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
**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.

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>PEST</th>
<th>RATE</th>
<th>WHP (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pears</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>750 mL/ha plus 5 L/ha summer oil</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>European red mite (<em>Panonychus ulmi</em>)</td>
<td>See General Instructions for mixing rates.</td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>750 mL/ha plus 5 L/ha summer oil</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>European red mite (<em>Panonychus ulmi</em>)</td>
<td>See General Instructions for mixing rates.</td>
<td></td>
</tr>
<tr>
<td>Capsicums</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>300 mL/ha</td>
<td>3</td>
</tr>
<tr>
<td>Citrus</td>
<td>Broad mite (<em>Polyhagotus onemus latus</em>), Brown citrus rust mite (<em>Tegulophus australis</em>), Citrus rust mite (<em>Phylocytopera oleivora</em>)</td>
<td>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</td>
<td>7</td>
</tr>
<tr>
<td>Cotton (Qld, NSW and WA only)</td>
<td>Carmine spider mite (<em>Tetranychus cinnabarinus</em>), Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>300 mL/ha</td>
<td>20</td>
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<tr>
<td></td>
<td>Native budworm (<em>Helicoverpa punctigera</em>)</td>
<td>300 mL/ha OR 600 mL/ha</td>
<td>20</td>
</tr>
<tr>
<td>Hops</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>1 L/ha</td>
<td>28</td>
</tr>
</tbody>
</table>

**CRITICAL COMMENTS**

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.

**Integrated Pest Control:** 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.

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.

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.

**Do NOT make more than two applications to cotton per season, regardless of the pest being controlled.**
- Apply when the threshold number of mites has been reached for your area.
- Apply when mite populations are low.

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.

**Do NOT make more than two applications to cotton per season, regardless of the pest being controlled.**

Use only when Lepton test kit results indicate no greater than 10% *Helicoverpa amigera* 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.

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.
<table>
<thead>
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<th>WHP (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strawberries</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>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</td>
<td>3</td>
</tr>
<tr>
<td>Tomatoes –Trellised or Staked</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>High volume spraying: 300 mL/ha or 450 mL/ha using concentrations of 60 mL to 90 mL/100 L</td>
<td>3</td>
</tr>
<tr>
<td>Tomato russet mite (<em>Aculops hycopersici</em>)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tobacco Leafminer (Potato moth) (Phthorimaea operculella)</td>
<td>High Volume Spraying: 600 mL/ha using concentrations of 120 mL/100 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomatoes -Field grown</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>300 mL/ha or 450 mL/ha</td>
<td>3</td>
</tr>
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<td></td>
<td></td>
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<tr>
<td>Oramentals, including Roses, Chrysanthemums, Carnations and indoor foliage plants</td>
<td>Two spotted mite (<em>Tetranychus urticae</em>)</td>
<td>50 mL/100 L to a maximum of 1.5 L/ha \ ABAMECTIN per application</td>
<td>Nil</td>
</tr>
</tbody>
</table>

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 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
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.

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:

<table>
<thead>
<tr>
<th>Amount of Apparent ABAMECTIN per 100 L</th>
<th>Amount of Summer Oil per 100 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 L/ha (Minimum)</td>
<td>75 mL</td>
</tr>
<tr>
<td>1500 L/ha</td>
<td>50 mL</td>
</tr>
<tr>
<td>2000 L/ha</td>
<td>37.5 mL</td>
</tr>
<tr>
<td>2500 L/ha</td>
<td>30 mL</td>
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</tbody>
</table>
**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 blushing 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 all 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 ÷ 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 unlabelled 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, goggies 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