

**POISON**

KEEP OUT OF REACH OF CHILDREN  
READ SAFETY INSTRUCTIONS BEFORE OPENING OR USING

# CHLORPYRIFOS

**500 INSECTICIDE**

**ACTIVE CONSTITUENT:**

500 g/L CHLORPYRIFOS  
(an anticholinesterase compound)

**SOLVENT:**

488 g/L LIQUID HYDROCARBON

**GROUP 1B INSECTICIDE**

For the control of certain insect pests of fruit, vegetables, field crops and pasture and other situations and for the post-construction management of subterranean termites in accord with AS3660.2 and other insect pests as specified in the Directions for Use Table.

DO NOT USE THIS PRODUCT IN OR AROUND THE HOUSE.  
THIS PRODUCT IS TOO HAZARDOUS FOR USE BY  
HOUSEHOLDERS.

**IMPORTANT: READ THIS LEAFLET BEFORE USE**

**RELYON®**



**DIRECTIONS FOR USE AS A TERMITICIDE:****MANAGEMENT OF SUBTERRANEAN TERMITES** (All States, except Tasmania)**RESTRAINTS**

**DO NOT** apply to soils if excessively wet, immediately after heavy rain or if heavy rains are expected within 48 hours to avoid run-off of chemical. DO NOT use at less than indicated label rates.

**DO NOT** use in cavity walls, except for direct treatment of nest.

**DO NOT** use on alkaline soils in SA (use on neutral or acidic soils only) or on dolomite-based sub-slab bedding material.

**RATES OF APPLICATION**

**IMPORTANT:** Relyon Chlorpyrifos 500 Insecticide should be used as part of an overall termite management program as detailed in Australian Standard Series AS 3660. A great deal of care is required to understand construction details of the building and to apply the product in a manner which ensures a complete chemical soil barrier. Where necessary, the barrier may need to be re-applied under the building. Application equipment must be fitted with a flow meter and pressure regulator on the application device. The purpose of a chemical soil barrier is to impede and discourage concealed termite entry into a structure. Barriers may still be bridged by termites, but their entry can then be more easily detected during routine inspections. If a barrier is not complete or breached, then concealed termite entry may occur. It is often not possible to form a complete barrier around existing structures in which case other termite management options and/or more frequent inspections will also need to be considered.

SITUATION	RATE
Installing a chemical soil barrier around and under buildings. MUST NOT be used in residential areas, in or around houses, in public spaces, or in publicly accessible commercial or industrial areas	<b>Horizontal Barriers*:</b> 100mL/m <sup>2</sup>  <b>Vertical Barriers:</b> 2L/m <sup>3</sup>
Installing a chemical soil barrier around and under buildings north of the Tropic of Capricorn or where <i>Mastotermes darwiniensis</i> is a concern. MUST NOT be used in residential areas, in or around houses, in public spaces, or in publicly accessible commercial or industrial areas	<b>Horizontal Barriers*:</b> 200mL/m <sup>2</sup>  <b>Vertical Barriers:</b> 4L/m <sup>3</sup> .
Installing a chemical soil barrier around new and existing poles, eg. transmission and building poles, fence posts and palings. MUST NOT be used in residential areas, in or around houses, in public spaces, or in publicly accessible commercial or industrial areas	200mL/10L of water or creosote
Treatment of termite nest or colony.	100mL/10L of water

\*Horizontal barriers must not be used in residential areas, around houses, in public spaces or in publicly accessible commercial or industrial areas

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

CRITICAL COMMENTS
<b>Horizontal Barriers*:</b> Use 100mL of Relyon Chlorpyrifos 500 Insecticide per 5L of water and apply the mixture (emulsion) at a rate of 5L/m <sup>2</sup> . <b>Vertical Barriers:</b> Use 2L of Relyon Chlorpyrifos 500 Insecticide per 100L of water and apply the mixture at a rate of 100L/m <sup>3</sup> . See <b>APPLICATION VOLUME</b> section in <b>GENERAL INSTRUCTIONS</b> for further information. <b>200 mL/10L is equivalent to a 1% active ingredient emulsion.</b> See <b>Service requirement</b> in <b>GENERAL INSTRUCTIONS</b> for expected barrier life.
This is an optional high rate for use north of the Tropic of Capricorn, or where <i>M darwiniensis</i> is a concern. <b>Horizontal Barriers*:</b> Use 200mL of Relyon Chlorpyrifos 500 Insecticide per 5L of water and apply the mixture (emulsion) at a rate of 5L/m <sup>2</sup> . <b>Vertical Barriers:</b> Use 4L of Relyon Chlorpyrifos 500 Insecticide per 100L of water and apply the mixture at a rate of 100L/m <sup>3</sup> . See <b>APPLICATION VOLUME</b> section in <b>GENERAL INSTRUCTIONS</b> for further information. <b>4L/100L is equivalent to a 2% active ingredient emulsion.</b> See <b>Service requirement</b> in <b>GENERAL INSTRUCTIONS</b> for expected barrier life.
Trench (preferred) or rod and puddle-treat backfill, ensuring a complete and continuous treated soil barrier is provided around the pole or post, to a minimum depth of 300mm and minimum width of 150mm. Use 100L of emulsion per m <sup>3</sup> of soil. In addition, infested poles may be drilled near ground level and the cavity flooded with the emulsion. This allows seepage to form a treated soil barrier. <b>Note:</b> A 50mm gap between fence palings and soil will reduce termite attack and fungal decay. Only soil in contact with palings should be treated. • Replenishment is recommended within 2 years north of the Tropic of Capricorn and 5 years in other areas. • If the barrier is disturbed, or rain falls immediately after application, retreat to restore continuity and completeness of the barrier. Refer to Australian Standard Series AS 3660
Once the nest or colony has been located it should be broken open and flooded with emulsion. This includes nests located in trees. When treating trees, the addition of a wetting agent is suggested. Refer to Australian Standard Series AS 3660.

## APPLICATION INSTRUCTIONS

### APPLICATION EQUIPMENT

#### Hand Spraying

For hand spraying use a rose head shrouded nozzle, operating at 170 kPa, with a flow meter and pressure regulator fitted to the hand-piece.

#### Treatment Beneath Concrete Slabs or Sealed Areas

Where it is not possible or practical to remove the slab to allow direct application to the soil, use a sub-slab injector fitted with multi-directional tip (eg. a B&G or similar system) with a 5 degree upward angle (eg. 3 way or 4 way) operated at 170 kPa. Ensure a strong seal with the top of the drill hole to avoid leakage. For the best distribution, the injector needs to be held vertically, at right angles to the slab, and rotated during the application through 90 degrees (if using a 4 way dispersion tip), or through 120 degrees (for a 3 way dispersion tip).

#### Injection into Soil

Where it is not possible or practicable to trench the soil; use a soil rod with a 3 or 4 way multi-directional tip (B&G, or similar) operated at 170 kPa. The 4 way tip needs to be rotated during the application through 90 degrees and the 3 way tip through 120 degrees.

### APPLICATION VOLUME

To compensate for impervious soils such as heavy clay where application of 5L/m<sup>2</sup> would cause run-off, it may be necessary to apply a volume of emulsion less than 5L/m<sup>2</sup>. When reducing the total volume of emulsion used, increase the concentration accordingly to match the label rate by mixing the required amount of Relyon Chlorpyrifos 500 Insecticide per m<sup>2</sup> in a lesser volume of water. **DO NOT** use emulsion volumes less than 2L for every square metre to be treated.

