

CAUTION

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

RAVENSDOWN **Clopyralid** HERBICIDE



**ACTIVE CONSTITUENT: 300g/L CLOPYRALID
PRESENT AS THE TRIISOPOPANOLAMINE SALT**

GROUP	I	HERBICIDE
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For the control of a wide range of broadleaf weeds in wheat, barley, triticale, oats, pastures, canola, fallow land, forests and industrial situations as specified in the Directions for Use table.

IMPORTANT: READ THE ATTACHED BOOKLET BEFORE OPENING OR USING THIS PRODUCT

CONTENTS: 5L, 10L, 20L, 100L

RAVENSDOWN FERTILISER CO-OPERATIVE LIMITED
2 BIRKSGATE ROAD ROUS HEAD
Locked Bag 10
NORTH FREMANTLE, W.A. 6159 AUSTRALIA
Phone 08 9430 2222 Fax 1800 683 122
ACN 128 889 814

Batch Number:
Date of Manufacture:
APVMA Approval Number:59343 / 54158

STORAGE AND DISPOSAL:

Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store near feedstuffs, fertilisers or seed.

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 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.

SMALL SPILL MANAGEMENT

Wear protective equipment (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal. (See STORAGE AND DISPOSAL section). If necessary, wash the spill area with an alkali detergent and water and absorb as above, the wash liquid for disposal.

SAFETY DIRECTIONS:

May irritate the eyes and skin. Avoid contact with the eyes and skin. DO NOT inhale spray mist. When preparing the spray, wear elbow-length PVC gloves and face shield. After each day's use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre (Telephone Australia 13 11 26).

MATERIAL SAFETY DATA SHEET:

Additional information is listed in the Material Safety Data Sheet which is available from Ravensdown Fertiliser Cooperative Ltd.

CONDITIONS OF SALE

The use of Ravensdown Clopyralid Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Ravensdown Fertiliser Cooperative Limited regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Ravensdown Fertiliser Cooperative Limited accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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BOOKLET

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DIRECTIONS FOR USE

It is essential to select a rate appropriate to weed size. Best results will be obtained when weeds are actively growing at treatment.

RESTRAINTS:

DO NOT apply to weeds which may be stressed (not actively growing) due to prolonged periods of extreme heat or cold, moisture stress (water-logged or drought affected) or previous herbicide treatment as reduced levels of control may result.

DO NOT sow susceptible crops (see PROTECTION OF CROPS) for nine months following any application up to 300mL/ha or for twelve months following an application in excess of 300mL/ha and up to 500mL/ha. Field peas should not be sown the season following an application of 500mL/ha. Where rates in excess of 500mL/ha have been used, susceptible crops including field peas should not be sown for at least two years.

DO NOT spray if rain is likely within 3 hours.

CROP	CROP STAGE	WEED	WEED STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Barley, Oats, Triticale, Wheat	Pre-sowing	Capeweed	Up to 8 leaf and maximum 10cm diameter	WA only	150mL plus knockdown herbicide	Pre-sowing: this rate should only be used in tank mixture with formulations of Ravensdown Wildfire 250 Herbicide or Ravensdown Massacre 450 Herbicide.
	Post-sowing pre-emergence through to 3 leaf				150mL plus Diuron at 300mL/ha	Post Sowing Pre-Emergent to 3-Leaf: This rate should only be used in tank mixture with Diuron for control of transplants.
	Early Post-emergence (2 leaf to jointing)		Cotyledons to 6 leaf and maximum 5cm diameter		150mL	Early Post-Emergent: Weeds should be growing actively and not larger than 5cm diameter.
4-5Leaf onwards		Capeweed, Soldier Thistle	Up to 10cm diameter (4-8 leaf)	NSW, ACT, Vic, SA, Tas and WA only	300mL	Weeds should be young and actively growing. Weeds will become stunted and not be competitive soon after application although final results may not show for some weeks. Faba beans and lupins will only be suppressed. Use 75mL/ha rate only in combination with Ravensdown LVE MCPA 500 Herbicide.
		Volunteer Chickpeas, Lentils and Safflower	Up to 6 leaf		250mL	
		Volunteer Faba Beans, Lupins	Up to 4 leaf		150mL	
		Volunteer Field Peas	Maximum 10cm high or 6 nodes		75mL plus 700mL/ha Ravensdown LVE MCPA 500 Herbicide.	
		Volunteer Medics and Seedling Lucerne	Up to 8 leaf		150mL	
		Volunteer Sub-Clover	Up to 6 leaf		100mL	
		Volunteer Vetch	Runners up to 10cm maximum 16 leaf		75mL plus 700mL/ha Ravensdown LVE MCPA 500 Herbicide.	
		Prickly Lettuce	4-6 leaf and maximum 8cm diameter		150mL plus 700mL/ha Ravensdown LVE MCPA 500 Herbicide.	
		Thistles including: Nodding, Saffron, Scotch, Slender, Spear, Stemless, Variegated	Rosettes up to 10cm maximum diameter		NSW, ACT, VIC SA, Tas, Qld and WA only	
5 leaf to late tillering	Skeleton Weed	5-15cm rosettes	NSW, ACT, Vic and SA only	500mL plus 1.0L/ha Ravensdown MCPA 500 Herbicide	Weeds should be a minimum 5cm in diameter and growing actively. This rate will give control until harvest and substantially reduce weed numbers the following season.	

