

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

**Marlin<sup>®</sup>**

**INSECTICIDE**

**Active Constituent:** 225 g/L METHOMYL  
 (an anti-cholinesterase compound)  
**Solvent:** 593 g/L METHANOL

**GROUP 1A INSECTICIDE**

**For the control of insect pests in various crops as specified in the DIRECTIONS FOR USE Table**

### GENERAL INSTRUCTIONS

Marlin is a water miscible liquid to be dissolved in water for spray application. ALWAYS add a non-ionic agricultural wetting agent at a rate of 0.025% of active material. This is 25 mL/100 L for most wetting agents. It is most effective when spray schedules are initiated on young insects. The lower rates are used on small larvae and light infestations, the higher rates on larger larvae and heavy infestations.

### Insecticide Resistance Warning

For insecticide resistance management Marlin Insecticide is a Group **1A** insecticide.

Some naturally occurring insect biotypes resistant to Marlin 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 Marlin Insecticide or other Group **1A** insecticides are used repeatedly. The effectiveness of Marlin Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, Bayer CropScience accepts no liability for any losses that may result from the failure of this product to control resistant insects.

Marlin Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Bayer CropScience representative or local agricultural department agronomist

### Export of Treated Produce

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with Marlin Insecticide. If you are growing produce for export, please check with Bayer CropScience Pty Ltd for the latest information on MRLs and import tolerances BEFORE using Marlin Insecticide.

### Mixing

**Fill spray tank ¼ to ½ full of water. Start agitation (using mechanical or hydraulic means. NOT air agitation), add required quantity of Marlin and continue filling with water. Add non-ionic wetting agents as recommended previously. Continue agitation for several minutes prior to spraying to ensure thorough mixing.**

### Application

Apply when wind velocity is low, to avoid drift.

DO NOT apply as a fog or mist.

Proper timing and good coverage is essential for effective insect control.

**Larvicidal:** Apply at the recommended rates when the insects first appear and repeat as needed. Apply the lower rates on small caterpillars and light infestations of insects. Use the higher rates on larger caterpillars and heavier infestations. Best control is obtained when spray schedules are initiated on young insects.

**Ovicidal/Larvicidal:** Use these rates only where crops are regularly monitored for eggs and larvae. Use the lower rate when eggs are present. Use the higher rate when heavy egg lays occur and/or when first to second instar larvae are present (up to 5 mm long). If large larvae are present (longer than 5 mm), use the larvicide rates as recommended. This product may be used at ovicidal/larvicidal rates in conjunction with other recommended larvicides used to control other insects.

### Ground Application

Apply as a coarse spray with low pressure ground equipment. Use sufficient water to obtain thorough, uniform coverage.

## Special instructions for Tree Crops/Vines

### 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.

### 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 (i.e.  $1500 \text{ L} \div 500 \text{ L} = 3$ )
  4. If the dilute label rate is 10 mL/100 L, then the concentrate rate becomes 3 x 10, that is 30 mL/ 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.

### Air Application

For cotton, soybeans, sorghum, mung beans, sunflowers, pastures, winter cereals and linseed only:

Do not use less than 22 L/ha water and increase the spray volume according to density of crop and pest pressure. Turn off spray boom while passing over creeks or dams.

### Compatibility

This product can be mixed in the spray tank with one of the following insecticides: Chlorfos<sup>®</sup>, Larvin<sup>®</sup> 375.

As the formulations of other manufacturers' products are beyond the control of Bayer CropScience, all mixtures should be tested prior to mixing commercial quantities.

### PRECAUTION

Keep unprotected persons and animals out of operational areas during treatment and while there is a danger of drift. Avoid contact with spray residues.

### Re-Entry Period

Do not allow entry into treated areas for at least 24 hours after treatment. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) a washable hat and elbow length PVC gloves. Clothing must be laundered after each days use.

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

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/ crops, cropping lands or pastures. Avoid drift by applying when wind velocity is low.

