RLP APPROVED

Product Name: Gharda Alphaguard 100 EC Insecticide

APVMA Approval no: 88616 / 121829

Label Name:	Gharda Alphaguard 100 EC Insecticide

Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Constituent Statements:	ACTIVE CONSTITUENT: 100 g/L ALPHA-CYPERMETHRIN SOLVENT: 718 g/L LIQUID HYDROCARBONS

Mode of Action:	GROUP 3A INSECTICIDE

Statement of Claims:	For the control of certain insect pests on various crops and Redlegged earth mite and Blue oat mite on certain field crops and pastures.

Net Contents:	1 L, 5 L, 10 L, 1000 L

Restraints:	DO NOT apply if rain is expected within 6 hours after application. NOTE This product is ineffective against synthetic pyrethroid-resistant Helicoverpa armigera larvae longer than 5 mm. All Helicoverpa armigera in NSW and Qld should be treated as being resistant to synthetic pyrethroids. Refer to RESISTANCE MANAGEMENT under GENERAL INSTRUCTIONS. This product is ineffective against synthetic pyrethroid-resistant Plutella xylostella.

Directions for Use:	

Other Limitations:	

Withholding Periods:	ASPARAGUS, BROCCOLI, BRUSSELS SPROUTS, CABBAGES, CAULIFLOWERS, CHINESE CABBAGE, KALE, KOHLRABI, TOMATOES, TURNIPS: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION. LETTUCE: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION. PASTURES: DO NOT GRAZE FOR 3 DAYS AFTER APPLICATION. DO NOT CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION. MAIZE, MUNG BEANS, NAVY BEANS, RICE, SORGHUM, SOYBEANS, SWEET CORN, TOBACCO: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION. WINTER CEREALS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION. DO NOT GRAZE TREATED STUBBLE FOR 14 DAYS AFTER APPLICATION. LUCERNE: DO NOT GRAZE OR CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION. COTTON, LINSEED, POME FRUIT, STONE FRUIT: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION. CANOLA: DO NOT GRAZE OR CUT FOR STOCKFEED FOR 21 DAYS AFTER APPLICATION. DO NOT CUT AND WINDROW FOR HARVEST FOR 21 DAYS AFTER PPLICATION. CHICKPEAS: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCKFEED FOR 5 WEEKS AFTER APPLICATION. SUNFLOWERS: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION. FIELD PEAS, LUPINS: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION. FABA BEANS: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCKFEED FOR 5 WEEKS AFTER APPLICATION. LINOLA: DO NOT HARVEST FOR 12 WEEKS AFTER APPLICATION.

Trade Advice:	

General Instructions:	

Resistance Warning:	GROUP 3A INSECTICIDE For insecticide resistance management Alphaguard is a Group 3A insecticide. Some naturally occurring insect biotypes resistant to Alphaguard and other Group 3A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Alphaguard or other Group 3A insecticides are used repeatedly. The effectiveness of Alphaguard on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Gharda Australia Pty Ltd accepts no liability for any losses that may result from the failure of Alphaguard to control resistant insects. Alphaguard may be subject to specific resistance management strategies. For further information, contact your local supplier, Gharda Australia Pty Ltd. representative or local agricultural department agronomist. In NSW and Qld, application of this product to Helicoverpa armigera larvae longer than 5 mm may not only be ineffective but it may increase the level of synthetic pyrethroid resistance. This product should NOT be used to treat infestations that were not controlled by an earlier application of it or another synthetic pyrethroid. Infestations not controlled by Alphaguard should be treated with an insecticide from another chemical group. Application of Alphaguard with an insecticide from another chemical group will assist with the management of synthetic pyrethroid resistant Helicoverpa armigera.

Precautions:	

Protections:	PROTECTION OF LIVESTOCK Dangerous to bees. DO NOT spray on any plants in flower while bees are foraging. Alphaguard is known to have a deterrent effect on foraging bees for a short period of time after spraying. Risk to bees is reduced by spraying in early morning and late evening while bees are not foraging. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT Dangerous to fish and aquatic invertebrates such as yabbies. DO NOT contaminate fish ponds, dams, drains, rivers or streams with product or used containers. Drift and run-off from treated areas may be hazardous to fish or crustaceans in adjacent sites.

Storage and Disposal:	The method of disposal of the container depends on the container type. Read the 'Storage and disposal' instructions on the label that is attached to the container. Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Triple-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 deliver empty packaging 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. Refillable containers (1000L only): Empty contents fully into application equipment. Close all valves and return to [point of supply/designated collection point/other specific collection details] for refill or storage.

