

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

decis options[®]

INSECTICIDE

Active Constituent: 27.5 g/L DELTAMETHRIN
811 g/L LIQUID HYDROCARBONS

GROUP	3A	INSECTICIDE
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For the control of *Heliothis (Helicoverpa spp.)* and other specified pests on cotton and various other crops

GENERAL INSTRUCTIONS

Insecticide Resistance Warning

For insecticide resistance management, Decis Options Insecticide is a Group **3A** insecticide.

Some naturally occurring insect biotypes resistant to Decis Options and other Group **3A** insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Decis Options or other Group **3A** insecticides are used repeatedly. The effectiveness of Decis Options on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Decis Options to control resistant insects.

The user should seek advice, and monitor the performance, and if the results are not in accordance with expectations, contact the manufacturer immediately. Apparent resistance however, should not be confused with poor application, coverage or timing techniques.

Decis Options may be subject to specific resistance management strategies. For further information contact your local supplier, Bayer CropScience representative or local agricultural department agronomist.

Export of Treated Produce

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with Decis Options Insecticide. If you are growing produce for export, please check with Bayer CropScience Pty Ltd for the latest information on MRLs and import tolerances BEFORE using Decis Options Insecticide.

Application and Equipment

Decis Options is a contact spray. Thorough, even coverage is essential. Residual control of Decis Options may be reduced if heavy rainfall is received within 48 hours of application.

Decis Options can be applied using water as a carrier, and from aircraft can also be applied ULV when in combination with a compatible ULV insecticide and/or oil as bulking agent.

Ground Spray

Standard low volume boom or high volume equipment may be used.

Aircraft

Applied with water - Decis Options may be applied by aircraft using water as a carrier. Water volumes of 20 to 30 L/ha have given satisfactory results.

Applied ULV - Decis Options may also be used without dilution in mixture with some ULV products, as listed under Compatibility, or applied ULV in combination with D-C-Tron[®] Cotton Spray Oil, D-C-Trate[®] Anti-Evaporative Spray Oil or Ulvapron[®] Oil. A minimum spray volume, as described in the table below, should be applied ULV, using either a compatible ULV insecticide mixture partner and/or compatible oil as the bulking agent.
 DO NOT add water – use direct from the container.

CROP	PEST	MINIMUM TOTAL SPRAY VOLUME FOR ULV APPLICATION
Canola (oilseed rape)	Corn earworm and native budworm (heliiothis), looper	2.5 L/ha
	Green vegetable bug	2.5 L/ha
	Cutworms (<i>Agrotis</i> spp.)	1.0 L/ha
Cereals	Native budworm, corn earworm (heliiothis)	2.5 L/ha
	Southern and common armyworm	2.0 L/ha
	Green vegetable bug	2.5 L/ha
	Webworm (<i>Hednota pedionoma</i>)	1.0 L/ha
	Cutworms (<i>Agrotis</i> spp.)	1.0 L/ha
Chickpeas, faba beans, lentils, linseed, safflower, vetch	Corn earworm and native budworm (heliiothis), looper	2.5 L/ha
	Green vegetable bug	2.5 L/ha
	Cutworms (<i>Agrotis</i> spp.)	1.0 L/ha
Cotton	Native budworm (<i>H. punctigera</i>), cotton bollworm (<i>H. armigera</i>)	3.0 L/ha
	Pink spotted bollworm	2.5 L/ha
	Green mirid	2.5 L/ha
Field peas	Corn earworm and native budworm (heliiothis)	1.25 L/ha
	Pea weevil (NSW only)	2.0 L/ha
	Pea weevil (Vic, SA only)	1.5 L/ha
	Cutworms (<i>Agrotis</i> spp.)	1.0 L/ha
Lupins	Native budworm (<i>H. punctigera</i>) (NSW, Vic, SA, WA only)	1.0 L/ha
	Native budworm (<i>H. punctigera</i>) (Qld, Tas, NT)	2.5 L/ha
	Corn earworm (<i>H. armigera</i>) and looper	2.5 L/ha
	Cutworms (<i>Agrotis</i> spp.)	1.0 L/ha
	Green vegetable bug	2.5 L/ha
Maize	Corn earworm and native budworm (heliiothis)	2.5 L/ha
Sweetcorn		
Sorghum	Corn earworm and native budworm (heliiothis)	2.5 L/ha
	Sorghum midge (Vic, SA, WA only)	2.5 L/ha
	Sorghum midge (Qld, NSW, NT only)	1.0 L/ha
Soybeans, navy beans, mung beans, and other seed and pod crops	Corn earworm and native budworm (heliiothis), looper	2.5 L/ha
	Green vegetable bug	2.5 L/ha
Sunflower	Corn earworm, native budworm (heliiothis), Rutherglen bug, jassids	2.5 L/ha

Please note: Berry vegetables (cape gooseberries, rosella), Cole crops (cabbage, cauliflower, Brussels sprouts, broccoli), Tobacco and Tomatoes should not be treated by ULV application.