CROP	CROP STAGE	WEED	WEED STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Canola	2-8 leaf	Capeweed, Saffron Thistle, Skeleton Weed and Soldier Thistles	Up to 10cm diameter (4-8 leaf)	NSW, ACT, Vic, SA, Tas, Qld and WA only	300mL	Weeds should be young and actively growing. Weeds will become stunted and will not be competitive soon after application although final results may not show for some weeks. Skeleton weed will only be controlled until harvest. Faba beans and lupins will only be suppressed. For the control of annual grasses, Ravensdown Clopyralid Herbicide may be tank mixed with haloxyfop.
		Volunteer Chickpeas, Lentils and Safflower	Up to 6 leaf		250mL	
		Volunteer Faba Beans and Lupins	Up to 4 leaf		150mL	
		Volunteer Field Peas	Maximum 10cm high or 6 nodes			
		Volunteer Medics and Seedling Lucerne	Up to 8 leaf			
		Volunteer Sub-Clover	Up to 6 leaf		100mL	
		Volunteer Vetch	Runners up to 10cm maximum 16 leaf			
Pastures and Fallow Land	Post-Emergence	Hardhead Thistle (Creeping Knapweed, Russian Knapweed)	Actively growing plants	Qld and Vic only	Hand gun: 500mL/100L of water Boom spray: 2 or 4L/ha	<p>NOTE: DO NOT USE ON LUCERNE. CLOVERS AND MEDICS WILL BE ELIMINATED FOR AT LEAST ONE YEAR.</p> <p>Victoria Only: Use the lower rate only on light soils (sand and sandy loam) where a slightly lower degree of control is acceptable. Use the higher rate on all soil types where complete control is required. Addition of a wetting agent at label rates is recommended for treatment of hardhead thistle. Spray between September and April on actively growing plants for effective control. Thorough coverage is essential. Apply in 200 to 250L of water per hectare.</p> <p>Boom spraying: Use the higher rates of Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide on multi-crowned plants or rosettes larger than 30cm in diameter.</p> <p>Pre-Spray Management: The pasture should be slightly grazed prior to spraying to reduce clover and grass cover and expose the smaller thistles to the spray. The grazed pasture should be left for 7 days to allow thistles to freshen prior to treatment.</p> <p>Post-Treatment Management: Response of thistles to treatment with Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide mixture will be slow compared to the standard treatments with 2,4-D or MCPA. If possible delay grazing of sprayed thistles for 14 days after treatment.</p> <p>Clover Damage: Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide mixtures can be very damaging to subterranean clover. The lower rate is no more damaging than label rates of 2,4-D or Ravensdown MCPA 500 Herbicide. The higher rate of Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide mixture will reduce the clover component of the pasture for about 2 months. Clover recovery will be quicker during periods of active growth.</p> <p>Handgun (Spot Spray): Treat from rosette stage to early flowering. Thorough spraying is necessary.</p> <p>Drench gun: Apply 10mL to rosette crown. To multi-crown plants, apply 10mL to each crown.</p>
		Thistles including: Nodding, Variegated, Scotch, Spear, Slender, Saffron	Rosette stage prior to stem elongation.	NSW, ACT, Vic, Tas, SA and Qld only	50 or 70mL/ha plus 1-1.5L Ravensdown MCPA 500 Herbicide Drench gun: 50mL/1L water	

