



Product Name: SINMAS 225 INSECTICIDE
APVMA Approval No: 60419/141189

Label Name:	SINMAS 225 INSECTICIDE
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Signal Headings:	DANGEROUS POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	ACTIVE CONSTITUENT: 225 g/L METHOMYL (an anticholinesterase compound) SOLVENT: 644 g/L METHANOL
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Mode of Action:	GROUP 1A INSECTICIDE
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Statement of Claims:	For the control of certain insect pests as recommended in the Directions for Use table
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Net Contents:	1 L - 1000 L
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Restraints:	<p>DO NOT use in covered or protected situations such as glasshouses, greenhouses or plastic tunnels.</p> <p>SPRAY DRIFT RESTRAINTS Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift</p> <p>DO NOT allow bystanders to come into contact with the spray cloud.</p> <p>DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p> <p>DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.</p> <p>DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.</p>
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Directions for Use:	
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Other Limitations:	IN TASMANIA, THIS PRODUCT MUST NOT BE APPLIED BY AIRCRAFT WITHOUT THE SPECIFIC APPROVAL OF THE REGISTRAR OF PESTICIDES. THIS PRODUCT IS TOO HAZARDOUS FOR USE IN THE HOME GARDEN.
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Withholding Periods:	<p>HARVEST: APPLES, BEANS, BROCCOLI, BRUSSEL SPROUTS, CABBAGES, CAPSICUMS, CAULIFLOWER, CENTROSEMA PASCUORUM SEED CROPS, LENTILS, STONEFRUIT, PEAS, SWEETCORN, TOMATOES: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION CITRUS, PEARS: DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION STRAWBERRIES (FRESH), TOBACCO: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION BLUEBERRIES: DO NOT HARVEST FOR 5 DAYS AFTER APPLICATION ADZUKI BEANS, COWPEAS, CANOLA, CHICKPEAS, GRAPES, GUAR, LETTUCE, LINSEED, LUPINS, MUNG BEANS, PIGEON PEAS, SOYBEANS, SUNFLOWERS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION STRAWBERRIES (FOR FREEZING): DO NOT HARVEST FOR 10 DAYS AFTER APPLICATION MAIZE, MINT, POPPIES, PEANUTS, SESAME SEED, SORGHUM, WHEAT, OATS, BARLEY, HOPS: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION</p> <p>GRAZING: COTTON: DO NOT GRAZE OR FEED TREATED CROPS TO ANIMALS HOPS: DO NOT GRAZE TREATED CROPS 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</p>
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Trade Advice:	
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General Instructions:	<p>GENERAL INSTRUCTIONS</p> <p>USE OF WETTING AGENT When diluting with water, add a non-ionic surfactant at registered label rates.</p> <p>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.</p> <p>APPLICATION</p> <p>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.</p>
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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 (i.e.: $1500 \text{ L} \div 500 \text{ L} = 3$)
 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 100L of water, and the sprayer set up and operation may need to be changed as the crop grows.
 - For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

For concentrate application, use a spray volume of at least 200 L/ha.

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 15 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 (i.e.: volumes less than 5 L/ha): use a spray of a VERY FINE spray droplet category.

	<p>When applying at LOW VOLUMES (i.e.: volumes greater than 5 L/ha): use a spray of a FINE spray droplet category.</p> <p>COMPATIBILITY Sinmas 225 Insecticide is compatible with a wide range of pesticides in common use.</p>
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Resistance Warning:	<p>INSECTICIDE RESISTANCE WARNING GROUP 1A INSECTICIDE</p> <p>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.</p>
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Precautions:	<p>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.</p> <p>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 day's use.</p>
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Protections:	<p>PROTECTION OF LIVESTOCK Keep animals out of operational area during treatment and while there is a danger of drift.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT 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.</p> <p>This product is toxic to wildlife. Birds feeding on treated areas may be killed.</p> <p>Dangerous to fish. DO NOT contaminate wetlands or watercourses with this chemical or the used container.</p>
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Storage and Disposal:	<p>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.</p> <p>Triple rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm 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 or product.</p>
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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:

SAFETY DIRECTIONS

Very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact or inhaled or swallowed. Attacks eyes and will irritate the nose, throat and skin. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with eyes and skin and clothing. DO NOT inhale vapour or spray mist. Protect eyes while using. When opening the container and preparing spray, wear elbow-length chemical resistant gloves and face shield. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves and impervious footwear and half facepiece respirator with combined dust and gas cartridge. 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 and face shield and respirator (and if rubber wash with detergent and warm water) and contaminated clothing.

First Aid Instructions:

FIRST AID

If swallowed, splashed on skin or in eyes, or inhaled, contact a Poisons Information Centre (Phone Australia 13 11 26, New Zealand 0800 764 766) or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. If swallowed, activated charcoal may be advised. Give atropine if instructed.