**Note:** Use of emulsion volumes other than the recommended 5L/m<sup>2</sup> is only permitted when installing barriers in exposed soil. It is not permitted when injecting through the slab or into sealed areas.

### Existing Structures

#### a) Strategic Drilling Through Slab or Sealed Areas

For treatment of slabs when termites are entering the building through the slab, where reticulation systems do not exist, slab drilling and injection will be required. In most cases, unless there is a known severe termite hazard, grid drilling of the slab is not required. Any such need is to be determined by a licensed Pest Manager.

Treatment needs to be made around the inside of all exterior walls to complete a termite barrier, along both sides of interior wall partitions, around plumbing/electrical or piping entry points and along major cracks or expansion joints. When treating along major cracks or expansion joints it is recommended that holes are drilled alternately on either side of the crack at the recommended drill hole spacings.

For a sand base or sandy soil, apply through a row of holes drilled no more than 300mm apart and 100-200mm out from the wall, crack or pipe. For a clay base, apply through a row of holes drilled 150mm apart and 100mm from the wall, crack or pipe. Apply 10L of emulsion per linear metre and ensure the holes are securely plugged after treatment.

#### b) External Barriers

An external barrier should be installed around the perimeter of the building and should circumference all pipes and service facilities. External barriers should be created by using either a vertical or horizontal barrier, as determined by the building construction type and adjoining ground level. **An external barrier is an essential part of the treatment when relying on a chemical soil barrier to provide the full termite management system as per AS 3660.**

An external horizontal barrier is only required when prevention of concealed vertical access by termites is necessary at the perimeter. (eg. when ground level is equal to the top of a slab, where the slab is also a barrier to concealed termite movement into the building). A vertical barrier is required when prevention of concealed horizontal access is necessary (eg. where ground level is higher than building material vulnerable to concealed horizontal entry by termites).

**i) Horizontal Barrier:** Use a rose head shower nozzle operated at 170 kPa to apply the required rate of 1.5L of the correctly diluted Relyon Chlorpyrifos 500 Insecticide per linear metre (150mm wide) to soil loosened to a depth of approximately 80mm (see **APPLICATION VOLUME Section**). Not for use in home, garden, residential or public accessible spaces.

**ii) Vertical Barrier:** The vertical barrier should be at least 150mm wide and should reach down to 50mm below the top of the footings. To achieve this, trench to the top of the footings, and where this is not possible, a combination of trenching (preferably at least 300mm deep) and rodding into the base of the trench may be necessary.

Apply Relyon Chlorpyrifos 500 Insecticide emulsion at 100L per cubic metre of backfill soil, this equates to 1.5L of emulsion/linear metre of a trench 150mm wide and 100mm deep. Where the required vertical barrier is deeper than 100mm, ensure the same rate of application for the extra volume of soil. Use a rose head shower nozzle operated at 170 kPa to flood the base of the open trench and also to treat the backfill soil

as it is replaced into the trench to ensure even distribution. Where rodding is necessary, rod before the trench is treated using the spacings in the following table.

#### Rod Spacings

Heavy Clay	Clay Loams	Sands
150 mm	200 mm	300 mm

Insert the rod to the foundation foot as close as possible to the house wall ensuring the chemical is applied during insertion and withdrawal. (See **APPLICATION EQUIPMENT section, Injection into Soil**).

#### c) Suspended Floors

Install horizontal and vertical barriers as specified in Australian Standard Series AS 3660 to adjoin all substructure walls, stumps, piers, pipes and wastes using the techniques described for **external barriers around concrete slabs**. (See **Existing Structures Section**.) Not for use in home, garden, residential or public accessible spaces.

## GENERAL INSTRUCTIONS - Termite Management

### Termite Management

To minimise the risk of termite infestation, the subfloor area of buildings should be kept free of stored or waste timber and all other building materials that attract termites. Appropriate action should also be taken to eliminate any undue dampness caused by leaking water or sewerage pipes, or inadequate drainage. Subterranean termites need a constant source of moisture to survive. Provision of adequate ventilation in the subfloor area also helps to eliminate undue dampness. Pest managers using this product for termite management should advise the home owner that disturbing the treated soil barrier with subsequent construction of additions or alterations, paths, steps, landscaping etc., may render the termite management system in place ineffective unless further management options are considered.

### Colonies not in contact with the ground

Occasionally subterranean termites establish a colony in a building without having contact with the soil because they have access to a continuous supply of moisture (eg. from a faulty plumbing fixture or leaking roof). Such colonies are not affected by chemical soil barriers and should be treated as recommended for established colonies, as per Australian Standard Series AS 3660. Relyon Chlorpyrifos 500 Insecticide may be applied directly to the termite colony in such situations.

### Service Requirement

Regular, competent inspections by a licensed Pest Manager are recommended as part of an overall termite management program to determine the prevailing termite pressure and environmental conditions and consequent requirement for further termite management options. Inspections should be performed at least on an annual basis, but more frequent inspections are strongly recommended.

At the 1% application rate, Relyon Chlorpyrifos 500 Insecticide can provide an effective chemical soil barrier in subfloor regions for 4 years or more north of the Tropic of Capricorn, and 10 years or more south of the Tropic of Capricorn. At the 1% application rate, Relyon Chlorpyrifos 500 Insecticide can provide an effective chemical soil barrier in exposed situations for 2 years or more north of the Tropic of Capricorn, and up to 5 years or more south of the Tropic of Capricorn.

At the 2% application rate north of the Tropic of Capricorn, Relyon Chlorpyrifos 500 Insecticide can provide an effective chemical soil barrier in subfloor regions for 6 years or more and in exposed situations for up to 3 years or more.

The actual period of efficacy will depend on factors such as termite hazard, climatic conditions, soil types and soil disturbance and gardening/landscaping practices.

## GENERAL INSTRUCTIONS - For use as a Termiticide

### MIXING

Half fill the spray tank with water (or creosote where applicable) and add the required amount of Relyon Chlorpyrifos 500 Insecticide, then add the remaining water (or creosote) with an agitator running. If using a knapsack sprayer gently shake before using. Only mix sufficient chemical for each specific application.

### CLEANING SPRAY EQUIPMENT

After using Relyon Chlorpyrifos 500 Insecticide, empty the spray equipment completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, and drain. To wash the system, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles (for knapsack sprayers spray to waste through the nozzle). Drain and repeat the washing procedure twice. Dispose of rinsate/rinse water in accordance with **Storage and Disposal Instructions** below.

### PRECAUTIONS

DO NOT apply to surface areas in or around the home, garden, residential or public accessible area.

**RE-ENTRY TO TREATED AREAS**

DO NOT permit re-occupation of any premises until treated areas are completely dry (normally 3-4 hours) and adequately ventilated.

**PROTECTION OF PETS AND LIVESTOCK**

Before spraying, remove animals and pets from buildings and other areas to be treated. Cover or remove any open food and water containers.

Cover or remove fish tanks before spraying. DO NOT allow animals and pets to contact treated areas for at least 24 hours.

Dangerous to bees. DO NOT spray any plants in flower while bees are actively foraging.