CROP	CROP STAGE	WEED	WEED STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Pasture and Fallow Land	Post-emergence	Nodding Thistle	Rosettes up to 20cm diameter	NSW, ACT only	100mL	Apply the spray from September to October. Apply by boom spray only. DO NOT apply to thistles over 20cm in diameter. When thistles are over 20cm in diameter use Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide (as described above). Clover Damage: Damage to white clover will be no greater than damage with Ravensdown MCPA 500 Herbicide alone and less than damage from Ravensdown Clopyralid Herbicide plus Ravensdown MCPA 500 Herbicide mixtures. Damage to sub-clover may be greater than with Ravensdown MCPA 500 Herbicide or 2,4-D alone. DO NOT use for spot treatment.
		Californian Thistle	From early buds to flowering (December to February)	Vic and Tas only	Handgun: 200mL/100L water Boom spray: 2L/ha	Addition of a wetting agent at label rates is recommended. Retreatment of regrowth in the year following treatment will usually be necessary to achieve a high level of control. NOTE: Clovers and medics will be eliminated for at least one year.
Pasture, Forests, Rights-Of-Way, Industrial Situations		Groundsel Bush	Young seedlings to mature plants	Qld, NSW, ACT only	Hand gun: 330 or 500mL/100L of water	Spray foliage when growth is active. Use the lower rate on young seedlings and the higher rate on plants more than 2m tall or when growth is slow.
Pasture and <i>Pinus radiata</i> plantations		Silver Wattle	Active growth spring to summer	NSW, ACT, Vic and Tas only	Hand gun: 500mL/100L of water Boom and Aerial Spray: 5L/ha (weeds 30cm to 2m) 7L/ha (weeds 2 to 4m) 8.5L/ha (weeds 4 to 8m)	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. Handgun: Means high volume NOT low volume knapsack. Spray to give full coverage of leaves and stems. Add organosilicone surfactant at 200mL/100L for optimum results. See General Instructions for handgun spraying. Boom and Aerial Spraying: For boom spraying apply in 150 to 200L of water/ha. For aerial treatment apply in a minimum of 50L/ha of water containing 25-50% by volume of anti-evaporant oil such as Ravensdown Assist Spray Tank Adjuvant. Mix Ravensdown Clopyralid Herbicide and water first and then add Ravensdown Assist Spray Tank Adjuvant. Maintain continuous agitation. Clovers and other legumes will be eliminated for at least one year.

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

WITHHOLDING PERIODS:

PASTURE AND FALLOW LAND:

DO NOT GRAZE OR CUT TREATED PASTURES FOR STOCK FEED FOR 7 DAYS AFTER APPLICATION

CEREALS AND CANOLA:

DO NOT GRAZE OR CUT TREATED CEREAL OR CANOLA FOR STOCK FEED FOR 7 DAYS AFTER APPLICATION

FORESTS:

DIRECTIONS FOR USE: It is essential to select a rate appropriate to weed size. Best results will be obtained when weeds are actively growing at treatment.

RESTRAINTS: DO NOT apply to weeds which may be stressed (inactive growth) due to prolonged periods of extreme heat or cold, moisture stress (water logging or drought) or previous herbicide treatment as reduced levels of control may result.

DO NOT spray if rain is likely within 3 hours.

