



MagiPal

Beneficial insect attractant

A new tool for integrated pest management (IPM)

MagiPal offers growers a new tool in the IPM toolbox;

- It attracts predators into the crop before pest numbers reach damaging levels.
- It ensures a more even spread of natural enemies throughout the crop.
- It delays the build-up of pest hot-spots.
- Safe to use and pesticide-free.

Use MagiPal as part of an integrated programme. Integrated pest management is an effective and environmentally sensitive method of managing pests, which relies on using a combination of physical, cultural and biological techniques to keep pest numbers low. Only when results suggest that a pest is likely to exceed the economic damage threshold do chemical pesticides need to be used.

Using nature's tools to redress the balance

What is it and what does it do?

MagiPal is a specially formulated attractant, which attracts naturally occurring predators and parasitoids into an area. These important natural enemies contribute to the management of the target pests, typically reducing pest numbers by 40-80% in field trials.

Available as controlled release polymeric dispensers in units of 4 sachets.

Where to use it:

The following crops benefited from MagiPal releases in field trials.

Crops

MagiPal has been used in a wide range of crops, including:

- Apple and Pear (top fruit)
- Brassicas (e.g. cabbage, turnip, oilseed rape)
- Cotton
- Cranberry
- Grape
- Hop and Wheat (open field).
- Tomato
- Aubergine

Beneficial species attracted:

- Anthocoridae (e.g. *Orius spp.*)
- Ladybirds (e.g. *Schymnus*, *Hippodamia*)
- Hoverflies (Syrphidae)
- Lacewings (Chrysopidae)
- Parasitic wasps (*Diadegma spp.*, *Aphidiidae*)

Pest species affected in trials:

- Aphids (e.g. *Brevicoryne brassicae*, *Dysaphis spp.*, *Sitobium avenae*)
- Leaf hoppers (*jassids*)
- Lepidoptera (e.g. *Autographa gamma*, *Plutella xylostella*, *Manduca sexta*)
- Pear sucker (*Cacopsylla pyri*)
- Pear leaf midge (*Dasineura mali*)
- Thrips (e.g. *Thrips tabaci*)
- Whiteflies (e.g. *Aleyrodes protella*, *Bemisia tabaci*)

Directions for use:

- Use 100-120 lures per hectare in a grid pattern throughout the crop (at 10 m intervals)
- Extra lures can be placed in pest hot-spots as required.
- Place the lures at or above crop height.
- Replace lures every 2-3 months, or as recommended by your advisor.

Examples of predators and the pests they control:



Hoverflies
(*Syrphidae*)

These colourful flies seek out aphid colonies to lay their eggs. They also feed on pollen and nectar, and some species are important pollinators.

The larval stages are predators of aphids, each larva can consume 300-500 aphids during their lifespan.



Lacewings
(*Chrysopidae*)

The adults are beautiful and distinctive insects with lacy wings and their larvae are important predators. The larval stages feed on a wide range of soft-bodied insects such as aphids, insect eggs, thrips, whitefly scales, and small caterpillars.



Ladybirds
(*Coccinellidae*)

There are about 5000 species of ladybird, most of which feed on insects and mites. Both adult and larval stages are predatory. Some species prefer to feed on particular prey, such as aphids or scale insects, but they feed on other species if their preferred prey is not available.



Anthocorids
(*Anthocoridae*)

These bugs are routinely released for the control of thrips in glasshouses. Both adults and larvae feed on thrips and a wide range of other soft-bodied insects and mites, including spider mites and small caterpillars.



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