

# ParaMite®



## ParaMite in Bananas<sup>1</sup>



**Now  
registered  
for AERIAL  
application**

**1 DAY  
Withholding**

FEATURE	BENEFIT
New and unique chemical class	No resistance or cross resistance to other miticides
Effective at all stages of the mite life cycle	Kills eggs and nymphs, sterilises adult females. Gives long-term control.
Unscheduled poison	High degree of worker and user safety
Translaminar movement through the leaf	Controls mites on the underside of leaves where they feed
Long-lasting control	Cost effective

<sup>1</sup> ParaMite is also registered for control of spider mites in: Pome fruit, stone fruit, wine and table grapes, citrus, tomatoes, capsicums and cotton.



SUMITOMO CHEMICAL

# ParaMite® in Bananas

SITUATION	PEST	RATE (per ha)	CRITICAL COMMENTS
Bananas (Ground application)	Strawberry mite ( <i>Tetranychus lambi</i> )	200 mL	For application with the standard tractor drawn air blast sprayer a water rate of 400 L per hectare should be used. For aerial application use a minimum of 30 L spray volume per hectare and a registered crop oil such as Sacoa BioPest Oil.
Bananas (Aerial application)		500 mL + 3.5 L of a registered Crop Oil	It is important to carefully monitor mite populations as when the right weather conditions prevail, there is a tendency for them to increase rapidly in Bananas. To give effective long term population control ParaMite should be applied at the first signs of an increase in the population of mite crawlers. Once large numbers of adults are present it may be necessary to also apply a miticide from a different group to control the adults immediately and reduce potential damage.

Very toxic to aquatic life. **DO NOT** apply when there are aquatic and wetland areas including aquacultural ponds or surface streams and rivers downwind from the application area and within the **mandatory no-spray zones**.

## MANDATORY NO-SPRAY ZONES FOR PROTECTION OF THE AQUATIC ENVIRONMENT

### For ground application (airblast)

Windspeed at time of application – from 3 to 20 kilometres per hour

Crop	Downwind Mandatory No-Spray Zone
Bananas	25 metres

### For aerial application

Wind speed range at time of application	Downwind mandatory no-spray zone	
	Fixed-wing and helicopter (for release heights greater than 2 metres above the canopy)	Fixed-wing and helicopter (for release heights lower than 2 metres above the canopy, where it is safe to do so)
From 3 to 8 kilometres per hour	120 metres	20 metres
From 8 to 14 kilometres per hour	250 metres	60 metres
From 14 to 20 kilometres per hour	450 metres	120 metres

## NO-SPRAY ZONES FOR THE PROTECTION OF INTERNATIONAL TRADE

### For aerial application

Wind speed range at time of application	Downwind mandatory no-spray zone	
	Fixed-wing and helicopter (for release heights greater than 2 metres above the canopy)	Fixed-wing and helicopter (for release heights lower than 2 metres above the canopy, where it is safe to do so)
From 3 to 8 kilometres per hour	140 metres	Not required
From 8 to 14 kilometres per hour	350 metres	20 metres
From 14 to 20 kilometres per hour	600 metres	80 metres

### For ground application (airblast)

Wind speed range at time of application	Downwind mandatory no-spray zone
From 3 to 20 kilometres per hour	Not required

**WITHHOLDING PERIODS: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.**



## How to get the best results from ParaMite

- Carefully monitor mite populations as they have a tendency to increase rapidly when favorable weather conditions prevail.
- Apply ParaMite when the mite population consists predominantly of immature stages (eggs and nymphs).
- If the mite population is predominantly adult, it is to advisable to mix a knock-down miticide with ParaMite to reduce the number of adults and to minimise damage from feeding. While ParaMite will sterilise adult females to prevent the laying of viable eggs, they will continue to feed until they die naturally.
- ParaMite is translaminar but not systemic, so good coverage is important. Use airblast sprayers to ensure coverage of all foliage and uncovered bunches.
- Do not apply ParaMite if rainfall is expected before the spray has dried.
- To prevent the development of resistance and to preserve ParaMite as a control option, do not apply more than one spray per season.



