



Product Name: Surefire Prynova 350 WG Insecticide  
APVMA Approval No: 88598/149990

Label Name:	Surefire Prynova 350 WG Insecticide
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Signal Headings:	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	ACTIVE CONSTITUENT: 350 g/kg CHLORANTRANILIPROLE
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Mode of Action:	GROUP 28 INSECTICIDE
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Statement of Claims:	For the control of Lepidopteran species of insect pests in Cotton, certain fruit and almond crops; and Pulse crops, as per the Directions for Use. For the control of African Black Beetle, Argentine Stem Weevil, Argentinian Scarab, Billbugs and other insect pests in turf as per the Directions for Use.
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Net Contents:	NET CONTENTS: 100 g - 5 kg
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Restraints:	This section contains file attachment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	WITHHOLDING PERIODS HARVEST GRAPES: DO NOT HARVEST FOR 8 WEEKS AFTER APPLICATION COTTON: DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION. CHICKPEA, MUNG BEAN, SOYBEAN, ALMONDS, POME AND STONE FRUIT: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION
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#### GRAZING

COTTON: DO NOT ALLOW LIVESTOCK TO GRAZE CROPS, COTTON STUBBLE OR GIN TRASH TREATED WITH SUREFIRE PRYNova 350 WG INSECTICIDE.

TURF: DO NOT GRAZE TREATED TURF/LAWN OR FEED TURF/LAWN CLIPPINGS FROM ANY TREATED AREA TO POULTRY OR LIVESTOCK

GRAPES, ALMONDS, POME AND STONE FRUIT: DO NOT GRAZE OR CUT FOR STOCK FOOD

CHICKPEA, MUNG BEAN, SOYBEAN: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION

Trade Advice:	<p><b>EXPORT STATEMENT:</b> Import tolerances for produce treated with Surefire Prynova 350 WG Insecticide may be pending in some countries. Consult with your exporter or PCT before applying Surefire Prynova insecticide to export crops.</p>
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General Instructions:	<p><b>GENERAL INSTRUCTIONS</b></p> <p>Surefire Prynova 350 WG Insecticide is an anthranilic diamide insecticide in the form of a water dispersible granule. Surefire Prynova 350 WG is particularly active on Lepidopteran insect pests, primarily as a larvicide.</p> <p>Surefire Prynova 350 WG should be applied after careful field monitoring of pest populations of eggs and larvae to determine the need for application, the correct timing of the initial application and of any subsequent applications. Subsequent applications are dependent on economic thresholds, as well as the growth rate of new unprotected plant material.</p> <p>For <i>Helicoverpa</i> species, spray applications should be timed to coincide with egg hatching and before larvae are entrenched in protected feeding sites.</p> <p>Surefire Prynova 350 WG has been specifically designed for use in Integrated Pest Management (IPM) schemes. Surefire Prynova 350 WG does not give traditional larval "knockdown" control. Surefire Prynova 350 WG enters larvae primarily by ingestion of treated foliage, or through penetration of the insect cuticle. After ingesting Surefire Prynova 350 WG, the larvae cease feeding and die four to five days later. Surefire Prynova 350 WG provides square, flower and boll protection in cotton, and flower and pod protection in pulse crops.</p> <p><b>MIXING</b></p> <p>Fill spray tank to ¼ to ½ full of water. Measure the amount of Surefire Prynova 350 WG Insecticide required for the area to be sprayed. Add Surefire Prynova 350 WG Insecticide directly to the spray tank with the agitation engaged. Mix thoroughly to disperse the insecticide. Once dispersed, the material must be kept in suspension at all times by continuous agitation. Use mechanical or hydraulic means, DO NOT use air agitation, premix or slurry.</p> <p>If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. DO NOT allow spray mix to sit overnight, as resuspension may be difficult.</p> <p><b>SURFACTANTS/WETTING AGENT</b></p> <p>Use a non-ionic surfactant/wetting agent at 15 g active/100 L, (e.g. Agral 600 @ 25 mL/100 L).</p> <p>DO NOT add a non-ionic surfactant/wetting agent if:</p> <ul style="list-style-type: none"><li>• mixing with another product which already contains a surfactant and/or the product label advises not to add a surfactant.</li><li>• mixing with a liquid fertiliser.</li></ul> <p><b>Compatibility</b></p> <p>Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of the desired tank mix and observe possible adverse changes (settling out, flocculation etc). Avoid complex tank mixtures of several products or very concentrated spray mixtures. Surefire Prynova 350 WG is compatible with amitraz and</p>
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mepiquat chloride formulations. Surefire Prynova 350 WG is not compatible with Ultra Low Volume (ULV) formulations.

