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**POISON**  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

**Apparent** 

## Abamectin 18

**MITICIDE/INSECTICIDE**

ACTIVE CONSTITUENT: 18 g/L ABAMECTIN  
SOLVENT: 350 g/L N-METHYL-2-PYRROLIDONE

**GROUP 6 INSECTICIDE**

For the control of certain mites on cotton, citrus, apples, capsicums, hops, pears, tomatoes, ornamentals and strawberries and native budworm on cotton.

**IMPORTANT: Read this booklet before use.**

APVMA Approval No: 67057/55093

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**DIRECTIONS FOR USE:****RESTRAINTS:**

DO NOT spray if rain seems likely before spray has dried on the leaves. Failure to observe this restraint may result in reduced efficacy.

SITUATION	PEST	RATE	WHP (Days)
Pears Apples	Two spotted mite ( <i>Tetranychus urticae</i> )  European red mite ( <i>Panonychus ulmi</i> )	750 mL/ha plus 5 L/ha summer oil  See General Instructions for mixing rates.	14
Capsicums	Two spotted mite ( <i>Tetranychus urticae</i> )	300 mL/ha	3
Citrus	Broad mite ( <i>Polyphagotars onemus latus</i> ), Brown citrus rust mite ( <i>Tegolophus australis</i> ), Citrus rust mite ( <i>Phyllocoptera oleivora</i> )	Dilute spray: 15 mL/100 L or 25 mL/100 L plus 250 mL/100 L summer oil Concentrate spray: Refer to application section - citrus	7
Cotton (Qld, NSW and WA only) DO NOT apply to cotton under visible stress.	Carmine spider mite ( <i>Tetranychus cinnabarinus</i> ), Two spotted mite ( <i>Tetranychus urticae</i> )	300 mL/ha	20
Cotton (Qld, NSW and WA only) DO NOT apply to cotton under visible stress.	Native budworm ( <i>Helicoverpa punctigera</i> )	300 mL/ha OR 600 mL/ha	20
Hops	Two spotted mite ( <i>Tetranychus urticae</i> )	1 L/ha	28

CRITICAL COMMENTS
<p>For best results, apply the product using dilute application (spraying to point of runoff). If applying with concentrate applications efficacy may be compromised. DO NOT apply at more than two times concentrate (i.e. half the dilute water volume). Apply the same amount of Apparent Abamectin 18 Miticide/Insecticide to the target crop whether by spraying by dilute or concentrate spraying methods. DO NOT apply this product before or after applications of Delan or Captan. In apples apply this product from 2 to 6 weeks after petal fall if monitoring shows high numbers of over wintering European Red Mite eggs are present or if mites are a problem early in the season. In pears, timing is not as critical and the application should be made as soon as after mite numbers have reached a threshold for your area. Maximum mite control is usually reached at 7 days. Moderate to high mite populations will be controlled but if there are no predatory mites present re-treatment with another miticide (from another chemical group) may be necessary.</p> <p><b>Integrated Pest Control:</b> The effects of Abamectin on parasitic wasps and other beneficial insects in Australian orchards are not known. Studies have shown that after application of Abamectin predatory mite populations may not increase for a number of weeks, due to lack of suitable pest mite prey. Predatory mite numbers will increase with any increase in pest mite numbers allowing the continuation of biological mite control. DO NOT use in IPM programs unless the pest mite threshold has been reached and predators are unlikely to achieve effective control.</p>
<p>Thorough coverage and penetration into the plant canopy is essential. Preferably apply before buildup of mite numbers. Re-apply as pest numbers indicate. Alternate with other chemical groups. Allow at least 28 days between applications with Apparent Abamectin 18 Miticide/Insecticide and DO NOT use more than 2 Apparent Abamectin 18 Miticide/Insecticide sprays per crop. Refer notes on resistance under General Instructions section of this label.</p> <p>Apply as a dilute spray in 3000 to 6000 L water/ha as pest pressure indicates. Apply by dilute or concentrate spraying equipment. Apply the same amount of Apparent Abamectin 18 Miticide/Insecticide to the target crop whether by spraying by dilute or concentrate spraying methods. Use the higher rate when the pest pressure is high. DO NOT apply more than once per season.</p>
<p><b>Do NOT make more than two applications to cotton per season, regardless of the pest being controlled.</b></p> <ul style="list-style-type: none"> <li>• Apply when the threshold number of mites has been reached for your area.</li> <li>• Apply when mite populations are low.</li> </ul> <p>If the mite population is too high at time of application, satisfactory control may not be achieved. Under high pest pressure a second application may be required 7 - 10 days after the initial application. Thorough coverage is essential.</p>
<p><b>Do NOT make more than two applications to cotton per season, regardless of the pest being controlled.</b></p> <p>Use only when Lepton test kit results indicate no greater than 10% <i>Helicoverpa amigerana</i> are present. Use the higher rate alone, or the lower rate with a suitable mixing partner. Applications should target brown eggs and newly emerged larvae (neonates). Mixed sized larval populations should be avoided.</p>
<p>Apply as a dilute spray in 1000 to 2000 L water per hectare, depending on crop size as pest pressure indicates. DO NOT apply more than once per season.</p>