First Aid Warnings:

ADVICE TO DOCTOR

Methomyl produces effects associated with anti-cholinesterase activity. Atropine sulphate should be used for treatment. Administer repeated doses 1.2 mg 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.

DIRECTIONS FOR USE

TREE AND VINE CROPS					
RATE					CRITICAL COMMENTS
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application Section.					For all uses in this Tree and Vine Crop table: <ul style="list-style-type: none"> 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.
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Apples					This product is highly toxic to bees. DO NOT 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			
		NSW, ACT only	150 mL/100 L		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, Vic, WA only			
Plague thrips (<i>Thrips imaginis</i>), Dimple bug (<i>Campylomma livida</i>)	QLD, 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>) <i>Helicoverpa</i> spp., 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. DO NOT apply while bees are actively foraging. Apply when bees have ceased foraging such as late in the afternoon. Monolepta beetle: Apply according to pest incidence. Helicoverpa spp.: Apply when the infestation reaches an economically damaging level. Plague thrips: 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 (<i>continued</i>)						
RATE In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application Section.					CRITICAL COMMENTS For all uses in this Tree and Vine Crop table:	
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	25 mL/100 L		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			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>) 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 glycinae</i>)				Apply when infestation reaches an economically damaging level and repeat if necessary.	
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.	
Stonefruit Peaches, Nectarines, Plums	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. DO NOT apply to early peach varieties or to stressed trees.	
	<i>Helicoverpa</i> spp.	Tas, WA only	150 mL/100 L		Apply to blossoms of affected trees where beetles are feeding.	
	Monolepta beetle	All States	100 mL/100 L		Apply from July to September when infestations occur.	
	Thrips		200 mL/100 L		Apply at petal fall. Apply as a high volume spray ensuring adequate spray penetration.	

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) Legume seed crops	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		Apply when infestation reaches an economically damaging level and repeat if necessary. It is especially important to control this pest during and after flowering.
	Green vegetable bug (<i>Nezara viridula</i>)	Qld, NSW, ACT, Tas, WA, NT only	Larvicide: 1.5 to 2 L/ha Ovicide/Larvicide: 500 mL/ha to 1 L/ha		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).
	<i>Helicoverpa</i> spp.				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		1 day (H)
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/ha to 1 L/ha		Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.

NON-TREE AND VINE CROPS (<i>continued</i>)					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Centrosema pascuorum seed crops	<i>Green vegetable bug (Nezara viridula), Piezodorus spp., Helicoverpa spp., Riptortus spp.</i>	NT & WA only	1.5 to 2 L/ha	1 day (H) NIL (G)	Apply through boom spray with hollow cone nozzles in 250 L/ha water.
Cotton	<i>Helicoverpa spp.</i>	QLD, NSW, ACT, WA only	500 mL/ha to 1 L/ha plus a non-ionic surfactant at registered label rates	NIL (H) DO NOT graze or feed treated crops to animals	<p>DO NOT graze or feed treated crops to animals.</p> <p>Ovicide/Larvicide: Thorough spray coverage is essential for adequate ovicidal activity. Apply the lower rate when egg numbers are from 1 to 2 times the economic threshold and no larvae are present. 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.</p> <p>Larvicide: Application of these rates may redden cotton foliage depending on the frequency of application and the degree of plant stress. DO NOT apply to stressed plants. If reddening is excessive, discontinue use of this product and use other insecticides until the crop has recovered. Apply the lower rate when larvae are small or infestations are light. Apply the higher rate when larvae are large or infestations are heavy.</p>
			1.8 to 2.4 L/ha		
	Looper (<i>Chrysodeixis subsidens</i>)	QLD, WA only	1.8 to 2.4 L/ha		
Lentils	<i>Helicoverpa spp.</i>	QLD, NSW, ACT, WA 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.

NON-TREE AND VINE CROPS (continued)					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Lettuce: Field grown head and leafy lettuce (not hydroponic lettuce)	<i>Helicoverpa</i> spp. Larvae	All States	200 mL/100 L or 2 L/ha	7 DAY (H) NIL (G)	Apply when pests first appear. Repeat depending on infestation. For high volume spraying, use at least 1000 L/ha of spray mixture. DO NOT apply more than 4 applications per crop. There MUST be at least a 3-day interval between consecutive applications. Observe the Western Flower Thrips insecticide resistance management strategy (available from http://www.dpi.nsw.gov.au/agriculture/horticulture/pests-diseaseshort/multiple/thrips/wft-resistance).
	<i>Helicoverpa</i> spp. Ova		100 mL/100 L or 1 L/ha		
	Cluster caterpillar		200 mL/100 L or 2 L/ha		
	Western flower thrips				
Linseed	<i>Helicoverpa</i> spp.	QLD, WA only	1.5 to 2 L/ha	7 days (H)	Apply sprays from early flowering. Repeat if necessary. Larvae completely enclosed inside pods at time of spraying may not be killed. (Refer to Larvicidal Application Instructions for more detail).
Lucerne (grazing, hay and seed)	<i>Helicoverpa</i> spp.	WA only	1 to 2 L/ha	3 days (G)	Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).
		QLD, NSW, ACT, Vic, Tas, SA, NT only	1.5 to 2 L/ha		

