

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

# SINMAS<sup>®</sup> 225

## INSECTICIDE

**ACTIVE CONSTITUENT: 225 g/L METHOMYL  
(an anti-cholinesterase compound)**

**SOLVENTS: 644 g/L METHANOL**

|       |           |             |
|-------|-----------|-------------|
| GROUP | <b>1A</b> | INSECTICIDE |
|-------|-----------|-------------|

**For the control of certain insect pests as recommended in the Directions for Use table  
in the attached Label Booklet.**

### GENERAL INSTRUCTIONS

#### USE OF WETTING AGENT

When diluting with water, add a non-ionic surfactant at registered label rates.

#### SPRAY PREPARATION

Quarter to half fill spray tank with water. Start agitation (**DO NOT** use air agitation). Add the required amount of this product to the tank and complete filling with water. Add a non-ionic surfactant as recommended above. Continue agitation for several minutes prior to spraying to fully mix the chemical.

### APPLICATION

**a) Larvicidal:** Apply at the recommended rates when the infestation reaches an economically damaging level and repeat as needed. Apply the lower rates on small larvae and on light infestations of insects. Use the higher rate on large larvae and heavier infestations of insects. Best control is obtained when young insects are treated.

**b) Ovicidal/Larvicidal:** Use these rates only where crops are regularly monitored for eggs and larvae. Use the lower rate when only eggs are present. Use the higher rate when heavy egg lays occur and/or when larvae are less than 3 mm long. If larvae are longer than 3 mm use the larvicidal rates. This product may be used at ovicidal/larvicidal rates in conjunction with other recommended larvicides used to control other insects.

#### Tree and Vine Crops – 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 100 L 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.

#### Tree and Vine Crops – 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: 1500 L/ha
2. Your chosen concentrate spray volume: For example: 500 L/ha
3. The concentration factor in this example is: 3 X (ie: 1500 L ÷ 500 L = 3)

4. If the dilute label rate is 100 g/100 L, then the concentrate rate becomes 3 x 100, that is, 300 g/100 L of concentrate spray.
- The chosen spray volume, amount of product per 100 L 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.

For concentrate application, use a spray volume of at least 200 litres per hectare.

For dilute application, apply to run-off. See Dilute Spraying above.

#### **Non-tree and vine crops – Ground Application:**

Apply as a fine spray preferably generated by cone nozzles. **DO NOT** apply as a fog or mist. For effective insect control, proper timing and good coverage are essential. Use sufficient water to obtain thorough uniform coverage. Use 100-400 L/ha spray mixture unless otherwise directed in the Directions for Use section.

#### **Aerial Application:**

For ADZUKI BEANS, CANOLA, COTTON, LINSEED, LUCERNE, LUPINS, MUNG BEANS, PASTURE, PEANUTS, PEAS, SORGHUM, SOYBEANS, SUNFLOWERS, TOMATOES AND WINTER CEREALS:

#### **Spray volumes:**

For rates less than 1.5 L/ha: Dilute to any convenient volume no less than 1.5 L/ha.

For rates of 1.5 L/ha and higher: apply undiluted or diluted to give any convenient volume.

#### **Droplet Sizes:**

When applying at ULTRA LOW VOLUMES (ie: volumes less than 5 L/ha): use a spray of 80-120 µm VMD.

When applying at LOW VOLUMES (ie: volumes greater than 5 L/ha): use a fine spray (100-150 µm VMD).

To reduce drift and optimise results, avoid application in calm conditions and apply in light to moderate crosswinds.

#### **INSECTICIDE RESISTANCE WARNING**

For insecticide resistance management, Sinmas 225 Insecticide is a Group 1A Insecticide. Some naturally occurring insect biotypes resistant to Sinmas 225 Insecticide and other Group 1A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Sinmas 225 Insecticide or other Group 1A insecticides are used repeatedly. The effectiveness of Sinmas 225 Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, Sinon Australia Pty Limited accepts no liability for any losses that may result from the failure of Sinmas 225 Insecticide to control resistant insects. Sinmas 225 Insecticide may be subject to specific resistance management strategies. For further information, contact your local supplier, Sinon Australia Pty Limited representative or local agriculture department agronomist.

#### **COMPATIBILITY**

Sinmas 225 Insecticide is compatible with a wide range of pesticides in common use, eg: HALLMARK<sup>+</sup> 10 ULV, Endosan<sup>+</sup> 240 ULV, Thiodan<sup>+</sup> ULV, Endosulfan ULV and Endosulfan ULV240.

#### **CAUTION**

Keep unprotected persons out of operational area during treatment and while there is a danger of drift. Avoid contact with spray residues. Keep container closed when not in use.

#### **Re-entry Period**

Keep unprotected persons out of treated area for at least 24 hours.

#### **PROTECTION OF CROPS, LIVESTOCK, WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Keep animals out of operational area during treatment and while there is a danger of drift.

Dangerous to bees. **DO NOT** spray on any plants in flower while bees are foraging. ENSURE beehives are removed from area to be treated and from adjacent paddocks.

This product is toxic to wildlife. Birds feeding on treated areas may be killed.

Dangerous to fish. **DO NOT** contaminate fish ponds, dams, rivers or streams with this chemical or the used container.

#### **STORAGE AND DISPOSAL**

Store in the original container, tightly closed in a safe well-ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight. Do not contaminate seed, feed or foodstuff. Do not re-use container for any purpose.

This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple rinse container for disposal. Dispose of rinsate by adding it to the spray tank. **DO NOT** dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any *drumMUSTER* collection point or similar container management program site. The cap should not be replaced but may be taken separately.

If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface 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. Do not burn empty containers and product.

*For Refillable containers (110L, 1000L):* Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

### SAFETY DIRECTIONS

Very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact, or inhaled or swallowed. Attacks eyes. Will irritate the nose, throat and skin. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with eyes, skin and clothing. DO NOT inhale vapour or spray mist. Protect eyes while using. Obtain an emergency supply of atropine tablets 0.6 mg. When opening the container and preparing the spray, wear elbow-length PVC gloves and face shield. When using the prepared spray, wear:

- cotton overalls buttoned to the neck and wrist;
- washable hat;
- elbow-length PVC gloves;
- impervious footwear; and
- half face-piece respirator with combined dust and gas cartridge (canister).

If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product or spray on skin, immediately wash area with soap and 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, face shield, respirator (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: 131126).

If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs.