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules (Surefire Prynova), wettable powders, water-based suspension concentrates, water soluble concentrates, oil-based suspension concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers.

## APPLICATION

### Minimising Spray Drift

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions.

The most effective way to reduce drift potential is to apply large droplets (volume mean diameter (VMD) >250 - 300 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not minimise drift if applications are made improperly or under unfavourable environmental conditions.

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

### Ground application - field crops

Apply as a blanket spray or as a banded spray. Ensure thorough spray coverage on the foliage, using appropriate fan nozzles. Apply in a minimum spray volume of 100 L/ha and keep the boom low to avoid spray drift. A minimum spray pressure of 275 kPa (40 psi) should be used with fan nozzles applying insecticides. Higher pressure reduces droplet size, DOES NOT improve canopy penetration and may increase drift potential. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE. For band spraying, increase the number of fan nozzles per crop row as the plant size increases.

### Aerial application – field crops

Surefire Prynova 350 WG must only be applied with aircraft fitted with accurately calibrated equipment. Apply a minimum total spray volume of 30 L/ha with nozzles (e.g. Micronaire rotary atomisers, CP nozzles or conventional hydraulic nozzles) set to medium spray droplet size category. A spray drift minimisation strategy should be employed at all times when applying this product. DO NOT apply Surefire Prynova 350 WG insecticide using Ultra Low Volume (ULV) methods.

### Ground application - tree and vine crops

Use a sprayer fitted with high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size, DOES NOT improve canopy penetration and may increase drift potential. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER- CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE. Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. For orchard/vineyard sprayers avoid directing spray above trees and always turn-off outward pointing nozzles at row ends and outer rows.

### Ground application - turf

- Apply extremely coarse droplets.
- Spray with at least 400 L of water/ha (or 4 L water per 100 m<sup>2</sup>) to ensure even coverage.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Note that the amount of product specified in the Directions for Use is per hectare or 100 m<sup>2</sup> of product. You will need to determine your spray rate per area before deciding on the amount of product to add to the tank.
- For optimal control, irrigate with approximately 6 mm of water immediately after application (except where treating for caterpillars, when irrigation and mowing should be delayed for 24 hours).

## Spray Timing

African Black Beetle / Argentinian Scarab: Surefire Pynova 350 WG Insecticide may be applied from spring onwards for preventative control of these species infesting turfgrass. The need for an application may be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods.

Argentine Stem Weevil / Billbug: Surefire Pynova 350 WG Insecticide should be applied when overwintered adults are first observed in early spring (mid September) to prevent damage in late spring. An application at this time will also give excellent control of African Black Beetle.

Caterpillars: Surefire Pynova 350 WG Insecticide will provide excellent curative caterpillar control in turfgrass and should be applied when pests/damage is observed.

#### Dilute Spraying

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.
- Always apply sufficient water to cover the crop to the point of run-off, otherwise under dosing will occur and disease control may be inadequate.

#### 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 1,500 L/ha
2. Your chosen concentrate spray volume: For example 500 L/ha
3. The concentration factor in this example is: 3times (i.e. 1,500 L divided by 500 L = 3)
4. If the dilute label rate is 150 g/100 L, then the concentrate rate becomes 3 x 150 g, that is, 450 g/100 L of concentrate spray.

- The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows.
- For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

#### Spray Equipment Cleanout

Prior to application, start with clean, well-maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove. Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. DO NOT clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

Resistance Warning:	<p>Insecticide Resistance Warning GROUP 28 INSECTICIDE</p> <p>For insecticide resistance management Surefire Pynova 350 WG Insecticide is a Group 28 insecticide. Some natural occurring insect biotypes resistant to Surefire Pynova 350</p>
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WG and other Group 28 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Surefire Prynova 350 WG and other Group 28 insecticides are used repeatedly. The effectiveness of Surefire Prynova 350 WG on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, PCT Holdings Pty Ltd accepts no liability for any losses that may result from failure of Surefire Prynova 350 WG to control resistant insects.

