

Product Name: LONTREL ADVANCED HERBICIDE
APVMA Approval No: 65587 / 110938



Label Name:	LONTREL ADVANCED HERBICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	600 g/L CLOPYRALID PRESENT AS THE DIMETHYLAMMONIUM SALT
Mode of Action:	GROUP I HERBICIDE
Statement of Claims:	For control of a wide range of broadleaf weeds in wheat, barley, oats, triticale, canola, pastures, fallow land, forests and industrial situations as specified in the Directions for Use.
Net Contents:	1000L 100L 10L 110L 1L 20L 5L
Restrains:	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 apply later than the 8 leaf stage of canola. DO NOT compost material from treated plants or crops before reading the PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS section. DO NOT spray if rain is likely within 3 hours. DO NOT apply more than one application per crop.

SPRAY DRIFT RESTRAINTS

DO NOT apply Lontrel Advanced with spray droplets smaller than a COARSE spray droplet size category according to the “APVMA Compliance Instructions for Mandatory COARSE or Larger Droplet Size Categories” located under this title in the GENERAL INSTRUCTION section of this label.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product MUST make an accurate written record of the details of each spray application within 24 hours following application and KEEP this record for a minimum of 2 years. The spray application details that must be recorded are:

- 1 Date with start and finish times of application
- 2 Location address and paddock/s sprayed
- 3 Full name of this product
- 4 Amount of product used per hectare and number of hectares applied to
- 5 Crop/situation and weed/pest
- 6 Wind speed and direction during application
- 7 Air temperature and relative humidity during application
- 8 Nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application
- 9 Name and address of person applying this product. (Additional record details may be required by the state or territory where this product is used).

Directions for Use:

Withholding Periods:

Pastures, Fallow land, Industrial and Commercial situations:
DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.
Cereals and Canola:
DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.
Cereals (HARVEST):
DO NOT APPLY LATER THAN 10 WEEKS BEFORE HARVEST.
Canola (HARVEST):
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:

Resistance Warning:

Lontrel Advanced is a member of the pyridines group of herbicides. The product has the disrupters of plant cell growth mode of action. For weed resistance management, the product is a Group I herbicide.

Some naturally occurring weed biotypes resistant to the product and other disrupters of plant cell growth 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 the product or other disrupters of plant cell growth herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of the product to control resistant weeds.

	Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or local Dow AgroSciences representative.
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Protections:	
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Storage and Disposal:	<p>5, 10, 20 L containers Store in the closed, original container in a cool, well ventilated area which is securely locked. DO NOT store for prolonged periods in direct sunlight. DO NOT store near food, feedstuffs, fertilisers or seed.</p> <p>This container can be recycled if it is clean, dry, free of visible residues and has the drumMUSTER logo visible. Triple or pressure rinse container for disposal. Dispose of rinsate by adding to the spray tank. Do not dispose of undiluted chemicals 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 site. The cap should not be replaced but may be taken separately. 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.</p> <p>1 L containers Store in the closed, original container in a cool, well ventilated area which is securely locked. DO NOT store for prolonged periods in direct sunlight. DO NOT store near food, feedstuffs, fertilisers or seed.</p> <p>Rinse container before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. 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 containers below 500 mm 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.</p> <p>100, 110, 1000 L containers Store in the closed, original container in a cool, well ventilated area which is securely locked. DO NOT store for prolonged periods in direct sunlight. DO NOT store near food, feedstuffs, fertilisers or seed. Returnable containers: 100 & 110 L only Do not remove or tamper with the dry valves or security seal. Do not contaminate the drum with water or any other foreign matter. After each use of the product ensure that the dry valve coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained. Add the rinsings to the spray tank. When the drum is empty remove the dry valve coupler and return to the point of purchase. The drum remains the property of Dow AgroSciences and must be returned. Refillable containers: 1000 L only Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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Safety Directions:	<ul style="list-style-type: none"> * May irritate the eyes, nose and throat. Avoid contact with eyes. * DO NOT inhale the spray mist.
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* When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemical resistant gloves and a disposable dust face mask covering mouth and nose.
* If applying by hand, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemical resistant gloves and a disposable dust face mask covering mouth and nose.
* Wash hands after use.
* After each day's use, wash gloves and contaminated clothing.

