

Aphid & Spider Mite Control in Christmas Trees – the Options.

A substantial number of growers are successful in producing first quality trees without the use of insecticides. This can reflect the fact that the plantation is too high or exposed to favour aphids or has plenty of predators such as lacewings, ladybirds or parasitic wasps. Those of us not brave enough to leave the sprayer in the barn should still aim to minimise the number of insecticides applied, and for most varieties just one spray per year should be sufficient.

For species such as Fraser Fir which require a programme approach of several applications, it is highly desirable to use insecticides from any one group no more than twice per year to avoid the possibility of building up resistance to the chemical. It is therefore important to know which insecticides belong to which group.

Synthetic pyrethroids

cypermethrin (Toppel*), deltamethrin (Decis*), alpha-cypermethrin (Contest*), lambda cyhalothrin (Hallmark).

Relatively inexpensive and tolerated by most spray operators, these control a wide range of insects and are best used in the winter when insect predators and other beneficial insects are less likely to be harmed.

As well as killing aphids on contact, they can “starve” aphids due to anti feeding properties.

Organophosphorus & carbamates

dimethoate (Danedim), chlorpyrifos (Dursban / Spannit), pirimicarb (Aphox)

These are all nerve poisons and should be handled with care.

However dimethoate is particularly useful as a spring & summer spray as it can move by sap around the tree. Pirimicarb is also worth considering in warm weather, as it can volatise and control aphids through fumigation.

Nicotinoids

(Gazelle), (Admire*)

Reasonably kind to operators and beneficial insects, and can move from one side of the needle to the other which can be helpful if aphids are on the underside of the needle.

(Mainman**)

Very persistent and works only as an anti-feedant, therefore causing death by starvation. Fully systemic, so will move around the tree and control aphids not hit by the spray. Particularly useful for spring / summer control of Balsam Woolly Aphid and Silver Fir Woolly Aphid which are both difficult targets to hit with non systemic insecticides.

Approval Status

* Current use under UK extension of use regulations

** Single offlabel Approval (SOLA) must be in your possession.

Otherwise a label approval for Ornamental Plant Production - includes Christmas Trees.

Which aphicides to use and when

<u>Species</u>	<u>Aphid Pest</u>	<u>Time of Spray</u>	<u>Preferred Insecticide</u>
Norway Spruce	Green Spruce Aphid Pineapple Gall Spruce Shoot Aphid	Sept. to February] Nov. to February] June to August	Any, but synthetic pyrethroids are inexpensive & effective. Minimal effect on other insects in winter. Use Aphox or Gazelle on any summer infestations
Pines & Douglas Fir	“Woolly” adelgids	Nov. to February before “wool” observed	Synthetic pyrethroids.
Nordman Fir	Giant Fir Aphid	Any time when seen	Ideally spot treat with synthetic pyrethroid or Aphox or Gazelle if overspraying crop
	Silver Fir Woolly Aphid	Mid March May/June - full flush	Synthetic pyrethroid - Decis / Toppel / Contest Mainman (repeat if severe infestation)
Fraser Fir	Balsam Woolly Aphid	Early April May/June - full flush July	Synthetic pyrethroid - Decis / Toppel / Contest Mainman Mainman

Spider Mite Control

Two spider mites can damage Christmas trees - Conifer Spinning Mite in Spruce & Rust Mite in Firs.

Control is the same for both species.

Clofentazine (Apollo*) kills winter eggs and can be applied with the winter aphicide any time from November to early March.

This is the preferred choice as it does not affect beneficial insects, and can therefore be used as part of an integrated insect control programme.

If an attack is identified mid season, then there is a choice of insecticides, but the most commonly used is fenpyroximate (Sequel*), as it will control summer eggs, motiles and adults. However, some beneficial insects may also be affected.

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