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

Dangerous to birds, fish, stock and wildlife. Birds feeding on treated areas may be killed. Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. Ensure beehives are removed from the area to be treated and from adjacent paddocks. DO NOT contaminate streams, rivers or waterways with the chemical or used containers. DO NOT re-use container.

**STORAGE AND DISPOSAL**

KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAMES.

Store in the closed, original container in a dry, cool, secure, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture, and bury empty containers in a local authority landfill. If no landfill is available, bury the empty containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**SAFETY DIRECTIONS**

Very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact, inhaled or swallowed. Attacks the 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 spray wear elbow length PVC gloves and a 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 facepiece 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 or face piece and contaminated clothing. Wash rubber respirator with detergent and warm water.

**FIRST AID**

If swallowed, splashed on skin or in eyes, or inhaled, contact a Poisons Information Centre (telephone 13 11 26 or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. If swallowed, activated charcoal may be advised. Give atropine if instructed.

**Advice to Doctor**

Methomyl is a reversible cholinesterase inhibitor. Atropine sulphate should be used for treatment, 1.2 to 2.0 mg i.v. every 10 to 30 minutes until full atropinisation is achieved. Maintain full atropinisation until patient recovers. Do not use morphine or 2-PAM. Artificial respiration or oxygen may be necessary. Allow no further exposure to cholinesterase inhibitors until recovery is assured.

**MATERIAL SAFETY DATA SHEET**

Additional information is listed in the Material Safety Data Sheet, which can be obtained from [www.bayercropscience.com.au](http://www.bayercropscience.com.au).

**EXCLUSION OF LIABILITY**

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

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APVMA Approval No.: 32032/1006



<b>CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC (contains methanol, methomyl)</b>		
<b>UN 2758</b>	<b>PG II</b>	<b>HAZCHEM 3WE</b>
FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111		



**DIRECTIONS FOR USE****Restraint**

DO NOT use in covered or protected situations such as glasshouses, greenhouses or plastic tunnels

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS	
Adzuki beans	Heliothis	NSW, WA only	0.5 or 1.0 L/ha	7(H)	<b>Ovicide/Larvicide:</b> Use only where crops are monitored regularly. Use low rate when eggs are present and high rate when heavy egg lay occurs and/or when first to second instar larvae are present (up to 5 mm long).	
			1.5 or 2.0 L/ha		<b>Larvicide:</b> Apply when infestation reaches an economically damaging level and repeat if necessary. Use low rate on small larvae and light infestations and high rate on large larvae and heavy infestations.	
	Green vegetable bug		1.5 L/ha		Apply when infestation reaches an economically damaging level and repeat if necessary.	
Apples	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.					
	Lightbrown apple moth	Qld, Vic, Tas, SA, WA only	Dilute spraying 150 or 200 mL/ 100 L water	1(H)	Apply at calyx stage and repeat each 14 days, or as required by pest pressure. Only use low rate in NSW, but in other states use high rate if infestation is heavy.	
		NSW only				
	Codling moth	NSW, Vic, WA only	Dilute spraying 150 mL/ 100 L water			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.
	Heliothis	Tas, WA only	Dilute spraying 150 to 200 mL/100 L water			Apply when number of larvae on shoots suggest economic damage is imminent.
Thrips, dimpling bug	Qld, WA only	Dilute spraying 200 mL/ 100 L water	Apply when pests appear and repeat when necessary. Apply as a high volume spray ensuring adequate spray penetration to obtain effective control of the pests. Only apply when bees are not foraging.			
Broad beans, French beans, navy beans, long beans, legume seed crops	Beanfly	Qld, NSW, WA, NT only	100 mL/ 100 L water OR 1.5 to 2 L/ha	1(H)	Apply about 3 days after seedlings emerge and again 4 days later. Continue weekly applications until blossom.  Apply when pests first appear. Repeat depending on infestation. Spray to penetrate blossom. Use higher rate on heavier infestations.  OVICIDE/LARVICIDE: Refer to Ovicidal/Larvicidal application instructions.  NOTE: Control of green vegetable bug is important during and after flowering.	
	Bean thrips	Qld, NSW, SA, WA, NT only				
	Bean pod borer	Qld, WA, NT only	1.5 or 2.0 L/ha			
	Heliothis	Qld, NSW, Tas, WA, NT only	100 mL/100 L OR 1.5 or 2 L/ha			
			500 mL to 1 L/ha			
Green vegetable bug, loopers	Qld, NSW, WA, NT only	1.5 L/ha				
Blueberries	Monolepta beetle, <i>Helicoverpa</i> spp., plague thrip	NSW & WA only	100 mL/100 L	5(H)	Monolepta beetle: Apply according to pest incidence. <i>Helicoverpa</i> spp.: Apply when the infestation reaches an economically damaging level. Plague thrip: Apply when numerous on flowers.	