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

VERY HIGHLY TOXIC TO FISH AND AQUATIC INVERTEBRATES. Rinse waters, and run-off from treated areas MUST NOT enter drains or waterways. For under-slab treatments, the moisture membrane MUST be installed immediately after treatment. DO NOT apply to waterlogged soils. DO NOT apply if heavy rains are expected to occur within 48 hours of application.

HIGHLY TOXIC TO BIRDS. DO NOT treat fill unless it has been placed back in the trench to form the chemical soil barrier.

DO NOT spray directly on to the foliage of plants as damage to some species is possible.

**DIRECTIONS FOR USE – AS AN INSECTICIDE****FRUIT AND VEGETABLES**

CROPS	INSECT	STATE	RATE		WITHHOLDING PERIODS
			VOL/HA	VOL/100L WATER	
Bananas	Banana scab moth	QLD, WA ONLY	<b>Aerial:</b> 1 or 2 L in a minimum of 10 L water	200 mL. Apply a minimum of 500 L water/ha	Harvest - 14 days
	Banana weevil borer	QLD, NSW, WA ONLY	Not applicable	1 or 1.8 L	
	Caterpillars	NSW, ACT, ONLY	Not applicable	200 mL	
Carrots	Light brown apple moth	All States	500 or 700 mL	NA	NA
Cassava	Cutworm	QLD, WA ONLY	700 mL		
Cole crops including cabbage, cauliflower, brussels sprouts, broccoli	Cabbage moth, Cabbage white butterfly, Cabbage aphid, Cluster caterpillar, Cabbage cluster caterpillar	NSW, ACT, VIC, TAS, SA, WA ONLY	1.5 or 2 L	150 or 200 mL	Harvest - 5 days
	Corn earworm, Native budworm	QLD, WA ONLY	1.5 L	150 mL	
	Corn earworm	NSW, ACT, VIC, SA, WA ONLY	1.5 or 2 L	150 or 200 mL	
	Native budworm	NSW, ACT, VIC, TAS, SA, WA ONLY			
	Wingless grasshopper	NSW, ACT, VIC, TAS, SA ONLY	500 mL	50 mL	
	Redlegged earth mite, Blue oat mite	NSW, WA, ACT ONLY	140 or 300 mL	NA	
Cabbage, Cauliflower	African black beetle	NSW, WA, ACT ONLY	2 L (Boom spray)	300 mL (Drench)	Harvest - 5 days
Cucurbits	White flies	NSW, WA, ACT ONLY	NA	50 mL	

CRITICAL COMMENTS
Apply from the first appearance of flower bell and repeat as populations indicate until fingers are exposed. Use high rate with onset of wet weather and/or heavy insect pressure. <b>Note:</b> Burning of young fruit may occur under poor drying conditions.
After removal of trash, apply 500-700 mL of spray depending on butt size, to the lower 30 cm of the butt and to the surrounding soil within a radius of 30 cm, ensuring thorough coverage of butt and suckers. <b>Sub-tropical areas:</b> Use high rate for annual control of borers. <b>Tropical areas:</b> Use high rate in September-November for initial spray and a follow-up with low rate in February-April should insect presence warrant a second application.
Apply from the first appearance of flower bell and repeat as populations indicate until fingers are exposed. Use as ground application only, do not apply by air.
Apply when moths are first detected. Repeat at the higher rate if there is a re-occurrence of infestation.
Apply to seedlings and soil at base of seedlings, when cutworm activity is observed.
Spray at 10 to 14 day intervals. Use high rate under heavy pest pressure. <b>Large plants:</b> Use 1000 L of spray/ha. To improve spray coverage add non-ionic wetting agents as recommended.
Apply when pests first appear. <b>Large plants:</b> Use 1000 L of spray/ha.
Apply at 10 to 14 day intervals. Use high rate under heavy pest pressure. <b>Large plants:</b> Use 1000 L of spray/ha.
Apply at 10 day intervals commencing when pests first appear. Apply at 7 day intervals under heavy pest pressure. <b>Large plants:</b> Use 1000 L/ha.
Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop
Use higher rate for severe infestations. Headlands and vegetation surrounding the crop may also need to be sprayed.
<b>Boom spray:</b> Apply in 500-1000 L of water/ha at or soon after planting as a 10-15 cm band spray. <b>Drench:</b> Apply 100 mL of diluted spray to base of each plant. Treat as soon as the first signs of infestation are observed. <b>Note:</b> If attack is prolonged, follow up boom spray or drench treatment may be necessary.
Apply when pest is first detected. If required repeat applications every 10 to 14 days.

CROPS	INSECT	STATE	RATE		WITHHOLDING PERIODS
			VOL/HA	VOL/100L WATER	
Ginger	Cutworm	QLD, WA ONLY	700 - 900 mL	NA	NA
Kiwifruit	Common armyworm, Southern armyworm, Lightbrown apple moth	NSW, ACT, VIC, WA, SA, TAS, QLD ONLY	1 L	50 mL	Harvest - 14 days
Pineapples	Pineapple mealybug, Ants	QLD, WA ONLY	Not applicable	50 or 100 mL	NA
	White grubs		5 L	NA	
Potatoes	African black beetle	NSW, ACT, WA ONLY	3 or 6 L	NA	
			900 mL		
	Whitefringed weevil	NSW, ACT, VIC, WA ONLY	6 L		
		WA, NSW, ACT ONLY	1 L		
	Wireworm	VIC ONLY	6 L		
Silver Beet	Redlegged earth mite, Blue oat mite	NSW, ACT, TAS, WA ONLY	140 or 300 mL		
Strawberries	Field crickets, Mole crickets	QLD, WA ONLY	100 mL / 10 kg bran bait/ha		
Tomatoes	Wingless grasshopper	NSW, ACT, VIC, TAS, SA, WA ONLY	500 mL	50 mL	Harvest - 3 days
	Wireworm, False wireworm	QLD ONLY	5 L/ha sprayed	NA	NA
	African black beetle	NSW, ACT ONLY	2 L (Boom Spray)	300 mL (Drench)	
	Tomato grubs	QLD, NSW, ACT, VIC, WA ONLY	1.5 or 2 L	150 or 200 mL	Harvest - 3 days
	Native budworm	TAS, WA ONLY			
	Green vegetable bug	TAS, SA, WA ONLY			
Green peach aphid	QLD, VIC, TAS, SA, WA ONLY	1 L	100 mL		

CRITICAL COMMENTS
Apply when pest population is evident from damage to the primary shoot at or below ground, or to the first leaf during growth.
Apply at green tip at least 10 days after dormant lime sulphur application and pre-blossom. Do not apply post-blossom.
Apply when pests are first seen and repeat at 90 day intervals or as necessary. Use a minimum of 3000 L of spray/ha. Use higher rate under heavy pest pressure.
Apply as a pre-plant spray, to a freshly cultivated soil surface. Incorporate immediately by rotary hoeing to a depth of 10-20 cm.
Apply the spray to the soil immediately prior to planting, ensuring thorough immediate incorporation to a depth of 15 cm. Use higher rate under heavy pest pressure.
Apply as a second spray as bands on either side of plants at final hilling-up. Ensure good incorporation of the spray immediately into the soil in the hill.
Apply pre-plant and incorporate into the soil immediately after application.
Apply at hilling-up or 7 weeks after planting as a follow-up to pre-plant incorporation.
Apply as a band spray to the soil surface incorporating immediately. Use before planting in areas where wireworms are a known problem.
Use higher rate for severe infestations. Headlands and vegetation surrounding the crop may also need to be treated.
Apply in recently ratooned strawberry patches or newly planted runners when damage or pest populations indicate. Broadcast, preferably in the late afternoon, to base of plants and inter-row space. <b>See General Instructions</b> on preparation of bran baits.
Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
Apply as a band at least 10 cm wide into the open furrow at planting. Spray the entire furrow width using a nozzle directly behind the planting tine. Use a minimum spray volume of 20 L/ha. <b>See General Instructions</b> on soil application.
<b>Boom spray:</b> Apply in 500-1000 L of water/ha at or soon after planting as a 10-15 cm band spray. <b>Drench:</b> Apply 100 mL of diluted spray to base of each plant. Treat as soon as first sign of infestation is noticed. <b>Note:</b> If attack is prolonged, follow-up boom spray or drench treatment may be necessary.
Spray on 7 to 10 day schedule commencing at flowering. Use high rate under heavy pest pressure.
Spray at first sign of bug activity. Use higher rate under heavy pest pressure.
Spray when aphids are seen. <b>Large plants:</b> Use 1000 L/ha.