If poisoned by skin absorption or through lungs, remove any contaminated clothing, wash skin thoroughly and give atropine tablets as above.

Get to a doctor or hospital quickly.

### ADVICE TO DOCTOR

Methomyl produces effects associated with anti-cholinesterase activity. Atropine sulphate should be used for treatment. Administer repeated doses 1.2 to 2.0 mg intravenously every 10-30 minutes until full atropinization is achieved. **DO NOT** use morphine or 2-PAM. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitors until recovery is assured.

### MATERIAL SAFETY DATA SHEET (MSDS)

Additional information is listed in the MSDS, which is available from the supplier.

### NOTICE TO BUYER

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use. No warranty of merchantability for a particular purpose, express or implied, extends to the use of the product contrary to label instructions, or under abnormal conditions.

|                                                                                                                          |  |
|--------------------------------------------------------------------------------------------------------------------------|--|
| CARBAMATE PESTICIDES, LIQUID, FLAMMABLE,<br>TOXIC, N.O.S, flash point less than 23°C<br>(CONTAINS METHOMYL AND METHANOL) |  |
| UN NO. 2758<br>PG II HAZCHEM 3WE                                                                                         |  |
| TOXIC<br>FLAMMABLE LIQUID 3                                                                                              |  |

|                                                                          |                                                                                           |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| In a Transport Emergency<br>Dial<br><b>000</b><br>Police or Fire Brigade | SPECIALIST ADVICE<br>IN EMERGENCY ONLY<br><b>1800 033 111</b><br>ALL HOURS AUSTRALIA WIDE |
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\*Other Trademarks

## DIRECTIONS FOR USE

**RESTRAINTS: DO NOT** use in covered or protected situations such as glasshouses, greenhouses or plastic tunnels.

| TREE AND VINE CROPS                                                                                                                            |                                                                                                                          |                            |                     |                                         |                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RATE</b><br>In the following table, all rates are given for dilute spraying.<br>For concentrate spraying, refer to the Application Section. |                                                                                                                          |                            |                     |                                         | <b>CRITICAL COMMENTS</b><br><b>For all uses in this Tree and Vine Crop table:</b> <ul style="list-style-type: none"> <li>• Apply by dilute or concentrate spraying equipment.</li> <li>• Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.</li> </ul>                                                                        |
| CROP                                                                                                                                           | PEST                                                                                                                     | STATE                      | RATE                | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                                                                                             |
| Apples                                                                                                                                         |                                                                                                                          |                            |                     |                                         | This product is highly toxic to bees. <b>DO NOT</b> spray while bees are foraging. Spraying is recommended between early evening and dawn when bees are less active.                                                                                                                                                                                                                                          |
|                                                                                                                                                | <i>Helicoverpa</i> spp.                                                                                                  | TAS, WA only               | 150 to 200 mL/100 L | 1 day (H)                               | Apply at calyx stage and repeat at 14 day intervals or as required depending on infestation. (Refer to Larvicidal Application Instructions for more detail).                                                                                                                                                                                                                                                  |
|                                                                                                                                                | Light brown apple moth ( <i>Epiphyas postvittana</i> )                                                                   | QLD, Vic, Tas, SA, WA only |                     |                                         | Apply on a 14-day schedule for late season control of light infestations only. Moderate to heavy infestations of codling moth will not be controlled.                                                                                                                                                                                                                                                         |
|                                                                                                                                                | Codling moth ( <i>Cydia pomonella</i> )                                                                                  | NSW, ACT only              | 150 mL/100 L        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                | Plague thrips ( <i>Thrips imaginis</i> ), Dimple bug ( <i>Campylomma livida</i> )                                        | NSW, ACT, Vic, WA only     | 200 mL/100 L        |                                         | Apply when pest levels reach an economically damaging level and repeat if necessary.                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                |                                                                                                                          |                            |                     |                                         |                                                                                                                                                                                                                                                                                                                                                                                                               |
| Blueberries                                                                                                                                    | Monolepta beetle, ( <i>Monolepta australis</i> )<br><i>Helicoverpa</i> spp.,<br>Plague thrips ( <i>Thrips imaginis</i> ) | NSW, ACT, WA only          | 100 mL/100 L        | 5 days (H)                              | This product is toxic to bees exposed to direct application. <b>DO NOT</b> apply while bees are actively foraging. Apply when bees have ceased foraging such as late in the afternoon.<br><b>Monolepta beetle:</b> Apply according to pest incidence.<br><b>Helicoverpa spp.:</b> Apply when the infestation reaches an economically damaging level.<br><b>Plague thrips:</b> Apply when numerous on flowers. |
| Cherries                                                                                                                                       | Thrips                                                                                                                   | QLD, WA only               | 200 mL/100 L        | 1 day (H)                               | Apply at petal fall. Apply as a high volume spray ensuring adequate spray penetration.                                                                                                                                                                                                                                                                                                                        |