Safety Directions:	Harmful if swallowed. Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. Avoid inhaling vapour or spray mist. When preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and a face shield or goggles. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day’s use, wash gloves, face shield or goggles and contaminated clothing.

First Aid Instructions:	If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766. If swallowed, do NOT induce vomiting.

First Aid Warnings:	

GENERAL INSTRUCTIONS

Alphaguard is a contact and residual insecticide. It can be used as a protective treatment when applied at regular intervals or as a knockdown treatment to control existing infestations. Alphaguard can be applied mixed either with water carrier or oil based bulking agents or compatible ULV products.

CROP SAFETY

Gharda Alphaguard 100 EC Insecticide has demonstrated good crop safety, however, has not been tested on all plant cultivars. Before application it is recommended to undertake a test application to a small area before applying on a broad scale basis.

MIXING/APPLICATION

Low Volume and High Volume applications by ground rig or aircraft when Alphaguard is applied with water carrier.

Add the required quantity of Alphaguard to water in the spray tank and mix thoroughly. Maintain agitation during mixing and application.

Ultra Low Volume (ULV) application by aircraft when Alphaguard is applied with oil based bulking agents.

This product can be mixed with compatible products (See COMPATIBILITY section).
First add the mixing partner to the spray tank and then, with the agitator in motion, add the required quantity of Alphaguard direct to the spray tank. DO NOT mix with water and ensure that no water is in the spraying system.

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: 3X (i.e. 1500 L÷ 500 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.

Low Volume and High Volume applications by ground rig or aircraft when Alphaguard is applied with water carrier.

Alphaguard can be applied by ground or aircraft with a water carrier. Thorough coverage is essential to ensure adequate control. Always apply with a non-ionic surfactant unless detailed on the label of a tank mix partner. Apply during the cooler parts of the day or night.

Ground application - water carrier.

For low volume spraying of field crops with ground rigs, use a total volume of 50-200 L/ha except for sweetcorn, tomatoes and tobacco where higher volumes should be used. Drop arms should be used on ground rigs in row crops taller than 30 cm (0.3 m). The application should be made as a fine spray, preferably using hollow cone nozzles, unless otherwise directed in the Critical Comments.

Aerial application - water carrier.
DO NOT apply to trellis tomatoes by aircraft. Use a minimum spray volume of 20 L/ha. For spring/early summer application to cereals, linola, canola, rice and to other dense crops, apply in a total spray volume of 30 to 35 L/ha. If possible, spray in a crosswind. Avoid spraying in calm conditions or when wind is light and variable in direction. Apply as a spray of 100-150 microns VMD.
Ultra Low Volume (ULV) application by aircraft.
Alphaguard, mixed with compatible products should be applied in a minimum total spray volume of 1.5 L/ha. It should only be applied by aircraft with suitable equipment to provide a droplet size of approximately 80-100 microns VMD. Applications should be made during the cooler parts of the day or at night. Avoid application in calm or very windy conditions. Preferably apply in light to moderate cross winds.

DIRECTIONS FOR USE

RESTRAINT
DO NOT apply if rain is expected within 6 hours after application.
NOTE
This product is ineffective against synthetic pyrethroid-resistant *Helicoverpa armigera* larvae longer than 5 mm.
All *Helicoverpa armigera* in NSW and Qld should be treated as being resistant to synthetic pyrethroids.
Refer to RESISTANCE MANAGEMENT under GENERAL INSTRUCTIONS.

This product is ineffective against synthetic pyrethroid-resistant *Plutella xylostella.*

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Asparagus (not for use on white asparagus)	Garden weevil (*Phlyctinus callosus)*	WA only	100 mL/100 L	1 day	Apply in Spring after weevil emergence, at up to 500 L spray solution per hectare. Day time spraying is effective but superior control may be achieved if spray is applied at night. Repeat applications as required, depending on pest pressure. Application to fern, after spear harvest may reduce carry-over of Garden weevil for the following season. Caution: Not for use on White Asparagus, there have been reports of some phytotoxicity when using Alpha-Cypermethrin.
Banksias Ornamentals	Banksia moth *(Danima banksiae)*	WA only	20 mL/100 L	-	Apply on a regular programme at 2 week intervals at early flower development. Commence spraying when blooms are immature and continue until flowers are fully developed.
Broccoli, Brussels Sprouts, Cabbages, Cauliflowers, Kale, Kohlrabi, Chinese Cabbage, Turnips	Cabbage moth *(Plutella xylostella),* Cabbage white butterfly *(Pieris rapae), Helicoverpa punctigera, Helicoverpa armigera*	All States	LOW VOLUME 400 mL/ha HIGH VOLUME 50 mL/100 L ULTRA LOW VOLUME 400 mL/ha	1 day (Harvest)	Apply according to pest incidence. When reinfestation is continuous, treatment every 7-10 days may be required. Add a non-ionic surfactant at registered label rates. LOW VOLUME Ground rig application: Apply in 100 to 600 L of water per hectare as a fine spray, (i.e. a droplet size of 100 to 200 microns). Aerial application: Apply in 20 to 60 L of water per hectare as a spray of 100 to 150 microns droplet size. HIGH VOLUME Gradually increase the spray volume as the plants grow, from 600 L/ha just after transplanting to 1000 L/ha at maturity. Apply as a medium spray (i.e. droplet size of 200 to 400 microns VMD). ULTRA LOW VOLUME See ULV application section in this label.
	Cluster caterpillar *(Spodoptera litura)*	All States			*Helicoverpa armigera* In NSW and Qld. Follow the application directions for the pests above. Apply as required according to pest incidence. Thorough and frequent crop checks are essential. Preferably apply to

