the wasp (the first 3 days after parasitism) the aphid even eats more than normal and secretes more honeydew. Parasitized aphid adults or 4th instars keep on producing progeny. Then, the *Aphidius* larva starts eating the aphid from inside, starting with the non-vital parts. Ten days after parasitism (at 21°C or 70°F) the parasite fixes the aphid onto the leaf, and forms a silk cocoon which causes the aphid to swell into a golden-brown leather-like mummy. Five days after the beginning of the mummification (at 21°C or 70°F) an adult *Aphidius* emerges from the mummy through a round hole. Compared to other *Aphidius* species, *A. matricariae* parasitizes faster and in higher numbers. A female parasitoid lays about hundred eggs and may attack up to three hundred aphids in the attempt and process of parasitism. Most of the eggs are laid during the first four days. An adult *Aphidius* lives for 2 to 3 weeks.

A. matricariae has also an excellent searching capacity for aphid colonies. The presence of an *Aphidius* causes also a panic reaction within an aphid colony. Aphids often let themselves fall down, and usually die on the ground.

Application

Dosage

Preventive application: 0.25/m², repeat weekly if necessary.
Light curative application: 1/m² at a weekly interval, min. 3x
High curative application: 2/m² at a weekly interval, min. 6x

Use Biobox to release the mummies in the aphid hot spots.

Conditions

The optimal temperature is between 18-22°C (64 – 71.5°F) and relative humidity 60-80%.
A. matricariae should only be used when temperature is above 10°C (50°F). The efficacy decreases at temperatures higher than 30°C (85,6°F).

Note

The release of aphid predators, such as *Adalia bipunctata* (Adalia-System), *Aphidoletes aphidimyza* (Aphidoletes-System) and *Chrysopa carnea* (Chrysopa-System), is a favourable addition.

Packaging

Matricariae-System is available in next formulations:

- 30 ml plastic tube with 500 mummies in a sawdust carrier
- 250 ml plastic tube with 5.000 mummies in a sawdust carrier

Storage

Store Matricariae-System in a dark place at a temperature of 6-8°C and a RH of 85%.
Under these storage conditions, Matricariae-System remains good until the expiry date mentioned on the label.
It is recommended to release the mummies as soon as possible after delivery.

ADVANTAGES

1. Applicable in many crops
2. Excellent parasitoid of the green peach aphid (*Myzus persicae*), the tobacco aphid (*Myzus persicae* var. *nicothianae*) and the peach potato aphid (*Myzus persicae* var. *persicae*).
3. Preventive introduction possible
4. Good search capacity
5. High number of eggs per female during the first days
6. Parasitism is easy to recognize (mummies)
7. Less sensitive to hyperparasitism