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
<b>Brassicas Flowerhead brassicas only</b> (cauliflower, broccoli, Chinese broccoli)	Cabbage white butterfly	Qld, WA, NT only	100 mL/ 100 L water or 1 L / ha	1(H)	Apply when pests first appear. Repeat depending on infestation. Treatment will probably be required each 5 to 7 days during the growing season. Ensure thorough spray penetration. Use higher rate on heavier infestations.
		NSW, Vic, Tas, SA, WA only	1 or 2 L/ha		
	Heliothis	Qld, NSW, Tas, SA, WA, NT only	1.5 or 2 L/ha		
	Cabbage centre grub	Qld, NSW, SA, WA, NT only	1.5 L/ha		
	Cluster caterpillar	Qld, WA, NT only	1 L/ha		
	Loopers	Qld, NSW, Vic, Tas, WA, NT only	1.5 L/ha		
<b>Centrosema pascuorum seed crops</b>	Green vegetable bug	NT & WA only	1.5 to 2 L/ha	1(H)	Apply through boom spray with hollow cone nozzles in 250 L/ha water.
<b>Chickpeas</b>	Heliothis	Qld, WA only	1.5 to 2 L/ha	1(H)	Apply when pests first appear. Repeat depending on infestation. Ensure thorough spray penetration.
<b>Citrus</b>	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.				
	Long-tailed mealy bug	SA, WA only	Dilute spraying 200 mL/100 L water	2(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	NSW, 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.
	<b>Bronze orange bug, Spined citrus bug</b>	Qld, Vic, SA, WA only	Dilute spraying 25 mL/100 L water		Apply as populations indicate and before bugs reach the adult winged stage.
	Heliothis		Dilute spraying 200 mL/100 L water		Spray only if heavy infestations occur on young foliage and fruit.
	Large citrus butterfly, Small citrus butterfly			Apply to cover unhardened leaves from recent growth flushes when infestations are noted in young trees only.	