CROPS	INSECT	STATE	RATE		WITHOLDING PERIODS
			VOL/HA	VOL/100L WATER	
Vegetables including asparagus, beans, beetroot, broccoli, brussels sprouts, cabbage, cauliflower, capsicum, carrot, celery, eggplant, onion, peas, potato, radish, rhubarb, shallot, sweet potato, tomato, turnip	Wingless grasshopper	NSW, ACT, WA, VIC, TAS ONLY	500 mL	50 mL	Tomatoes Harvest - 3 days
	Cutworm	ALL STATES	700 mL	70 mL	Cole crops Harvest - 5 days
	Field crickets, Mole crickets	QLD, WA ONLY	100 mL/10 kg bran bait/ha	Not Applicable	
	Vegetable weevil	NSW, WA, ACT ONLY	800 mL		Asparagus, celery Harvest - 14 days

CRITICAL COMMENTS
Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
Apply immediately infestation is observed. Increase concentration to compensate if application is below 1000 L/ha. Spray should cover soil out to at least 20 cm on both sides of row crop.
Apply as pest populations indicate. <b>See General Instructions</b> on preparation of bran baits.
Apply immediately infestation is observed. Apply as a band over the young plants and adjacent soil along the row. One treatment should be sufficient if plants are sprayed at the seedling stage or soon afterwards.

#### FRUIT AND VEGETABLES – TREE CROP/VINE

CROPS	INSECT	STATE	RATE		WITHOLDING PERIODS	
			All rates are given for dilute spraying. For concentrate spraying, refer to the Application Section			
			VOL/HA	VOL/100L WATER		
Apples, Pears	San Jose scale	QLD NSW, ACT, SA, WA ONLY	Not Applicable	100 mL (2% miscible winter oil may be added to the dormant spray)	Harvest - 14 days	
	Woolly aphid					
	Wingless grasshopper	NSW, ACT ONLY	500 mL	50 mL		
Avocado	Avocado leafroller, Ivy leafroller	QLD, WA ONLY	1 or 2 L	50 or 100 mL	Harvest - 7 days	
	Ivy leafroller	NSW, WA, ACT ONLY				
	Latania scale, Hairy caterpillars, Light brown apple moth, Red shouldered leaf beetle					

CRITICAL COMMENTS
<b>For all uses in this table: Apply by dilute or concentrate spraying equipment. Refer to the MIXING instructions in the GENERAL INSTRUCTIONS: FOR USE AS AN INSECTICIDE section. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.</b>
<b>Dormant period:</b> Apply as late as possible ensuring thorough coverage of all branches. <b>Seasonal period:</b> Apply to coincide with crawler activity in mid-late November and later as necessary. Ensure thorough coverage of all branches, foliage and fruit.
Apply when infestation build-up is first noticed ensuring thorough coverage.
Apply to areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.
Use this rate in tank mix with 1 L/ha (500 mL/100 L of water) of dichlorvos (500 g/L). For the low volume spray equipment use L/ha rate. Apply at first sign of pest activity before larvae move to fruit. Use higher rate when populations are high.
Apply at first sign of pest activity before larvae move to fruit. Use higher rate when populations are high. For low volume spray equipment use L/ha rate.
Apply when populations indicate treatment is required. Spot-spray affected trees only. Repeat as necessary. Use higher rate when populations are high.

CROPS	INSECT	STATE	RATE All rates are given for dilute spraying. For concentrate spraying, refer to the Application Section		WITHHOLDING PERIODS
			VOL/HA	VOL/100L WATER	
Citrus	California red scale	NSW, ACT, VIC, SA, WA ONLY	Not Applicable	100 mL alone or 50 mL + 1 L miscible summer spraying oil	Harvest - 14 days
		QLD ONLY		100 mL alone or 100 mL + 1 L miscible summer spraying oil	
Citrus, Pome fruit	Wingless grasshopper	VIC, TAS, NSW, WA, SA ONLY	500 mL	50 mL	
Grape Vines	Light brown apple moth	ALL STATES	500 mL	50 mL	Harvest - 14 days
	Grapevine moth	QLD, NSW, ACT, TAS, SA, WA ONLY	Not applicable	100 mL alone or 50 mL + 1 L miscible winter oil	
	Grapevine scale				
Kiwifruit - trellised	Common armyworm, Southern armyworm, Lightbrown apple moth	NSW, ACT, VIC, WA, SA, TAS, QLD ONLY	1 L	50 mL	
Mango	Common mango scale	QLD, WA ONLY	Not applicable	100 mL	Harvest - 21 days
Stone-fruit	European earwig	NSW, WA, ACT ONLY	2 L	100 mL	Harvest - 14 days
			200 mL + 250 mL sunflower oil/5 kg cracked wheat or cracked sorghum bait		
	San Jose scale	QLD, WA, NSW, ACT ONLY	Not applicable	100 mL (2% miscible winter oil may be added to the dormant spray)	
Tomatoes – trellised	Wingless grasshopper	NSW, ACT, VIC, TAS, SA, WA ONLY	500 mL	50 mL	Harvest - 3 days
	Wireworm, False wireworm	QLD ONLY	5 L/ha sprayed	Not applicable	NA
	African black beetle	NSW, ACT ONLY	2 L (Boom Spray)	300 mL (Drench)	
	Tomato grubs	QLD, NSW, ACT, VIC, WA ONLY	1.5 or 2 L	150 or 200 mL	Harvest - 3 days
	Native budworm	TAS, WA ONLY			
	Green vegetable bug	TAS, SA, WA ONLY			
Green peach aphid	QLD, VIC, TAS, SA, WA ONLY		1 L	100 mL	