For ULV application, Decis Options must only be applied by aircraft fitted with accurately calibrated ULV equipment, e.g. Micronair AU5000 atomisers. To minimise drift it is essential to produce a suitable spray droplet diameter (volume mean diameter) by controlling the rotational speed of the atomisers. It is recommended that the application parameters in terms of plane speed and blade angle settings are adjusted to deliver a maximum rotational speed of 3000 rpm and a resultant droplet diameter of approximately 100 microns. Rotational speed of the atomisers can be measured by the fitment and maintenance of transducers. Thorough coverage is essential.

Compatibility

Applied with water - Decis Options may be mixed with most piperonyl butoxide formulations (e.g. Pipbut® Synergist) and most formulations of fungicides and insecticides such as chlorothalonil, dimethoate, mancozeb, metalaxyl, methamidophos, methomyl, methyl parathion, pirimicarb, Larvin® 375, Ovasyn® EC, Ovasyn Options, Predator* 300 and Curacron® Flexi, where these products are required for additional insect control or for control of diseases. Decis Options may also be mixed with other products including Reign™ Plant Growth Regulator, Wuxal® Liquid Foliar Nutrient and most knockdown herbicides. Decis Options and Larvin 800 WG are not compatible and should not be mixed.

Applied ULV - When sprayed as a ULV product, Decis Options is compatible with Ovasyn Options, Ovasyn ULV, Pipbut Synergist, Predator 300 and Curacron Flexi, where these products are required for additional insect control. Decis Options is also compatible with D-C-Tron Cotton Spray Oil, D-C-Trate Anti-Evaporative Spray Oil and Ulvapron Oil. For further information on ULV insecticide compatibilities contact Bayer CropScience Pty Ltd.

Warning: Decis Options may be mixed with some organophosphate insecticides for additional insect control. Organophosphate insecticides can cause phytotoxicity, which may be exaggerated with multiple applications. The addition of Decis Options to organophosphate insecticides does not affect the degree of phytotoxicity.

Mixing

Applied with water - Fill the spray tank to about $\frac{3}{4}$ full with clean water. Add the required quantity of Decis Options to the spray tank with agitators in motion. Where other products are to be mixed, add these after Decis Options is mixed in the tank. Top up the spray tank to the required volume with clean water, with agitators operating.

When mixing Decis Options with Pipbut Synergist, add the required quantity of Decis Options to the spray tank, followed by the Pipbut Synergist, then, with agitators operating, add the required quantity of clean water to the spray tank.

Applied ULV - When Decis Options is to be applied as a ULV spray in combination with compatible ULV products (or oil), Decis Options should be added after the ULV product (or oil), with agitators in motion. Ensure that there is no water, or products containing water, in this mixture, or in the spraying equipment.

PRECAUTIONS**Re-entry Period**

Do not allow entry into treated areas until the spray deposits have dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow-length PVC gloves. Clothing must be laundered after each day's use.

DRIFT WARNING

DO NOT apply under weather conditions, or from spraying equipment, which could be expected to cause spray to drift onto adjacent crops, crop lands, pastures or livestock.

PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT spray on any plants in flower while bees are foraging. Some repellent effect may be apparent for approximately 2 days.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with this product or used container.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, secure, well-ventilated area. Do not store for prolonged periods in direct sunlight.

5, 20 and 200 L

Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Container with dry-break connection (100 and 1000 L)

If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products.

Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.

Schütz container with camlock valve connection (1000 L)

If tamper evident seals are broken prior to initial use, then the integrity of the contents cannot be assured. The container must be vented before discharging contents. To empty, connect a camlock fitted hose to the bottom valve. Remove top cap when discharging for venting purposes. When the container is empty, close all caps and valves and return the container to the point of purchase.

SAFETY DIRECTIONS

Product is poisonous if swallowed. Facial skin contact may cause temporary facial numbness. Will damage eyes and will irritate the skin. Avoid contact with eyes and skin. Avoid inhaling vapour or spray mist. When preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield. If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves, face shield and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (telephone 13 11 26). If swallowed, do NOT induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet, which can be obtained from www.bayercropscience.com.au.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

Decis Options®, Larvin®, Ovasyn®, Pipbut®, and Wuxal® are Registered Trademarks of Bayer.
Reign™ - trademark applied for