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
Cotton	Heliothis	Qld, NSW, WA only	500 mL or 1 L/ha	Nil (H) DO NOT graze or feed treated crops to animals.	<p>Avoid contact with spray residue. Keep unprotected persons out of treated areas for at least 24 hours.</p> <p><b>Ovicide/Larvicide:</b> Check crops every 2 to 3 days for egg and larval numbers.</p> <p><b>Pre-Squaring:</b> Initiate sprays when significant number of eggs are present, i.e. 75 eggs per 100 plants. Continue at 4 to 5 day intervals while egg numbers are above these levels and larvae control is adequate. Add an effective larvicide at registered rates if significant numbers of small larvae (20 per 100 plants) are present.</p> <p><b>Squaring:</b> Boll Maturing: Continue above schedule when 50 eggs or more per 100 plant terminals are found. Add an effective larvicide at registered rates if significant numbers of small larvae (10 per 100 plant terminals) are present. If large larvae survive or if <i>Heliothis armigera</i> becomes predominant use higher rates or add other effective larvicides. Refer to appropriate larvicide labels for directions for use. Use higher rate at peak egg laying and when 1<sup>st</sup> to 2<sup>nd</sup> instar larvae predominate. Good spray coverage is essential to assure good ovicidal activity.</p> <p>NOTE: Methomyl may cause reddening of foliage. If excessive, discontinue use.</p>
	Heliothis	Qld, NSW, WA only	1.8 to 2.4 L/ha		
	Loopers	Qld, WA only	1.8 to 2.4 L/ha		
Cowpeas	Heliothis	NSW, SA, WA only	0.5 or 1 L/ha	7(H)	<b>Ovicide:</b> Apply as detailed for adzuki beans above.
			1.5 or 2 L/ha		<b>Larvicide:</b> Apply as detailed for adzuki beans as above.
	Green vegetable bug		1.5 L/ha		Apply when infestation reaches an economically damaging level and repeat if necessary.
Duboisia	Cluster caterpillar	Qld, WA only	100 mL/100 L OR 1 L/ha	-	Apply when pests first appear. Repeat depending on infestation
Ginger	Heliothis		150 mL/100 L or 1.5 L/ha		Apply when damage is evident to young shoots at ground level.
Grapevines/ grapes	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.				
	Lightbrown apple moth, Vine moth	All States	Dilute spraying 150 mL/100 L water	7(H)	Apply during early shoot growth/flowering if pests are a problem and again just before bunches close, if required. Control at later stages is difficult.

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
<b>Guar</b>	Green vegetable bug, pod sucking bug	Qld, WA only	2 L/ha	7 (H)	Apply when significant populations are noted.
<b>Hops</b>	Heliothis	Vic, Tas, WA only	2 L/ha	14(H) DO NOT graze treated crops.	Apply when pests first appear. Repeat depending on infestation. For high volume spraying, use at least 1000 L/ha of spray mixture. DO NOT use chemicals from the same group for consecutive sprays.
<b>Lentils</b>	Heliothis	Qld, NSW, WA only	1.5 to 2 L/ha	7(H)	Examine crops at least twice weekly during flowering, podding for caterpillars and their damage. Use the higher rate if infestation is heavy.
<b>Linseed</b>	Heliothis	Qld, WA only	1.5 or 2 L/ha	7(H)	Apply from early flowering and repeat depending on infestation. Larvae completely enclosed inside bolls may not be controlled. Use high rate for heavier infestations.
		Qld, NSW, Vic, Tas, SA, NT only	1.5 to 2 L/ha		
<b>Lucerne</b> (forage, hay and seed)		WA only	1 to 2 L/ha	3(G)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestations.
<b>Lupins</b>	Heliothis	Qld, NSW, WA only	1.5 or 2 L/ha	7(H)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestations.
		Vic, Tas only	1.5 L/ha		
<b>Mint</b>		Tas, WA only	1.5 or 2 L/ha	14(H)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestations.
<b>Mung beans</b> (Seed)	Heliothis	Qld, NSW, WA, NT only	1.5 or 2 L/ha	7(H)	LARVICIDE: Apply when pests first appear. Repeat depending on infestation.
		Qld, WA only	500 mL to 1 L		OVICIDE/LARVICIDE: Refer to Ovicidal/Larvicidal Application instruction for more detail.
	Green vegetable bug	Qld, NSW, WA, NT only	1.5 L/ha		Apply when pests first appear. Repeat depending on infestations.
	Bean pod borer	Qld, WA, NT only	1.5 to 2 L/ha		
<b>Pastures native &amp; improved</b> (alone or with legumes)	Armyworms	Qld, NSW, SA, WA only	1.5 or 2 L/ha	3(G)	NOTE: All armyworms, except the dayfeeding armyworm, feed mainly during the evening so spraying at dusk is recommended.
	Common armyworm	Vic, WA only			
	Southern armyworm	Tas & WA only			
	Buffel grass seed caterpillar	Qld, WA only	1.75 L/ha		Apply when pests appear (when webbing is just visible) and repeat if necessary. Ensure thorough spray penetration to obtain effective control of the pest.
<b>Pasture legume seed crops</b>	Heliothis, lucerne blue butterfly		1.5 to 2 L/ha		Apply as infestations indicate during the flowering and pod setting period of crop development.