| TREE AND VINE CROPS (continued)                                                                                                                |                                                                                                                |                       |                     |                             |                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RATE</b><br>In the following table, all rates are given for dilute spraying.<br>For concentrate spraying, refer to the Application Section. |                                                                                                                |                       |                     |                             | <b>CRITICAL COMMENTS</b><br><b>For all uses in this Tree and Vine Crop table:</b> <ul style="list-style-type: none"> <li>• Apply by dilute or concentrate spraying equipment.</li> <li>• Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.</li> </ul> |
| CROP                                                                                                                                           | PEST                                                                                                           | STATE                 | RATE                | WHP Harvest (H) Grazing (G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                      |
| Citrus                                                                                                                                         | Long-tailed mealy bug                                                                                          | SA, WA only           | 200 mL/100 L        | 2 days (H)                  | Apply in August or late November to early December when fruit is absent and young mealybug are present. Treatment will prevent mealybug attacking under the fruit calyx.                                                                                                                                                               |
|                                                                                                                                                | Light brown apple moth ( <i>Epiphyas postvittana</i> )                                                         | NSW, ACT, SA, WA only |                     |                             | Apply in late November to early December when fruit is absent to prevent light brown apple moth attacking under the fruit calyx.                                                                                                                                                                                                       |
|                                                                                                                                                | Spined citrus bug ( <i>Biprorulus bibax</i> ), Bronze orange bug ( <i>Musgraveia sulciventris</i> )            | QLD, Vic, SA, WA only | 25 mL/100 L         |                             | Apply when the infestation reaches an economically damaging level but before bugs reach the adult winged stage.                                                                                                                                                                                                                        |
|                                                                                                                                                | <i>Helicoverpa</i> spp.                                                                                        |                       | 200 mL/100 L        |                             | Spray only if heavy infestations occur on young foliage and fruit.                                                                                                                                                                                                                                                                     |
|                                                                                                                                                | Large citrus butterfly ( <i>Papilio aegaeus aegaeus</i> )<br>Small citrus butterfly ( <i>Papilio anactus</i> ) |                       |                     |                             | In young trees only, apply to cover unhardened leaves from recent growth flushes when infestations are seen.                                                                                                                                                                                                                           |
| Grapes                                                                                                                                         | Light brown apple moth ( <i>Epiphyas postvittana</i> )                                                         | All States            | 150 mL/100 L        | 7 days (H)                  | Apply during early shoot growth/flowering if pest populations indicate. Apply again just before bunches close if light brown apple moth is seen. Control at later stages if bunching is difficult.                                                                                                                                     |
|                                                                                                                                                | Vine moth ( <i>Phalaenoides glyciniae</i> )                                                                    |                       |                     |                             | Apply when infestation reaches an economically damaging level and repeat if necessary.                                                                                                                                                                                                                                                 |
| Peaches and Nectarines                                                                                                                         | Green peach aphid ( <i>Myzus persicae</i> )                                                                    | All States            | 100 mL/100 L        | 1 day (H)                   | Apply when infestation reaches an economically damaging level and repeat if necessary.                                                                                                                                                                                                                                                 |
|                                                                                                                                                | <i>Helicoverpa</i> spp.                                                                                        | Tas, WA only          | 150 mL/100 L        |                             | <b>DO NOT</b> apply to early peach varieties or to stressed trees.                                                                                                                                                                                                                                                                     |
|                                                                                                                                                | <i>Monolepta beetle</i>                                                                                        | NSW, ACT only         | 100 mL/100 L        |                             | Apply to blossoms of affected trees where beetles are feeding. Apply from July to September when infestations occur.                                                                                                                                                                                                                   |
|                                                                                                                                                | Thrips                                                                                                         | QLD, WA only          | 200 mL/100 L        |                             | Apply at petal fall. Apply as a high volume spray ensuring adequate spray penetration.                                                                                                                                                                                                                                                 |
| Pears                                                                                                                                          | Light brown apple moth ( <i>Epiphyas postvittana</i> )                                                         | Vic, WA only          | 150 to 200 mL/100 L | 2 days (H)                  | Apply at calyx stage from late November onwards and repeat at 14 day intervals or as required depending on infestation.                                                                                                                                                                                                                |

| NON-TREE AND VINE CROPS                                                   |                                                |                                 |                                                                 |                             |                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------|------------------------------------------------|---------------------------------|-----------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                                                      | PEST                                           | STATE                           | RATE                                                            | WHP Harvest (H) Grazing (G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                           |
| BROADACRE CROPS: Beans – Broadbeans, French beans, Long beans, Navy beans | Beanfly ( <i>Ophiomyia phaseoli</i> )          | QLD, NSW, ACT, WA, NT only      | 100 mL/100 L or 1.5 to 2 L/ha                                   | 1 day (H)                   | Apply 3 days after seedlings emerge, then 4 days later. Repeat at weekly intervals until blossoming.                                                                                                                                                                        |
|                                                                           | <i>Thrips</i> spp.                             |                                 |                                                                 |                             | Apply when infestation reaches an economically damaging level and repeat if necessary. Spray to penetrate blossoms.                                                                                                                                                         |
|                                                                           | Looper ( <i>Chrysodeixis subsidens</i> )       |                                 | 1.5 L/ha                                                        |                             |                                                                                                                                                                                                                                                                             |
|                                                                           | Green vegetable bug ( <i>Nezara viridula</i> ) |                                 |                                                                 |                             | Apply when infestation reaches an economically damaging level and repeat if necessary. It is especially important to control this pest during and after flowering.                                                                                                          |
| Legume seed crops                                                         | <i>Helicoverpa</i> spp.                        | Qld, NSW, ACT, Tas, WA, NT only | Larvicide: 1.5 to 2 L/ha<br>Ovicide/Larvicide: 500 mL to 1 L/ha | 1 day (H)                   | Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. Spray to penetrate blossoms. (Refer to Larvicidal Application Instructions for more detail).<br>Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions. |
|                                                                           | Corn earworm ( <i>Helicoverpa armigera</i> )   | QLD, NT only                    |                                                                 |                             |                                                                                                                                                                                                                                                                             |
|                                                                           | Bean pod borer ( <i>Maruca testulalis</i> )    | QLD, WA, NT only                | 1.5 to 2 L/ha                                                   |                             | Apply when infestation reaches an economically damaging level and repeat if necessary. Spray to penetrate blossoms. (Refer to Larvicidal Application Instructions for more detail).                                                                                         |
| Canola                                                                    | Cabbage moth ( <i>Plutella xylostella</i> )    | WA only                         | 1 L/ha                                                          | 7 days (H)                  | Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                                                           |
|                                                                           | <i>Helicoverpa</i> spp.                        | NSW, ACT, Vic, Tas, WA, SA only | 1.5 to 2 L/ha                                                   |                             |                                                                                                                                                                                                                                                                             |
|                                                                           |                                                |                                 | NSW, ACT only                                                   |                             | 500 mL to 1 L/ha                                                                                                                                                                                                                                                            |