NON-TREE AND VINE CROPS (<i>continued</i>)					
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)	<p>Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).</p> <p>Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.</p>
		QLD, NSW, ACT, WA only	1.5 to 2 L/ha		
			500 mL/ha 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) 14 days (G)	<p>Larvicide: 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.</p> <p>NSW only: 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).</p> <p>Ovicide: 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.</p>
			100 mL/100 L or 1 L/ha		
			Armyworms (<i>Pseudaletia convecta</i> , <i>Persectania ewingii</i> , <i>Persectania dyscrita</i>)		
	Mint, Poppies	<i>Helicoverpa</i> spp.	Tas, WA only	1.5 to 2 L/ha	14 days (H)
Mung beans (seed production)	<i>Helicoverpa</i> spp.	QLD, NSW, ACT, WA, NT only	1.5 to 2 L/ha	7 days (H)	<p>Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).</p> <p>Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions</p> <p>Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).</p>
		QLD, WA only	500 mL/ha to 1 L/ha		
	Green vegetable bug (<i>Nezara viridula</i>)	QLD, NSW, ACT, WA, NT only	1.5 L/ha		
	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 Harvest (H) Grazing (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. Note: 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		
Pasture legume seed crops	<i>Helicoverpa</i> spp.	QLD, WA only	1.5 to 2 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. 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:	Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail). Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions. 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	1 day (H)	
			500 mL/ha to 1 L/ha	Chickpeas, Pigeon peas: 7 days (H)	
		Looper (<i>Chrysodeixis subsidens</i>)	1.5 L/ha		
	<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)	Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail). Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.
			500 mL/ha 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 (continued)

CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Sesame seed	Corn earworm (<i>Helicoverpa armigera</i>)	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).
	Green vegetable bug (<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, NSW, ACT, WA, NT only	1.5 to 2 L/ha	14 days (H) 14 days (G)	Larvicide: Apply when infestation reaches an economically damaging level and repeat if necessary. (Refer to Larvicidal Application Instructions for more detail).
			500 mL/ha to 1 L/ha		Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.
	Armyworms		1.5 L/ha		Apply when infestation reaches an economically damaging level and repeat if necessary. NOTE: As all armyworms, except the day feeding armyworm, feed mainly during the evening, spraying at dusk is recommended.
	Sorghum midge (<i>Contarinia sorghicola</i>)	QLD, WA, 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, NSW, ACT, WA, NT only	1.5 to 2 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).
			500 mL/ha to 1 L/ha		Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.
	Green vegetable bug (<i>Nezara viridula</i>)		1.5L/ha		Apply when infestation reaches an economically damaging level and repeat if necessary.
	Looper (<i>Chrysodeixis subsidens</i>)	QLD, WA, NT only			

NON-TREE AND VINE CROPS (continued)

CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Sunflowers	Green vegetable bug (<i>Nezara viridula</i>)	NSW, ACT, WA only	1.5 to 2 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). NOTE: 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, ACT, WA only	1.5 to 2 L/ha		
		QLD only	1.5 L/ha		
		SA only	2 L/ha		
	QLD, NSW, ACT, SA, WA only	500 mL/ha to 1 L/ha	Ovicide/Larvicide: Refer to Ovicidal/Larvicidal Application Instructions.		
Wheat, Oats, Barley	Armyworms	All States	1 to 1.5 L/ha	14 days (H) 14 days (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 20mm long and the higher rate against larger larvae. NOTE: As these armyworms feed mainly during the evening, spraying at dusk is recommended.
	Common armyworm (<i>Pseudaletia convecta</i>)	QLD only	1 L/ha aerial spray only		
	<i>Helicoverpa</i> spp.	All States	1.5 to 2 L/ha		