First Aid Instructions:	If poisoning occurs, contact a doctor or Poisons Information Centre. Phone: Australia 13 11 26.
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First Aid Warnings:	
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IT IS ESSENTIAL to select a rate appropriate to weed size. Best results will be obtained when weeds are actively growing at treatment.

Table 1. WINTER CEREALS

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Barley Oats Triticale Wheat	Pre-sowing	Capeweed, Volunteer chickpeas and faba bean, Sub clover, Vetch	Up to 8 leaf and maximum 10 cm diameter	75 mL/ha + knockdown herbicide	Pre-sowing: This rate should only be used in tank mixture with Spray.Seed® or glyphosate.
Barley Oats Triticale Wheat	Post-sowing pre-emergence through to 3 leaf	Capeweed, Volunteer faba bean, Sub clover	Pre-emergence	150 – 300 mL/ha	Rates of 150-300 mL/ha give good suppression (reduced seed set and up to 80% weed control). 300 mL/ha is required for good control of capeweed and sub-clover. Apply to moist soil and time treatment for major germination of weeds. Good soil moisture and application close to time of weed germination is essential for best control.
	Post-sowing pre-emergence through to 3 leaf	Capeweed	Up to 8 leaf and maximum 10cm diameter	75 mL/ha + 170 g/ha diuron (900 g/kg)	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 5 cm diameter	75 mL/ha	Early post-emergent: Weeds should be growing actively and not larger than 5 cm diameter.
	4 to 5 leaf through to booting	Capeweed Soldier thistle	Up to 10 cm diameter (4 to 8 leaf)	150 mL/ha	Weeds should be young and actively growing. Weeds will become stunted and non-competitive soon after application although final results may not show for some weeks.
	Volunteer chickpeas, lentils and safflower	Up to 6 leaf	125 mL/ha	Faba beans and lupins will only be suppressed.	
	Volunteer faba beans and lupins	Up to 4 leaf			
	Volunteer field peas	Maximum 10 cm high or 6 nodes	75 mL/ha 40 mL/ha + 600 mL/ha LVE MCPA (600 g/L)		

Table 1 continued

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Barley Oats Triticale Wheat	4 to 5 leaf through to booting	Volunteer medic and Lucerne (seedlings)	Up to 8 leaf	75 mL/ha	<i>continued</i>
		Volunteer sub-clover	Up to 6 leaf		
		Volunteer vetch	Runners up to 10 cm, maximum 16 leaf	50 mL/ha	
	5 leaf through to booting	Flaxleaf Fleabane (<i>Conyza bonariensis</i>)	5 cm rosettes	150 mL/ha	

Table 2. WINTER CEREALS: Post-emergence tank mixtures

Weeds should be young and actively growing. Weeds will become stunted and non-competitive soon after application although final results may not show for some weeks. Where a rate range is listed use low rate mixtures for small weeds to 5cm diameter and higher rate mixtures for weeds up to 10 cm diameter. Use a surfactant such as BS1000® for granular herbicides or the recommended adjuvant on the partner herbicide label.

WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Capeweed	Up to 4 leaf, 10 cm diameter	100 – 150 mL/ha + 20 g/ha chlorosulfuron (750 g/kg)	Chlorosulfuron mixes – 2 leaf to 1 st node crop stage.
		50 mL/ha + 35 - 50 mL/ha Eclipse® + 300 – 400 mL/ha LVE MCPA (600 g/L)	Eclipse/LVE MCPA (600 g/L) mixes – 3 leaf to 1 st node. Where 400 mL/ha LVE MCPA added apply from 4-5 leaf to 1 st node crop stage.
		50 mL/ha + 5 g/ha Ally® + 400 mL/ha LVE MCPA (600 g/L)	Ally/LVE MCPA mixes – 4 to 5 leaf to 1 st node crop stage.
		50 mL/ha + 750 mL/ha Tigrex®	Tigrex mixes – 3 leaf to 1 st node crop stage, but not on barley or Kulin wheat in WA.
Field peas (volunteer) Vetch (volunteer)	Up to 6 node, 10 cm diameter Up to 4 branch, 10 cm diameter	50 mL/ha + 35 - 50 mL/ha Eclipse + 500 - 700 mL/ha (200 g/L bromoxynil/200 g/L MCPA)	Bromoxynil/MCPA mixes – 3 leaf to 1 st node crop stage.
		50 mL/ha + 35 – 50 mL/ha Eclipse + 300 – 400 mL/ha LVE MCPA (600 g/L)	Eclipse/ LVE MCPA mixes – 3 leaf to 1 st node. Where 400 mL/ha LVE MCPA added apply from 4-5 leaf to 1 st node crop stage.
		50 mL/ha + 5 g/ha Ally + 300 mL/ha LVE MCPA (600 g/L) or 40 mL/ha + 600 mL/ha LVE MCPA (600 g/ha)	Use 40 mL/ha only in combination with LVE MCPA. Lontrel Advanced + LVE MCPA mixes – 4 to 5 leaf to 1 st node crop stage.
Vetch (volunteer)	Runners up to 10 cm, maximum 16 leaf	40 mL/ha + 600 mL/ha LVE MCPA (600 g/L)	4 to 5 leaf through to booting crop stage. Weeds should be young and actively growing. Weeds will become stunted and non-competitive soon after application although final results may not show for some weeks.

Table 2 continued

WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Chickpea (volunteer)	Up to 4 branch, 10 cm diameter	50 mL/ha + 35 – 50 mL/ha Eclipse + 500 - 700 mL/ha (200 g/L bromoxynil/200 g/L MCPA)	Bromoxynil/MCPA mixes – 3 leaf to 1 st node crop stage.
Faba bean (volunteer)	Up to 4 node, 10 cm tall		
Lupin (volunteer)	Up to 6 leaf, 10 cm tall	50 mL/ha + 35 – 50 mL/ha Eclipse + 300 - 400 mL/ha LVE MCPA (600 g/L)	Eclipse/LVE MCPA mixes – 3 leaf to 1 st node. Where 400 mL/ha LVE MCPA added apply from 4 to 5 leaf to 1 st node crop stage.
Sub-clover (volunteer)	Up to 5 trifoliolate, 5 cm diameter		
Prickly lettuce	Up to 6 leaf, maximum. 10 cm diameter	50 mL/ha + 5 g/ha Ally + 300 - 400 mL/ha LVE MCPA (600 g/L)	Ally/LVE MCPA mixes – 4 to 5 leaf to 1 st node crop stage.
Medic (volunteer)	Up to 6 leaf, maximum. 5cm diameter		
Prickly lettuce	4 to 6 leaf and maximum. 8 cm diameter	75 mL/ha + 600 mL/ha LVE MCPA (600 g/L)	4 to 5 leaf through to booting crop stage. Weeds should be young and actively growing. Weeds will become stunted and non- competitive soon after application although final results may not show for some weeks.
	Up to 6 leaf, maximum. 10 cm diameter	75 mL/ha + 600 mL/ha LVE MCPA (600 g/L)	Lontrel Advanced + LVE MCPA mixes – 4 to 5 leaf to 1 st node crop stage.
Thistles including: Nodding, Saffron Scotch, Slender Spear, Stemless, Variegated	Rosettes up to 10 cm maximum diameter	25 mL/ha + 700 mL/ha Canvas 750 (MCPA) or 25 mL/ha + 600 mL/ha LVE MCPA (600 g/L)	4 to 5 leaf through to booting crop stage. <u>For thistle control</u> , Lontrel Advanced rate will depend on density, growth stage, climatic conditions and time of application. Use higher rates for best control where high density and/or large weeds occur. MCPA or 2, 4-D mixes apply from 4 to 5 leaf to 1 st node crop stage.
St Barnaby's thistle	4 to 8 leaf, 5 to 10 cm diameter	25 – 50 mL/ha + 350 mL/ha to 700 mL/ha Statesman™ 720 (2, 4-D amine) or 700 mL to 1 L Canvas 750 (MCPA)	Weeds should be young and actively growing. Weeds will become stunted and non- competitive soon after application although final results may not show for some weeks.