| NON-TREE AND VINE CROPS ( <i>continued</i> ) |                                                  |                                                  |                                                                                           |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|--------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                         | PEST                                             | STATE                                            | RATE                                                                                      | WHP<br>Harvest<br>(H)<br>Grazing<br>(G)                                        | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Cotton                                       | <i>Helicoverpa</i> spp.                          | QLD,<br>NSW,<br>ACT, WA<br>only                  | 500 mL to 1<br>L/ha<br>plus a non-<br>ionic<br>surfactant at<br>registered<br>label rates | NIL (H)<br><b>DO NOT</b><br>graze or<br>feed<br>treated<br>crops to<br>animals | <b>DO NOT</b> graze or feed treated crops to animals.<br><b>Ovicide/Larvicide:</b><br>Thorough spray coverage is essential for adequate ovicidal activity.<br>Apply the lower rate when egg numbers are from 1 to 2 times the economic threshold and no larvae are present.<br>Apply the higher rate when egg numbers exceed 2 times the economic threshold and when larvae do not exceed 3 mm in length and they are exposed. Continue applications on this basis at 4 to 5 day intervals. When larvae longer than 3 mm are present or when larvae are entrenched, add an effective larvicide at recommended rates, or apply the higher rates of this product recommended below. |
|                                              |                                                  |                                                  | 1.8 to 2.4<br>L/ha                                                                        |                                                                                | <b>Larvicide:</b><br>Application of these rates may redden cotton foliage depending on the frequency of application and the degree of plant stress. <b>DO NOT</b> apply to stressed plants. If reddening is excessive, discontinue use of this product and use other insecticides until the crop has recovered.<br>Apply the lower rate when larvae are small or infestations are light.<br>Apply the higher rate when larvae are large or infestations are heavy.                                                                                                                                                                                                                |
|                                              | Looper<br>( <i>Chrysodeixis<br/>subsidents</i> ) | QLD, WA<br>only                                  | 1.8 to 2.4<br>L/ha                                                                        |                                                                                | Apply when infestation reaches an economically damaging level and repeat if necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Lentils                                      | <i>Helicoverpa</i> spp.                          | QLD,<br>NSW,<br>ACT, WA<br>only                  | 1.5 to 2 L/ha                                                                             | 1 day (H)                                                                      | Examine crops at least twice weekly during flowering to podding for larvae and their damage. Use the higher rate if the infestation is heavy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Linseed                                      | <i>Helicoverpa</i> spp.                          | QLD, WA<br>only                                  | 1.5 to 2 L/ha                                                                             | 7 days<br>(H)                                                                  | Apply sprays from early flowering. Repeat if necessary. Larvae completely enclosed inside pods at time of spraying may not be killed.<br>(Refer to Larvicidal Application Instructions for more detail).                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Lucerne<br><br>(grazing,<br>hay and<br>seed) | <i>Helicoverpa</i> spp.                          | WA only                                          | 1 to 2 L/ha                                                                               | 3 days<br>(G)                                                                  | Apply when infestation reaches an economically damaging level and repeat if necessary.<br>(Refer to Larvicidal Application Instructions for more detail).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                              |                                                  | QLD,<br>NSW,<br>ACT, Vic,<br>Tas, SA,<br>NT only | 1.5 to 2 L/ha                                                                             |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| NON-TREE AND VINE CROPS (continued) |                                                                                                      |                                |                                      |                             |                                                                                                                                                                                                                                             |
|-------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                | PEST                                                                                                 | STATE                          | RATE                                 | WHP Harvest (H) Grazing (G) | CRITICAL COMMENTS                                                                                                                                                                                                                           |
| Lupins                              | <i>Helicoverpa</i> spp.                                                                              | Vic, Tas only                  | 1.5 L/ha                             | 7 days (H)                  | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                    |
|                                     |                                                                                                      | QLD, NSW, ACT, WA only         | 1.5 to 2 L/ha                        |                             | <b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions.                                                                                                                                                            |
|                                     |                                                                                                      |                                | 500 mL to 1 L/ha                     |                             |                                                                                                                                                                                                                                             |
| Maize                               | <i>Helicoverpa</i> spp.                                                                              | All States                     | 150 to 200 mL/100 L or 1.5 to 2 L/ha | 14 days (H)<br>14 days (G)  | <b>Larvicide:</b> Apply initial spray at early silking or when eggs are first seen on silks. Repeat at 2 to 3 day intervals during silking if infestation continues. Use sufficient spray volume to thoroughly cover young developing cobs. |
|                                     |                                                                                                      |                                |                                      |                             | <b>NSW only:</b> Control at tasselling stage may also be necessary. Application when 80% of the cobs are at early silking stage is very important. (Refer to Larvicidal Application Instructions for more detail).                          |
|                                     |                                                                                                      |                                |                                      | 100 mL/100 L or 1 L/ha      | <b>Ovicide:</b> Use this rate only where crops are monitored for eggs and larvae. Apply when only eggs are present. As soon as any larvae are present, use larvicidal rates as recommended above.                                           |
|                                     | Armyworms ( <i>Pseudaletia convecta</i> , <i>Persectania ewingii</i> , <i>Persectania dyscrita</i> ) | QLD, NSW, ACT, SA, WA, NT only | 1.5 L/ha                             | 14 days (H)<br>14 days (G)  | Apply when infestation reaches an economically damaging level and repeat if necessary.<br><b>Note:</b> As all armyworms, except the dayfeeding armyworm, feed mainly during the evening, spraying at dusk is recommended.                   |
| Mint, Poppies                       | <i>Helicoverpa</i> spp.                                                                              | Tas, WA only                   | 1.5 to 2 L/ha                        | 14 days (H)                 | Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                                      |
| Mung beans (seed production)        | <i>Helicoverpa</i> spp.                                                                              | QLD, NSW, ACT, WA, NT only     | 1.5 to 2 L/ha                        | 7 days (H)                  | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                    |
|                                     |                                                                                                      | QLD, WA only                   | 500 mL to 1 L/ha                     |                             | <b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions                                                                                                                                                             |
|                                     | Green vegetable bug ( <i>Nezara viridula</i> )                                                       | QLD, NSW, ACT, WA, NT only     | 1.5 L/ha                             |                             | Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                                      |
|                                     | Bean pod borer ( <i>Maruca testulalis</i> )                                                          | QLD, WA, NT only               | 1.5 to 2 L/ha                        |                             |                                                                                                                                                                                                                                             |