Pre-Planting: Boom and Aerial Application

FORESTS AND PLANTATION TREES INCLUDING <i>Eucalyptus</i> spp., <i>Corymbia maculata</i> AND <i>Pinus radiata</i>				
Weeds Controlled	Weed Growth Stage	State	Rate/ha	Critical Comments
Capeweed, Thistles, Volunteer Legumes, Flatweed, Fleabanes	Pre-emergent	All States	2-6 L	Use the higher rate for extended pre-emergence control (>3 months).
<i>Pinus radiata</i> ONLY				
Silver Wattle (suppression only)	Pre-emergence from seeds	NSW, ACT, Vic, Tas, SA only	6 L	For best results apply Ravensdown Clopyralid Herbicide to bare soil just prior to Spring rain or when wattles are expected to germinate. Avoid application to heavy trash situations. A high level of suppression may not be achieved where rain does not fall for an extended period after application (>1 month), or where very high rainfall occurs after application (>1200 mm/yr).

Post-Planting: High Volume Spraying by Hand Gun

FORESTS AND PLANTATION TREES INCLUDING <i>Eucalyptus</i> spp., <i>Corymbia maculata</i> AND <i>Pinus radiata</i>				
Weeds Controlled	Weed Growth Stage	State	Rate/100 L water	Critical Comments
Groundsel Bush	Young seedlings to mature plants	Qld, NSW, ACT only	330 to 500 mL	Spray foliage when growth is active. Use the lower rate on young seedlings and the higher rate on plants more than 2 m tall or when growth is slow.
Ragwort	Actively growing rosettes up to stem elongation and before flowering.	All States	200 to 300 mL	Spray from the rosette to the shooting stage of growth. Use the higher rate on large multi-crown plants. Addition of a 100% non-ionic surfactant such as Ravensdown Wetter 1000. Add Diquat (200 g/L) at 1L/100L water plus a surfactant after opening of the first flowers, to prevent the formation of viable seed. Where Diquat is added use a directed spray to avoid tree injury.
Silver Wattle	Active growth Spring to Summer	NSW, ACT, Vic, Tas, SA only	500 mL	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. Handgun: Means high volume NOT low volume knapsack. (See General Instructions, Application). Spray to the point of run-off to give full coverage of leaves and stems. Add Ravensdown Assist Spray Tank Adjuvant at 200 mL/100 L for optimum results.
Cape Ivy	Any growth stage	Vic, Tas only	3.3 L/ha	Application may be made at any time of the year providing foliage is dry at the time. Avoid spraying non-target plants. Low volume application: For application by hand held weed wiper or C.D.A. use at dilutions with water of 100 g/L

Post-Planting: Boom and Aerial Application

FORESTS AND PLANTATION TREES INCLUDING <i>Eucalyptus</i> spp., <i>Corymbia maculata</i> AND <i>Pinus radiata</i>				
Weeds Controlled	Weed Growth Stage	State	Rate/ha	Critical Comments
Capeweed, Flatweed, Thistles (except Hardhead Thistle), Volunteer Legumes, Skeleton Weed	Actively growing rosettes, seedlings up to 15 cm diameter or height.	All States	500 mL to 1 L	Cupping of the tip leaves and "weepy leader" symptoms may occur on certain <i>Eucalyptus</i> spp. and <i>Corymbia maculata</i> and are generally transient and do not result in long-term injury. These symptoms may be more obvious at rates of 1 L/ha or higher or where mixtures are used on blue gum, shining gum and spotted gum. Where "weepy leader" effect is a concern use a directed spray. Use the 500 mL rate until 3 months post-planting and the 1 L rate for trees 3 months and older.
Capeweed, Flatweed, Fleabane, Thistles including Hardhead Thistle, Volunteer Legumes, Skeleton Weed	Actively growing rosettes and seedlings greater than 15 cm diameter or height up to stem elongation and before flowering.		2 L	Use the low rate only under ideal conditions with excellent weed growth and where knockdown control of small weeds is desired. Use the high rate where longer control is required of larger weeds. For the control of annual and certain perennial grasses, Ravensdown Clopyralid Herbicide can be tank mixed with other 520g/L Haloxyfop products. See also comments in Mixing section. Bonza should not be used in tank mixes with or other 520g/L Haloxyfop products and Ravensdown Clopyralid Herbicide on sensitive species such as blue gum, shining gum or spotted gum where rates of Ravensdown Clopyralid Herbicide are more than 2L/ha. Use a 100% non-ionic surfactant such as Ravensdown Wetter 1000 at 0.1% v/v instead.
Californian Thistle	From early bud to flowering (December to February)			For best control of California Thistle use a wetter such as Ravensdown Wetter 1000 at 0.1% v/v. A second annual application may also be required for best control.