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
<b>Peaches, nectarines</b>	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.				
	Green peach aphid	All States	Dilute spraying 100 mL/100 L water	1(H)	Apply when pests first appear. Repeat depending on infestation. DO NOT apply to early peach varieties such as Watts.
	Heliothis	Tas, WA only	Dilute spraying 150 mL/100 L water		
<b>Peanuts</b>	Heliothis	Qld, WA, NT only	1.5 or 2 L/ha	14(H)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation.
<b>Pears</b>	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.				
	Light brown apple moth	Vic, WA only	Dilute spraying 150 or 200 mL/100 L	2(H)	Apply at calyx stage from late November onwards and repeat at 14 day intervals or as required depending on infestation.
<b>Peas</b> (including field peas)	Heliothis	Qld, NSW, SA, WA only	1.5 or 2 L/ha	1(H) Peas 7(H) Field peas	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation. Spray for good coverage and penetration.
		Vic, Tas only	1.5 L/ha		
	Loopers	Qld, NSW, Vic, SA, WA only	100 mL/100 L water OR 1 L/ha		
	Pea thrips				
<b>Pigeon peas</b>	Green vegetable bug	NSW, WA only	1.5 L/ha	7(H)	Apply when infestation reaches an economically damaging level and repeat if necessary.
	Heliothis	Qld, WA only	1.5 to 2 L/ha		Apply when pests first appear. Repeat depending on infestation.
<b>Poppies</b>		Tas, WA only			14(H)
<b>Potatoes</b>	Potato moth	All States		Nil	
	Potato looper	Qld, WA only	1.5 L/ha		
<b>Rapeseed/ canola</b> (Seed)	Cabbage moth	WA only	1 L/ha	7(H)	OVICIDE/LARVICIDE: Refer to Ovicidal/Larvicidal application instructions.
	Heliothis	NSW, Vic, Tas, SA, WA, only	1.5 to 2 L/ha		
		NSW only	500 mL to 1 L		
<b>Sesame seed</b>	Corn earworm	Qld, WA, NT only	1.5 to 2 L/ha	14(H)	Apply when significant populations are noted (Refer Larvicidal Application instructions for more detail).
	Green vegetable bug		1.5 L/ha		

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
Sorghum	Heliothis	Qld, NSW, WA, NT only	1.5 or 2 L/ha	14(H) 14(G)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation.
			500 mL or 1 L/ha		<b>Ovicide/ Larvicide:</b> Refer to Ovicide/Larvicide Application instructions.
	Armyworm	Qld, NSW, WA, NT only	1.5 L/ha		Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation. NOTE: All armyworms, except the dayfeeding armyworm, feed mainly during the evenings so spraying at dusk is recommended.
	Sorghum midge	Qld, WA, NT only	1 L/ha		Apply when 1 midge/head is present from first emergence, from boot to pollen shedding. Repeat application when significant egg laying recommences.
Soybeans	Green vegetable bug	Qld, NSW, WA, NT only	1.5 L/ha	7(H)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation.
	Loopers	Qld, WA, NT only			
	Heliothis	Qld, NSW, WA, NT only	1.5 or 2 L/ha		<b>Larvicide:</b> Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation.
			500 mL to 1 L/ha		<b>Ovicide/Larvicide:</b> Refer to Ovicide/Larvicide Application instructions.
Stonefruit (cherries, nectarines, peaches)	Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Concentrate spraying – Refer to the <b>Application</b> section in GENERAL INSTRUCTIONS.				
	Thrips	Qld, WA only	Dilute spraying 200 mL/100 L water	1(H)	Apply at petal fall. Apply as a high volume spray ensuring adequate spray penetration.
Strawberries	Cluster caterpillar, heliothis, loopers	Qld, NSW, Vic, Tas, WA, NT only	150 mL/100 L water OR 1.5 L/ha	Fresh: 3(H) Frozen: 10(H)	Apply when pests first appear. Repeat depending on infestation. Use higher rate on heavier infestation. NOTE: To avoid the possibility of taint in strawberries to be frozen, do not apply later than 10 days before harvest.
	Heliothis, lightbrown apple moth	SA, WA only	150 or 200 mL/100 L water		
Sunflowers	Green vegetable bug	Qld only	1.5 L/ha	7(H)	NOTE: Apply to sunflowers before seed heads turn over, to ensure spray penetration.  OVICIDE/LARVICIDE: Refer to Ovicide/Larvicidal Application Instructions
		NSW, WA only	1.5 to 2 L/ha		
	Heliothis	Qld only	1.5 L/ha		
		NSW, WA only	1.5 or 2 L/ha		
		SA only	2 L/ha		
		Qld, NSW, SA, WA only	500 mL to 1 L		