| NON-TREE AND VINE CROPS ( <i>continued</i> )               |                                                                                                      |                                          |                        |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                                       | PEST                                                                                                 | STATE                                    | RATE                   | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                                      |
| Native pastures, Improved pastures (alone or with legumes) | Common armyworm ( <i>Pseudaletia convecta</i> )                                                      | Vic only                                 | 1.5 to 2 L/ha          | 3 days (G)                              | Refer to Larvicidal Application Instructions for more detail.<br><b>Note:</b> As all armyworms, except the dayfeeding armworm, feed mainly during the evening, spraying at dusk is recommended.                                                                                                                                                        |
|                                                            | Armyworms ( <i>Pseudaletia convecta</i> , <i>Persectania ewingii</i> , <i>Persectania dyscrita</i> ) | QLD, NSW, ACT, SA, WA only               |                        |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            | Southern armyworm ( <i>Persectania ewingii</i> )                                                     | Tas, WA only                             |                        |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            | Buffel grass seed caterpillar ( <i>Mampava rhodoneura</i> )                                          | QLD, WA only                             | 1.75 L/ha              |                                         | Apply when infestation reaches an economically damaging level and repeat if necessary. Ensure thorough spray penetration to obtain effective control of the pest.                                                                                                                                                                                      |
| Pasture legume seed crops                                  | <i>Helicoverpa</i> spp.                                                                              | QLD, WA only                             | 1.5 to 2 L/ha          |                                         | Apply as infestations indicate during the flowering and pod setting period of crop development.                                                                                                                                                                                                                                                        |
| Peanuts                                                    | <i>Helicoverpa</i> spp.                                                                              | QLD, WA, NT only                         | 1.5 to 2 L/ha          | 14 days (H)                             | Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                                                                                                                                                 |
| Peas                                                       | <i>Helicoverpa</i> spp.                                                                              | Vic, Tas only                            | 1.5 L/ha               | Peas: 1 day (H)                         | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).<br><b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions.<br>Apply when infestation reaches an economically damaging level and repeat if necessary. |
| Peas (including Chickpeas, Field peas and Pigeon peas)     |                                                                                                      | QLD, NSW, ACT, SA, WA only               | 1.5 to 2 L/ha          | Chickpeas, Pigeon peas: 7 days (H)      |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            |                                                                                                      |                                          | 500 mL to 1 L/ha       |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            |                                                                                                      |                                          | 1.5 L/ha               |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            | Looper ( <i>Chrysodeixis subsidens</i> )                                                             |                                          |                        |                                         |                                                                                                                                                                                                                                                                                                                                                        |
|                                                            | <i>Thrips</i> spp.                                                                                   |                                          | 100 mL/100 L or 1 L/ha |                                         |                                                                                                                                                                                                                                                                                                                                                        |
| Peas (including Cowpeas and Adzuki beans)                  | <i>Helicoverpa</i> spp.                                                                              | NSW, ACT, SA (not Adzuki Beans), WA only | 1.5 to 2 L/ha          | Peas: 1 day (H)                         | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).<br><b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions.                                                                                           |
|                                                            |                                                                                                      |                                          | 500 mL to 1 L/ha       | Cowpeas, Adzuki beans: 7 days (H)       |                                                                                                                                                                                                                                                                                                                                                        |
| Pigeon peas, Cowpeas, Adzuki beans                         | Green vegetable bug ( <i>Nezara viridula</i> )                                                       | NSW, ACT, WA only                        | 1.5 L/ha               | 7 days (H)                              | Apply when infestation reaches an economically damaging level and repeat if necessary.                                                                                                                                                                                                                                                                 |

| NON-TREE AND VINE CROPS ( <i>continued</i> ) |                                                   |                                     |                  |                                         |                                                                                                                                                                                                                            |
|----------------------------------------------|---------------------------------------------------|-------------------------------------|------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                         | PEST                                              | STATE                               | RATE             | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                          |
| Sesame seed                                  | Corn earworm<br>( <i>Helicoverpa armigera</i> )   | QLD, WA,<br>NT only                 | 1.5 to 2 L/ha    | 14 days<br>(H)                          | Apply when infestation reaches an economically damaging level and repeat if necessary.<br>(Refer to Larvicidal Application Instructions for more detail).                                                                  |
|                                              | Green vegetable bug<br>( <i>Nezara viridula</i> ) |                                     | 1.5 L/ha         |                                         |                                                                                                                                                                                                                            |
| Sorghum                                      |                                                   |                                     |                  |                                         | Crop checking should commence when the head emerges from the boot and continue daily until the end of flowering for midge and at weekly intervals until maturity for <i>Helicoverpa</i> .                                  |
|                                              | <i>Helicoverpa armigera</i>                       | QLD,<br>NSW,<br>ACT, WA,<br>NT only | 1.5 to 2 L/ha    | 14 days<br>(H)<br>14 days<br>(G)        | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary.<br>(Refer to Larvicidal Application Instructions for more detail).                                                |
|                                              |                                                   |                                     | 500 mL to 1 L/ha |                                         | <b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions.                                                                                                                                           |
|                                              | Armyworms                                         |                                     | 1.5 L/ha         |                                         | Apply when infestation reaches an economically damaging level and repeat if necessary.<br><b>NOTE:</b> As all armyworms, except the day feeding armyworm, feed mainly during the evening, spraying at dusk is recommended. |
|                                              | Sorghum midge<br>( <i>Contarinia sorghicola</i> ) | QLD, WA,<br>NT only                 | 1 L/ha           |                                         | Apply when there are 1 or more Sorghum Midge adults per panicle or according to the threshold recommended by local agricultural authorities.                                                                               |
| Soybeans                                     | <i>Helicoverpa</i> spp.                           | QLD,<br>NSW,<br>ACT, WA,<br>NT only | 1.5 to 2 L/ha    | 7 days<br>(H)                           | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary.<br>(Refer to Larvicidal Application Instructions for more detail).                                                |
|                                              |                                                   |                                     | 500 mL to 1 L/ha |                                         | <b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions.                                                                                                                                           |
|                                              | Green vegetable bug<br>( <i>Nezara viridula</i> ) |                                     | 1.5 L/ha         |                                         | Apply when infestation reaches an economically damaging level and repeat if necessary.                                                                                                                                     |
|                                              | Looper<br>( <i>Chrysodeixis subsidens</i> )       | QLD, WA,<br>NT only                 |                  |                                         |                                                                                                                                                                                                                            |