FORESTS AND PLANTATION TREES INCLUDING *Eucalyptus* spp., *Corymbia maculata* AND *Pinus radiata*

Weeds Controlled	Weed Growth Stage	State	Rate/ha	Critical Comments
Ragwort	Small rosettes to larger rosettes up to stem elongation and before flowering		1 L to 2 L	Spray from the rosette to the shooting stage of growth. For small rosette seedling plants use the lower rate. For large rosette multicrown and/or perennial plants use the higher rate. Addition of a 100% non-ionic surfactant such Ravensdown Wetter 1000 at 0.1% v/v is recommended
Sorrel (suppression only)	Actively growing rosettes, seedlings up to 15 cm diameter or height		6 L to 8.5 L	Higher rates give better suppression. At rates greater than 6L use a directed spray to avoid tree injury.
Silver Wattle	Active growth Spring to Summer (0.5 to 2 m tall)	NSW, ACT, SA, Tas, Vic only	5 L	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. For boom spraying apply in 150 to 200 water/ha. For aerial treatment apply in a minimum of 50 L/ha of water containing 25 to 50% by volume of anti-eporant such as Broadcoat. Mix Ravensdown Clopyralid Herbicide and water first and then add Broadcoat. Maintain continuous agitation. At rates of 7L and 8.5L for Eucalypt spp. use a directed spray to avoid tree injury.
	Active growth Spring to Summer (2 to 4 m tall)		7 L	
	Active growth Spring to Summer (4 to 8 m tall)		8.5 L	

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WITHHOLDING PERIODS:

FOREST HARVEST WITHHOLDING PERIOD:

NOT REQUIRED WHEN USED AS DIRECTED.

FORESTS EXCEPT *Pinus radiata* PLANTATIONS:

DO NOT GRAZE FOR 7 DAYS AFTER APPLICATION.

***Pinus radiata* PLANTATIONS:**

DO NOT GRAZE FOR 14 DAYS AFTER APPLICATION

GENERAL INSTRUCTIONS:**MIXING**

Half fill the spray unit with water and add the required amount of Ravensdown Clopyralid Herbicide. Add the remaining water with the agitator running. Agitate continuously to ensure thorough mixing before and during application. Only mix sufficient chemical for each day's work.

Prior to loading the sprayer, confirm that all components to be mixed are compatible and that the water quality is satisfactory. Allow time for good mixing and dispersion after each product is added.

1. Fill tank partially with water (1/2 to 2/3 final volume) and engage full agitation.
2. Add any water conditioners (such as pH buffers) and/or ammonium sulphate if required.
3. Add the required amount of any dispersible granules, flowables, suspension concentrates and wettable powders ensure that each has dispersed before continuing. Add the required amount of Ravensdown Clopyralid Herbicide.
4. Add any emulsifiable concentrates (such as esters or trifluralin), taking care not to add too fast.
5. Add any water soluble formulations, such as Ravensdown Massacre 450 Herbicide.
6. Add Ravensdown Wetter 1000 if required.
7. Top up with water to the required volume.

COMPATIBILITY**Broadleaf Herbicides:**

This product is compatible with fluroxypyr, Ravensdown Metsulfuron WG Herbicide, bromoxynil, Ravensdown Chlorsulfuron WG Herbicide, Ravensdown Diuron 900 WG Herbicide, Ravensdown Massacre 450 Herbicide, Ravensdown MCPA 500 Herbicide, Ravensdown LVE MCPA 500 Herbicide, Ravensdown Paraquat 250 Herbicide, Ravensdown Wildfire 250 Herbicide, terbutryn, 2,4-D amine.

Grass Herbicides in Cereal Crops:

Ravensdown Diclofop methyl 375 Selective Herbicide, Puma (Puma for wild oat control only).

Grass Herbicides on Broadleaf Crops:

Haloxypol

APPLICATION**Boom and Aerial spraying Crop and Pastures:**

Apply Ravensdown Clopyralid Herbicide in sufficient water to obtain good coverage. It should be applied by an accurately calibrated ground rig or aircraft, delivering 200-300micron droplets and not less than 50L/ha water volume for boom sprayers and no less than 20L/ha for aerial applications.

