



Agrovista UK Limited

Rutherford House
Nottingham Science
& Technology Park
University Boulevard
Nottingham
NG7 2PZ

T: 0115 939 0202

E: enquiries@agrovista.co.uk

 @AgrovistaFruit

   @AgrovistaUK

www.agrovista.co.uk/fruit

10/23



Biological controls for soft fruit

with **Koppert UK**
and **Agrovista**

Koppert

*Biological solutions
to help you control
common pests on
soft fruit crops*

*growing through
innovation*

Praon volucre
Koppert UK



Aphids

Aphid pests are a major threat to protected soft fruit crops because of their high reproductive potential and their ability to transmit plant viruses. Strawberry crops are host to a wide range of aphid species including *Aphis gossypii*, *Myzus ascalonicus*, *Macrosiphum euphorbiae*, *Aulacorthum solani* and *Chaetosiphon fragaefolii*. In raspberries the two most common aphid species are *Amphorophora idaei* and *Aphis idaei*.

The most robust aphid control programmes are based on using a combination of parasitic wasps and predators.

Aphiscout® contains a mix of 250 aphid mummies and emerged adults of five aphid parasitoid species in the following proportions: 40% *Praon volucre*, 20% *Aphidius colemani*, 15% *Aphidius ervi*, 15% *Aphelinus abdominalis* and 10% *Ephedrus cerasicola*. This unique combination provides broad spectrum aphid control across a wide range of temperatures from 16 to 30°C.

PredaNostrum® is based on the hoverfly species *Sphaerophoria rueppellii*, which offers an effective treatment against all aphid species including *Myzus persicae*, *Macrosiphum euphorbiae*, *Aulacorthum solani* and *Chaetosiphon fragaefolii*. The larvae are voracious feeders at night and usually concealed during day. Early intervention with a programme of **PredaNostrum®** releases will help to mitigate the need to apply pesticide sprays.

Thrips

Swirski Mite®, Thripex NXT® and Anso-Mite® are loose formulated product options for thrips control in glasshouse and polythene tunnel crops. All three products can be applied to the crop canopy using the **Natutec Drive®**.

Anso-Mite® is a generalist predator which is suited to cold spring temperatures. This mite should be introduced early in the IPM programme as a preventative treatment. This should be followed with successive releases of **Swirski Mite®** or **Thripex NXT®**. Re-introductions of **Anso-Mite®** should begin towards the end of the season as the prevailing temperatures start to decline.

Swirski Mite® contains the thrips and whitefly predator *Amblyseius swirskii*. This predator prefers warmer conditions and should be introduced from May to August. This species has a high reproductive rate and is often seen on the lower leaf surface in groups consisting of 4 or 5 individuals.

Thripex NXT® contains *Neoseiulus cucumeris* and the Koppert patented feeder mite which acts as a food base to aid establishment in the crop. This product is used specifically against the Western flower thrips, *Frankliniella occidentalis*.



Amblyseius swirskii
search a leaf for
suitable food prey



Two *Amblyseius swirskii*
adults attack a
thrips larva



Orius laevigatus spears a thrips
larva with its piercing mouth parts

Two-spotted spider mite

Anso-Mite® contains the generalist predator *Amblyseius Anso-Mitei*, which will also feed on two-spotted spider mites, when applied early in the season against thrips. This predator will avoid spider mite webbing and will tend to feed from the edges of a spider mite colony.

Spidex® contains *Phytoseiulus persimilis* which is a specialist spider mite predator. It can be applied to glasshouse and polytunnel crops from mid-May. In glasshouse crops the spider control programme should start earlier with **Spical®** (*Neoseiulus californicus*).

Spidex Vital Plus® now available in sachets, contains *Phytoseiulus persimilis* nymphs, juveniles and adults which disperse into the crop over a period of several weeks. (The mites are initially white, turning red after feeding on spider mites). When introduced early in the season Vital provides long-lasting protection against spider mite even when levels are low.



Phytoseiulus persimilis
Koppert UK



*Heterorhabditis
bacteriophora*
Koppert UK



Spotted wing drosophila

Spotted wing drosophila is a major threat to soft fruit production. A strategy involving **Drososan®** traps and **Fruit fly attractant®** (based on apple cider vinegar) is essential to the management of this pest. The clarity of the attractant makes inspection and identification much easier than other solutions on the market. The solution is also stable under hot weather unlike wine based attractants which form a solid surface jelly. The trap is robust and long lasting. It can be re-used over many seasons.

Vine weevil

Vine weevil larvae activity periods are covered by **Larvanem®** and **Entonem®**. It is critical that the correct nematode species is applied at the right time. Koppert have developed a strategy which involves the use of **Larvanem®** in the primary treatment window from August to October, followed by **Entonem®** from late October and into the following spring if required.

Application machinery

The **Natutec Drive®** is Koppert's latest machinery innovation. This patented system is used to apply all predatory mites as well as lacewing larvae to polythene tunnel strawberry crops. It is attached to a custom-made vehicle which is driven between the strawberry table-tops. The basic system works on a revolving 60 litre drum, which dispenses the predators and carrier material into a hopper, and onwards, via several delivery tubes, to the crop canopy. The application process is controlled from a touch-screen inside the tractor cab, by simply selecting the product name and the rate of application required. The **Natutec Drive®** is supplied on a lease hire basis.