

Admiral[®]

A selective insect growth regulator for the control of whitefly on greenhouse tomatoes and greenhouse cucumbers.

- **Multiple points of activity in the insect life cycle, reducing pest numbers by preventing egg hatch and establishment of adult colonies**
- **Translaminar activity through the leaf to pests on both sides of the leaf**
- **Non-toxic to bees**
- **Short withholding period in most crops**
- **Suitable for use in insect resistance management strategies**
- **Low toxicity and low environmental impact**



Active Ingredient: 100g/L pyriproxyfen as an emulsifiable concentrate.

Pack Size: 1L

Managing Whitefly with Admiral

Admiral is an easy to use, selective insect growth regulator with attributes well-suited to managing whitefly populations. Admiral contains pyriproxyfen, a juvenile hormone mimic that interferes with whitefly reproduction and development. Juvenile hormone is secreted naturally in the early larval stages of insects and is responsible for maintaining larval characteristics. As juvenile hormone levels in the insects decrease and disappear over time, they progress on to later instars and ultimately pupate and emerge as adults. Juvenile hormone also controls insect ovary development.

Activity

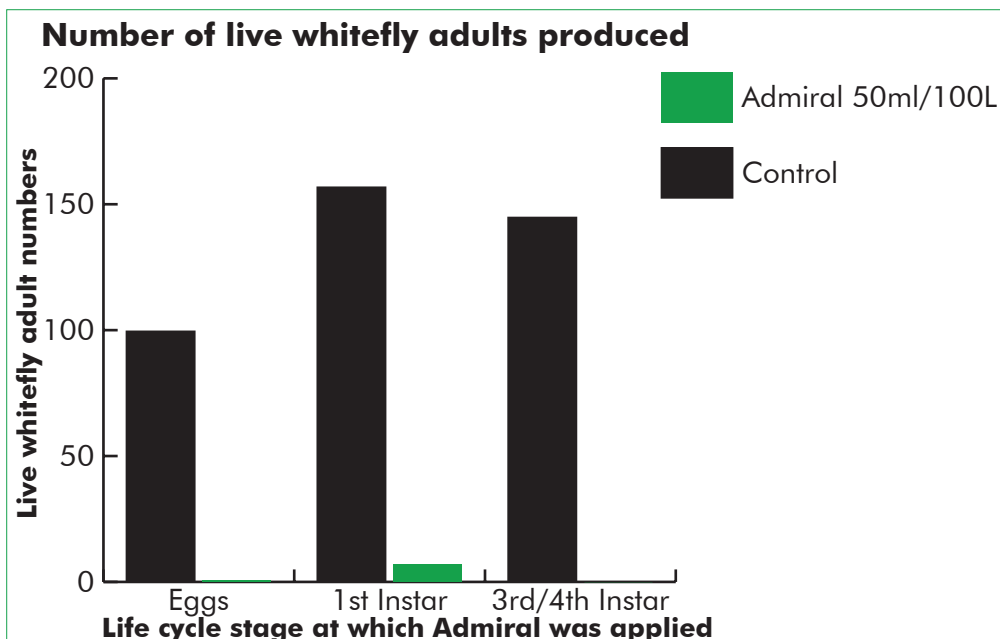
Due to its mode of action, Admiral should be regarded as a population disruptor – not a knockdown insecticide. It is slow acting, but if used correctly the effects are dramatic and long lasting

Admiral reduces whitefly numbers by:

- Causing inhibition of egg hatch
- Artificially increasing juvenile hormone levels – prevents progression from the larval to the adult stage
- Sterilising adult females

Withholding Periods

Tomatoes and cucumbers - 1 day



Application: The rates suggested are for high volume spraying to run-off. For concentrate spraying adjust dilution rate accordingly.

PEST	RATE	CRITICAL COMMENTS
Whitefly	50mL/100L water (minimum 500 mL/ha) Use 500-1000L water/ha and up to 2000L water/ha for full canopy tomato crops.	Apply at first appearance of whitefly. Make a second application 10-14 days later. Ensure thorough coverage of the plants. Addition of a non-ionic wetting agent is recommended. Use an alternative insecticide to control adult whitefly.

Resistance Management

Whiteflies have short and overlapping generations and are notorious for quickly developing resistance to insecticides. Resistance to Admiral could develop from repeated use. DO NOT apply Admiral more than twice in any one crop per 12 month period. Use an insecticide from a different chemical group the next time whitefly control is required. Maximise non-insecticide controls.

Beneficials

Admiral has a narrow spectrum of activity and is safe on many beneficial insects.

- Admiral is of low toxicity to adult parasitoids such as *Encarsia*, *Eretmocerus* and *Aphidius*, but it may indirectly reduce parasitoid numbers by removing the host.
- Admiral does not affect predatory mites or bumblebees used for pollination.
- It is good practice to delay the application of Admiral to a time when bumblebees are not actively foraging.
- Admiral affects all immature stages of ladybirds, and is NOT suitable for use in greenhouses relying on predatory ladybirds e.g. *Cleobora mellyi* for pest control.

Want more information?

0800 683 276 / www.nufarm.co.nz

