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



ALPHA-CYPERMETHRIN 100 EC Insecticide

ACTIVE CONSTITUENT: 100g/L ALPHA-CYPERMETHRIN SOLVENT: 735g/L LIQUID HYDROCARBON

GROUP **3A** INSECTICIDE

For control of certain insect pests in Cereals, Rice, Cotton, Sunflowers, Sweetcorn, Maize, Soy, Navy and Mung beans, Sorghum and Tomatoes as per DIRECTIONS FOR USE Table.

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

4 FARMERS AUSTRALIA PTY LTD A.B.N. 51 160 092 428 1 / 70 McDowell Street, Welshpool, WA 6106 Tel: (08) 9356 3445 www.4farmers.com.au

In a Transport Emergency Dial 000 Police or Fire Brigade	Special Poisons Advice: 13 11 26
---	-------------------------------------

GENERAL INSTRUCTIONS

4FARMERS ALPHA-CYPERMETHRIN 100 EC INSECTICIDE is a contact and residual insecticide. It can be used as a protective agent when applied at regular intervals or as a knockdown treatment to control existing larvae. Best results will be obtained by spraying at egg hatch. Thorough coverage is essential to ensure adequate control. Apply during the cooler parts of the day or night.

Ground Application

For low volume spraying of field crops with ground rigs, use a total volume of 50 to 200L/ha except for sweet corn, tomatoes and tobacco – where higher volumes should be used. Drop arms should be used on ground rigs in row crops taller than 300mm. The application should be made as a fine spray, preferably using hollow cone nozzles and a droplet size of 150 or 200 microns.

Aerial Application

Use at least 10L/ha of total spray volume unless advised otherwise. If possible spray in a cross wind. Avoid spraying in calm conditions or when wind is light and variable.

Mixing

Add the required quantity to water in the spray tank and mix thoroughly. Maintain agitation during mixing and application. Product is compatible with diesel dilution.

Compatibilities

While there are no specific recommendations for compatibilities, before mixing the following guidelines should be followed.

Follow the general mixing guidelines for mixing wetable powders, granules and flowables. Add the powder/granule/flowable to the spray tank (\sim 2/3 full of water) first and then add Alpha-cypermethrin.

While there are no specific mixing problems known, always check the stability of any novel mixes with a jar test.

EC formulations may enhance the foliar activity of some herbicides seek additional advice if other components of the proposed mix specify No wetters or oils.

Compatibility is reported with similar products for mixes with glyphosate, Spray.Seed, Simazine, Atrazine, 2,4-D amine, 2,4-D Ester, MCPA, 2,4-DB, Dimethoate, and the grass specific products – Fops and Dims.

Compatible with spray oils and 4Farmers Oil Ester.

In all uncertain situations, if in doubt, seek expert advice before proceeding with that mix.

Protection of Wildlife, Fish, Crustaceans and Environment

Dangerous to fish. **DO NOT** contaminate dams, ponds, rivers, waterways and drains with this chemical or used container. Do not spray directly onto humans, exposed food or food utensils.

Protection of Livestock

Dangerous to bees. Do not spray any plant in flower while bees are foraging.

Storage and Disposal

Store in the closed, original container in a cool, dry, well-ventilated area (preferably locked), away from children, animals, food, feedstuffs, seed and fertiliser. Do not store for prolonged periods in direct sunlight or below 4°C. Triple or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush, puncture and bury empty containers in a local landfill. If not available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

Safety Directions

Product is harmful if swallowed. Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. Do not inhale vapour or spray mist. When preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and face shield or goggles. If product in eyes, washes it out immediately with water. After use and before eating, smoking or drinking, wash loves, face shield or goggles and contaminated clothing. Further information refer to SDS

First Aid

If poisoning occurs, contact a doctor or Poisons Information centre on 13 11 26. If swallowed, and if more than 15 minutes from a hospital induce vomiting preferably using Ipecac Syrup APF.