| NON-TREE AND VINE CROPS ( <i>continued</i> )                                     |                                                    |                                     |                          |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|----------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------|--------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| CROP                                                                             | PEST                                               | STATE                               | RATE                     | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                         |  |
| Sunflowers                                                                       | Green vegetable bug<br>( <i>Nezara viridula</i> )  | NSW,<br>ACT, WA<br>only             | 1.5 to 2 L/ha            | 7 days<br>(H)                           | <b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary.<br>(Refer to Larvicidal Application Instructions for more detail).<br><b>NOTE:</b> Spray must be applied before the seed head turn over, to ensure adequate penetration and insect control.                      |  |
|                                                                                  |                                                    | QLD only                            | 1.5 L/ha                 |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|                                                                                  | <i>Helicoverpa</i> spp.                            | NSW,<br>ACT, WA<br>only             | 1.5 to 2 L/ha            |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|                                                                                  |                                                    | QLD only                            | 1.5 L/ha                 |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|                                                                                  |                                                    | SA only                             | 2 L/ha                   |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|                                                                                  |                                                    | QLD,<br>NSW,<br>ACT, SA,<br>WA only | 500 mL to 1 L/ha         |                                         |                                                                                                                                                                                                                                                                                                                           |  |
| Wheat,<br>Oats,<br>Barley                                                        | Armyworms                                          | All States                          | 1 to 1.5 L/ha            | 14 days<br>(H)<br>14 days<br>(G)        | Apply when infestation reaches an economically damaging level and repeat if necessary. Where two rates are recommended, use the lower rate against larvae up to 20 mm long and the higher rate against larger larvae.<br><b>NOTE:</b> As these armyworms feed mainly during the evening, spraying at dusk is recommended. |  |
|                                                                                  | Common armyworm<br>( <i>Pseudaletia convecta</i> ) | QLD only                            | 1 L/ha aerial spray only |                                         |                                                                                                                                                                                                                                                                                                                           |  |
|                                                                                  | <i>Helicoverpa</i> spp.                            | All States                          | 1.5 to 2 L/ha            |                                         |                                                                                                                                                                                                                                                                                                                           |  |
| <b>Ovicide/Larvicide:</b> Refer to Ovicidal/Larvicidal Application Instructions. |                                                    |                                     |                          |                                         |                                                                                                                                                                                                                                                                                                                           |  |

| FRUIT        |                                                                                                                                |                                                  |                                                 |                                                          |                                                                                                                                                                                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP         | PEST                                                                                                                           | STATE                                            | RATE                                            | WHP<br>Harvest<br>(H)<br>Grazing<br>(G)                  | CRITICAL COMMENTS                                                                                                                                                                                                                                                      |
| Strawberries | <i>Helicoverpa</i> spp.,<br>Cluster caterpillar<br>( <i>Spodoptera litura</i> )<br>Looper<br>( <i>Chrysodeixis subsidens</i> ) | Qld,<br>NSW,<br>ACT, Vic,<br>Tas, WA,<br>NT only | 150 mL/100<br>L<br>or 1.5 L/ha                  | Fresh:<br>3 days<br>(H)<br><br>Frozen:<br>10 days<br>(H) | Apply when infestation reaches an economically damaging level and repeat if necessary.<br><b>NOTE:</b> To avoid the possibility of taint in strawberries to be frozen, <b>DO NOT</b> apply later than 10 days before harvest.                                          |
|              | <i>Helicoverpa</i> spp.,<br>Light brown apple moth                                                                             | SA, WA only                                      | 150 or 200<br>mL/<br>100 L                      |                                                          |                                                                                                                                                                                                                                                                        |
| Tomatoes     | <i>Helicoverpa</i> spp.                                                                                                        | All States                                       | 50 to 100<br>mL/100 L<br>or 500 mL to<br>1 L/ha | 1 day (H)                                                | <b>Ovicidal control only:</b> Incorporate into a larvicide programme when pest pressure indicates. Use a higher rate at peak egg lay and when eggs are mainly laid on flowers and fruit.                                                                               |
|              |                                                                                                                                | NSW,<br>ACT, WA only                             | 200 mL/100<br>L<br>or 2 L/ha                    |                                                          | Apply when infestation reaches an economically damaging level and repeat if necessary.<br>For optimum results, the spray interval should not exceed 7 days. (Refer to Larvicidal Application Instructions for more detail).                                            |
|              |                                                                                                                                | QLD, Vic,<br>Tas, SA,<br>WA, NT only             | 150 to 200<br>mL/100 L<br>or 1.5 to 2<br>L/ha   |                                                          | <b>GROUND APPLICATION:</b><br><b>Low Volume:</b> Use 150 L/ha spray mixture or higher without producing run-off.<br><b>High Volume:</b> When applying at high volumes, use 250 L/ha spray mixture at the start of flowering, increasing to 1000 L/ha on mature plants. |
|              | Tobacco leaf miner/Potato moth<br>( <i>Phthorimaea operculella</i> )                                                           | QLD,<br>NSW,<br>ACT,<br>WA, NT only              | 150 to 200<br>mL/100 L<br>or 1.5 to 2<br>L/ha   |                                                          |                                                                                                                                                                                                                                                                        |
|              | Green vegetable bug<br>( <i>Nezara viridula</i> )                                                                              | QLD,<br>Tas, WA,<br>NT only                      | 150 mL/100<br>L or<br>1.5 L/ha                  |                                                          | <b>AERIAL APPLICATION:</b><br><b>Ultra Low Volume and Low Volume:</b><br>Refer to Application Instructions.                                                                                                                                                            |
|              | Looper<br>( <i>Chrysodeixis subsidens</i> )                                                                                    | QLD,<br>Tas, WA,<br>NT only                      | 1.5 L/ha                                        |                                                          |                                                                                                                                                                                                                                                                        |