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS												
Sweetcorn and maize	Heliothis	All States	150 or 200 mL/100 L OR 1.5 or 2 L/ha	1(H) Sweetcorn 14(H) Maize	LARVICIDAL: Apply initial spray at early silking or when eggs are first observed on silks. Repeat at 2 to 3 day intervals during silking if infestation continues. Use sufficient spray volume to thoroughly cover developing cobs. Use higher rate on heavier infestations. NOTE: Maize in NSW only may also require control at tasselling stage.												
			100 mL/100 L OR 1 L/ha Sweetcorn – NSW only: 500 mL to 1 L/100 L water	3(G) Sweetcorn 14(G) Maize	OVICIDAL: Use this rate only where crops are monitored for eggs and larvae. Apply only when egg laying occurs. As soon as larvae are present use Larvicidal rates as recommended above.												
	Armyworm	Qld, NSW, SA, WA, NT only	1.5 L/ha		Apply when pests first appear. Repeat depending on infestation. NOTE: All armyworms, except the dayfeeding armyworm, feed mainly during the evenings, so spraying at dusk is recommended.												
Sweet peppers (capsicum)	Heliothis	Qld, WA, NT only	150 OR 200 mL/100 L water	1(H)	Apply when pests first appear. Repeat depending on pest infestation, although the spray intervals should not exceed 7 days. Increase spray volume as plants increase in size. Use higher rate on heavier infestations.												
Tea tree	Xylorectid caterpillar, psyllid, leafhopper, crysomelid beetle	NSW & WA only	1.5 to 2 L/ha	Nil	Apply as a thorough foliar spray.												
Tobacco	Cluster caterpillar, heliothis, tobacco leafminer, tobacco looper	Qld, NSW, Vic, WA only	100 mL/100 L water	Nil	<p>Apply when pests first occur. Repeat depending on infestation. The following is a guide:</p> <table border="1"> <thead> <tr> <th>Plant Age</th> <th>Litres spray/ha</th> </tr> </thead> <tbody> <tr> <td>1 - 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>After 6 weeks as required</td> <td>900 - 1100</td> </tr> </tbody> </table>	Plant Age	Litres spray/ha	1 - 3 weeks	250	4 weeks	300	5 weeks	450	6 weeks	550	After 6 weeks as required	900 - 1100
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Green vegetable bug, leafhopper, tobacco thrips	Qld, WA only																
Tobacco stem borer	Qld, NSW, WA only		Apply 10 days after seedlings emerge and repeat at 6 day intervals (7 day intervals in NSW only) until transplanting.														
Cutworm, true & false wireworms, grasshoppers, seed harvesting ants (seed bed only)	Qld, WA only	150 or 200 mL/100 L water OR 1.5 or 2 L/ha	<p><b>Cutworms and wireworms:</b> Apply at dusk or late afternoon, using 1 knapsack/30 m length of bed. For field plants, ensure base of stem is well covered with spray. Use low rate for cutworms, high rate for wireworms.</p> <p><b>Grasshoppers:</b> Use low rate and apply to fully grown plants when pests first appear. Repeat depending on infestation.</p> <p><b>Seed harvesting ants:</b> Use high rate and apply by pouring directly down the ant hole, in seed beds only.</p>														
Stubby root nematode	Vic, WA only	20 L/ha	Spray onto soil and incorporate to a depth of 10 cm just prior to transplanting.														
Common brown leafhopper (vector for tobacco yellow dwarf virus)		45 mL/100 L water then 450 mL/100 L water	Apply low rate in transplant water, then 6 weeks later apply high rate as an overall spray.														