Safety Data Sheet

For further information please refer to the Safety Data Sheet. For a copy visit our website at www.4farmers.com.au

Conditions of Sale

The use of ALPHA-CYPERMETHRIN 100 EC Insecticide being beyond the control of the manufacturer, no warranty expressed or implied is given by 4 Farmers Australia Pty Ltd regarding its suitability, fitness of efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and 4 Farmers Australia Pty Ltd accepts no responsibility for any consequence whatsoever resulting from the use of this product.

Withholding Periods

Tomatoes & Crucifers: Do not harvest for 1 day after application.

Lettuce: Do not harvest for 3 days after application.

Winter cereals, Sweetcorn, Maize, Rice, Soybeans, Sorghum, Mung Beans, Navy Beans and Tobacco: Do not harvest for 7 days after application.

Sunflowers and Canola: Do not harvest for 21 days after application

Cotton, Linseed, Stone & Pome fruit: Do not harvest for 14 days after application.

Lucerne: Do not graze or cut for stock feed for 14 days after application.

Pasture: Do not graze for 3 days or cut for stock feed for 14 days after application.

Field peas, Lupins: Do not harvest for 4 weeks after application

Linola: Do not harvest for 12 weeks after application.

Resistance Strategy

Helicoverpa armigera (Heliothis) resistance Northern New South Wales and Queensland. To help contain pyrethroid resistance in *Helicoverpa armigera*, the Summer Crop Insecticide strategy as developed by the Queensland Department of Primary Industries and the New South Wales Department of Agriculture and Fisheries should be adhered to. Failure to observe the strategy may result in widespread resistance affecting the future viability of summer cropping.

GROUP **3A** INSECTICIDE

Exclusion of liability

ALPHA-CYPERMETHRIN 100 EC insecticide contains the pyrethroid insecticide, ALPHA-CYPERMETHRIN. Some Helicoverpa spp.in Australia have been found resistant to pyrethroids including ALPHA-CYPERMETHRIN and resistance may also show in other insect pests. Resistance results in the loss of efficacy of the product and thus in yield losses. Since the occurrence of resistance cannot be foreseen, 4 Farmers Australia Pty Ltd accepts no responsibility for any loss or damage to crops resulting from the failure of 4FARMERS ALPHA-CYPERMETHRIN 100 EC Insecticide to control resistant strains. Where 4FARMERS ALPHA-CYPERMETHRIN 100 EC Insecticide or other pyrethroid insecticides have previously been found to be ineffective in controlling the insect pests claimed in this label the 4FARMERS ALPHA-CYPERMETHRIN 100 EC Insecticide should not be used. Advice as to alternative treatments should be sought in such cases.