NRA Approval No.: 51849/1202

FOR 24 HOUR SPECIALIST ADVICE
IN EMERGENCY ONLY
PHONE 1800 033 111

DIRECTIONS FOR USE

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Berry vegetables; cape gooseberries, rosella	Native budworm (heliiothis, <i>Helicoverpa</i> spp.)	Qld, WA only	50 mL/100 L	1 day	Apply as thorough spray. Use sufficient water to ensure adequate penetration and coverage. Repeat sprays at 7 to 14 day intervals, depending upon pest incidence.
Canola (oilseed rape)	Corn earworm and native budworm (heliiothis), looper	All States	500 mL/ha	7 days	Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliiothis or looper are 5 mm long.
	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only			Apply as soon as adult green vegetable bugs are seen, before there is a build-up of nymphs.
	Cutworms (<i>Agrotis</i> spp.)	NSW, WA only	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.
Cereals	Native budworm, corn earworm (heliiothis)	All States	500 mL/ha	7 days	Apply at first sign of infestation, before larvae are 5 mm, for best results.
	Southern and common armyworm				
	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only			Apply as soon as adult green vegetable bugs are seen, before there is a build-up of nymphs.
	Webworm (<i>Hednota pedionoma</i>)	WA only	200 mL/ha		Pre-seeding: Decis Options may be tank mixed with knock down herbicides and applied prior to seeding. Apply once larvae have emerged, i.e. from last week in May onwards. Closely graze pasture prior to application. To ensure good penetration, use high water volume, i.e. 100 L/ha. Do not apply on dense pasture. Post crop emergence: inspect crop regularly from seeding onwards, and spray at first sign of damage. Check with local Department of Agriculture adviser for further details.
	Cutworms (<i>Agrotis</i> spp.)	NSW only	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.
WA only				Apply at first sign of infestation, before larvae are 10 mm long, for best results.	
Chickpeas, faba beans, lentils, linseed, safflower, vetch	Corn earworm and native budworm (heliiothis), looper	All States	500 mL/ha	7 days	Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliiothis or looper are 5 mm long.
	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only			Apply as soon as adult green vegetable bugs are seen, before there is a build-up of nymphs.
	Cutworms (<i>Agrotis</i> spp.)	NSW, WA only	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Cole crops: cabbage, cauliflower, Brussels sprouts, broccoli, etc.	Cabbage white butterfly, cabbage moth, cabbage centre grub	Qld, NSW, NT only	High Volume: 50 mL/100 L or Low Volume: 500 mL/ha	2 days	<p>High Volume: Apply thorough spray to ensure even coverage, using at least 600 to 1000 L water/ha.</p> <p>Low Volume: Apply in sufficient water to obtain even and thorough coverage. Repeat sprays at 7 to 14 day intervals depending upon pest incidence. The addition of a wetting agent is recommended for both high and low volume spraying.</p>
		Vic, Tas, SA, WA only	High Volume: 40 to 50 mL/100 L or Low Volume: 400 to 500 mL/ha		Apply as above. Use the lower rate under low infestation levels.
Cotton	Native budworm (<i>H. punctigera</i>), cotton bollworm (<i>H. armigera</i>)	Qld, NSW, WA, NT only	700 mL/ha	7 days	Use when insect reinfestation pressure is high (i.e. moderate to heavy egg laying is occurring and small to medium larvae are present).
			600 mL/ha		Use when low to moderate egg laying is occurring and only few small to very small larvae are present (see 'note' below).
			500 mL/ha		Use when egg laying is low and larvae are just about to hatch (see 'note' below).
	Pink spotted bollworm	Qld, WA only	500 to 600 mL/ha		Apply at first sign of activity before larvae enter boll. Repeat as necessary.
	Green mirid	Qld, NSW, WA, NT only	180 mL/ha		Suppression of green mirids. Apply when commercial thresholds are exceeded.
Field Peas	Corn earworm and native budworm (heliiothis)	NSW, Vic, SA, WA only	250 to 500 mL/ha	7 days	Inspect crops regularly and particularly at flowering and early podding. Apply as soon as infestation occurs. Use lower rates only when infestation is low and majority of larvae are young (ie. less than 5 mm). Large larvae are often not readily controlled.
			Pea weevil		NSW only
	Vic, SA only	300 to 500 mL/ha			
	Cutworms (<i>Agrotis</i> spp.)	NSW, WA only	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening. Thorough coverage is required for effective control.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Lupins	Native budworm (<i>H. punctigera</i>)	NSW, Vic, SA only	200 to 500 mL/ha	7 days	Apply lower rate on small (5 mm) larvae and higher rate on dense canopies and/or larger larvae.
		WA only			Apply as above. Small caterpillars do not normally damage pods and numbers usually decline rapidly. Spraying is usually only necessary when caterpillars are about 20 mm in length. Apply thoroughly to ensure good penetration of lupin canopy.
		Qld, Tas, NT	500 mL/ha		Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliothis or looper are 5 mm long.
	Corn earworm (<i>H. armigera</i>), looper	All States			
	Cutworms (<i>Agrotis</i> spp.)	NSW, WA only	200 mL/ha		Check emerging and establishing crops in the late afternoon or evening for caterpillars crawling on the soil surface and feeding on the seedlings. Spray in the late afternoon or evening.
	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only	500 mL/ha	Apply as soon as adult green vegetable bugs are seen, before there is a build-up of nymphs.	
Maize	Corn earworm and native budworm (heliothis)	All States	Low Volume: 500 mL/ha or High Volume: 50 mL/ 100 L	7 days	Apply at tasselling and before silk emergence when larvae are small (less than 5 mm) and before they enter cob. Repeat sprays at 3 to 5 day intervals may be necessary, particularly for sweetcorn. For High Volume: apply as a thorough spray using 600 to 1000 L spray/ha, depending on plant size.
Sweetcorn			5 days		
Sorghum	Corn earworm and native budworm (heliothis)	All States	500 mL/ha	7 days	Apply at first sign of pest, generally from head emergence onward. In tight head varieties, heliothis may be protected and not readily controlled. Repeat sprays as necessary.
	Sorghum midge	Vic, SA, WA only	200 to 400 mL/ha		Apply at first sign of infestation from head emergence and during flowering. Use rates towards the lower end of the range when infestation is light (1 to 2 midge/head) for knockdown effect late in the flowering period of sorghum. Use rates towards the higher end of the range when infestation occurs early in the period and/or under heavier infestation levels.
	Qld, NSW, NT only				
Soybeans, navy beans, mung beans and other seed and pod crops	Corn earworm and native budworm (heliothis), looper	All States	500 mL/ha	7 days	Inspect crops regularly from early terminal development (4-leaf stage) onwards. Apply before heliothis or looper are 5 mm long.
	Green vegetable bug	Qld, NSW, Tas, SA, WA, NT only			Apply as soon as adult green vegetable bugs are seen, before there is a build-up of nymphs.
Sunflower	Corn earworm, native budworm (heliothis), Rutherglen bug, jassids	All States	500 mL/ha	7 days	Apply at first sign of pest activity. Critical period is from bud stage/face opening onward. At later growth stages, pests may be partially protected by heads or bracts. Heliothis should be sprayed before they are 5 mm long for best results. Repeat sprays as necessary. If flowering has started and bees are active, application should be deferred until after flowering is complete but before the heads turn down. If treatment is unavoidable during flowering, spraying must take place in the very early morning or very late afternoon.