SITUATION	PEST	RATE	WHP (Days)
Strawberries	Two spotted mite ( <i>Tetranychus urticae</i> )	100 mL/100 L. If spray volume is less than 600 L/ha, use a minimum of 600 mL of this product/ha. DO NOT exceed 1200 mL of this product/ha per application	3
Tomatoes –Trellised or Staked	Two spotted mite ( <i>Tetranychus urticae</i> )	High volume spraying: 300 mL/ha or 450 mL/ha using concentrations of 60 mL to 90 mL/100 L	3
	Tomato russet mite ( <i>Aculops lycopersici</i> )		
	Tobacco Leafminer (Potato moth) ( <i>Phthorimaea operculella</i> )	High Volume Spraying: 600 mL/ha using concentrations of 120 mL/100 L	
Tomatoes -Field grown	Two spotted mite ( <i>Tetranychus urticae</i> )	300 mL/ha or 450 mL/ha	3
	Tobacco Leafminer (Potato moth) ( <i>Phthorimaea operculella</i> )	600 mL/ha	
	Tomato russet mite ( <i>Aculops lycopersici</i> )	300 mL/ha or 450 mL/ha	
Ornamentals, including Roses, Chrysanthemums, Carnations and indoor foliage plants	Two spotted mite ( <i>Tetranychus urticae</i> )	50 mL/100 L to a maximum of 1.5 L/ha ABAMECTIN per application	Nil

CRITICAL COMMENTS
Spray to wet all foliage to near the point of run-off. Ensure thorough coverage and penetration into plants. Best results are obtained if application is made at the first sign of mite appearance. When applied at this time, one application may give good control. If mite numbers exceed 3 to 5 mites per leaflet, apply low applications 7 to 10 days apart. Re-apply if required by apply a maximum of 2 sprays of this product per season. If a further treatment is required, apply a product from a different chemical group. Integrated Pest Control: see instructions in Apple and Pears section above. Refer to notes on resistance under General Instructions section of this label.
Spray to wet foliage to near the point of run-off. Ensure thorough coverage and penetration into plants. Best results are obtained if application is made before build up of mite numbers. Use the higher rate if mite numbers exceed 5 to 6 mites per compound leaf. Re-apply if required but apply a maximum of 2 sprays of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance in the General Instructions section of this label.
Apply as for Two-Spotted Mite. The lower rate will control tomato russet mites not apparent at spraying. Use the higher rate when tomato russet mite is present at spraying or is the main pest.
Wet foliage to the point of run-off. Thorough coverage and penetration into bushes is essential. Apply at the first sign of pest activity. Re-apply as pest numbers indicate or every 7 to 10 days with a maximum of 5 applications to the crop. If mites are also a problem DO NOT use more than 2 sprays per crop. Refer to notes on resistance in the General Instructions section of this label. Note: Other IPM strategies to reduce leaf miner populations should be employed.
Apply in sufficient volume to obtain even coverage and penetration of plants. Use droppers to direct spray onto plants and away from the inter row. Best results are obtained if application is made before the build-up of mite numbers. Use the higher rate if mite numbers exceed 5 mites per compound leaf. Re-apply if required but apply a maximum of 2 sprays of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance in the General Instructions section of this label.
Apply in sufficient volume to obtain even coverage and penetration of plants. Use droppers to direct spray onto plants away from the inter-row. Apply at the first sign of pest activity. Re-apply as pest numbers indicate or every 7 to 10 days with a maximum of 5 applications to the crop. If mites are also a problem DO NOT use more than 2 Apparent Abamectin 18 Miticide/Insecticide sprays per crop. Refer to notes on resistance in the General Instructions section of this label. NOTE: Other IPM strategies to reduce leaf miner populations should be employed.
Apply as per Two-Spotted Mite. The lower rate will control Tomato Russet Mites not apparent at spraying. Use the higher rate if Tomato Russet Mite is present at spraying or is the main pest.
Spray to wet foliage to near the point of run-off using at least 2000 L/ha (100 L per 500 square m <sup>2</sup> ). Thorough coverage and penetration into plants is essential. Preferably apply on first appearance of mites. When applied when pest numbers are low to moderate, one application will be sufficient to give effective control, however if mites are numerous, apply two applications spaced 7 - 10 days apart. DO NOT use overhead irrigation within 24 hours after application. DO NOT use on Ferns and Shasta Daisies. For ornamentals not listed on the label, small test applications to assess for unexpected phytotoxicity should be made before spraying the whole crop. Do not use more than 2 times per season. Refer to notes on resistance under General Instructions section of this label.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.**