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

Directions for use

RESTRAINT: DO NOT apply if rain is expected within six (6) hours of spraying

CEREALS	CEREALS						COTTON						
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS	CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS		
Winter Cereals	Cutworm (Agrotis spp)	Old, WA, NT, ACT NSW only		7 days	Check emerging and established crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in late afternoon or evening. In NSW do not spray before May or after August.	Cotton	Cotton Bollworm (Helicoverpa spp.) Native budworm	Qld, NSW, WA, NT only	300mL/ha	14 Days	Apply to coincide with egg hatching as indicated by field checks: Spray BEFORE larvae are in protected feeding sites. Use when egg laying is light ie. – 5 or 20 brown eggs/m or 2 or 5 newly hatched larvae per 100 terminals.		
	Pasture Webworm (Hednota spp)	WA only			Pre Planting: may be applied with knockdown herbicides or to planting. Apply from the last week in May when the larvae have emerged- Pasture should be closely grazed to ensure good spray		(Helicoverpa punctigera)		400mL/ha		Apply to coincide with egg hatching as indicated by field checks: Spray BEFORE larvae are in protected feeding sites. Use when egg laying is heavy and larvae < 5mm long are present.		
					penetration. Use high water volumes eg. 100L/ha. Do not apply on dense pasture.				500mL/ha		Apply to coincide with egg hatching as indicated by field checks: Spray BEFORE larvae are in protected		
		11 111 107	1/0 14		Post crop emergence: Inspect crop regularly from emergence and spray at first sign at pest activity.						feeding sites. Use when egg laying is heavier and continuous, larvae < 5mm long and residual control is required.		
	Common Armyworm (Mythimna convecta) Southern Armyworm (Persectania ewinaii)	Vic, WA, ACT, Tas only	160mL/ha		Apply before head lopping occurs when larval numbers exceed two or more per square meter. Spray in the cool of the day (late afternoon) when the larvae are most active. Spray to achieve good crop penetration. This rate is effective against small (6mm) and Large (20mm) grubs. This rate is effective if added to 840mL diesel and sprayed through		Rough Bollworm (Earias huegeliana)		300 or 400mL/ha		Apply when an average of 2 or more larvae are present per 100 boils. 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 greater than 10mm are present.		
	ewingii)	NSW Only	_		Micronair equipment at a rate of 1 Litre of mixture /ha. Spray in the cool at to day (late afternoon) when larvae are most active.								
	Redlegged earth mite (Halotydeus destructor) Blue oat mite (Penthaleus major)	NSW, Vic, WA, ACT, Tas & SA only	50mL/ha		Spray seedling crops if silvering or whitening (bleaching) of the leaves occurs 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 use as a bare earth treatment.								
Maize	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armigera)	Old, NT ACT, NSW, Vic only	300 or 400mL/ha		Cob damage tolerated is variable according to market requirements. For fresh corn market spray at tassel emergence then at intervals at 5 to 8 days until silks wither. For processing corn and maize spray at early silking. Use the higher rate if larvae are present. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5 mm In Northern NSW & Old.								
Rice	Common Armyworm (Mythimna convecta)	NSW only	200mL/ha		Do NOT use more than a total of 400mL/ha per season. Apply to drained fields only. Inspect crop regularly for the presence of grubs. Apply by aircraft in 20-30 Litres of water /ha. Spray In the cool at the day (early morning or late afternoon) when larvae are most active.								
Sorghum	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armigera)	Old, NSW, WA, & NT only	300 or 400mL/ha		Apply when larval numbers exceed two / head. Use the higher rate if greater residual control is required. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm In Northern NSW &Qld.								
	Sorghum midge (Contarinia sorghicola)		100 or 200mL/ha		Spray when Midge numbers are one or two / head, from emergence to the completion of flowering. Use the higher rate if greater residual control is required.								

CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS				
Lupins	Native budworm (Helicoverpa punctigera)	Vic, ACT, SA, NSW only	200 or 300mL/ha	4 weeks	Inspect the crop regularly. Spray when damaging pest numbers first appear on the crop and repeat i necessary. Use the higher rate if larvae larger than 10mm are present.				
		WA only	120mL/ha		Check for caterpillars of 20mm size and if damage to pods is imminent. When caterpillars are small, they do not damage the pods and numbers may reduce naturally.				
	Cutworm (Agrotis spp)	ACT, WA, NSW only	75mL/ha		Check for caterpillars (late afternoon or evening) when larvae are most active: Inspect crop regularly from emergence and spray at first sign at pest activity. Spray in the cool of the day (late afternoon				
	Common Armyworm (Mythimna convecta) Southern Armyworm (Persectania ewingii)	ACT, NSW, only	160mL/ha		Spray in the cool of the day (late afternoon) when larvae are most active.				
Peas (field)	Pea weevil (Bruchus pisorum)	Vic, WA, ACT, Tas only	160 or 200mL/ha		Check crops for adult weevils every three to four day from beginning of flowering. Apply during flowering prior to egg laying when the population is one or more per 25 sweeps of the sweep net.				
	Native budworm (Helicoverpa punctigera)	NSW, SA, only	160mL/ha		Check crops for larvae every three to four days from beginning of flowering. Spray open, less dense crop Spray when damaging pest numbers first appear on the crop and repeat if necessary.				
			200 or 300mL/ha		Check crops tor larvae every three to four days from beginning of flowering. Spray when damaging pest numbers first appear on the crop and repeat if necessary. Use the higher rate if larvae are bigger tha 10mm and when greater residual control is required.				
	Cutworm (Agrotis spp)	WA, ACT, NSW, only	75mL/ha		Check for caterpillars crawling on the soil surface (late afternoon) when larvae are most active: Inspect crop regularly from emergence and spray at first sigr at pest activity. Spray in the cool of the day (late afternoon).				
	Redlegged earth mite (Halotydeus destructor) Blue oat mite (Penthaleus major)	Vic, WA, Tas, NSW, SA, only	50mL/ha		Apply to established crops when mites reach damaging levels. DO NOT spray as a bare earth treatment.				
Soy-beans	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armigera)	Qld, NT, ACT, NSW only	300 or 400mL/ha	7 Days	Apply when flower or pod feeding numbers reach 1 or 2 or more present per metre of row. It Is essential to detect and treat infestations in the early stages. When the canopy is dense, or greater residual control is required, use the higher rate. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm In Northern NSW & Old.				

CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS				
Lucerne (seed & forage)	Native budworm (Helicoverpa punctigera)	Vic, SA, Tas, NSW, WA only	160mL/ha	14 days	DO NOT use more than a total of 160mL/ha per cut. Apply when damaging pest numbers appear on the crop in economic proportions.				
	Green mirid (Creontiades dilutus)	Vic, SA, Tas only							
Pasture (legume and grass)	Wingless grasshopper (Phaulacridium vittatum)	Vic, SA, Tas, NSW, WA only		3 days graze.	DO NOT use more than a total of 320mL/ha per cut. Apply when hoppers appear on the pastures. Spray areas infected before insects disperse. If mature populations appear, spray before egg lying.				
	Brown pasture looper (Ciampa arietaria)		50mL/ha	14 days (Cut for stock feed)	Apply when the damaging pest numbers appear on the crop in economically damaging proportions. Inspect the pasture regularly. Take soil samples after the first significant rain in April – May. Spray when damaging pest numbers first appear in sufficient numbers to warrant treatment.				
	Blackheaded cockchafer (Aphodius tasmaniae)	Vic, SA, NSW only	100mL/ha						
					Spraying after June will give poor results.				
	Redlegged earth mite	Vic, ACT, Tas, WA, SA,	50mL/ha		Insecticide can be mixed with most herbicides used for cleaning legume pastures or pasture topping				
	(Halotydeus destructor) Blue oat mite (Penthaleus major)	NSW only			Autumn/Winter: Apply 2 or 3 weeks after the openin rains, when egg hatching occurs. Insecticide is rainfast after spraying deposits have dried on the leaf surface.				
					Spring: Spray before dialectica egg production if RLEM / BOM numbers increase.				

CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS
Apples Pears Apricots Nectarine Peach Plums	Garden weevil (Phlyctinus callosus) Apple weevil (Octiorhynchus cribricollis)	WA only	100mL/100L water	14 days	Check weevil emergence using a single sided cardboard trunk band in late Oct – late Nov. (garden weevil) and late Nov. or mid Dec (apple weevil). Apply 1 or 2L of solution on the trunk & crotch of the tree, as well as the soil at its base at peak weevil emergence. A second spray may be required as determined by continued monitoring.

TREES &	FREES & ORNAMENTALS													
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS									
Eucalypts	Tasmanian Eucalyptus leaf beetle (Chrysophtharta bimaculata)	Tas only	250mL/ha	-	Use aircraft or helicopter using either hydraulic or Micronair equipment. Micronair application in 5L of water / Ha has proved effective. Apply insecticide to the crowns of trees before insects cause defoliation. Treatment will control from small larvae to adult beetle.									
Banksia	Banksia moth (Anthophore arcuatallis)	WA only	20mL/100L		Regularly spray at 2-week intervals from early flower development until blooms are fully developed. Commence spraying when blooms are immature.									

TOBACCO					
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS
Tobacco	Native Budworm (Helicoverpa punctigera) Tobacco Budworm (Helicoverpa armigera)	Vic only	30 or 40mL/100L	7 days	Apply on a 7 to 10 day schedule after transplanting, while pests are active, In a volume application of 200 to 1.000L/ha depending on crop height. Use a higher rate when egg laying is intense or if larvae are bigger than 10 mm. Apply as a fine spray using hollow cone nozzles.