Strategies to minimise the risk of insecticide resistance are available. To help prevent the development of resistance to Surefire Prynova 350 WG Insecticide observe the following instructions:

- Use Surefire Prynova 350 WG Insecticide in accordance with the current Insecticide Resistance Management (IRM) strategy for your region.
- Apply Surefire Prynova 350 WG or other Group 28 insecticides using a "window" approach to avoid exposure of consecutive insect pest generations to the same mode of action. Multiple successive applications of Surefire Prynova 350 WG or other Group 28 insecticides are acceptable if they are used to treat a single insect generation.
- Following a "window" of Surefire Prynova 350 WG or other Group 28 insecticides, rotate to a "window" of applications of effective insecticides with a different mode of action.
- The total exposure period of all "Group 28-active windows" applied throughout the crop cycle (from seedling to harvest) should not exceed 50% of the crop cycle.
- Incorporate IPM techniques into the overall pest management program.
- Monitor insect populations for loss of field efficacy.
- Cultivate all cotton and pulse crop fields as soon as possible after picking/harvest to destroy over-wintering pupae of *Helicoverpa armigera*.

For further information contact your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local PCT Representative.

For additional information on insect resistance, modes of action and monitoring visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>

Precautions:	PRECAUTIONS RE-ENTRY DO NOT enter the treated area until the spray has dried.
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Protections:	PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto near-by non-target plants/crops, cropping lands or pastures. IMPORTANT: Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops have been individually tested for crop safety. To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator. PROTECTION OF HONEY BEES AND OTHER INSECT POLLINATORS Based on Good Agricultural Practices (GAP) Surefire Prynova should not be applied when bees are actively foraging.  PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT Dangerous to aquatic invertebrates. Drift and run off from treated areas may be hazardous to aquatic organisms in neighbouring areas. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.
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Storage and Disposal:	STORAGE AND DISPOSAL KEEP OUT OF REACH OF CHILDREN. 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.
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If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

**Safety Directions:**

**SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Wash hands after use.

**First Aid Instructions:**

**FIRST AID**

First aid is not generally required. If in doubt, contact a Poisons Information Centre (phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

**First Aid Warnings:**

## **RESTRAINTS**

DO NOT apply if heavy dew is present on crops, or if rainfall is expected within 2 hours of application.

DO NOT make more than 3 applications per cotton crop per season, and no more than 2 consecutive sprays per field per season. Applications must be a minimum of 7 days apart.

DO NOT make more than 2 applications per chickpea, soybean or mung bean crop per season. Applications must be a minimum of 7 days apart.

DO NOT apply to turf when the soil is saturated with water as adequate distribution of the active ingredient vertically in the soil profile cannot be achieved under this condition. DO NOT apply more than 1.6 kg per hectare per year in broadcast applications to turfgrass.

## **SPRAY DRIFT RESTRAINTS**

Specific definitions for terms used in this section of the label can be found at [www.apvma.gov.au/spraydrift](http://www.apvma.gov.au/spraydrift)

**DO NOT** allow bystanders to come into contact with the spray cloud.

**DO NOT** apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

**DO NOT** apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

**DO NOT** apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

**DO NOT** apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a **MEDIUM** spray droplet size category
- **For turf:** spray droplets not smaller than **EXTREMELY COARSE** spray droplet size category
- minimum distances between the application site and downwind sensitive areas (see 'Mandatory no-spray zones' section) are observed.

### Buffer zones for boom sprayers

Crop	Application rate	<b>Mandatory downwind buffer zones</b>
		<b>Natural aquatic areas</b>
Cotton Chickpea, Mung bean, Soybean	Up to 150 g/ha	20 metres
Turf	Up to 860 g/ha	10 metres

**DO NOT** apply by a vertical sprayer unless the following requirements are met:

- Spray is not directed above the target canopy.
- The outside of the sprayer is turned off when turning at the end of rows and when spraying the outer row on each side of the application site.
- Minimum distances between the application site and downwind sensitive areas (see ‘Mandatory buffer zones’ section of the following table titled ‘Buffer zones for vertical sprayers’) are observed.

### Buffer zones for vertical sprayers

Crop	<b>Mandatory downwind buffer zones</b>
	<b>Natural aquatic areas</b>
Grapes	20 metres
Almonds, Pome fruit, Stone fruit	50 metres

**DO NOT** apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a **MEDIUM** spray droplet size category.
- For maximum release height above the target canopy of 3 m or 25% of wingspan or 25% of rotor diameter, whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see ‘Mandatory buffer zones’ section of the following table titled ‘Buffer zones for aircraft’) are observed.