Table 2 continued

WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Sowthistle (common)	Young rosettes up to 8 true leaves	50 mL/ha + 800 mL/ha (26 g/L picloram/420 g/L MCPA) or 5 g/ha Ally + 600 mL/ha LVE MCPA (600 g/L)	Apply to actively growing young rosettes. Use Uptake™ Spraying Oil at 500 mL/100 L of water for improved control with picloram/MCPA tank-mixes or BS1000 with Ally/LVE MCPA tank-mixes. Apply tank-mixes from 4 to 5 leaf to 1 st node crop stage.
Skeleton weed	5 to 15 cm rosettes	250 mL/ha + 700 mL/ha Canvas 750 (MCPA)	Weeds should be a minimum 5 cm in diameter, and growing actively. This rate will give control until harvest and substantially reduce weed numbers the following season. Apply from 4 to 5 leaf to 1st node crop stage.

Table 3. CANOLA

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Canola	Pre-sowing	Capeweed, Volunteer chickpeas and faba bean, Sub clover, Vetch	Up to 8 leaf and maximum 10 cm diameter	75 mL/ha + knockdown herbicide	Pre-sowing: This rate should only be used in tank mixture with Spray.Seed or glyphosate.
	Post-sowing Pre-emergence to 3 leaf	Capeweed, Volunteer faba bean, and Sub-clover	Pre-emergence	150 – 300 mL/ha	Rates of 150 - 250 mL/ha give good suppression (reduced seed set and up to 80% weed control). 300 mL/ha is required for good control of capeweed and sub-clover. Apply to moist soil and time treatment for major germination of weeds. Good soil moisture and application close to time of weed germination is essential for best control.
	2 to 8 leaf	Capeweed Cotula Saffron thistle Skeleton weed Soldier thistle	Up to 10 cm diameter (4 to 8 leaf)	150 mL/ha	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.
		Volunteer chickpeas, lentils and safflower	Up to 6 leaf	125 mL/ha	Faba beans and lupins will only be suppressed.
		Volunteer faba beans and lupins	Up to 4 leaf	75 mL/ha	For the control of annual grasses, Lontrel Advanced may be tank mixed with Verdict™ 520 Herbicide.
		Volunteer field peas	Maximum 10 cm high or 6 nodes		
		Volunteer medics and seedling lucerne	Up to 8 leaf		
		Volunteer sub-clover	Up to 6 leaf		
		Volunteer vetch	Runners up to 10 cm maximum 16 leaf	50 mL/ha	
St Barnaby's thistle		4 to 8 leaf, 5 to 10 cm diameter	75 – 150 mL/ha	Lontrel Advanced rate will depend on weed density, growth stage, climatic conditions and time of application. Use higher rates for best control where high density and/or large weeds occur.	

Table 4. HERBICIDE TOLERANT CANOLA: Post-emergence 2 to 8 leaf crop stage

CROP	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Clearfield Canola	Cotula (common), Capeweed	Up to 6 leaf	75 mL/ha + 40 g OnDuty®	Where capeweed is a significant component of the weed spectrum, a tank-mix with Lontrel Advanced may be needed post-emergence. DO NOT exceed this rate of Lontrel Advanced, as reduced control of grass weeds may occur.
Triazine Tolerant Canola	Capeweed, Lupins (volunteer), Saffron thistle, Skeleton weed, Soldier thistle, and weeds from conventional canola	Up to 6 leaf	150 mL/ha	Lontrel Advanced is compatible with atrazine and simazine for use in triazine tolerant canola. Uptake Spraying Oil at 500 mL/100 L of water should be added to this mix for best grass and broadleaf weed control. For the control of annual grass weeds, Lontrel Advanced + atrazine + Verdict 520 + Uptake Spraying Oil are compatible and selective to triazine tolerant canola.