GRAPEVIN	GRAPEVINES (Non-bearing)														
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS										
Grapevines (non bearing)	Pink Cutworm (Agrotis munda), Apple weevil (curculio beetle) Garden weevil (Phlyctinus callosus)	SA only	100mL/100L	-	Check young vines regularly during Spring to early Summer. Spray at the first signs of leaf damage. Apply the insecticide to the leaves, cane and soil (to a diameter of 30cm) around each vine. Approx. 70 or 80mL of the spray should suffice for each vine. If pests persist, a second application may be required in three weeks, please monitor the situation.										

	_					Cauliflowers Brussels sprouts	Cabbage white butterfly		400mL/ha		reinfestation is continuous, treatment every 7 to 10 may be required. Add wetter (1000g/L) at a rate of
OIL SEEDS	S PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS	Broccoli Kale	(Pieris rapae) Cabbage Moth				15 or 20L/100L of spray mixture.
Canola	Native budworm (Helicoverpa punctigera) Tobacco Looper (Chrysodeixis argentifera)	Vic, WA, Tas, NSW, only Vic, WA, Tas, NSW, SA only	200 or 300mL/ha	21 Days	DO NOT use more than a total of 400mL/ha per season. 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. A total volume of 30 or 35L/ha should suffice. Use the higher rate if larvae larger than 10mm are present.	Turnips Chinese cabbage Kohlrabi	(Plutella xylostella) Cluster Caterpillar (Spodoptera litura)	Vic, ACT, NSW, WA only	High vol: 50mL/ha		When applying by ground equipment use a fine spray with droplet size of 100 to 200 microns. Apply in 100 to 600L water/ha. Aircraft Application: Use 20 or 60L water /ha with a droplet size of 100 to 150 microns. HIGH VOLUME: Use a medium spray with droplet size of 200 to 400 microns. Apply 600L spray mixture per hectare just after transplanting and increase gradually to 1000L/ha toward maturity.
	Vegetable weevil	WA only	400mL/ha		Inspect the crop regularly. Spray when damaging pest numbers first appear on the crop and repeat border spraying if necessary to control invading	Lettuce	Helicoverpa spp	ACT, NSW only	50mL/100L or 400mL/ha	3 days	Inspect the crop regularly. Spray when damaging pest numbers first appear on the crop and repeat if necessary. Please read RESISTANCE STRATEGY.
Linola	Native budworm (Helicoverpa punctigera)	Vic, WA, Tas, NSW, SA only	160 or 200mL/ha	12 weeks	adults. Spray should be applied when cotyledons and leaves are eaten. DO NOT use more than a total of 400mL/ha per season. Inspect the crop regularly during and Immediately after flowering. Apply when damaging pest numbers first appear on the crop.	Sweet Corn	Corn earworm (Helicoverpa armigera)	All States	300 or 400mL/ha	l day	Cob damage tolerated is variable according to market requirements. For fresh corn market spray at tassel emergence then at intervals at 5 to 8 days until silks wither. For processing corn and maize spray at early silking. Use the higher rate if larvae are present. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm in Old.
Linseed	Native budworm (Helicoverpa punctigera)	Vic, WA only	200 or 300mL/ha	14 days	For aerial application: Apply during the cooler part of the day. A total volume of 30 or 35L/ha should suffice. Use the higher rate if larvae larger than 10mm are present. Check crops for insects every three to four days from beginning of flowering. Spray when damaging pest numbers first appear on the crop and repeat if	Tomatoes	Native Budworm (Helicoverpa punctigera) Tomato grub (Helicoverpa armigera)	All States	Programme Application: Low vol: 200 or 300mL/ha High vol: 20 or 30mL/100L	I day	Do not apply to trellis tomatoes by aircraft. Programme application: Apply on a 1 to 10 day schedule while pests are active. Use the higher rate when egg laying is intense. Apply as a fine spray using hollow cone nozzles. For low volume application apply in 100 to 400 L / ha by ground or minimum of 10 L/ha by air. For high volume application apply 200 L of spray mixture per hectare
	Cutworm (Agrotis spp)	NSW, ACT only	75mL/ha		necessary. Use the higher rate if larvae are bigger than 10mm and when greater residual control is required. Check emerging and established crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in		Cluster Caterpillar (Spodoptera litura)	Vic, NT, NSW, Qld, WA, ACT only	Established Infestations: Low vol: 400mL/ha		after transplanting and increase gradually to 1,000 L/ha at maturity. Established Infestations: Apply these rates to established infestations or escape situations. DO NOT apply to Tomato grub larvae > 5mm in length.
Sun flowers	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armigera)	Vic, NT, Tas, NSW, Qld only	300 or 400mL/ha	21 days	late afternoon. Apply when larval numbers average two or three / head, or where larvae are damaging plants. Apply to coincide with egg hatching. Use the higher rate if greater residual control is required. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm In Northern NSW & Old.		Plague Thrips (Thrips imaginis)	Vic, NT, Tas, NSW, Qld, WA, ACT only	High vol: 50mL/100L Low vol: 130mL/ha High vol: 18mL/100L		Apply as required using methods stated above in the critical comments section for control of Native budworm, tomato grub and Cluster caterpillar on tomatoes.