					eggs. Apply to larvae only if they are less than 5 mm long.
Canola	Native budworm *(Helicoverpa punctigera)*	NSW, ACT, SA, Tas, Vic, WA only	200 or 300 mL/ha	21 days (Cutting for harvest or stockfeed or grazing)	DO NOT apply more than a total of 400 mL/ha per season to any one crop. For ULTRA LOW VOLUME USE, see application section in this label. Inspect the crop regularly during and immediately after flowering. Apply when damaging pest numbers first appear on the crop and repeat if necessary. For aerial application, use a total volume of 33-35 L/ha and apply in the cooler part of the day. Use the higher rate if larvae longer than 10 mm are present.
	Tobacco looper *(Chrysodeixis argentifera)*				
	Vegetable weevil *(Listroderes difficilis)*		400 mL/ha		Crops should be inspected as they emerge. Border sprays are required to control invading adults. Apply when cotyledons and leaves are being eaten or the plant lopped. Repeat as necessary.
	Cabbage white butterfly (*Pieris rapae*), cabbage moth (*Plutella xylostella*)				Apply according to pest incidence.
	Redlegged earth mite (*Halotydeus destructor*)		100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply as a ULV application.
	Redlegged earth mite (*Halotydeus destructor*), Blue oat mite (*Penthaleus major*)		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT apply as pre-emergence treatment. DO NOT use as a ULV application.
Chickpeas	Native budworm *(Helicoverpa punctigera)*	WA only	160 mL/ha	21 days (Harvest) 5 weeks (Grazing)	Apply to open, less dense crops when numbers of newly hatched larvae first appear on the crop and repeat as necessary.
		NSW, ACT, Qld, Vic, Tas,	200 or 300 mL/ha		Apply when pest numbers reach damaging levels and repeat if necessary. Use the higher rate if larvae larger than 10 mm are present. Best results will be obtained by spraying at egg hatch.

		SA, WA only			
	Redlegged earth mite *(Halotydeus destructor)*	NSW, ACT, Vic, SA, WA, Tas only	100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply as a ULV application.
	Redlegged earth mite *(Halotydeus destructor)* Blue oat mite *(Penthaleus major)*		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT apply as a pre-emergence treatment. DO NOT use as a ULV application.
	Cutworm (*Agrotis* spp.)		75 mL/ha		Check emerging or establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon and evening.
Cotton	Native Budworm *(Helicoverpa punctigera)*	NSW, NT, Qld, WA only	-	14 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section in this label. Apply as indicated by field checks using rates appropriate for the infestation level determined. Application should be timed to coincide with egg hatching and before larvae are in protected feeding sites.
			300 mL/ha		Apply 300 mL/ha when there are up to 75 eggs and/or up to 5 larvae less than 5 mm long per 100 terminals.
			400 mL/ha		Apply 400 mL/ha when there are up to 150 eggs and/or up to 10 larvae less than 5 mm long per 100 terminals and/or when larvae between 5 and 10 mm are present.
			500 mL/ha		Apply 500 mL/ha when there are up to 150 eggs and/or more than 10 larvae less than 5 mm long per 100 terminals and/or when larvae longer than 10 mm are present.
	Cotton bollworm *(Helicoverpa armigera)*		-		Preferably apply to eggs. Apply to larvae only if they are less than 5 mm long.
			300 mL/ha		Apply 300 mL/ha when there are up to 75 eggs and /or up to 5 larvae less than 5 mm long per 100 terminals.
			400 mL/ha		Apply 400 mL/ha when there are up to 150 eggs and/or up to 10 larvae less than 5 mm long per 100 terminals.
			500 mL/ha		Apply 500 mL/ha when there are more than 150 eggs and/or more than 10 larvae less than 5 mm long per 100 terminals.