CRITICAL COMMENTS
<p><b>For all uses in this table: Apply by dilute or concentrate spraying equipment. Refer to the MIXING instructions in the GENERAL INSTRUCTIONS: FOR USE AS AN INSECTICIDE section.</b></p> <p><b>Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.</b></p>
<p>Apply during November-March period. Two sprays may be required under conditions of heavy scale infestation. Apply with high volume sprayer to point of run-off.</p> <p><b>Note:</b> Do not use on citrus in areas where integrated control programmes are in operation.</p>
<p>Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.</p>
<p>Apply initial spray just after berry set (early October). Later schedule sprays should be made as required.</p>
<p>Apply as a dormant spray, post-pruning (July).</p>
<p>Apply at green tip at least 10 days after dormant lime sulphur application and pre-blossom. Do not apply post-blossom.</p>
<p>Apply to coincide with crawler activity. Ensure thorough coverage of all branches, foliage and fruit.</p>
<p><b>Spray application:</b> Apply in a minimum of 2000 L/ha in spring. If lower volume used, increase concentration to apply 2 L of product/ha.</p>
<p><b>Bait application:</b> Apply 5 kg of bait/ha in spring by fertiliser spreader. <b>See General Instructions</b> on preparation of cracked wheat or cracked sorghum bait.</p>
<p><b>Dormant period:</b> Apply as late as possible ensuring thorough coverage of all branches. <b>Seasonal period:</b> Apply to coincide with crawler activity in mid-late November and later if necessary. Ensure thorough coverage of all branches, foliage and fruit. <b>Note:</b> Some fruit marking may occur if high volume spraying is carried out under hot, dry conditions.</p>
<p>Spray areas of crop infested with grasshoppers. Also apply as a barrier across the line of advance, when grasshoppers are invading the crop.</p>
<p>Apply as a band at least 10 cm wide into the open furrow at planting. Spray the entire furrow width using a nozzle directly behind the planting tine. Use a minimum spray volume of 20 L/ha. <b>See General Instructions</b> on soil application.</p>
<p><b>Boom spray:</b> Apply in 500-1000 L of water/ha at or soon after planting as a 10-15 cm band spray. <b>Drench:</b> Apply 100 mL of diluted spray to base of each plant. Treat as soon as first sign of infestation is noticed. <b>Note:</b> If attack is prolonged, follow-up boom spray or drench treatment may be necessary.</p>
<p>Spray on 7 to 10 day schedule commencing at flowering. Use high rate under heavy pest pressure.</p>
<p>Spray at first sign of bug activity. Use higher rate under heavy pest pressure.</p>
<p>Spray when aphids are seen.</p> <p><b>Large plants:</b> Use 1000 L/ha.</p>

**FIELD CROPS AND PASTURE**

CROPS	INSECT	STATE	VOL/HA	WITHHOLDING PERIODS
Canola (rapeseed)	Wireworm, False wireworm	QLD, WA ONLY	1 or 1.5 L/ha	NA
Cereals, pasture, forage crops	Southern armyworm, Common armyworm	ALL STATES	700 or 900 mL	<b>Cereals</b> - 10 days <b>Grazing</b> - 2 days
Cereals	Pasture webworm	NSW, ACT, VIC, TAS, SA ONLY	700 mL	
		WA ONLY	300 mL	
Cereals, pasture, young plants of oil seeds	Cutworm	QLD, NSW, ACT, TAS, WA ONLY	900 mL in a minimum of 100 L water	<b>Cereals</b> - 10 days <b>Grazing</b> - 2 days
		VIC ONLY	700 mL in a minimum of 100 L water	
Cereals, pasture, oil seeds	Cutworm ( <i>Agrotis munda</i> and <i>A. infusa</i> )	SA, WA ONLY	700 mL in a minimum of 100 L water	<b>Cereals</b> - 10 days <b>Grazing</b> - 2 days
Cereals	Cereal curculio	SA, WA ONLY	120 mL/100 kg seed	NA
Cereals, pasture, forage crops	Spur-throated locust	QLD, NSW, ACT, VIC, WA ONLY	1.25 or 1.5 L	<b>Cereals</b> - 10 days <b>Grazing</b> - 2 days
	Australian plague locust	VIC ONLY	560 mL	
			350 mL	
		SA ONLY	560 mL	
		QLD, NSW, ACT, WA ONLY	350 mL	
	Migratory locust	QLD, WA ONLY		
	Blue oat mite	ALL STATES	140 mL	
Redlegged earth mite	NSW, ACT, VIC, WA, SA, TAS ONLY	70 mL		
Cereals, pasture, oil seeds	Wingless grasshopper	NSW, ACT, VIC, TAS, WA, SA ONLY	500 mL	

CRITICAL COMMENTS
Apply as a broadcast application. Use higher rate with extreme population numbers. <b>See General Instructions</b> on soil application.
Spray over total crop area when infestation is widespread. When pests are moving as an "army", treat a broad strip over and in advance of the infestation. <b>Late stage instar:</b> Use higher rate when larvae 3 cm in length. Apply follow-up as required.
Spray at first sign of damage. Apply with ground-rig boom or mister or by air.
<b>Pre-plant:</b> Apply with the label rate of an approved tillage herbicide to foliage prior to any cultivation. <b>Post-emergence:</b> Apply at first sign of damage. Apply with ground-rig boom or mister or by air.
Apply immediately infestation is observed. Apply follow-up treatments as required.
Apply immediately infestation is observed. Apply follow-up treatments as required.
<b>Apply as a seed dressing</b> just prior to sowing through an accurately calibrated applicator. <b>Note:</b> A sowing rate of 95 kg/ha (min.) is necessary to ensure economic responses are achieved.
Spray areas of crop or pasture infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. <b>Late stage hoppers and adults:</b> Use higher rate.
<b>Adults:</b> Spray areas of crop or pasture infested with locusts.
<b>Hoppers:</b> Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying until all hoppers have been contacted.
<b>Adults:</b> Spray areas of crop or pasture infested with locusts.
<b>Hoppers:</b> Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying until all hoppers have been contacted.
Spray areas of crop, trees and roosting sites infested with locusts.
Spray when pests appear in large numbers, 3-6 weeks after autumn rains. Re-spray as necessary. Avoid spraying when pests are sheltering. Spray when at least 2.5 cm cover of pasture or crop is present. <b>DO NOT</b> spray if rain is imminent.
Spray area of crop or pasture infested with grasshoppers. Apply also as a barrier across the line of advance, when grasshoppers are invading the crop.



CROPS	INSECT	STATE	VOL/HA	WITHHOLDING PERIODS
Field Peas, broad beans, chickpeas, lupins, lucerne, lucerne pastures and clover seed crops, rapeseed, linseed, safflower, wheat, oats, barley, rye, triticale. Improved annual pastures, establishing perennial pastures.	Blue oat mite, Redlegged earth mite	NSW, ACT, WA ONLY	140-300 mL	<b>Cereals</b> - 10 days <b>Grazing</b> - 2 days
Cotton (young plants)	Cutworm	QLD, NSW, WA, ACT ONLY	900 mL in a minimum of 100 L water	Harvest - 4 weeks Grazing - 4 weeks
Cotton	Southern armyworm, Common armyworm		700 or 900 mL	
	Pink spotted bollworm moth	QLD, WA ONLY	1 L	
	Spur-throated locusts	QLD, NSW, WA, ACT ONLY	1.25 or 1.5 L	
	Wingless grasshopper		500 mL	
	Cotton aphid		300 or 400 mL	
	Cotton flea beetle, Red shouldered leaf beetle		900 mL or 1.5L	
	Springtails		300 mL	
	Migratory locust	QLD, WA ONLY	350 mL	
	Wireworm, False wireworm	QLD, NSW, ACT ONLY	<b>In-furrow:</b> 5 to 15 mL/100 m row or 500 mL to 1.5 L/ha for row spacing of 1 metre	

CRITICAL COMMENTS
Apply as a ground spray immediately prior to seedling emergence using sufficient water to give good coverage. If mite activity is severe, also spray headlands and surrounding vegetation prior to seedling emergence.
Apply immediately infestation is observed. Apply follow-up treatments as required.
Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat broad strip over and in advance of the infestation. <b>Late stage instar:</b> Use higher rate when larvae 3 cm in length. Apply follow-up treatments as required.
Apply when 10-15 moths are trapped on two consecutive nights. This prevents infestation of bolls by larvae.
Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. <b>Late stage instar: Use</b> higher rate.
Spray areas of crop infested with grasshoppers. Apply also as a barrier across the line of advance when grasshoppers are invading the crop.
Apply when pests first appear. Re-spray as indicated by field inspection. Use higher rate for higher populations.
Apply when pests are present. Use higher rate under heavy pest pressure.
Spray when large numbers of pests occur and damage is evident. Re-spray as necessary.
Spray areas of crop, trees and roosting sites infested with locusts.
Use higher rate with extreme population numbers. <b>See General Instructions</b> on soil application.