Hardhead Thistle: Use a spray volume of 200-250L/ha of water.

Silver Wattle: Use a spray volume of 150-200L/ha of water by ground boom spray and minimum spray volume of 50L/ha by aircraft.

Boom spraying Plantation Trees:

Apply Ravensdown Clopyralid Herbicide in sufficient water to obtain good coverage. It should be applied by an accurately calibrated ground rig or aircraft. Delivering 200 to 300 micron droplets and not less than 50L/ha water volume for boom sprayers or not less than 20L/ha for aerial application.

High Volume Hand Gun:

Apply the recommended mix to give full coverage of leaves and stems through a No6-8 tip at 700-1500kPa. Spray volume for effective coverage of dense two metre high silver wattle should be 30-40 litres of spray per 100m² (10m x 10m) of infestation. For larger areas an equivalent would be 3000-4000 litres per infested hectare.

CLEANING SPRAY EQUIPMENT

Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto unused land away from desirable plants and water courses.

PARTIAL CLEANING (Before spraying other labelled or tolerant crops)

After using Ravensdown Clopyralid Herbicide, empty the spray unit completely and drain the whole system. Thoroughly wash inside the spray unit using a pressure hose. Quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the procedure twice.

COMPLETE CLEANING (Before spraying susceptible crops)

Before spraying sensitive crops with equipment that has been used to apply Ravensdown Clopyralid Herbicide wash the tank and rinse the system as above. Then quarter fill the tank again and add an alkaline detergent (eg liquid SURF*, OMO*, OMOMATIC*, DRIVE*, at 500mL/100L water or the powder equivalent at 500g/100L water) and circulate throughout the system for at least 15minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain.

RESISTANT WEEDS WARNING

GROUP	HERBICIDE
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Ravensdown Clopyralid Herbicide is a member of the pyridines group of herbicides. Ravensdown Clopyralid Herbicide has the disruptors of plant cell growth mode of action. For weed resistance management, Ravensdown Clopyralid Herbicide is a Group I herbicide. Some naturally- occurring weed biotypes resistant to Ravensdown Clopyralid Herbicide and other

Group I Herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group I Herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Ravensdown Fertiliser Cooperative Limited accepts no liability for any losses that may result from the failure of Ravensdown Clopyralid Herbicide to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment that may cause spray drift onto nearby susceptible plants/crops, cropping lands or pastures.

DO NOT apply Ravensdown Clopyralid Herbicide to crops or pastures which are to be used for the production of compost or mulches for use with susceptible crops or plants. The use of straw, hay or other plant material treated with Ravensdown Clopyralid Herbicide for composting or mulching susceptible crops may damage these crops.

Susceptible crops include but are not limited to chickpeas, clover, cotton, faba beans, field peas, fruit trees, lentils, lupins, lucerne, medics, ornamentals, potatoes, safflower, sub-clover, tomatoes, vegetables, grape and kiwi fruit vines, vetches, wattle and white clover. Field peas, faba beans, lentils and vetches are particularly susceptible and should not be sown the season following an application of Ravensdown Clopyralid Herbicide at 500mL/ha. DO NOT allow spray drift onto susceptible crops.

Where Ravensdown Clopyralid Herbicide residue carry over from use rates of less than 500mL/ha is suspected and susceptible crops are to be planted, test the treated area as follows:

Field bioassay – where rain allows plant a small area of the susceptible crop 4 to 6 weeks before desired planting date and take note of any symptoms of injury. If any herbicide symptoms are observed, only plant either canola or a cereal (see recommendation for northern and southern Australia below).

Pot bioassay – where not practical to do field bioassay, plant a small number of seeds of the susceptible crop into pots containing soil from the treated field. Do this 4 to 6 weeks before desired planting date. If any herbicide symptoms are observed, only plant either canola or cereal (see recommendation for northern and southern Australia below).