	Rough bollworm (*Earias huegeli*)		300 or 400 mL/ha		Apply when an average of 2 or more larvae are present per 100 bolls. It is essential to detect and treat infestations in the early stages before larvae are established or concealed in bolls deep in the canopy. Use the higher rate if larvae longer than 10 mm are present. Best results will be obtained by applying at egg hatch.
	Green mirid (*Creontiades dilutus*) Apple dimpling bug (*Campylomma liebknechti*)				Apply at recommended threshold levels as indicated by field checks. Use higher rate when pest pressure is high and when increased residual protection is required.
Cereals (winter)	Cutworms *(Agrotis* spp.*)*	Vic, SA, WA only	75 mL/ha	7 days (Harvest) 14 days (Stubble grazing)	DO NOT apply more than a total of 540 mL/ha per season to any one crop. For ULTRA LOW VOLUME use, see ULV application section in this label. Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the surface and feeding on the seedlings. Spray in late afternoon or evening.
		NSW, ACT, Qld only	75 or 150 mL/ha		Use the higher rate when the infestation is severe, or when there are larvae longer than 10 mm, or when longer residual activity is required.
	Webworm (*Hednota* spp.)	NSW,ACT, Vic, SA, WA only	75 mL/ha		DO NOT use as a ULV application. Preplanting: May be applied with knockdown herbicides prior to planting. Apply from the last week in May when the larvae have emerged. DO NOT apply to dense pasture. All pasture should be closely grazed prior to application to ensure adequate spray penetration. Apply in a minimum of 100 L of water per hectare. Repeat as required. Post crop emergence: Inspect crop regularly from emergence and apply at the first sign of pest activity. Repeat as required.
	Common armyworm *(Mythimna convecta),* Southern armyworm (*Persectania ewingii*)	All states	240 mL/ha		Apply before "head lopping" occurs and when there are 2 or more larvae per square metre. Spray in the cool of the day (usually late afternoon) when larvae are most active. Ensure the spray penetrates the crop. This rate is effective on larvae up to 20 mm in length. Monitor crops closely and re-treat if necessary. Poor control may occur in crops that have lodged. See application section for correct water rates.

	Redlegged earth mite *(Halotydeus destructor)*	NSW,ACT, Vic, Tas, SA, WA only	100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply as a ULV application.
	Redlegged earth mite *(Halotydeus destructor)* Blue oat mite *(Penthaleus major)*		50 mL/ha		Apply when mite numbers reach damaging levels. Spray seedling crops if silvering or whitening (bleaching) of leaves is causing a reduction in crop growth. If possible, spray on a calm mild morning when mites are actively feeding on crop leaves. DO NOT apply as a pre-emergent treatment. DO NOT use as a ULV application.
	Aphids (*Rhopalosiphum* spp.) (Barley yellow Dwarf Virus vectors)		125 mL/ha		To control aphids, sprays should be applied at 3 and 7 weeks after emergence to reduce aphid colonisation and the spread of Barley Yellow Dwarf Virus. This will also reduce the effect of feeding aphid damage.
Eucalyptus spp. plantations	Adults and larvae of Chrysomelid leaf beetle or Eucalyptus leaf beetle *(Chrysophtharta* spp.*),* Eucalyptus weevil *(Gonipterus* spp.*)*, Autumn gum moth *(Mnesampela* spp.*),* Adults of *Liparetrus* spp., *Cadmus* spp.	All states	250 – 300 mL/ha		Ground or aerial applications depending on size of trees. Apply by fixed wing aircraft or by helicopter, using hydraulic or Micronair equipment, to the crowns of trees. Micronair application in 5 litres of water/ha has proved effective. Apply before insect damage causes severe defoliation. For ULTRA LOW VOLUME use, see ULV application section in this label.
Eucalyptus and *Pinus* spp. plantations	Adults and larvae of Bronzed field beetle *(Adelium* spp.*)*				
	Wingless grasshopper		160 mL/ha		