CROPS	INSECT	STATE	VOL/HA	WITHHOLDING PERIODS
Lucerne (young plants)	Cutworm  <i>Agrotis munda</i> and <i>A. infusa</i>	QLD, NSW, ACT, TAS, WA ONLY	900 mL in a minimum of 100 L water	Grazing - 2 days
		VIC ONLY	700 mL in a minimum of 100 L water	
Lucerne	Webspinner caterpillar	QLD, NSW, WA, ACT ONLY	700 mL	
	Lucerne leaf roller		300 or 400 mL	
Lucerne and medics in pasture and forage crops	Spotted alfalfa aphid, Bluegreen aphid	NSW, WA, ACT ONLY	200 or 300 mL	
		QLD, VIC, TAS, SA, WA ONLY		
	Pea aphid	QLD, NSW, ACT, VIC, TAS, SA, WA ONLY		
	Sitona weevil	NSW, ACT, VIC, TAS, WA, SA ONLY	350 mL	
Maize	African black beetle	NSW, ACT ONLY	20 mL/ 100m of row <u>or</u> 2 L/ha for row spacing of 1 metre	NA
Maize, soybeans, sunflower	False wireworm, Cockroaches, Field crickets	QLD, WA ONLY	100 mL + 125 mL sunflower oil/2.5 kg cracked wheat <u>or</u> cracked sorghum bait/ha	NA
Maize, sunflower	Wireworm, False wireworm	QLD, NSW, ACT ONLY	<b>In-furrow</b> 5 to 15 mL/100 m row <u>or</u> 500 mL to 1.5 L/ha for row spacing of 1 metre	
Pasture	Lawn armyworm	QLD, NSW, WA, ACT only	700 mL	Grazing - 2 days
	Sod webworm	QLD, WA ONLY		
	Blackheaded pasture cockchafer	NSW, ACT, VIC, TAS, SA, WA ONLY	900 mL	
Pasture, forage crops	Underground grass grub	NSW, ACT, VIC, SA, WA ONLY		
	Brown pasture looper	NSW, ACT, VIC, TAS, SA, WA ONLY	700 mL	
	Pasture webworm			
Rice	Bloodworm	NSW, WA ONLY	60 or 150 mL	Harvest - 10 days
	Brown planthopper	QLD, WA ONLY	1.5 L	

CRITICAL COMMENTS
Apply immediately infestation is observed. Apply follow-up treatments as required.
Spray when pests appear.
Apply when pests first appear. <b>Late stage instar:</b> Use higher rate when larvae 1.5 cm in length are present and/or under heavy pest pressure.
Spray when aphids first appear. Use the higher rate when large numbers of aphids are invading the crop.
<b>Seeding lucerne, medics:</b> Apply when 1-2 aphids/plant are observed. <b>Established lucerne, medics:</b> Apply when 20-40 aphids/stem are observed.
Apply October to December, or in autumn when adults occur in damaging numbers.
Apply at sowing as a 15-20 cm band spray. For best results spray nozzles should be in front of press wheels on planter. Press wheels assist in establishment.
Apply at planting of crop. <b>See General Instructions</b> on preparation of cracked wheat or sorghum bait.
Use higher rate with extreme population numbers. <b>See General Instructions</b> on soil application.
Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. Apply follow-up treatments as required.
Spray as early as possible once pests appear. Apply with ground-rig boom or mister. Re-spray as necessary.
Treat when larvae are actively foraging as indicated by numerous piles of fresh soil, or casts on the surface. This usually occurs after showers of rain following short dry spells. Apply by ground-rig boom.
Apply when caterpillars are actively feeding. Spray before noticeable damage has occurred. Graze pasture prior to spraying to ensure penetration of spray into the pasture sward.
Spray at first sign of pasture infestation.
Spray at first sign of damage. Apply with ground-rig boom or mister or by air.
Use higher rate when water more than 15 cm or amount of decaying plant material is high.
Apply when pest numbers reach 1-2 per tiller and repeat as necessary.

CROPS	INSECT	STATE	VOL/HA	WITHHOLDING PERIODS
Sorghum <b>Note: (DO NOT</b> use on Sugar Drip or Alpha sorghum. Check new varieties before applying to entire crop.)	Southern armyworm, Common armyworm	QLD, NSW, ACT, WA ONLY	700 to 900 mL	Harvest - 2 days
	Cutworm		900 mL in a minimum of 100 L water	
	Spur-throated locust		1.25 or 1.5 L	
	Australian plague locust		350 mL	
	Migratory locust	QLD, WA ONLY		
	Sorghum midge	QLD, NSW, ACT, WA ONLY	500 mL	
	Wireworm, False wireworm		<b>In-furrow:</b> 5 to 15 mL /100 m row or 500 mL to 1.5 L/ha for row spacing of 1 metre	NA
	Corn aphid		500 mL	Harvest - 2 days
False wireworm, Cockroaches, Field crickets	QLD, WA ONLY	100 mL + 125 mL sunflower oil/2.5 kg cracked wheat or cracked sorghum bait/ha	Grazing - 2 days	
Sugarcane	Southern armyworm, Common armyworm	QLD, WA ONLY	700 or 900 mL	Harvest - 7 days Grazing - 2 days
	Spur-throated locust		1.25 or 1.5 L	
	Australian plague locust, Migratory locust		350 mL	
	Symphylids		2 L	
	Sugarcane wireworm		QLD, NSW, WA ONLY	
	African black beetle, Black Beetle	NSW, WA ONLY		
Tobacco	Wireworm, False wireworm, Cutworm	VIC, WA ONLY	3.0 L	NA