**WITHHOLDING PERIODS:**

**Cotton:**

**DO NOT HARVEST FOR 20 DAYS AFTER APPLICATION.**

**DO NOT GRAZE OF CUT FOR STOCK FEED FOR 20 DAYS AFTER APPLICATION.**

**Citrus:****DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.****Hops:****DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION.****Apples, Pears:****DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.****DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 14 DAYS AFTER APPLICATION.****Capsicums, Strawberries:****DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.****DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.****Tomatoes:****DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.****DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.****Ornamentals:****NOT REQUIRED WHEN USED AS DIRECTED.****DO NOT CUT OR GRAZE FOR STOCK FOOD.****GENERAL INSTRUCTIONS**

This product is not systemic, but quickly moves into leaves following application. It is important that thorough coverage is achieved so that the maximum amount of product can be deposited on the leaf surface for uptake and subsequent ingestion by sucking mites. Product that is not absorbed by leaves is quickly degraded.

**RESISTANCE**

It is known that early development of mite resistance may occur if one particular miticide and miticides from one particular chemical group are continually used. For this reason it is recommended that this product be applied no more than twice in one season and preferably only once per season. A second application is only recommended where mite pressure is very high. It is also recommended to alternate this product with miticides from a different chemical group. Consult your local supplier or technical adviser for further information on chemical groups.

**INSECTICIDE RESISTANCE WARNING****GROUP 6 INSECTICIDE**

For insecticide resistance management Apparent Abamectin 18 Miticide/Insecticide is a Group 6 insecticide. Some naturally occurring insect biotypes resistance to Apparent Abamectin 18 Miticide/Insecticide and other Group 6 Insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Apparent Abamectin 18 Miticide/Insecticide or other Group 6 insecticides are used repeatedly. The effectiveness of Apparent Abamectin 18 Miticide/Insecticide could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use Apparent Pty Ltd accepts no liability for any losses that may result from the failure of Apparent Abamectin 18 Miticide/Insecticide to control resistant insects. Apparent Abamectin 18 Miticide/Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Apparent Pty Ltd representative or local agricultural department agronomist. It is recommended that this product be applied no more than the following amount of times per season/crop and that it is not used consecutively except where a two-spray schedule is specifically recommended.

Crop	No of Sprays per season
Cotton	No more than twice in one season and preferably only once per season. A second application is only recommended where mite pressure is very high.
Apples, Pears, Capsicums, Citrus, Hops:	One spray per season
Tomatoes:	Two sprays per season if mites are present. Five sprays per season if mites are not present.
Strawberries	Two sprays per season.

Apparent Abamectin 18 Miticide/Insecticide should not be applied in two consecutive seasons or crops without an unrelated chemical being used in between. Alternate this product with approved miticides from other chemical groups. For further information contact your local supplier, Apparent Pty Ltd representative or local agricultural department agronomist.

**CROP MONITORING:**

It is essential to carry out regular crop monitoring of mite levels (every 2-3 days for cotton and every 3-5 days for other crops) to ensure the product is applied at the correct timing.

