

# PARAMITE® INSECTICIDE

### FOR CONTROL OF MITES IN ALMONDS

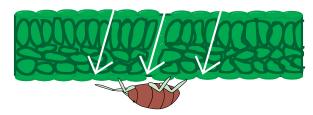
ParaMite® is now registered for control of Two Spotted, European Red and Bryobia mites in almonds. The active ingredient in ParaMite, etoxazole, is a new chemical class and has no cross resistance to existing miticides – therefore making it an ideal rotation option in a resistance management strategy. While highly efficacious against a variety of mites, ParaMite is safe on beneficials, ensuring a good fit in an IPM program. ParaMite has been used in pome fruit, stone fruit, grapes, citrus, bananas and tomatoes for a number of years with great success.

### Mode of action

ParaMite contains the active ingredient etoxazole from the Diphenyloxazoline group. Etoxazole is an Insect Growth Regulator (IGR), or more specifically a moult inhibitor, which has excellent contact activities against juvenile stages from eggs to larvae and nymphs, and an indirect effect on adults. ParaMite stops egg, larvae and nymph development on contact and sterilises adult females.

## **Translaminar movement**

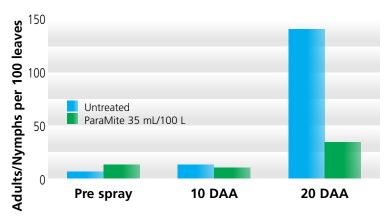
ParaMite applied to top of leaf



Leaf cross-section: Translaminar movement of ParaMite

# **Bryobia control in almonds**

109-023 Merbein Vic, Application 23rd October

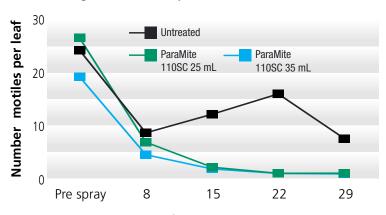


Trial demonstrating the benefits of applying ParaMite early before mite number explode.

# Two Spotted Mite (TSM) control

ParaMite has been used successfully for a number of years to control TSM in stonefuit, and is now registered for registered for TSM control in almonds.

#### ParaMite against TSM in apricots



Days after initial treatment

It takes 10-14 days to pull adult numbers down but control persists for several weeks after application. 35 mL/100 L is a more robust rate.

As is evident from the results above, the full effect of ParaMite on the mite population takes a few days to become apparent. Once the population cycle had been disrupted though, the ovicidal action of ParaMite results in long-lasting control.





### ParaMite Insecticide – For for control of mites in almonds

# How to get the best results from ParaMite

- ParaMite is best suited to early application before nymphs turn into adults. Other than sterilizing female mites, it has limited effect against adults and they will continue to feed and cause damage until they die naturally.
- Correct timing requires careful monitoring. Apply ParaMite while the mite population is still developing and predominantly juvenile.
- If a population of adults is already present; more than 15% of leaves infested or two adults per leaf it is advisable to mix or precede ParaMite with a knockdown miticide.
- Only one spray of ParaMite should be used per season. It can be used in the same season as knockdown miticides but its use should be rotated with products from different chemical groups.

### **Directions for use**

DO NOT apply if rainfall is expected before spray has dried. DO NOT apply more than one spray per season as over-use may lead to development of mite resistance.

DO NOT apply by air.

SITUATION	PEST	RATE per 100 L	CRITICAL COMMENTS
Almonds	Two-spotted mite (Tetranychus urticae), Bryobia mite (Bryobia rubrioculus)	35 mL	ParaMite is a mite growth regulator that causes adults to lay sterile eggs and stops existing eggs and nymphs developing. Control of these stages is generally achieved within 7 days. ParaMite also has translaminar and residual activity which means control of the population may last for four to five weeks. However, it does not control adult mites, which normally live for up to two weeks.  To give effective long term population control ParaMite should therefore be applied at the first signs of mite crawlers. Once large numbers of adults are present it may be necessary to also apply a miticide from a different group two control the adults immediately and reduce potential damage.  As a guide, if there are 2 or more adults per leaf, and 15% or more of leaves are infested, a knockdown of adults with a different miticide may be required.  ParaMite can be applied as dilute or concentrated sprays on apples, pears, stone fruit, almonds and table grapes but good coverage is important so the volume should be no less than 750 L/ha.  DO NOT apply in water volumes greater than 2000 L/ha.  If re-treatment is required, use an approved miticide from a different chemical group.

Withholding Period: ALMONDS: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

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