CRITICAL COMMENTS
Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. <b>Late stage instar:</b> Use higher rate when larvae 3 cm in length. Apply follow-up treatments as required.
Apply immediately infestation is observed. Apply follow-up treatments as required.
Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. <b>Late stage instar:</b> Use higher rate.
<b>Adults:</b> Spray areas of crop infested with locusts. <b>Hoppers:</b> Spray a swath in advance of marching band and the dense marching front. Continue spraying until all hoppers have been contacted.
Spray all areas of crop, trees and roosting sites infested with locusts.
Check regularly (preferably in the morning) and apply when 1-2 midge per head are present from first emergence of boot to pollen shedding. With repeated attack spray at intervals of 5 days or less.
Use high rate with extreme population numbers. <b>See General Instructions</b> on soil application.
Apply when damaging populations of aphids occur.
Apply at planting of crop. <b>See General Instructions</b> on preparation of cracked wheat or cracked sorghum bait.
Spray over total crop area when infestation is widespread. When pests are moving as an "army" treat a broad strip over and in advance of the infestation. <b>Late stage instar:</b> Use higher rate when larvae 3 cm in length. Apply follow-up treatments as required.
Spray areas of crop infested with locusts. Apply spray to trees or roosting sites to control swarming adult locusts. <b>Late stage hoppers and adults:</b> Use higher rate.
<b>Adults:</b> Spray areas of crop infested with locusts. <b>Hoppers:</b> Spray a swath in advance of marching band and then spray along the dense marching front. Continue spraying until all hoppers have been contacted.
Spray areas of crop, trees and roosting sites infested with locusts.
Apply as a low pressure (less than 35 kPa) or gravity feed spray onto the plant sett and adjacent to soil, at the point of exit from the rear of the planting machine, immediately prior to soil cover being brought in over the sett.
Apply at planting or ratooning. Apply as a low pressure (less than 35 kPa) or gravity feed spray onto the plant sett and adjacent soil through a nozzle placed above the planter boards. Repeat treatment within 12 weeks of planting if black beetles re-occur.
Apply as a pre-plant spray to cultivated soil surface. Incorporate immediately by rotary hoeing to a depth of 10 cm.

**GENERAL PEST CONTROL**

**RESTRAINTS**

**DO NOT** spray polycarbonate surfaces/roof sheeting or aged vinyl wall cladding as solvent may cause etching.

SITUATION	PEST	RATE
Commercial and industrial areas MUST NOT be publicly accessible	Cockroaches (residual control and/or heavy infestations)	95mL/10 L of water
	Spiders	
	Silverfish	50mL/10L of water
	Cockroaches (light infestations)	
	Ants including Argentine ants	95mL/10L of water. Use at least 1L spray/10m <sup>2</sup> infested area
Commercial and industrial areas. MUST NOT be publicly accessible	Fleas (outdoor use only)	90mL/10L of water
Hides/Skins	Hide Beetles	200mL/100L of water. Use at least 30mL of spray/skin.
Light vegetation MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas	Mosquito larvae	30mL/ha
Medium vegetation MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas	Mosquito larvae	60mL/ha
Heavy vegetation MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas		105mL/ha
Light to medium vegetation MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas	Mosquito adults	60mL/ha
Medium to heavy vegetation MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas		105mL/ha
Polluted water impoundments MUST NOT be used in residential areas, around houses, in public spaces, or in publicly accessible commercial or industrial areas	Mosquitoes (larvae and adults)	2mL/10,000L of water or 20mL/100 m <sup>3</sup> of water

CRITICAL COMMENTS
Apply as a coarse, low pressure spray to the point of run-off, to cracks, crevices, harbourages, eaves, downpipes and other places where the pests may occur. For optimum control of webbing spiders, use a 2-part treatment. After applying as a coarse, low pressure spray to harbourages where spiders may occur, apply a light spray over surfaces of the building.
Locate ant nests and treat appropriately. Spray ant tracks or where ant activity is noticed. Apply to paths in continuous 300mm bands. Apply to base of buildings, walls, fences, rock-works, trunks of shrubs and trees, and other hard surfaces to a height of 300mm. <b>Note:</b> All occurrences of Argentine Ants are to be reported to WA Department of Agriculture.
Apply as a fine droplet spray. <b>Outdoors only.</b> Treat areas where animals frequent. <b>Remove animals during treatment and until spray deposit is dry.</b> <b>Do not treat pets with this product. Pets should be treated with a product registered for application to animals.</b>
Apply spray to flesh side of skins or hides sufficient to moisten them. Ensure coverage of ears and lugs. To minimise the chance of later infestations, storage area should be sprayed regularly. Repeat application every 3 months. Access through bales should be maintained for application of product.
Dilute with water and apply as a spray to areas infested with mosquitoes.
Dilute with water and apply as a spray to areas infested with mosquitoes.

**TURF**

CROPS	INSECT	STATE	RATE
COMMERCIAL TURF (farms only) to which the public do not have access	Funnel Ant	Qld, NSW, WA only	<i>Field application:</i> 2.0 L/ha <i>Spot spray:</i> 5 mL/5L
	African Black Beetle	Qld, NSW, Vic, WA only	6.0 L/ha or 60 mL/100 m <sup>2</sup>
	Argentine Stem Weevil	NSW, Vic, Tas, SA, WA only	4.0 L/ha or 40 mL/100 m <sup>2</sup>
	Blackheaded Pasture Cockchafer		900 mL/ha or 9 mL/100 m <sup>2</sup>
	Brown Pasture Looper		700 mL/ha or 7 mL/100 m <sup>2</sup>
	Pasture Webworm		
	Lawn Armyworm	Qld, NSW, Vic, SA, WA only	
	Sod Webworm	All States	
	Underground Grass Grub	NSW, Vic, SA, WA only	900 mL/ha or 9 mL/100 m <sup>2</sup>
	Crickets	Qld, WA only	2.5 kg bran bait
	Winter Corbie, Corbie	Tas only	900mL/ha

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

**WITHHOLDING PERIOD**

**DO NOT GRAZE OR CUT CEREALS, PASTURES OR FORAGE CROPS FOR STOCK FOOD FOR 2 DAYS AFTER APPLICATION.**

**TURF: DO NOT FEED TURF FROM TREATED AREA TO POULTRY OR LIVESTOCK.**

**COTTON: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION.**

**DO NOT HARVEST THE FOLLOWING CROPS UNTIL THE NUMBER OF DAYS STATED BELOW HAS ELAPSED, AFTER SPRAYING:**

Mango	21 days
Asparagus, Bananas, Citrus, Grapevines, Kiwifruit, Pome Fruit, Stone Fruit, Celery	14 days
Cereal Grain Crops	10 days
Avocado, Sugar Cane	7 days
Cole Crops, Cucurbits	5 days
Tomatoes	3 days
Sorghum Grain Crops	2 days

**GENERAL INSTRUCTIONS: FOR USE AS AN INSECTICIDE**

Thorough coverage is essential.

For application by aircraft apply in 10-50 L of water/ha.

**MIXING**

Slowly add the required amount of product to the water in the spray tank under agitation.

**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.

CRITICAL COMMENTS
For spot spraying, apply 30 mL spray to each mound. In areas of high density, a repeat application may be necessary to ensure thorough mound coverage.
Apply to turf when pests appear. Water in immediately after application.
Lightly water following application. Apply as late in the day as possible.
Use sufficient water to give even coverage. Apply as late in the day as possible.
Apply when pests first appear.
Spray at first sign of damage. Apply with ground-rig boom or mister. Apply as late in the day as possible.
Spray over total turf area when infestation is present. When pests are moving, treat strip over and in advance of infestation. Apply follow-up treatments as required.
Apply as soon as pests appear. Repeat as required.
Apply when caterpillars are actively feeding. Spray before noticeable damage has occurred. Apply as late in the day as possible.
Bait should only be used on turf farms not recreational turf. <b>See General Instructions for Bran Bait preparation.</b>
Apply May to July for Winter Corbie and September for Corbie.

- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advise.
- Add the amount of product specified in the Directions for Use table for each 100L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

**Concentrate Spraying**

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine an appropriate dilute spray volume (see Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way:

**EXAMPLE ONLY**

1. Dilute spray volume as determined above: For example 1500 L/ha
2. Your chosen concentrate spray volume: For example 500 L/ha
3. The concentration factor in this example is: 3 X (i.e. 1500 L ÷ 500 L = 3)
4. If the dilute label rate is 10 mL/100L, then the concentrate rate becomes 3 x 10, that is 30 mL/100L of concentrate spray.
5. 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.

**SOIL APPLICATION**

**In-Furrow:** Apply as a band spray to the open furrow at planting. Spray the entire furrow tilth using a nozzle located directly behind the seed tube. Ensure all spray is directed into the furrow contacting bottom, sides and all soil drawn in to the furrow at closure. Use a minimum of 20 L of water/ha. Use the higher rate under extreme population numbers.

## BAIT APPLICATION

**Bran bait:** Mix 10 mL/kg of bran using sufficient water to give a moist crumb structure. Allow to stand for 2-3 hours before application. Gloves should be worn when preparing and applying the bait.

**Cracked wheat or cracked sorghum bait:** Mix the required volume of Relyon Chlorpyrifos 500 Insecticide and sunflower oil together. Then, add to the wheat or sorghum, mixing thoroughly. Gloves should be worn when preparing and applying the bait.

## COMPATIBILITY

Relyon Chlorpyrifos 500 Insecticide is compatible with the following:

### Herbicides

Atrazine, bromoxynil, chlorsulfuron, diclofop-methyl, diuron, flammop-methyl, fluometuron, glyphosate, paraquat, paraquat + diquat, pendimethalin, trifluralin.

### Insecticides and Miticides

Acephate, azinphos-methyl, carbaryl, cypermethrin, deltamethrin, demeton-S-methyl, diazinon, dichlorvos, dicofol, dimethoate, endosulfan, ethion, fenvalerate, maldison, methidathion, methomyl, monocrotophos, oils, oxythioquinox, parathion, phosalone, phosmet, tetradifon, trichlorfon.

### Fungicides

Chlorothalonil, thiram, triadimefon, zineb, ziram.

### Fertilisers

Diammonium phosphate, limestone, miloreanite, monoammonium sulphate, potash, sulphur coated urea, triple superphosphate, urea.

## INCOMPATIBILITY

Relyon Chlorpyrifos 500 Insecticide is **NOT** compatible with the following:

### Herbicides

2,4-D, Dicamba, MCPA, Tordon\* 75-D, Tordon\*242.

### Fungicides

Fixed coppers, liquid and organic coppers, wettable sulphur.

### Fertilisers

Iron sulphate, manganese sulphate, zinc oxysulphate.

## RE-ENTRY TO TREATED AREAS

**Field crops, tree crops and vines:** Do not allow entry into treated crops until spray deposits have dried. If prior entry is required, limit duration of entry and wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

**Cotton chippers:** Do not allow entry into treated crops until spray deposits have dried. After this time, wear shoes or boots, socks, long trousers, long sleeved shirt, gloves and hat.

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

- **HIGHLY TOXIC TO BIRDS AND REPTILES. VERY HIGHLY TOXIC TO FISH AND AQUATIC INVERTEBRATES.**
- **DO NOT** re-apply to the same crop within 7 days (unless specifically recommended in the directions for use).
- Spray drift may occur under adverse meteorological conditions or from certain spray equipment. **DO NOT** allow spray to drift onto sensitive areas including, but not limited to, natural streams, rivers or watercourses and human dwellings. A spray drift management strategy such as those in the "Best Management Practices Manual for Cotton Growers" or the "Pilots and Operators Manual" should be applied.
- Options for minimising drift to sensitive areas include not spraying within a certain distance of sensitive areas when the wind is blowing towards them (see Table for guidance) or ensuring that drifting spray will be intercepted by a catching surface such as a row of shelter trees, an unsprayed row of orchard trees, or hail netting.

Situation	Rate (L/ha)	Recommended Buffer Distance (m)
Orchard (dormant trees, citrus, large trees)	<4	30
	4-8	40
	>8	50
Cotton (aerial application)	-	300
Other crops (aerial application)	-	100

- **DO NOT** apply if heavy rains or storms that are likely to cause surface run-off are forecast in the immediate area within two days of application.
- **DO NOT** apply when irrigating, or to waterlogged soil, or while water remains on the surface or in furrows, unless tail water is captured on farm.
- **DO NOT** allow contaminated run-off water from treated paddocks to enter adjacent areas or water bodies. Run off contaminated by irrigation events (tail water) and a 25 mm rainstorm should be captured on farm for two days after application.
- **DO NOT** contaminate streams, rivers or watercourses with chemical or used container.

## PROTECTION OF LIVESTOCK

- **DO NOT** feed grass clippings to poultry or other animals.
- Dangerous to bees. **DO NOT** spray any plants in flower while bees are foraging.

## INSECTICIDE RESISTANCE WARNING

<b>GROUP</b>	<b>1B</b>	<b>INSECTICIDE</b>
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For insecticide resistance management Relyon Chlorpyrifos 500 Insecticide is a Group 1B insecticide. Some naturally occurring insect biotypes resistant to Relyon Chlorpyrifos 500 Insecticide and other Group 1B insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Relyon Chlorpyrifos 500 Insecticide or other Group 1B insecticides are used repeatedly. The effectiveness of Relyon Chlorpyrifos 500 Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Nutrien Ag Solutions Limited accepts no liability for any losses that may result from the failure of Relyon Chlorpyrifos 500 Insecticide to control resistant insects.

Relyon Chlorpyrifos 500 Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier or Nutrien Ag Solutions Limited representative.

## STORAGE AND DISPOSAL

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.

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

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

## SMALL SPILL MANAGEMENT

Wear appropriate clothing and protective equipment whilst cleaning up small spills (see **SAFETY DIRECTIONS**). Treat spill with an absorbent material such as earth, sand or granular clay. Sweep up contaminated material and place in a refuse vessel for disposal.

If spilled inside a building, wash contaminated surfaces to deactivate the chlorpyrifos with a dilute solution of bleach (sodium hypochlorite), prepared according to the bleach label instruction.

Dispose of the contaminated material in accordance with **STORAGE AND DISPOSAL**.

## SAFETY DIRECTIONS

Product is poisonous if absorbed by skin contact or inhaled or swallowed. Repeated exposure may cause allergic disorders. Repeated minor exposure may have a cumulative poisoning effect. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale vapour or spray mist. When opening the container and preparing spray and using the prepared spray, wear chemical resistant clothing buttoned to the neck and wrist and washable hat and elbow-length PVC gloves and goggles and chemical resistant footwear and half facepiece respirator with combined dust and gas cartridge/canister. If clothing becomes contaminated with product or wet with spray remove clothing immediately. If product on skin, immediately wash area with soap and water. 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 and goggles and respirator (if rubber wash with detergent and warm water) and contaminated clothing.

**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. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

**SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet (SDS), which can be obtained from the supplier.

**CONDITIONS OF SALE**

The use of this product is beyond the control of Nutrien Ag Solutions Limited. Any provisions or rights under the Australian Consumer Law which cannot be excluded by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies expressed or implied under common law, statute or otherwise, in relation to the sale, supply, storage, use or application of this product are excluded. Nutrien Ag Solutions Limited does not accept any liability (including consequential loss and/or negligence) for any loss or damage connected with the sale, supply, storage, use or application of this product except for liability which cannot be excluded by statute.

# RELYON®

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