**MIXING INSTRUCTIONS FOR APPLES AND PEARS:**

To achieve 750 mL Apparent Abamectin plus 5 L Summer Oil per ha, apply spray at the following mixing rates:

	Amount of Apparent ABAMECTIN per 100 L	Amount of Summer Oil per 100 L
1000 L/ha (Minimum)	75 mL	500 mL
1500 L/ha	50 mL	335 mL
2000 L/ha	37.5 mL	250 mL
2500 L/ha	30 mL	200 mL

## MIXING:

Partially fill the spray tank with water, add the required amount of Apparent Abamectin 18 Miticide/Insecticide, and then add the remainder of the water. If oil is recommended then add this after the Apparent Abamectin 18 Miticide/Insecticide is well mixed. A wetting agent is NOT required.

## CROP SAFETY

A mixture of this product with summer oil has very occasionally caused slight fruit russetting on some pear varieties particularly Anjou and other sensitive varieties when used alone or when other products are applied sequentially. A very small amount of temporary apple fruit blemishing has been associated with low water volume applications. DO NOT apply Apparent Abamectin 18 Miticide/Insecticide to apples or pears before or after applications of Delan\* or Captan\*. The label instructions on the summer oil label must be strictly followed. Conditions which may contribute to crop damage are:

- Unusually hot conditions present or expected within 24 hours of application
- Poor or slow drying conditions
- Application with equipment that may leave large droplets on fruit after application.

## COMPATIBILITY

This product is compatible with most commonly used insecticides and fungicides. However all mixtures should be tested prior to mixing commercial quantities.

## APPLICATION INSTRUCTIONS FOR COTTON

Apparent Abamectin 18 Miticide/Insecticide may be applied by ground spraying equipment or by fixed wing aircraft. Apply in a minimum of 20L water per hectare. Ensure good coverage.

### Ground Application

Apply with inter-row droppers fitted with nozzles spraying towards the cotton rows. The inter-row nozzles should be level with or just below the canopy and spraying at right angles to the ground.

### Aerial Applications (Fixed Wing)

Apply in the cooler parts of the day or night when there is a reliable cross-wind to assist with good penetration into the crop canopy. Preferably use aircraft fitted with micronair atomisers.

## APPLICATION INSTRUCTIONS FOR CITRUS

To be effective this product requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume. The same quantity of product per hectare should be used when spraying either with dilute or concentrate method.

### Application by Dilute Spraying

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set-up and operation may also need to be changed, as the crop grows.

### Application by Concentrate Spraying

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine an appropriate dilute spray volume (See Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.

- The mixing rate for concentrate spraying can then be calculated in the following way:

### Example only

1. Dilute spray volume as determined above: For example 1500L/ha
2. Your chosen concentrate spray volume: For example 500L/ha
3. The concentration factor in this example is 3 X (ie:  $1500L \div 500L = 3$ )
4. If the dilute label rate is 10 mL/100L, then the concentrate rate becomes 3 x 10, that is 30 mL/100L of concentrate spray.
  - The chosen spray volume, amount of product per 100L of water, and the sprayer set up and operation may need to be changed as the crop grows.
  - For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

## PRECAUTIONS

### Re-entry Period

Allow the spray to dry on the foliage before re-entry into treated areas. DO NOT allow entry into treated areas in glasshouses for 24 hours after treatment. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow-length PVC gloves.

### PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Drift Warning: Do NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

### PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT spray any plants in flower while bees are foraging.

### PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Dangerous to fish and other water-borne organisms. Studies indicate that when Abamectin comes into contact with soil it readily and tightly binds to the soil and becomes inactive over time.

### STORAGE AND DISPOSAL

Store in the closed original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple, or preferably, pressure rinse containers before disposal. Add rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return the clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should NOT be burnt.

### SAFETY DIRECTIONS

Poisonous if absorbed by skin contact or swallowed. Will damage eyes. Will irritate the skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, and goggles. For space applications wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, goggles and half face piece respirator with dust cartridge or canister. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles, respirator (and if rubber, wash with detergent and warm water) and contaminated clothing.

### FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre Phone Australia 13 11 26. If swallowed, do NOT induce vomiting. Give a glass of water. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

**SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet, which is available from the supplier.

**CONDITIONS OF SALE**

The use of Apparent Abamectin 1.8 Miticide/Insecticide being beyond the control of the manufacturer no warranty expressed or implied is given by Apparent Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Apparent Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

\*Other trademark