## PARAMITE AERIAL REGISTRATION IN BANANAS

Spraying of bananas with ground spraying equipment in the wet tropics is frequently interrupted by wet conditions, often for long periods, during which mite populations can increase to damaging levels before spraying can resume. For this reason, Sumitomo Chemical Australia conducted the necessary trials and made several submissions to APVMA for registration. This has now been granted.

### The principles of applying ParaMite by air

- While ground application is effective at 200 mL/ha, aerial application requires a higher rate because sufficient product needs to reach the underside of the leaves and the lower canopy. ParaMite translocates from the top of the leaf to the underside where mites tend to congregate.
- Aerial application is improved by the addition of a crop oil to the mixture. Socoa BioPest Oil @ 3.5 L/ha has given a consistent result in trials. The addition of crop oil improves retention of ParaMite on the leaf. Oil also helps to reduce off-target drift. Growers may be concerned about the possibility of phytotoxicity from using oil with Paramite close to the application of chlorothalonil. Paramite will still give good mite control without the oil.

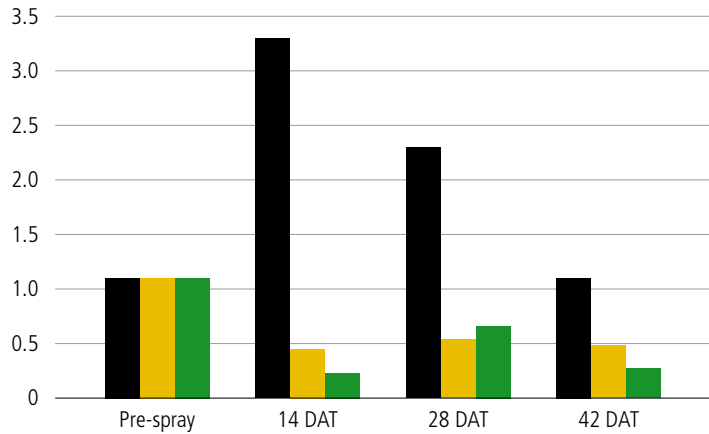


# Aerial application trial results

**TRIAL 1.** Tully, QLD. Cavandish bananas. Aerial application by fixed wing aircraft in 30 L water/ha. Coarse droplets (250 to 300 micron VMD).

**Relative reduction in banana spider mite numbers over time, compared to pre-spray population** (mean number of adults and nymphs per 25 cm<sup>2</sup>)

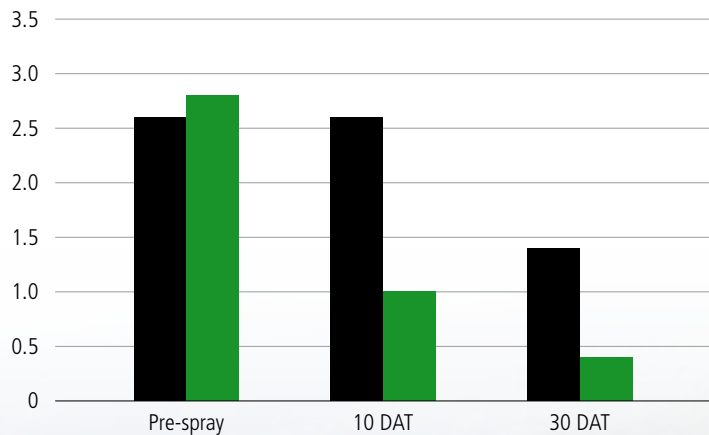
- Untreated control
- ParaMite 350 mL/ha + BioPest Oil
- ParaMite 500 mL/ha + BioPest Oil



**TRIAL 2.** Innisfail, QLD. Cavandish bananas. Aerial application by fixed wing aircraft in 30 L water/ha. Coarse droplets (250 to 300 micron VMD).

**Reduction in banana spider mite numbers over time compared to pre-spray population** (mean number of adults and nymphs per 25 cm<sup>2</sup>)

- Untreated control
- ParaMite 500 mL/ha + BioPest Oil



## CONCLUSION

Results from the above trials confirm that ParaMite at 500 mL/ha, plus a crop oil such as Sacoa BioPest Paraffinic Oil @ 3.5 L/ha, not only reduced spider mite numbers shortly after application but kept numbers low for up to 42 days after aerial application.

# ParaMite®

## in Bananas

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