Table 5. PASTURES AND FALLOW LAND (Established perennial grass and sub-clover based pastures) (Boom spray application if not specified)

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Pastures and fallow land	Post-emergence	Hardhead thistle (creeping knapweed, Russian knapweed)	Actively growing plants. Treat rosette stage prior to stem elongation.	<p>Motorised Hand gun: 250 mL/100 L of water. Boom spray: 1 or 2 L/ha</p> <p>Motorised Hand gun: 250 mL/100 L of water. Boom spray: 2 L/ha</p>	<p>NOTE: DO NOT USE ON LUCERNE. CLOVERS AND MEDICS WILL BE ELIMINATED FOR AT LEAST ONE YEAR. 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 BS1000 at 0.2%v/v 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 250 L of water/ha. BOOM SPRAYING: Use the higher rates of Lontrel Advanced plus MCPA on multicrowned plants or rosettes larger than 30 cm in diameter. Spraying may be done at any time during active growth, usually in early winter or spring. Avoid spraying during the dormant winter period or at any time when thistles are not actively growing. <i>DO NOT spray flowering thistles.</i> 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 seven (7) days to allow thistles to freshen prior to treatment. POST-TREATMENT MANAGEMENT: Response of thistles to treatment with the Lontrel Advanced plus MCPA 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. CLOVER DAMAGE: Lontrel Advanced plus MCPA or 2, 4-D mixtures can be very damaging to subterranean clover. The lower rate is no more damaging than label rates of 2, 4-D or MCPA. Use 25 mL/ha mixes when clover is at the 6 trifoliolate leaf stage to just prior to flowering. The 35 mL/ha mix will reduce the clover component of the pasture for about two months. Use the 35 mL/ha mix from 6 trifoliolate leaf stage and where thistles are large due to early germination. Clover recovery will be quicker during periods of active growth. If clover damage is the major consideration, use the lower Lontrel Advanced rate to minimise damage. MOTORISED HANDGUN (Spot spray): Treat from rosette stage to early flowering. Thorough spraying is necessary. DRENCHGUN: Apply 10 mL of mixture to rosette crown. To multicrown plants apply 10 mL of mixture to each crown.</p>
		Thistles including: Nodding Variegated Scotch Spear Slender Saffron St Barnaby's	Treat rosette stage prior to stem elongation.	<p>25 or 35 mL/ha + 700 mL/ha to 1 L/ha Canvas 750 (MCPA)</p> <p>Drench gun: 25 mL/1 L of water</p> <p>Motorised Hand gun: 125 mL/100 L of water</p>	

Table 5 continued

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Pastures and fallow land	Post-emergence	St Barnaby's Thistle	5 to 8 leaf and to 5 to 10 cm diameter	25 – 50 mL/ha + 350 - 700 mL/ha Statesman 720 (2, 4-D amine) or 1.5 - 2.5 L/ha 2,4-DB (500 g/L) or 1 L/ha Gramoxone® or 1 - 1.5 L/ha simazine (500 g/L) + 1 L/ha 2,4-DB (500 g/L)	<i>continued</i> Gramoxone mixes are for lucerne pasture use only. Simazine mixes are for silver grass control and for lucerne based pastures only.
		Nodding thistle	Rosettes up to 20 cm in diameter	50 mL/ha	Apply the spray from September to October. Apply by boom spray only. DO NOT apply to thistles over 20 cm in diameter. When thistles are over 20 cm in diameter use Lontrel Advanced plus MCPA (referred to above). Clover Damage: Damage to white clover will be no greater than damage with MCPA alone and less than damage from Lontrel plus MCPA mixtures. Damage to sub-clover may be greater than with MCPA or 2, 4-D alone. DO NOT use for spot treatment.
		Californian thistle	From early buds to flowering (December to February)	Motorised Hand gun: 125 mL/100 L of water Boom spray: 1 L/ha	Addition of BS1000 at 0.2%v/v 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 (1) year.