| VEGETABLES                                                                              |                                                         |                                                  |                                               |                                         |                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------|-----------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                                                                                    | PEST                                                    | STATE                                            | RATE                                          | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                        |
| <b>Brassicas –<br/>Brussel<br/>sprouts,<br/>Cauliflower,<br/>Broccoli,<br/>Cabbages</b> | Cabbage white<br>butterfly<br>( <i>Pieris rapae</i> )   | QLD,<br>WA, NT<br>only                           | 100 mL/100<br>L or<br>1 L/ha                  | 1 day (H)                               | Apply when infestation reaches an economically damaging level and repeat if necessary. Ensure adequate spray penetration to obtain effective control of the pests.                                                                                                                       |
|                                                                                         |                                                         | NSW,<br>ACT, Vic,<br>Tas, SA,<br>WA only         | 1 to 2 L/ha                                   |                                         | Apply at 5 to 7 day intervals during the growing season when larvae first appear. Ensure adequate spray penetration to obtain effective control of the pests. (Refer to Larvicidal Application Instructions for more detail).                                                            |
|                                                                                         | <i>Helicoverpa</i> spp.                                 | NSW,<br>ACT, Qld,<br>Tas, WA,<br>SA, NT<br>only  | 1.5 to 2 L/ha                                 |                                         | Apply when infestation reaches an economically damaging level and repeat if necessary. Ensure adequate spray penetration to obtain effective control of the pests. (Refer to Larvicidal Application Instructions for more detail).                                                       |
|                                                                                         | Cabbage centre<br>grub<br>( <i>Hellula hydralis</i> )   | QLD,<br>NSW,<br>ACT, SA,<br>WA, NT<br>only       | 1.5 L/ha                                      |                                         |                                                                                                                                                                                                                                                                                          |
|                                                                                         | Cluster caterpillar<br>( <i>Spodoptera<br/>litura</i> ) | QLD,<br>WA, NT<br>only                           | 1 L/ha                                        |                                         | Apply when infestation reaches an economically damaging level and repeat if necessary. Ensure adequate spray penetration to obtain effective control of the pests.                                                                                                                       |
|                                                                                         | Looper<br>( <i>Chrysodeixis<br/>subsicens</i> )         | NSW,<br>ACT, Qld,<br>Vic, Tas,<br>WA, NT<br>only | 1.5 L/ha                                      |                                         |                                                                                                                                                                                                                                                                                          |
| <b>Capsicums<br/>(sweet<br/>peppers)</b>                                                | <i>Helicoverpa</i> spp.                                 | QLD,<br>WA, NT<br>only                           | 150 to 200<br>mL/100 L<br>or 1.5 to 2<br>L/ha | 1 day (H)                               | Apply when infestation reaches an economically damaging level and repeat if necessary. For optimum results, the spray interval should not exceed 7 days. Increase spray volume as plants grow larger to ensure coverage. (Refer to Larvicidal Application Instructions for more detail). |
| <b>Potatoes</b>                                                                         | Potato moth<br>( <i>Phthorimaea<br/>operculella</i> )   | All States                                       | 1.5 to 2 L/ha                                 | -----                                   | Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).                                                                                                                                   |
|                                                                                         | Looper<br>( <i>Chrysodeixis<br/>subsicens</i> )         | QLD, WA<br>only                                  | 1.5 L/ha                                      |                                         |                                                                                                                                                                                                                                                                                          |

| VEGETABLES (continued) |                         |                                |                                      |                                         |                                                                                                                                                                                                                                                                                                                   |
|------------------------|-------------------------|--------------------------------|--------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP                   | PEST                    | STATE                          | RATE                                 | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                 |
| Sweetcorn              | <i>Helicoverpa</i> spp. | All States                     | 150 to 200 mL/100 L or 1.5 to 2 L/ha | 1 day (H)<br>3 days (G)                 | <b>Larvicide:</b> Apply initial spray at early silking or when eggs are first seen on silks. Repeat at <b>2 to 3</b> day intervals during silking if infestation continues. Use sufficient spray volume to thoroughly cover young developing cobs. (Refer to Larvicide Application Instructions for more detail). |
|                        |                         |                                | 100 mL/100 L or 1 L/ha               |                                         | <b>Ovicide:</b> Use this rate only where crops are monitored for eggs and larvae. Apply when only eggs are present. As soon as any larvae are present, use larvicidal rates as recommended above.                                                                                                                 |
|                        |                         | NSW, ACT only                  | 500 mL to 1 L/100 L                  |                                         |                                                                                                                                                                                                                                                                                                                   |
|                        | Armyworm                | QLD, NSW, ACT, SA, WA, NT only | 1.5 L/ha                             |                                         | Apply when pests first appear. Repeat depending on infestation.<br><b>NOTE:</b> All armyworms, except the dayfeeding armyworm, feed mainly during the evenings, so spraying at dusk is recommended.                                                                                                               |

| OTHER                                      |                                                                                               |                   |                          |                                                  |                                                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------|--------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| CROP                                       | PEST                                                                                          | STATE             | RATE                     | WHP<br>Harvest<br>(H)<br>Grazing<br>(G)          | CRITICAL COMMENTS                                                                                     |
| Duboisia                                   | Cluster caterpillar ( <i>Spodoptera litura</i> )                                              | QLD, WA only      | 100 mL/100 L or 1 L/ha   | -----                                            | Apply when infestation reaches an economically damaging level and repeat if necessary.                |
| Ginger                                     | <i>Helicoverpa</i> spp.                                                                       | QLD, WA only      | 150 mL/100 L or 1.5 L/ha | -----                                            | Apply when the pest is evident or damage is seen in young shoots at ground level during early growth. |
| Guar                                       | Green vegetable bug ( <i>Nezara viridula</i> ), Pod sucking bug ( <i>Riptortus serripes</i> ) | QLD, WA only      | 2 L/ha                   | 7 days (H)                                       | Apply when infestation reaches an economically damaging level and repeat if necessary.                |
| Hops                                       | <i>Helicoverpa</i> spp.                                                                       | Vic, Tas, WA only | 2 L/ha                   | 14 days (H)<br><b>DO NOT</b> graze treated crops | Apply when infestation reaches an economically damaging level and repeat if necessary.                |
| Tea-tree ( <i>Melaleuca alternifolia</i> ) | Xylorectid caterpillar, Psyllid, Leafhopper, Crysomelid beetle                                | NSW, ACT, WA only | 1.5 to 2 L/ha            | -----                                            | Apply as a thorough foliar spray.                                                                     |