CROP	PEST	STATE	RATE	WHP (DAYS)	CRITICAL COMMENTS
Tomatoes	Heliothis	All States	50 or 100 L/100 L water OR 500 mL or 1 L/ha	1(H)	<p><b>Ovicide:</b> (<i>Helicoverpa armigera</i> only): Apply the low rate when egg numbers indicate potential damage. Use the high rate at peak egg lay and when eggs are mainly in flowers and fruit.</p> <p><b>Larvicide:</b> Apply when pests first appear. Repeat depending on pest infestation, although the spray interval should not exceed 7 days. Increase spray volume as plants increase in size. Use higher rate on heavier infestations.</p>
		NSW & WA only	200 mL/100 L water		
		Qld, Vic, Tas, SA, WA only	150 or 200 mL/ 100 L water		
	Potato moth, tobacco leafminer	Qld, NSW, WA, NT only			
	Green vegetable bug	Qld, Tas, WA, NT only	150 mL/100 L water OR 1.5 L/ha		
	Loopers		1.5 L/ha		
Wheat, barley, oats	Armyworms	All States	1 or 1.5 L/ha	14(H) 14(G)	Apply when pests appear. Repeat depending on pest infestation. Use the low rate against larvae up to 20 mm long and the high rate against larger larvae. In Qld and WA use low rate for aerial application against common armyworm. NOTE: All armyworms, except the dayfeeding armyworm, feed mainly during the evening so spraying at dusk is recommended.
	Heliothis		1.5 to 2 L/ ha		Apply when pests appear. Repeat depending on infestation.

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

**THIS PRODUCT IS TOO HAZARDOUS FOR USE IN THE HOME GARDEN.**

**IN TASMANIA, THIS PRODUCT MUST NOT BE APPLIED BY AIRCRAFT WITHOUT THE SPECIFIC APPROVAL OF THE REGISTRAR OF PESTICIDES.**

#### WITHHOLDING PERIODS (WHP)

(G)= Grazing (H)= Harvest

#### HARVEST

Cotton, duboisia, ginger, pasture legume seed crops, potatoes, tea tree, tobacco: **NOT REQUIRED WHEN USED AS DIRECTED.**

Apples, beans, brassicas, *Centrosema pascuorum* seed crops, chickpeas, nectarines, peaches, peas, stonefruit, sweetcorn, sweet peppers (capsicum), tomatoes: **DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.**

Pears, citrus: **DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION.**

Strawberries (Fresh): **DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.**

Blueberries: **DO NOT HARVEST FOR 5 DAYS AFTER APPLICATION.**

Adzuki beans, cowpeas, field peas, grapes, guar, lentils, linseed, lupins, mung beans, pigeon peas, rapeseed/canola, soybeans, sunflowers: **DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.**

Strawberries (frozen): **DO NOT HARVEST FOR 10 DAYS AFTER APPLICATION.**

Barley, hops, maize, mint, oats, peanuts, poppies, sesame seed, sorghum, wheat: **DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.**

#### GRAZING

Lucerne, Pastures, sweetcorn: **DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 3 DAYS AFTER APPLICATION.**

Barley, maize, oats, sorghum, wheat: **DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 14 DAYS AFTER APPLICATION.**

Cotton, hops and crops not otherwise specified above: **DO NOT GRAZE OR FEED CROPS TO ANIMALS.**