	(Phaulacridium vittatum)				
Faba beans	Native budworm *(Helicoverpa punctigera)*	WA only	160 mL/ha	4 weeks (Harvest) 5 weeks (Grazing)	Apply to open, less dense crops when numbers of newly hatched larvae first appear on the crop and repeat as necessary.
		NSW, ACT, Vic, Tas, SA, WA only	200 or 300 mL/ha		Apply when pest numbers reach damaging levels and repeat if necessary. Use the higher rate if larvae larger than 10 mm are present. Best results will be obtained by spraying at egg hatch.
	Redlegged earth mite *(Halotydeus destructor)*		100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply as a ULV application.
	Redlegged earth mite *(Halotydeus destructor)* Blue oat mite *(Penthaleus major)*		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT apply as a pre-emergence treatment. DO NOT use as a ULV application.
	Cutworm (*Agrotis* spp.)		75 mL/ha		Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray late afternoon and evening.
Field peas	Native budworm *(Helicoverpa punctigera)*	WA only	160 mL/ha	4 weeks (Harvest)	For ULTRA LOW VOLUME use, see ULV application section of this label. Apply to open, less dense crops when damaging numbers of newly hatched larvae first appear on the crop and repeat if necessary.
		NSW, ACT, Vic, Tas, SA, WA only	200 or 300 mL/ha		Apply when pest numbers reach damaging levels and repeat if necessary. Use the higher rate if larvae longer than 10 mm are present. Best results are obtained by applying at egg hatch.
	Pea weevil *(Bruchus pisorum)*	NSW, ACT, Vic, SA, WA only	160 or 200 mL/ha		Apply during flowering prior to egg laying when the adult weevil population reaches one or more per 25 sweeps of a sweep net. Use the higher rate for longer residual protection.
	Cutworm (*Agrotis* spp.)		75 mL/ha		Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Apply product in late afternoon and evening.
	Redlegged earth	NSW,ACT,	100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after

	mite (*Halotydeus destructor*)	Vic, Tas, SA, WA only			sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite populations and re-treat as necessary. DO NOT apply as a ULV application.
	Redlegged earth mite (*Halotydeus destructor*), Blue oat mite (*Penthaleus major*)		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT apply as pre-emergence treatment. DO NOT use as a ULV application.
Grapevines (non bearing)	Pink cutworm (*Agrotis munda*), Apple weevil (Curculio beetle) (*Otiorhynchus cribricollis*), Garden weevil (*Phlyctinus callosus*)	NSW, ACT, Vic, Tas, SA, WA only	Dilute spraying 100 mL/100 L water Concentrate Spraying Refer to the Mixing/Application Section	-	Monitor young vines during spring and early summer and apply at the first signs of leaf damage. Spray the leaves, canes and the soil around each vine to a diameter of 30 cm. 70-80 mL of dilute spray should be sufficient for each vine. If pest infestation persists, a second application may be required after three weeks. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. (See General Instructions).
Lettuce	*Helicoverpa* spp.	All States	LOW VOLUME 400 mL/ha HIGH VOLUME 50 mL/100 L	3 days (Harvest)	Thoroughly and regularly check the crop. Apply at the first sign of pest activity. Preferably apply to eggs. Apply to *H. armigera* ONLY if larvae are less than 5 mm long. Repeat according to pest incidence.
Linola	Native budworm (*Helicoverpa punctigera)*	Vic, SA, Tas, NSW, ACT, WA only	160 or 200 mL/ha	12 weeks (Harvest)	DO NOT apply more than a total of 400 mL/ha per season to any one crop. For ULTRA LOW VOLUME use, see ULV application section of this label. Inspect the crop regularly during and immediately after flowering. Apply when damaging pest numbers first appear on the crop. For aerial application, apply during the cooler part of the day in a total volume of 30 – 35 L/ha. Use the higher rate if larvae longer than 10 mm are present. Refer to application section for water rates.
Linseed	Native budworm *(Helicoverpa punctigera)*	NSW, ACT, Vic, Tas,	200 or 300 mL/ha	14 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section of this label. Inspect the crop regularly and immediately after flowering. Apply when damaging pest numbers first appear on the crop and repeat if necessary. Use the higher rate if larvae longer than 10 mm are present.

		SA, WA only			Best results will be obtained by spraying at egg hatch. Refer to application section for water rates.
	Cutworms (*Agrotis* spp.)		75 mL/ha		Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on seedlings. Apply product in late afternoon and evening.
Lucerne (seed and forage crops)	Native budworm *(Helicoverpa punctigera)*	NSW, ACT, Vic, Tas, SA, WA only	160 mL/ha	14 days (Grazing or cutting for stockfeed)	For ULTRA LOW VOLUME use, see ULV application section in this label. DO NOT apply more than one application per cut or grazing for animal feed. Apply when pest populations reach economically damaging levels. Apply to larvae less than 5 mm in length.
	Green mirid (*Creontiades dilutus*)				DO NOT apply more than one application per cut or grazing for animal feed. Apply when pest populations reach economically damaging levels.
Lupins	Native budworm *(Helicoverpa punctigera)*	NSW, ACT, Vic, SA, only	200 or 300 mL/ha	4 weeks (Harvest)	DO NOT apply more than a total of 600 mL/ha per season to any one lupin crop. For ULTRA LOW VOLUME use, see ULV application section of this label. Apply when damaging pest numbers first appear on the crop and repeat if necessary. Use the higher rate if larvae longer than 10 mm are present. Best results are obtained by spraying at egg hatch.
		WA only	120 or 200 mL/ha		Spraying should be timed to precede the first visible damage to the pods. Use the higher rate when the infestation is severe, or when residual activity is required.
	Cutworm (*Agrotis* spp.)	NSW, ACT, Vic, Tas, SA, WA only	75 mL/ha		Check emerging and establishing crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on seedlings. Apply product in late afternoon or evening.
	Common armyworm (*Mythimna convecta*), Southern armyworm (*Persectania ewingii*)	ACT, NSW, WA only	240 mL/ha		Spray in the cool of the day (late afternoon) when larvae are most active.
	Redlegged earth mite (*Halotydeus*	NSW, ACT, Vic, Tas, SA, WA	100 mL/ha		Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply

	destructor)	only			as a ULV application.
	Redlegged earth mite (*Halotydeus destructor*), Blue oat mite (*Penthaleus major*)		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT apply as pre-emergence treatment. DO NOT use as a ULV application.
Maize	Com earworm *(Helicoverpa armigera)*	Qld, NSW, ACT, Vic, NT, WA only	300 or 400 mL/ha	7 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section in this label. Thoroughly and regularly check the crop. Apply from early silking according to pest incidence. Use the higher rate if larvae longer than 10 mm are present. In Qld, NSW and NT, preferably apply to eggs or apply to larvae only if they are less than 5 mm long.
	Native budworm *(Helicoverpa punctigera)*	All states			Thoroughly and regularly check the crop. Apply when the infestation reaches an economically damaging level and repeat if necessary. Best results will be obtained by applying at egg hatch. Use the higher rate if larvae longer than 10 mm are present.
Mung beans, Navy beans	Native budworm *(Helicoverpa punctigera)*	Qld, NSW, ACT, NT WA only	300 or 400 mL/ha	7 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section of this label. Crop checking should be aimed to detect larvae as they hatch. Small larvae are easier to kill than large larvae. Apply when the number of larvae feeding on flowers or pods reaches 1 to 2 per metre of row. Repeat as required. Use the higher rate if larvae longer than 10 mm are present or when canopy is dense. Best results will be obtained by applying at egg hatch.
	Corn earworm *(Helicoverpa armigera)*				Thoroughly and regularly check the crop. Apply when the infestations reach economically damaging levels and repeat as required. Preferably apply to eggs. In Qld and NSW, apply to larvae only if they are less than 5 mm long. Use the higher rate when pest pressure is high.
Pastures (legume and grass-based pastures)	Wingless grasshoppers *(Phaulacridium vittatum)*	All states	160 mL/ha	3 days (Grazing) 14 days (Cut for stockfeed)	DO NOT apply more than a total of 320 mL/ha per season. For ULTRA LOW VOLUME use, see ULV application section of this label. Apply to infested areas and repeat as necessary. Spraying is most effective on newly emerged hoppers before they begin dispersing. Spray in the warmer parts of the day when hoppers are exposed. Later sprays should be applied before the start of egg laying. Good coverage is essential.
	Brown pasture looper	NSW, ACT, Vic, Tas,	50 mL/ha		Apply when pest infestation reaches an economically damaging level.

	(Ciampa arietaria)	SA, WA only			
	Blackheaded pasture cockchafer *(Aphodius tasmaniae)*		100 mL/ha		Spraying is most effective when larvae are detected and treated early. Suspect paddocks should be dug after the first substantial rain in April/May and inspected to ensure grubs are present in sufficient numbers to warrant treatment. Spraying after June will give poorer results.
	Redlegged earth mite (*Halotydeus destructor*)				Pre-emergence: Apply by ground rig only. Treat infested paddocks after sowing but prior to crop emergence when soil is moist. Monitor Redlegged earth mite numbers and re-treat if necessary. DO NOT apply as a ULV application.
	Redlegged earth mite (*Halotydeus destructor*), Blue oat mite (*Penthaleus major*)		50 mL/ha		Apply when mite numbers reach damaging levels. DO NOT use as a ULV application. Autumn/winter: Apply 4 to 7 weeks after the opening rains in late autumn/early winter when RLEM are present (2 - 3 weeks after egg hatch occurs). Alphaguard is rain fast after spray deposits have dried on the leaf surface. Alphaguard can be mixed with herbicides used for winter cleaning of sub-clover pastures. Consult the Compatibility section of this label for details. Spring: If RLEM/BOM numbers increase in the spring, spray when damage is observed and again before diapause egg production begins. Alphaguard can be mixed with herbicides used for spray topping pastures if time coincides. Consult the Compatibility section of this label for details. DO NOT use as a pre-emergence treatment.
Pome fruit: Apples, Pears	Apple weevil (*Otiorhynchus cribricollis*) Garden weevil (*Phlyctinus callosus*)	NSW, Vic, SA, WA only	Dilute spraying 100 mL/100 L water Concentrate Spraying Refer to the Mixing/Application Section	14 days (Harvest)	Spray approximately 1 - 2 litres of solution onto the crotch, trunk and the soil at the base of each tree at peak weevil emergence. This usually occurs in late October – late November for garden weevil, and late November – mid December for apple weevil. Monitor weevil emergence using a single sided cardboard trunk band. Continue monitoring after spraying as a second spray may be needed 3 - 4 weeks later. 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.
Rice (both aerial and drill sown)	*Common armyworm (Mythimna convecta)*	NSW, WA only	200 mL/ha	7 days	DO NOT apply more than a total of 400 mL/ha per season to any one crop. Inspect crops regularly for the presence of grubs from flowering onwards. Apply when rice-damaging pest numbers first appear. Apply by aircraft