Stubble from treated crops – ensure that harvesters effectively spread crop straw and DO NOT leave a heavy “header trail” after harvest. Burn (if legal in the area), bale and remove, slash or incorporate stubble as soon as practical after harvest and as long as possible before planting next year to allow microbial breakdown of any residues in straw. Heavy stubble loads may carry more residue into the following season. Where heavy stubble burdens and/or not wetting soils exist and less than recommended rain amounts have occurred from application to planting the susceptible crop (see below) only plant a winter or summer cereal or canola.

Planting crops following use of Ravensdown Clopyralid Herbicide in previous crop – planting crops “dry” without significant rain (see below) in the “autumn break” increase the risk of injury to susceptible crops. This practice should be avoided, or only plant a winter or irrigated summer cereal crop or canola. In severely dry conditions, where less than 30% of average annual rainfall and/or less than the minimum rain (see below) has fallen between application and planting the next year, only plant a winter or irrigated summer cereal or canola.

PLANT BACK PERIODS FOR SOUTHERN AUSTRALIA WINTER DOMINANT RAINFALL AREAS (Sth NSW, VIC, SA, WA):

Required Rain – A minimum 25mm rain event in the post harvest summer to autumn period, with a subsequent extended period of at least 1 week where the top 10 cm of the soil stays moist is required to enable breakdown of soil residues. Fastest residue breakdown will occur under good soil moisture and warm conditions, which promote microbial activity, where significant rain (>25 mm) has fallen in summer to autumn, with soil wetting for at least one week, the following plant back periods apply:

Following Crops	Rate (mL/ha)	Plant Back Interval
Clover, Chickpeas, Faba Bean, Field Pea, Lentils Lupins, Medics and Vetch	Up to 300	9 months
	300-500	12 months
	>500	24 months
Barley, Canola, wheat, Oats	All label rates	1 week.

PLANT BACK PERIODS FOR NORTHERN AUSTRALIA SUMMER DOMINANT RAINFALL AREAS (Nth NSW, QLD):

Required Rainfall before plant back –

If planting susceptible summer crops at least 100mm of rain
 If planting susceptible winter crops at least 150 mm of rain

This rain or irrigation should wet the soil for extended periods (at least one week) this is essential for breakdown of soil residues prior to planting susceptible crops.

If planting a cereal or canola crop at least 50mm of rain or irrigation is required to enable soil wetting for at least one week.

Where these requirements have been met the following plant back periods apply.

Following Crops	Rate (mL/ha) and Plant Back Interval	
	Up to 75mL/ha	75-300mL/ha
Chickpea, Cotton, Soybean, Sunflower	3 months	6 months
Lucerne	9 months	9 months
Maize, Sorghum	1 week	2 weeks
Barley, Canola, Oats, Wheat	1 week	1 week

Note: Susceptible crops should not be sown for at least 2 years where Ravensdown Clopyralid Herbicide at more than 300mL/ha has been used in Northern Australia.

PROTECTION OF LIVESTOCK

DO NOT graze or cut treated crops for stock food except as specified under WITHHOLDING PERIODS.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Low toxicity of fish, birds, honey bees, livestock, earthworms and aquatic organisms.

DO NOT contaminate streams, rivers or water ways with chemical or used containers.

STORAGE AND DISPOSAL:

Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store near feedstuffs, fertilisers or seed.

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 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.

SMALL SPILL MANAGEMENT

Wear protective equipment (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal. (See STORAGE AND DISPOSAL section). If necessary, wash the spill area with an alkali detergent and water and absorb as above, the wash liquid for disposal.

SAFETY DIRECTIONS:

May irritate the eyes and skin. Avoid contact with the eyes and skin. DO NOT inhale spray mist. When preparing the spray, wear elbow-length PVC gloves and face shield. After each day's use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre (Telephone Australia 13 11 26).

MATERIAL SAFETY DATA SHEET:

Additional information is listed in the Material Safety Data Sheet which is available from Ravensdown Fertiliser Cooperative Ltd.

CONDITIONS OF SALE

The use of Ravensdown Clopyralid Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Ravensdown Fertiliser Cooperative Limited regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Ravensdown Fertiliser Cooperative Limited accepts no responsibility for any consequence whatsoever resulting from the use of this product.

RAVENSDOWN FERTILISER CO-OPERATIVE LIMITED

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