FRUIT					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Strawberries	<i>Helicoverpa</i> spp., Cluster caterpillar (<i>Spodoptera litura</i>) Looper (<i>Chrysodeixis subsidens</i>)	Qld, NSW, ACT, Vic, Tas, WA, NT only	150 mL/100 L or 1.5 L/ha	Fresh: 3 days (H) Frozen: 10 days (H)	Apply when infestation reaches an economically damaging level and repeat if necessary. NOTE: To avoid the possibility of taint in strawberries to be frozen, DO NOT apply later than 10 days before harvest.
	<i>Helicoverpa</i> spp., Light brown apple moth	SA, WA only	150 or 200 mL/100 L		
Tomatoes	<i>Helicoverpa</i> spp.	All States	50 to 100 mL/100 L or 500 mL/ha to 1 L/ha	1 day (H)	Ovicidal control only: 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, ACT, WA only	200 mL/100 L or 2 L/ha		Apply when infestation reaches an economically damaging level and repeat if necessary. For optimum results, the spray interval should not exceed 7 days. (Refer to Larvicidal Application Instructions for more detail).
		QLD, Vic, Tas, SA, WA, NT only	150 to 200 mL/100 L or 1.5 to 2 L/ha		GROUND APPLICATION: Low Volume: Use 150 L/ha spray mixture or higher without producing run-off. High Volume: 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 (<i>Phthorimaea operculella</i>)	QLD, NSW, ACT, WA, NT only	150 to 200 mL/100 L or 1.5 to 2 L/ha		AERIAL APPLICATION: Ultra Low Volume and Low Volume: Refer to Application Instructions.
	Green vegetable bug (<i>Nezara viridula</i>)	QLD, Tas, WA, NT only	150 mL/100 L or 1.5 L/ha		
	Looper (<i>Chrysodeixis subsidens</i>)	QLD, Tas, WA, NT only	1.5 L/ha		

VEGETABLES					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
Brassicas – Brussel sprouts, Cauliflower, Broccoli, Cabbages	Cabbage white butterfly (<i>Pieris rapae</i>)	QLD, WA, NT only	100 mL/100 L or 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, ACT, Vic, Tas, SA, 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, ACT, Qld, Tas, WA, SA, NT 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 grub (<i>Hellula hydralis</i>)	QLD, NSW, ACT, SA, WA, NT only	1.5 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.
	Cluster caterpillar (<i>Spodoptera litura</i>)	QLD, WA, NT only	1 L/ha		
	Looper (<i>Chrysodeixis subsidens</i>)	NSW, ACT, Qld, Vic, Tas, WA, NT only	1.5 L/ha		
Capsicums (sweet peppers)	<i>Helicoverpa</i> spp.	QLD, WA, NT only	150 to 200 mL/100 L or 1.5 to 2 L/ha	1 day (H)	
Potatoes	Potato moth (<i>Phthorimaea 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 (<i>Chrysodeixis subsidens</i>)	QLD, WA only	1.5 L/ha		

VEGETABLES (continued)					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (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) 3 days (G)	Larvicide: 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. (Refer to Larvicide Application Instructions for more detail).
			100 mL/100 L or 1 L/ha		
	NSW, ACT only	500 mL to 1 L/100 L	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.		
	Armyworm	QLD, NSW, ACT, SA, WA, NT only	1.5 L/ha		

OTHER					
CROP	PEST	STATE	RATE	WHP Harvest (H) Grazing (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>), Podsucking 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) DO NOT 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 Harvest (H) Grazing (G)	CRITICAL COMMENTS												
Tobacco	Tobacco budworm (<i>Helicoverpa armigera</i>)	QLD, Vic only	50 mL/100 L	3 day (H)	Ovicide: 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 (<i>Spodoptera litura</i>), <i>Helicoverpa</i> spp., Tobacco looper (<i>Chrysodeixis argentifera</i>), Tobacco leaf miner (<i>Phthorimaea operculella</i>)	QLD, NSW, ACT, Vic, WA only	100 mL/100 L		Larvicide: Use this rate if larvae are present. Spray volumes: Spray volumes should be increased with plant size/age. The following volumes are recommended. Frequency of application will depend upon pest incidence.												
					<table border="0"> <thead> <tr> <th>Plant Age: Time after transplanting</th> <th>Recommended Spray Volume L/ha</th> </tr> </thead> <tbody> <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> </tbody> </table>	Plant Age: Time after transplanting	Recommended Spray Volume L/ha	1 to 3 weeks	250	4 weeks	300	5 weeks	450	6 weeks	550	More than 6 weeks	900 to 1100
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Stubby root nematode (<i>Trichodorus S.L.</i>)	Vic, WA only	20 L/ha	Spray onto soil and incorporate to a depth of 10 cm just prior to transplanting.														
Tobacco stemborer (<i>Scrobipalpa heliopa</i>)	QLD, NSW, ACT, WA 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 (<i>Agrotis</i> spp.)	QLD, WA only	150 mL/100 L or 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 or 2 L/ha															
Grasshoppers		150 mL/100 L or 1.5 L/ha															
Seed harvesting ants (seed bed only) (<i>Pheidole</i> spp.)		200 mL/100 L															
Common brown leafhopper (<i>Orosius argentatus</i>) (vector for tobacco yellow dwarf virus)	Vic, WA only	Use 45 mL/100 L in transplant water. Six (6) weeks later, apply 450 mL/100 L as an overall spray.	Seed bed only: 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.