					in 20-30 L of water/ha to drained fields only. Spray in the cool of the day (early morning or late afternoon) when larvae are most active. Monitor crop closely and re-treat if necessary. Poor control may occur in crops that have lodged. See application section for correct water rates.
	Bloodworm		100 mL/ha		Apply to water immediately after sowing using helicopter or fixed-wing aircraft. A second treatment may be required approximately 10 to 14 days later. Plants are not vulnerable to bloodworm damage after secondary roots have developed. DO NOT release water from treated areas off-farm until the retention period specified by local irrigation authorities have been met.
Sorghum	Com earworm *(Helicoverpa armigera)* Native budworm *(Helicoverpa punctigera)*	Qld, NSW, ACT, NT, WA only	300 or 400 mL/ha	7 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section in this label. Crop checking should commence when the head emerges from the boot and continue at daily intervals until the end of flowering for midge and at weekly intervals until maturity for *Helicoverpa armigera*. DO NOT apply to tight headed varieties. Apply when there are 2 or more actively feeding larvae per head, or when numbers are sufficient to cause economic damage. Use the higher rate if longer residual control is required. Preferably apply to eggs. Apply to *H. armigera* larvae only if they are less than 5 mm long. Repeat as required.
	Sorghum midge *(Contarinia sorghicola)*		100 or 200 mL/ha		Apply when numbers reach 1 to 2 per head, between head emergence and the end of flowering. Repeat as required. Use the higher rate for increased residual protection.
Soybeans	Native budworm *(Helicoverpa punctigera)*	Qld, NSW, ACT, NT, WA only	300 or 400 mL/ha	7 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section in this label. Thoroughly and regularly check the crop. Apply when the number of larvae feeding on flowers plus pods reaches 1 to 2 per metre of row. Repeat as required. Use the higher rate if larvae longer than 10 mm are present. Best results will be obtained by applying at egg hatch.
	Corn earworm *(Helicoverpa armigera)*				Thoroughly and regularly check the crop. Apply when numbers are sufficient to cause economic damage. Preferably apply to eggs. In Qld and NSW, apply to larvae only if they are less than 5 mm long. Repeat as required. Use the higher rate when pest pressure is high.
Stone fruit: Apricots, nectarines, peaches, plums	Apple weevil (*Otiorhynchus cribricollis*) Garden weevil (*Phlyctinus*	WA only	Dilute spraying 100 mL/100 L water Concentrate Spraying Refer to the	14 days (Harvest)	Spray approx. 1-2 L of solution onto the crotch, trunk and soil at the base of each tree at peak weevil emergence. This is usually late October - late November for garden weevil, and late November - mid December for apple weevil. Monitor weevil emergence using a single sided cardboard trunk band. Continue monitoring after spraying as a second spray 3-4

