A new lure for a potential invasive thrips species

Thrips major Uzel (Figure 1) is a widespread pest of a range of flowering plants throughout Europe (Moritz et al. 2004). It has been implicated in fruit loss in nectarine, peach and strawberries due to extensive damage through feeding and ovipositing (Lewis 1997). It has not yet been confirmed present in New Zealand. Crop & Food Research and Plant Research International have developed a lure based on volatile odours that can increase the trap capture of:
- Onion thrips (Thrips tabaci);
- Western flower thrips (Frankliniella occidentalis);
- New Zealand flower thrips (Thrips obscuratus);
- and now Thrips major through trials in the Netherlands carried out in a commercial capsicum greenhouse and an outdoor leek field.

Method Glasshouse capsicum trials, July-August 2005, Utrecht, The Netherlands

Sticky traps were hung just above crop height, either baited with a prototype lure or un-baited (control). The lure was applied to:
- yellow sticky traps by spraying it on using a perfume atomiser (trial 1);
- yellow sticky traps by using a cotton dental roll placed inside a plastic sleeve (trial 2); or
- blue sticky traps by using a cotton dental roll alone (trial 3) (Figure 2).

Either 0.5 or 1.0 ml of the volatile odour was used depending on the duration of the trapping period (2 or 3 days). The numbers of thrips caught on each trap were counted and a subsample of the thrips identified based on morphological characteristics.

Results Glasshouse capsicum trials

In capsicum trials there were significantly more T. major (P < 0.001) on the traps with the treatment than on the control traps (Figure 3).

Method Outdoor leek trial, August-September 2007, Vredepeel, The Netherlands

Blue sticky traps were hung 40 cm above the crop, either baited with a commercial lure (LUREM-TR, attached to the top of the sticky traps) or un-baited (control) (Figure 4). Traps and lures were replaced weekly over a period of 5 weeks in late summer.

The thrips caught on each trap were counted and a subsample of the thrips identified based on morphological characteristics.

Results Outdoor leek trial

LUREM-TR baited traps caught between 2 and 13 times more Thrips major than the un-baited control traps (Figure 5).

This increase was, however, only significant in weeks 2 and 4.

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LUREM-TR was awarded the silver innovation award in the category for the protection of the environment at the International Horticulture Exhibition in France, Sifel 2008.

A NEW LURE FOR THRIPS MAJOR

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References