GRAPEVINES (Non-bearing)						VEGETABLES					
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS	CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS
Grapevines (non bearing)	Pink Cutworm (Agrotis munda), Apple weevil (curculio beetle) Garden weevil (Phlyctinus callosus)	SA only	100mL/100L	-	Check young vines regularly during Spring to early Summer. Spray at the first signs of leaf damage. Apply the insecticide to the leaves, cane and soil (to a diameter of 30cm) around each vine. Approx. 70 or 80mL of the spray should suffice for each vine. If pests persist, a second application may be required in three weeks, please monitor the situation.	Bean (Mung & Navy)	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armigera)	Qld, NSW, ACT, NT only	300 or 400mL/ha	7 days	Apply when flower or pod feeding numbers reach I or 2 or more present per metre of row. It Is essential to detect and treat infestations in the early stages. When the canopy is dense, or greater residual control is required, Use the higher rate. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm In Northern NSW & Old.
						Cabbage Cauliflowers Brussels sprouts	Helicoverpa spp Cabbage white butterfly	All States	Low vol: 400mL/ha	1 day	Apply when pest populations indicate. When reinfestation is continuous, treatment every 7 to 10 may be required. Add wetter (1000g/L) at a rate of
OIL SEED	-					Broccoli	(Pieris rapae)				15 or 20L/100L of spray mixture.
CROP	PEST	STATE (S)	RATE	WHP	CRITICAL COMMENTS	Kale Turnips	Cabbage Moth (Plutella xylostella)				LOW VOLUME:
Canola	Native budworm (Helicoverpa punctigera) Tobacco Looper	Vic, WA, Tas, NSW, only Vic, WA, Tas,	200 or 300mL/ha	21 Days	DO NOT use more than a total of 400mL/ha per season. Inspect the crop regularly during and immediately after flowering. Apply when damaging pest numbers first appear on the crop.	Chinese cabbage Kohlrabi	Cluster Caterpillar (Spodoptera litura)	Vic, ACT, NSW, WA only	High vol: 50mL/ha		When applying by ground equipment use a fine spray with droplet size of 100 to 200 microns. Apply in 100 to 600L water/ha. Aircraft Application: Use 20 or 60L water /ha with a droplet size of 100 to 150 microns.
	(Chrysodeixis argentifera)	NSW, SA only			For aerial application: Apply during the cooler part of the day. A total volume of 30 or 35L/ha should suffice. Use the higher rate if larvae larger than 10mm are present.						HIGH VOLUME: Use a medium spray with droplet size of 200 to 400 microns. Apply 600L spray mixture per hectare just after transplanting and increase gradually to 1000L/ha toward maturity.
	Vegetable weevil	WA only	400mL/ha		Inspect the crop regularly. Spray when damaging pest numbers first appear on the crop and repeat border spraying if necessary to control invading	Lettuce	Helicoverpa spp	ACT, NSW only	50mL/100L or 400mL/ha	3 days	Inspect the crop regularly. Spray when damaging pest numbers first appear on the crop and repeat if necessary. Please read RESISTANCE STRATEGY.
Linola	Native budworm (Helicoverpa punctigera)	Vic, WA, Tas, NSW, SA only	160 or 200mL/ha	12 weeks	border spraying it necessary to control invading adults. Spray should be applied when cotyledons and leaves are eaten. DO NOT use more than a total of 400mL/ha per season. Inspect the crop regularly during and Immediately after flowering. Apply when damaging pest numbers first appear on the crop.	Sweet Corn	Corn earworm (Helicoverpa armigera)	All States	300 or 400mL/ha	I day	Cob damage tolerated is variable according to market requirements. For fresh corn market spray at tassel emergence then at intervals at 5 to 8 days until silks wither. For processing corn and maize spray at early silking. Use the higher rate if larvae are present. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae > 5mm in Old.