### Buffer zones for aircraft

Crop	Wind speed conditions	<b>Mandatory downwind buffer zones</b>
		<b>Natural aquatic areas</b>
Cotton Chickpea, Mung bean, Soybean	3-8 km/h	100 metres
	8-14 km/h	200 metres
	15-20 km/h	400 metres

## DIRECTIONS FOR USE

Crop	Pest	Rate	WHP	Critical Comments
<b>ALL FRUIT AND VINE CROPS</b>				
Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Refer to Application section of the label. Thorough fruit coverage is essential. Use in accordance with AIRAC Insecticide Resistance Management Strategy guidelines.				
Almonds	Carob moth ( <i>Ectomyelois ceratoniae</i> )	<u>Dilute spraying:</u> 18 g/100 L + non ionic surfactant @ 15 g ai/100 L  <u>Concentrate spraying:</u> Refer to <b>Mixing/ Application</b> section	14 days	Monitor moth flights through trapping. Applications can be aimed at reducing moth number by targeting mummies. Alternatively, applications should be made when 1 - 5% of the almond hull sutures are opening. If required, retreat at minimum interval of 7 days. Apply by airblast sprayer or equivalent and ensure thorough coverage of all leaf and nut surfaces. DO NOT apply more than 2 applications of Surefire Prynova per season. DO NOT treat successive generations with Surefire Prynova, alternate with a different mode of action insecticide.
Pome fruit including Apples, Nashi Pears, Pears	Codling moth ( <i>Cydia pomonella</i> ) Budworms ( <i>Helicoverpa</i> spp.) Oriental fruit moth ( <i>Grapholita molesta</i> )	<u>Dilute spraying:</u> 9 g/100 L + non ionic surfactant @ 15 g ai/100 L  <u>Concentrate spraying:</u> Refer to <b>Mixing/ Application</b> section	14 days	<b>DO NOT</b> make more than three (3) applications per crop per season. <u>Codling moth:</u> A maximum of three (3) applications of Surefire Prynova are to be applied at 14 – 21 day intervals commencing at petal fall (or before 110 Degree Days after Codling moth are detected in traps) until late December. Further treatments should be made with an alternate mode of action insecticide.  <b>Or</b> a maximum of three (3) applications can be applied commencing from the end of December at 14 - 21 day intervals following treatments with an alternate mode of action product.  <u>Oriental fruit moth:</u> When treating the first generation, apply the initial treatment before 110 Degree Days after Oriental fruit moths are detected in traps.  The above program, when commenced at petal fall, will also control Budworms.
	Lightbrown apple moth ( <i>Epiphyas postvittana</i> )			<u>Lightbrown apple moth:</u> A maximum of three (3) applications of Surefire Prynova are to be applied at 14 - 21 day intervals commencing at petal fall or apply at 140 Degree Days after Lightbrown apple moths are detected in traps.  Further treatments should be made with alternative mode of action insecticides.
Stone fruit including: Apricot, Cherries, Nectarines, Peaches, Plums	Oriental fruit moth ( <i>Grapholita molesta</i> )	<u>Dilute spraying:</u> 12 g/100 L + non ionic surfactant @ 15 g ai/100 L  <u>Concentrate spraying:</u> Refer to <b>Mixing/ Application</b> section		<b>DO NOT</b> make more than two (2) applications per crop per season with a minimum 14 days between applications.  When treating the first generation, apply the initial treatment before 110 Degree Days after Oriental fruit moths are detected in traps.  Apply a maximum of two (2) applications of Surefire Prynova (minimum of 14 days between applications) to each crop. Target sprays against eggs and newly

				hatched larvae before they become entrenched.  Further treatments should be made with alternative mode of action insecticides.
	Lightbrown apple moth <i>(Epiphyas postvittana)</i>	<u>Dilute spraying:</u> 9 g/100 L + non ionic surfactant @ 15 g ai/100 L  <u>Concentrate spraying:</u> Refer to <b>Mixing/ Application</b> section		A maximum of two (2) applications of Surefire Prynova are to be applied with a minimum spray interval of 14 days commencing at 140 Degree Days after Lightbrown apple moths are detected in traps.  Further treatments should be made with alternative mode of action insecticides.

