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WFT insecticide management

Version Two - Updated 21 June 2000

IMPORTANT: This guide provides information to assist in decision making for control of WFT. It includes notes on managing WFT, strategies for application of sprays and the selection of available chemicals approved by the NRA. WFT is a pest that readily acquires resistance to insecticides. For this reason it is important to avoid dependance on a single chemical and to only commence control after WFT has been confirmed on your property. It is also important that growers make there own judgement as to the suitability, effectiveness and safety of the chemicals for the intended use, and the effect that use of the chemical may have on trade, and do so at their own risk.

Important notes for managing western flower thrips (WFT) in ornamental crops

WFT can cause feeding damage. Insecticides alone are often not enough to beat WFT and stop it from spreading tomato spotted wilt virus (TSWV).

Keep your property clean!

• Control weeds within and nearby your crop, because broad leaf weeds harbour WFT that will reinfest your crop.

• Remove unwanted flowers, plants affected with TSWV, and old crop debris, and burn or bury.

• Monitor for WFT in your crops and packing sheds with sticky traps.

• Only buy WFT and TSWV-free seedlings and cuttings from a reliable or accredited supplier.

• Don't bring any plant material onto your property unless necessary, because you may bring WFT with it.

Keep any deliveries to one side and inspect for WFT. Treat if WFT present before putting plants or cuttings in amongst your stock.

Monitoring for WFT

It is important to monitor your crops to check if WFT is present because it can easily be confused with less damaging

species of thrips. Monitoring is done with yellow sticky traps and by crop inspections.

• If WFT are numerous or increasing in number you should consider applying insecticides as described below before damage occurs.

• It is important to only apply insecticides if needed because the more insecticides you apply, the greater the chance that WFT will become resistant to them.

Spraying

Larvae and adult stages of WFT can be effectively killed by insecticides, but eggs (laid inside leaf tissue) and pupae (mostly in the soil) are protected from sprays. For this reason three sprays are recommended to cover the time taken for eggs to hatch into larvae and for pupae to develop into adults.

• a series of three sprays of the same chemical at regular intervals will be effective for killing the majority of thrips.

The interval between applications varies with temperature. In cooler regions or at cooler times of the year (10-20°C) the length of the life cycle is 25-35 days, and at least 6 days is required between applications of the insecticide. At 20-30°C the life cycle is 15-25 days and 3 to 5 days is recommended between applications.

If you need to spray again

You should continue to monitor numbers of WFT so you know when to apply another series of sprays. If WFT are building up on sticky traps or you see many WFT on your plants, or fresh damage is visible then consider spraying again.

However, if the same insecticide is always used to control WFT, the thrips will become resistant and the chemical will no longer be effective. Shading in Table 1 indicates possible resistance already present in the WFT population.

To reduce the chance of WFT becoming resistant, rotate insecticides monthly from a different chemical group. For example if you spray with a carbamate this month then you should spray with either an organophosphate, organochlorine or abamectin next month.

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Table 1. Chemicals approved for use on ornamentals by the NRA. Effective to 31st May 2001. Use is at your risk, check on any specific State restrictions and avoid phytotoxicity by testing a small area first.

Chemical group	*Active ingredient*	*Product concentration*	*Product rate*	*Critical comments*
Organochlorine	endosulfan (S7)	350g/L	190mL/100L	not for use in enclosed spaces and subject to special restrictions
Organophosphate	acephate	750g/Kg	130g/100L or 13kg/ha	do not spray more than once a month on chrysanthemum and carnation. May cause phytotoxicity in these varieties: test on a small patch first
	methidathion (S7)	400g/L	125mL/100L	
	dichlorvos (S7)	500g/L	100mL/100L	for use as a crop spray (not in greenhouse) avoid spraying in direct sunlight and when plants are stressed. Use a small test patch to observe any phytotoxicity
Carbamate	methiocarb	750g/Kg	200g/100L	Use a small test patch
Antiobiotic	Abamectin	18g/L	50mL/100L	maximum of 2 sprays per season
Phenyl pyrazole	Fipronil	200g/L	250mL/ha	
Spinosyn	spinosad	120g/L	80ml/100L	max. 4 times per season / crop

Moderate resistance

RETURN TO NURSEY PAPERS INDEX