Table 5 continued

CROP	CROP STAGE	WEED	WEED STAGE	RATE	CRITICAL COMMENTS
Pastures and fallow land	Post-emergence	Lucerne	30 to 40 cm high preflowering	150 mL/ha + 1.5-2 L/ha glyphosate (450 g/L) + either 1.3 L/ha Canvas 750 (MCPA) or 1.5 L/ha Statesman 720 (2, 4-D amine) or 2 L/ha 2,4-D ester (800 g/L)	Treat healthy, actively growing lucerne in early spring prior to flowering. After grazing or cutting, allow lucerne to regrow for approximately four (4) weeks before treatment. For best control, DO NOT re-graze for greater than two (2) weeks after application. For complete control of lucerne in pasture, cultivate approximately one (1) month after herbicide treatment.
Pasture	Post-emergence	Groundsel bush	Young seedlings to mature plants	Motorised Hand gun: 165 – 250 mL/100 L of water	Spray foliage when growth is active. Use the lower rate on young seedlings and the higher rate on plants more than 2 metre tall or when growth is slow.
Grass pasture	See CRITICAL COMMENTS	Flaxleaf Fleabane (<i>Conyza bonariensis</i>)	5 cm rosettes	150 mL/ha – 1 L/ha	Pasture – The lower rate of 150 mL/ha will give knockdown control. For residual control use the 1 L/ha rate. NOTE: Clovers and medics will be eliminated for at least one (1) year. Where pasture removal is required use 1 L/ha + 2.4 L glyphosate (450 g/L) + BS1000 0.2%v/v.

Table 6. FORESTRY - Pre-planting: Boom and Aerial Application

FORESTS AND PLANTATION TREES INCLUDING <i>EUCALYPTUS SPP.</i>, <i>CORYMBIA MACULATA</i> AND <i>PINUS RADIATA</i>			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Capeweed, Thistles, Volunteer Legumes, Flatweed, Fleabanes	Pre-emergent	1 – 3 L/ha	Use the higher rate for extended pre-emergence control (greater than three (3) months).
Flaxleaf Fleabane (<i>Conyza bonariensis</i>)	5 cm rosettes	150 mL/ha – 1 L/ha	Forests (pre plant) – only use 1 L/ha + 2.4 L glyphosate (450 g/L) + BS1000 0.2%v/v where weeds exist that Lontrel Advanced does not control. Lontrel Advanced can be damaging to <i>Acacia</i> sp. Consult Dow AgroSciences before application in forests where <i>Acacia</i> sp. is a significant component.
<i>PINUS RADIATA</i> only			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Silver wattle (suppression)	Pre-emergence from seeds	3 L/ha	For best results apply Lontrel Advanced 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 (greater than one (1) month), or where very high rainfall occurs after application (greater than 1200 mm/yr)

Table 7. FORESTRY - 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	RATE	CRITICAL COMMENTS
Groundsel bush	Young seedlings to mature plants	160 or 250 mL/100 L water	Spray foliage when growth is active. Use the lower rate on young seedlings and the higher rate on plants more than 2 metres tall or when growth is slow.
Ragwort	Actively growing rosettes up to stem elongation and before flowering	100 to 150 mL/100 L water	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 BS1000 at 0.1% v/v is recommended. Add diquat (200 g/L) at 1 L/100 L water + 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	250 mL/100 L water	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. HAND GUN: 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 organosilicone surfactant (e.g. Pulse®) at 200 mL/100 L for optimum results. Clovers and legumes will be eliminated for at least one year.
Cape Ivy	Any growth stage	1.7 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 dilution with water of 125 mL/L.