	callosus)		Mixing/Application Section		weeks later may be needed. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. (See General Instructions).
Sunflowers	Native budworm *(Helicoverpa punctigera)*	Qld, NSW, Vic, ACT, NT, WA only	300 or 400 mL/ha	21 days (Harvest)	TO PROTECT BEES and ensure adequate pollination, application during flowering should be avoided. If application is necessary at flowering, apply early morning or late afternoon when bees are not actively foraging. For ULTRA LOW VOLUME use, see ULV application section in this label. Crop checking should be aimed to detect larvae as they hatch. Small larvae are easier to kill than large larvae. Apply when the infestation reaches an average of 2-3 larvae per head or when economic damage is occurring. Repeat as required. Apply before the heads turn downwards to ensure adequate coverage. Use the higher rate if larvae longer than 10 mm are present. Best results will be obtained by applying at egg hatch.
	Corn earworm *(Helicoverpa armigera)*				Thoroughly and regularly check the crop. Apply when numbers are sufficient to cause economic damage. Preferably apply to eggs. In NSW and Qld, apply to larvae only if they are less than 5 mm long. Repeat as required. Use the higher rate under heavy pest pressure.
	Grey cluster bug *(Nysius clevelandensis),* Rutherglen bug *(Nysius vinitor)*	Qld, NSW, Vic, ACT, NT, WA only	300 or 400 mL/ha		Apply from budding when adult numbers per plant reach 10 to 15 in dryland crops and 20 to 25 in irrigated crops. After flowering, apply when adult numbers on the face of heads reach 20 to 25. Repeat as required. The higher rate should be used when numbers are very high.
	Rutherglen bug *(Nysius vinitor)*	Vic, Tas, WA only	250 mL/ha		Apply from budding when adult numbers per plant reach 10 to 15 in dryland crops and 20 to 25 in irrigated crops. After flowering, apply when adult numbers on the face of heads reach 20 to 25. Repeat as required.
Sweetcorn	Native budworm *(Helicoverpa punctigera)* Com earworm *(Helicoverpa armigera)*	All states	300 or 400 mL/ha	7 days (Harvest)	For ULTRA LOW VOLUME use, see ULV application section in this label. Thoroughly and regularly check the crop. The level of cob damage tolerated varies with market requirements. Fresh Market Corn Apply at 5-8 day intervals, accordingly to pest incidence, from tassel emergence until the silks wither. Processing Corn Apply from early silking according to pest incidence. Larvae in protected feeding sites within the cob are not effectively controlled. Apply before this situation occurs. Best results will be obtained by applying at egg hatch. Use the higher rate if larvae longer than 10 mm are present. To

					help contain pyrethroid resistance in *Helicoverpa armigera* in Summer crops, DO NOT apply to corn earworm longer than 5 mm.
Tobacco	Native budworm (*Helicoverpa punctigera*) Tobacco budworm (*Helicoverpa armigera*)	Vic, WA, Qld only	30 or 40 mL/100 L	7 days (Harvest)	Apply from just after transplanting on a 7 to 10 day schedule, according to pest incidence. Apply as a medium to fine spray using hollow and/or solid cone nozzles. The spray volume should be gradually increased as the plants grow, from 200 L/ha just after transplanting to 1000 L/ha at maturity. Use the higher rate when larvae longer than 10 mm are present or when egg laying is intense.
Tomatoes (bush and trellis)	Native budworm (*Helicoverpa punctigera*)	All states	ULTRA LOW VOLUME 300 or 400 mL/ha LOW VOLUME 200, 300 or 400 mL/ha HIGH VOLUME 20, 30 or 50 mL/100 L	1 day (Harvest)	DO NOT apply to trellis tomatoes by aircraft. Apply on a 7 to 10 day schedule while the pests are active. Use the middle rate when pest activity is high and/or when larvae between 10 and 20 mm in length are present. Use the highest rate when larvae longer than 20 mm are present and/or when interruption of the schedule enables a very severe infestation to develop. ULTRA LOW VOLUME See ULV application section in this label. LOW VOLUME Ground rig application: Apply in 100 to 400 L of water per hectare as a fine spray. Aerial application: Apply in a minimum of 10 L of water per hectare as a spray of 100 to 150 microns VMD. HIGH VOLUME Apply as a medium to fine spray. Gradually increase the spray volume as the plants grow, from 200 L/ha just after transplanting establishment to 1000 L/ha at maturity.
	Tomato grub (*Helicoverpa armigera*)	Vic, Tas, SA, WA only			
	Cluster caterpillar (*Spodoptera litura*)	Qld, NSW, ACT, WA, NT only			
	Tomato grub (*Helicoverpa armigera*)	Qld, NSW, NT only	ULTRA LOW VOLUME 300 mL/ha LOW VOLUME 300 mL/ha HIGH VOLUME 30 mL/100 L		Thoroughly check the crop at 2-3 day intervals from transplanting/emergence. Apply according to pest incidence. Preferably apply to eggs. Apply to larvae only if they are less than 5 mm long. Apply using the methods described for native budworm above.
	Plague thrips (*Thrips imaginis*)	All States	ULTRA LOW VOLUME 130 mL/ha LOW VOLUME		The crop should be frequently checked when it is flowering for the presence of the pest. Apply when the infestation reaches an economically damaging level, using the application methods described for native budworm above.

			130 mL/ha HIGH VOLUME 18 mL/100 L		

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