CROP	PEST	STATE	RATE	WHP	CRITICAL COMMENTS
Tobacco	Tobacco budworm, native budworm (heliiothis), tobacco looper, tobacco stem borer	Qld, NSW, WA only	50 mL/100 L	7 days	Apply as thorough spray using 600 to 1000 L spray/ha depending on plant size. Repeat in 7 to 14 days or as required.
		Vic only	40 to 50 mL/100 L		Apply as above. Use lower rate under low infestation levels.
Tomatoes	Tomato grub and native budworm (heliiothis)	Qld, NSW, NT only	High Volume: 50 mL/100 L or Low Volume: 500 mL/ha	3 days	Apply as thorough spray. Repeat sprays at 7 to 14 day intervals, depending upon pest incidence. High Volume: Use 600 to 1000 L spray/ha depending on plant size. Low Volume: Use sufficient water to ensure adequate penetration and coverage.
		Tas, WA only	High Volume: 40 to 50 mL/100 L or Low Volume: 400 to 500 mL/ha		Apply as above. Use lower rate under low infestation levels.
		Vic, SA only	Programme Application: Low Volume: 300 to 500 mL/ha High Volume: 30 to 50 mL/100 L Established infestations: Low Volume: 500 mL/ha High Volume: 50 mL/100 L		Apply at first sign of pest activity. Repeat sprays at 7 to 14 day intervals depending on pest incidence. Use the higher rate when large larvae are present, and when reinfestation (egg-laying) is intense. Use also when insect re-infestation pressure is high. High Volume: Apply thorough spray to ensure even coverage, using at least 600 to 1000 L water/ha. Low Volume: Apply in sufficient water to obtain even and thorough coverage.
	Thrips	Vic, SA, WA only	300 mL/ha		Apply at first sign of infestation and repeat if necessary. Repeat applications may be necessary to control re-infestations, as residual control is limited.

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

WITHHOLDING PERIOD (WHP)

Berry vegetables: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION

Cole crops: DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION

Tomatoes: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION

Sweetcorn: DO NOT HARVEST FOR 5 DAYS AFTER APPLICATION

Canola (oilseed rape), cereals, chickpeas, cotton, faba beans, field peas, lentils, linseed, lupins, maize, mung beans, navy beans, safflower, sorghum, soybeans, sunflower, tobacco, vetch and other seed and pod crops: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

Note:

Larvae Size - Larvae greater than 5 mm are often not controlled satisfactorily as they are harder to kill and they are often protected from spray by the plant.