



BIOLOGICAL SERVICES

Ervi

Aphidius ervi

Aphidius ervi (Ervi) will parasitise a number of aphid species but is most commonly used to help control large aphid species such as *Aulacorthum solani* (foxglove or glasshouse potato aphid), *Macrosiphum euphorbiae* (potato aphid), and *Acrythosiphum* spp. (pea aphids), that are not parasitised by *Aphidius colemani*.

Description and biology

Ervi are black and about 4-5 mm long. They look very similar to *Aphidius colemani* but are darker and slightly larger. Adult wasps resemble small winged ants but antennae are long and slender.

The parasite deposits an egg into the aphid in a matter of seconds. The aphid continues to move and feed after the egg has been deposited. When the egg hatches, the Ervi larva begins feeding on the aphid, eventually killing it. The parasitoid develops within the aphid body which at this stage called a "mummy". The mummy looks like an over inflated bronze aphid. The Ervi then chews a hole through the back of the mummy and emerges as an adult wasp ready to deposit eggs in live aphids.

Complete development time is temperature dependent, but is about 12 days at 25 °C. This is longer than the development time of aphids, but each *Aphidius* female can parasitise over 300 aphids in her lifetime which can last 2-3 weeks when food and water are available. Prolonged temperatures of above 30 °C or below 8 °C may reduce efficacy of the parasite.

Suitable crops

Ervi can be used in all crops where susceptible aphids are pests. Ervi is primarily used in greenhouse production, but can also be used in outdoor crops to get parasitoids started earlier than would occur naturally. Crops that may benefit from Ervi include capsicums, eggplants, roses and other flower crops, a range of ornamentals, and some field crops such as lucerne, pulses and potatoes.

When to release

Ervi works best when used preventatively, or when aphids are first noticed in a crop. This parasitoid is very good at dispersing



Aphidius ervi parasitising an aphid.

and finding low populations of aphids. If aphid numbers are already high it is advisable to use a non-disruptive insecticide to lower the aphid population prior to release. Residual broad spectrum insecticides should not be used for at least four weeks prior to the release of Ervi. Where several aphid species are present or an unidentified aphid species has been detected, Ervi can be released in conjunction with *Aphidius colemani* and *Aphelinus abdominalis* which will cover many species of aphid pests.

How to release

Ervi are sent as aphid mummies in a small vial. Each vial contains approximately 250 mummies. When they arrive some adults may have emerged. They should be released as soon as possible. If they cannot be put into the crop immediately they can be stored at 8-12 °C for a day.

Open the vial in the crop where they are to be released. Place the vial underneath the canopy of the crop and allow the adults to fly out of the vial. The remainder of mummies in the vial should be spread throughout the area to be treated by sprinkling them onto the foliage, or leaving the open vial underneath the foliage at the base of plants.

Release rates

Rates will vary depending on the species of aphid targeted and the level of infestation at the time of release. The following rates have been determined overseas for the control of *Aulacorthum solani* and *Macrosiphum euphorbiae* in greenhouse vegetables and can be used as a guide.

Preventative: 0.1/m² weekly

After aphid detection: 0.5/m²/week up to 10/m² for hotspots, for at least 3 weeks.

Chemical use

Ervi is sensitive to many pesticides, particularly pyrethroids, organophosphates and neonicotinoids. Residues on foliage and greenhouse structures may remain toxic for many weeks and negatively impact on their survival and ability to effect control. Check side-effects charts carefully and avoid using pesticides before and during Ervi use unless they are known to be safe. Contact Biological Services for specific information.

Ordering and accounts

Orders are sent via express courier services on Monday or Tuesday of each week, and usually arrive within a couple of days. Orders received after noon on Tuesday are sent the following Monday. Prices are on a sliding scale i.e. the more that is purchased over a monthly period, the lower the price will be per vial. Freight is charged at cost.

Accounts are sent at the end of each month, and can be paid by EFT, BPay, cheque or postal order.