					For aerial application: Apply during the cooler part of the day. A total volume of 30 or 35L/ha should suffice. Use the higher rate if larvae larger than 10mm are present.	Tomatoes	Native Budworm (Helicoverpa punctigera) Tomato grub (Helicoverpa	All States	I States Programme Application: Low vol: 200 or 300mL/ha High vol: 20 or 30mL/100L	l day	Do not apply to trellis tomatoes by aircraft. Programme application: Apply on a 1 to 10 day schedule while pests are active. Use the higher rate when egg laying is intense. Apply as a fine spray using hollow cone nozzles. For low volume
Linseed	Native budworm (Helicoverpa punctigera)	Vic, WA only	200 or 300mL/ha	14 days	14 days Check crops for insects every three to four days from beginning of flowering. Spray when damaging pest numbers first appear on the crop and repeat if necessary. Use the higher rate if larvae are bigger than 10mm and when greater residual control is		armigera)				application apply in 100 to 400 L / ha by ground or minimum of 10 L/ha by air. For high volume application apply 200 L of spray mixture per hectare after transplanting and increase gradually to 1,000 L/ha at maturity.
	Cutworm (Agrotis spp)	NSW, ACT only	75mL/ha		required. Check emerging and established crops in the late afternoon and evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in late afternoon.		Cluster Caterpillar (Spodoptera litura)	Vic, NT, NSW, Old, WA, ACT only	Established Infestations: Low vol: 400mL/ha High vol: 50mL/100L		Established Infestations: Apply these rates to established infestations or escape situations. DO NOT apply to Tomato grub larvae > 5mm in length.
Sun flowers	Native budworm (Helicoverpa punctigera) Corn earworm (Helicoverpa armiaera)	Vic, NT, Tas, NSW, Qld only	300 or 400mL/ha	21 days	Apply when larval numbers average two or three / head, or where larvae are damaging plants. Apply to coincide with egg hatching. Use the higher rate if greater residual control is required. To help contain pyrethroid resistance in Helicoverpa armigera in summer crops, do not apply to Corn earworm larvae		Plague Thrips (Thrips imaginis)	Vic, NT, Tas, NSW, Qld, WA, ACT only	Low vol: 130mL/ha High vol: 18mL/100L		Apply as required using methods stated above in the critical comments section for control of Native budworm, tomato grub and Cluster caterpillar on tomatoes.

Withholding Periods

Tomatoes & Crucifers: Do not harvest for 1 day after application.

Lettuce: Do not harvest for 3 days after application.

Winter cereals, Sweetcorn, Maize, Rice, Soybeans, Sorghum, Mung Beans, Navy Beans and Tobacco: Do not harvest for 7 days after application.

Sunflowers and Canola: Do not harvest for 21 days after application.

Cotton, Linseed, Stone & Pome fruit: Do not harvest for 14 days after application.

Lucerne: Do not graze or cut for stock feed for 14 days after application.

Pasture: Do not graze for 3 days or cut for stock feed for 14 days after application.

Field peas, Lupins: Do not harvest for 4 weeks after application.

Linola: Do not harvest for 12 weeks after application.