Table 8. FORESTRY - 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	RATE	CRITICAL COMMENTS
Capeweed, Flatweed, Skeleton weed, Thistles (except Hardhead thistle), Volunteer Legumes,	Actively growing rosettes, seedlings up to 15 cm diameter or height	250 to 500 mL/ha	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 symptoms and DO NOT result in long-term injury. These symptoms may be more obvious at rates of 500 mL/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 250 mL/ha rate until three (3) months post-planting and the 500 mL/ha rate for trees three (3) months and older.
Capeweed, Flatweed, Fleabanes, Skeleton weed, Thistles including Hardhead thistle, Volunteer Legumes	Actively growing rosettes and seedlings greater than 15 cm diameter or height up to stem elongation and before flowering	1 L/ha	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 Lontrel Advanced can be tank mixed with Verdict 520 Herbicide. See also comments on mixing in DIRECTIONS FOR USE. Uptake Spraying Oil should not be used in tankmixes with Verdict 520 and Lontrel Advanced on sensitive species such as blue gum, shining gum and spotted gum where rates of Lontrel Advanced are more than 1 L/ha . Use a 100% non-ionic surfactant such as BS1000 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 BS1000 at 0.1% v/v. A second annual application may also be required for best control.
Flaxleaf Fleabane (<i>Conyza bonariensis</i>)	5 cm rosettes	150 mL/ha – 1 L/ha	Forests (post plant) – only 1 L/ha plus 2.4 L glyphosate (450 g/L) + BS1000 at 0.2%v/v. where weeds that Lontrel Advanced does not control exist. For post plant situations always apply with shielded sprayer and/or directed spray technique to avoid injury to trees by glyphosate. Lontrel Advanced can be damaging to <i>Acacia</i> sp. Consult Dow AgroSciences before application in forests where <i>Acacia</i> sp. is a significant component.

Table 8 continued

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Ragwort	Small rosettes to larger rosettes up to stem elongation and before flowering	500 mL/ha or 1 L/ha	Spray from the rosette to the shooting stage of growth. For small rosette seedling plants use the lower rate. For large rosette multi-crown and/or perennial plants use the higher rate. Addition of a 100% non-ionic surfactant such as BS1000 at 0.1% v/v is recommended. Add diquat (200 g/L) at 1 L/100 L 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.
Sorrel (suppression only)	Actively growing rosettes, seedlings up to 15 cm diameter or height	3 - 4.25 L/ha	Higher rates give better suppression. At rates greater than 3 L/ha use a directed spray to avoid tree injury.

***PINUS RADIATA* and *EUCALYPTUS SPP.* PLANTATIONS only**

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Silver wattle	Active growth spring to summer (0.5 to 2 m tall)	2.5 L/ha	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. For boom spraying apply in 150 to 200 L of water/ha. For aerial treatment apply in a minimum of 50 L/ha of water with Uptake Spraying Oil at 1 L/ha. At rates of 3.5 and 4.25 L/ha for <i>Eucalyptus spp.</i> use a directed spray to avoid tree injury. Clovers and legumes will be eliminated for at least one (1) year.
	Active growth spring to summer (2 to 4 m tall)	3.5 L/ha	
	Active growth spring to summer (4 to 8 m tall)	4.25 L/ha	

Note: Where drift is likely to be an issue apply in a minimum of 50 L water/with 25 to 50% by volume of anti-evaporant oil. Mix Lontrel Advanced and water first, and then add the anti-evaporant oil. Maintain continuous agitation.