Grapes	Lightbrown apple moth ( <i>Epiphyas postvittana</i> ) Grapevine moth ( <i>Phalaenoides glycinae</i> )	<u>Dilute spraying:</u> 9 g/100 L + non ionic surfactant @ 15 g ai/100 L  <u>Concentrate spraying:</u> Refer to Mixing/ Application section	8 weeks	<b>DO NOT</b> make more than two (2) applications per crop per season. Applications to be timed for egg hatch (140 Degree Days after a detected moth flight). <b>DO NOT</b> re-treat within fourteen (14) days. A final application may be applied up to bunch closure. <b>DO NOT</b> apply after bunch closure. <u>Concentrated spray:</u> <b>DO NOT</b> apply in volumes less than 250 L/ha. This low water volume is dependent on the suitability of concentrated spray application equipment. More reliable application may be gained through increased water volumes.
Cotton	Cotton bollworm ( <i>Helicoverpa armigera</i> ) Native budworm ( <i>Helicoverpa punctigera</i> ) Cluster caterpillar ( <i>Spodoptera litura</i> )	90 or 150 g per ha plus non ionic surfactant at 125 g ai/100 L	28 days	Target brown eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in squares, flowers and bolls.  Use the <b>low rate on threshold larvae pressure</b> (2 larvae per metre row) and low egg pressure. Use the <b>high rate</b> with high egg and/or larvae pressure (where potential for >2 larvae per metre row produced) and so as to achieve longer residual control of <i>Helicoverpa</i> spp.
	Northern rough bollworm ( <i>Earias vittella</i> ) Rough bollworm ( <i>Earias huegeliana</i> )	150 g per ha plus non ionic surfactant at 125 g ai/100 L		Target eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in terminals or bolls.
Chickpea	Cotton bollworm ( <i>Helicoverpa armigera</i> ) Native budworm ( <i>Helicoverpa punctigera</i> )	70 g per ha plus non ionic surfactant at 125 g ai/100 L	14 days	A maximum of two applications is to be applied to any one crop per season. Further treatments should be made with alternative mode of action insecticides.  Regularly scout crops to monitor for larvae. Target sprays against larvae. Apply as larvae reach threshold numbers. Larvae in entrenched feeding sites will not be controlled.
Mung bean, Soybean	Bean podborer ( <i>Maruca vitrata</i> ) Cotton bollworm ( <i>Helicoverpa armigera</i> ) Native budworm ( <i>Helicoverpa punctigera</i> ) Soybean looper ( <i>Thysanoplusia orichalcea</i> ) Bean looper ( <i>Mocis alterna</i> ) Irrorated tabby ( <i>Anticarsia irrorata</i> )			Use enough water to ensure thorough coverage of the crop. Target a minimum of 100 L/ha by ground rig and a minimum of 30 L/ha by aircraft. Use in accordance with CropLife Insecticide Resistance Management Strategy guidelines. Target brown eggs and hatchlings (neonates or first instar) to small larvae (second instar) when they reach the economic spray threshold and before they become entrenched in flowers or pods.

## Turf

Situation	Pest	Rate	Critical Comments
Applications should not be made when the soil is saturated with water because adequate distribution of the active ingredient vertically in the soil profile cannot be achieved under this condition. As is the case with any insecticide applied to turfgrass for beetle larvae control, optimal results will be achieved if the product is irrigated into the turf immediately after application.			
<b>Golf courses, Lawns</b> including commercial and residential lawn areas, <b>Sports grounds, Other sport and recreational turfgrass areas</b>	Beetle larvae including African Black Beetle ( <i>Heteronychus arator</i> )	430 g to 860 g/ha  OR  4.3 to 8.6 g/ 100 m <sup>2</sup>	Apply before or at peak egg hatch for maximum control (typically mid September). Apply the higher rate for early season (mid September) application where long residual protection is required, or in later season applications (mid December onwards) when less sensitive mid instar grubs are present at the time of application, or in cases of high pest pressure.
	Argentinian Scarab ( <i>Cyclocephala signaticollis</i> )		Apply before or at peak egg hatch for maximum control (typically mid December). Use the higher application rates for later season applications when less sensitive mid instar grubs are present at the time of application or in cases of high pest pressure.
	Argentine Stem Weevil larvae ( <i>Listronotus bonariensis</i> ), Billbug larvae ( <i>Sphenophorus brunniipennis</i> )		Apply early season (mid September) applications when overwintered adults are first observed, to prevent damage and population build up. Early application is essential to prevent grass damage due to feeding. Use the higher application rates when extended residual performance is required or for later season applications (mid December onwards) or in cases of high pest pressure.
	Caterpillars including Black Cutworm ( <i>Agrotis ipsilon</i> ), Lawn Armyworm ( <i>Spodoptera mauritia</i> ), Sod Webworm ( <i>Herpetogramma licarsialis</i> )	430 g/ha  OR  4.3 g/ 100 m <sup>2</sup>	To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application.

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