| OTHER (continued):                                                                                  |                                                                                                                                                                                                         |                                                                                                      |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------|--------------|-----|---------|-----|---------|-----|---------|-----|-------------------|-------------|
| CROP                                                                                                | PEST                                                                                                                                                                                                    | STATE                                                                                                | RATE                                                                                                                                                                   | WHP<br>Harvest<br>(H)<br>Grazing<br>(G) | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| Tobacco                                                                                             | Tobacco budworm<br>( <i>Helicoverpa armigera</i> )                                                                                                                                                      | QLD,Vic<br>only                                                                                      | 50 mL/100 L                                                                                                                                                            | NIL                                     | <b>Ovicide:</b> Use this rate only where crops are regularly monitored for eggs and larvae. If larvae are present, apply only in combination with a residual larvicide or use alone at the larvicidal rates recommended below.                                                                                                                                                                                                                                                                                                                                                            |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | Cluster caterpillar<br>( <i>Spodoptera litura</i> ),<br><i>Helicoverpa</i> spp.,<br>Tobacco looper<br>( <i>Chrysodeixis argentiifera</i> ),<br>Tobacco leaf miner<br>( <i>Phthorimaea operculella</i> ) | QLD,<br>NSW,<br>ACT,Vic,<br>WA only                                                                  | 100 mL/100 L                                                                                                                                                           |                                         | <b>Larvicide:</b> Use this rate if larvae are present.<br><u>Spray volumes:</u> Spray volumes should be increased with plant size/age. The following volumes are recommended. Frequency of application will depend upon pest incidence.<br><br><table><tr><th>Plant Age:<br/>Time after<br/>transplanting</th><th>Recommended<br/>Spray Volume<br/>L/ha</th></tr><tr><td>1 to 3 weeks</td><td>250</td></tr><tr><td>4 weeks</td><td>300</td></tr><tr><td>5 weeks</td><td>450</td></tr><tr><td>6 weeks</td><td>550</td></tr><tr><td>More than 6 weeks</td><td>900 to 1100</td></tr></table> | Plant Age:<br>Time after<br>transplanting | Recommended<br>Spray Volume<br>L/ha | 1 to 3 weeks | 250 | 4 weeks | 300 | 5 weeks | 450 | 6 weeks | 550 | More than 6 weeks | 900 to 1100 |
|                                                                                                     | Plant Age:<br>Time after<br>transplanting                                                                                                                                                               | Recommended<br>Spray Volume<br>L/ha                                                                  |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | 1 to 3 weeks                                                                                                                                                                                            | 250                                                                                                  |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | 4 weeks                                                                                                                                                                                                 | 300                                                                                                  |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | 5 weeks                                                                                                                                                                                                 | 450                                                                                                  |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | 6 weeks                                                                                                                                                                                                 | 550                                                                                                  |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | More than 6 weeks                                                                                                                                                                                       | 900 to 1100                                                                                          |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | Stubby root nematode<br>( <i>Trichodorus S.L.</i> )                                                                                                                                                     | Vic, WA<br>only                                                                                      | 20 L/ha                                                                                                                                                                |                                         | Spray onto soil and incorporate to a depth of 10 cm just prior to transplanting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
|                                                                                                     | Tobacco stem borer<br>( <i>Scrobipalpa heliopa</i> )                                                                                                                                                    | QLD,<br>NSW,<br>ACT, WA<br>only                                                                      | 100 mL/100 L                                                                                                                                                           |                                         | Apply 10 days after seedlings emerge and repeat at 6 day intervals (7 day intervals NSW only) until transplanting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| Cutworm<br>( <i>Agrotis</i> spp.)                                                                   | QLD, WA<br>only                                                                                                                                                                                         | 150 mL/100 L<br>or<br>1.5 L/ha                                                                       | Apply at dusk or late afternoon. In seedbeds, use one knapsack per 30 m length of bed. For field plants, ensure base of stem of each plant is well covered with spray. |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| True and false wireworms                                                                            |                                                                                                                                                                                                         | 200 mL/100 L<br>or<br>2 L/ha                                                                         |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| Grasshoppers                                                                                        |                                                                                                                                                                                                         | 150 mL/100 L<br>or<br>1.5 L/ha                                                                       |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| Seed harvesting ants<br>(seed bed only)<br>( <i>Pheidole</i> spp.)                                  |                                                                                                                                                                                                         | 200 mL/100 L                                                                                         |                                                                                                                                                                        |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |
| Common brown leafhopper<br>( <i>Orosius argentatus</i> )<br>(vector for tobacco yellow dwarf virus) | Vic, WA<br>only                                                                                                                                                                                         | Use 45 mL/100 L in transplant water.<br>Six (6) weeks later, apply 450 mL/100 L as an overall spray. | <b>Seed bed only:</b> Apply by pouring directly down the ant hole.                                                                                                     |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                           |                                     |              |     |         |     |         |     |         |     |                   |             |

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS  
 AUTHORISED UNDER APPROPRIATE LEGISLATION. IN TASMANIA, THIS PRODUCT MUST NOT BE APPLIED  
 BY AIRCRAFT WITHOUT THE SPECIFIC APPROVAL OF THE REGISTRAR OF PESTICIDES.

**WITHHOLDING PERIODS:****HARVEST:**

|                                                                                                                                                  |                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| APPLES, BEANS, BROCCOLI,<br>BRUSSEL SPROUTS, CABBAGES,<br>CAPSICUMS, CAULIFLOWER,<br>LENTILS, NECTARINES, PEACHES,<br>PEAS, SWEETCORN, TOMATOES: | <b>DO NOT HARVEST FOR 1 DAY AFTER APPLICATION</b>   |
| CITRUS, PEARS:                                                                                                                                   | <b>DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION</b>  |
| STRAWBERRIES (FRESH):                                                                                                                            | <b>DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION</b>  |
| BLUEBERRIES:                                                                                                                                     | <b>DO NOT HARVEST FOR 5 DAYS AFTER APPLICATION</b>  |
| CANOLA, CHICKPEAS, GRAPES,<br>GUAR, LINSEED, LUPINS,<br>MUNG BEANS, PIGEON PEAS,<br>SOYBEANS, SUNFLOWERS:                                        | <b>DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION</b>  |
| STRAWBERRIES (FOR FREEZING):                                                                                                                     | <b>DO NOT HARVEST FOR 10 DAYS AFTER APPLICATION</b> |
| MAIZE, MINT, POPPIES, PEANUTS,<br>SESAME SEED, SORGHUM, WHEAT,<br>OATS, BARLEY, HOPS:                                                            | <b>DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION</b> |

**GRAZING:**

|                                         |                                                                        |
|-----------------------------------------|------------------------------------------------------------------------|
| COTTON:                                 | <b>DO NOT GRAZE OR FEED TREATED CROPS TO ANIMALS</b>                   |
| HOPS:                                   | <b>DO NOT GRAZE TREATED CROPS</b>                                      |
| LUCERNE, PASTURES,<br>SWEETCORN:        | <b>DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 3 DAYS AFTER APPLICATION</b>  |
| BARLEY, MAIZE, OATS,<br>SORGHUM, WHEAT: | <b>DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 14 DAYS AFTER APPLICATION</b> |

|                                                 |                                           |
|-------------------------------------------------|-------------------------------------------|
| COTTON, DUBOISIA, GINGER,<br>POTATOES, TEA-TREE | <b>NOT REQUIRED WHEN USED AS DIRECTED</b> |
|-------------------------------------------------|-------------------------------------------|