Table 9. INDUSTRIAL/COMMERCIAL SITUATIONS including RIGHTS OF WAY AND FENCELINES - Boom Application only

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Capeweed, Thistles, Volunteer Legumes, Flatweed, Fleabanes	Pre-emergent	1 – 3 L/ha	Use the higher rate for extended pre-emergence control (greater than three (3) months)
Flatweed, Capeweed, Thistles (except Hardhead thistle), Volunteer Legumes, Skeleton weed	Actively growing rosettes, seedlings up to 15 cm diameter or height	250 – 500 mL/ha	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 Lontrel Advanced can be tank-mixed with Verdict 520 Herbicide. See also comments on mixing in DIRECTIONS FOR USE. For best control of California thistle use a wetter such as BS1000 at 0.1% v/v. A second annual application may also be required for best control.
Flatweed, Fleabanes, Capeweed, 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	1 L/ha	
Californian thistle	From early bud to flowering (December to February)		
Flaxleaf Fleabane (<i>Conyza bonariensis</i>)	5 cm rosettes	1 L/ha + 2.4 L/ha glyphosate (450 g/L) + BS1000 0.2%v/v	
Ragwort	Small rosettes to larger rosettes up to stem elongation and before flowering	500 mL/ha – 1 L/ha	Spray from the rosette to the shooting stage of growth. For small rosette seedling plants use the lower rate. For large rosette multi-crown and/or perennial plants use the higher rate. Addition of a 100% non-ionic surfactant such as BS1000 at 0.1% v/v is recommended. Add diquat (200 g/L) at 1 L/100 L 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 injury to non-target plants.

Table 10. INDUSTRIAL/COMMERCIAL SITUATIONS including RIGHTS OF WAY AND FENCELINES - High volume spraying by hand gun

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE	CRITICAL COMMENTS
Groundsel bush	Young seedlings to mature plants	160 or 250 mL/100 L water	Spray foliage when growth is active. Use the lower rate on young seedlings and the higher rate on plants more than 2 metres tall or when growth is slow.
Ragwort	Actively growing rosettes up to stem elongation and before flowering	100 to 150 mL/100 L water	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 BS1000 at 0.1% v/v is recommended. Add diquat (200 g/L) at 1 L/100 L 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 injury to non-target plants.
Silver wattle	Active growth spring to summer	250 mL/100 L water	For effective control apply when bushes are growing actively. Large trees will not show complete necrosis. HAND GUN: 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 organosilicone surfactant (e.g. Pulse) at 200 mL/100 L for optimum results.
Cape ivy	Any growth stage	1.6 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 dilution with water of 125 mL/L.

Table 11. AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY – Stem Injection Application on *Acacia* Species

Mix 1 part Lontrel Advanced with 9 parts of water and apply the diluted mix as directed below.

WEED GROWTH STAGE	APPLICATION RATE	CRITICAL COMMENTS
Single stems less than 25 cm diameter at base	1 mL of the diluted mix per cut at 10 to 13 cm centres	Apply to waist high cuts. See GENERAL INSTRUCTIONS - APPLICATION SECTION for application method details. DO NOT exceed the recommended spacings from the centre of one cut to the centre of the next cut. Inject each stem of a multi-stem tree where possible.
Multiple stems or more than 25 cm diameter at base	2 mL of the diluted mix per cut at 10 to 13 cm centres	

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

MIXING:

Tank-mixing: The following order should be followed:

1. Quarter fill the spraytank maintaining agitation.
2. Add any wettable powders or dry flowable formulations with continuous agitation, ensure product is completely dissolved.
3. Add Lontrel Advanced.
4. Add water to half fill the spray tank.
5. Add other suspension concentrates (flowables), aqueous concentrates and the emulsifiable concentrates including other selective grass herbicides or broadleaf herbicides.
6. If Uptake Spraying Oil or BS1000 is to be used, add when spray tank is three quarters full.
7. If other adjuvants or a wetting agent is to be used, add these according to their label.
8. Add water to bring to the final spray volume.

Only mix sufficient spray solution for immediate use and avoid storing.

COMPATIBILITY:

- **Conventional canola:** Lontrel Advanced + Verdict 520 + Uptake Spraying Oil are compatible and selective.
- **Triazine Tolerant canola:** Atrazine + Lontrel Advanced + Verdict 520 + Uptake Spraying Oil are compatible and selective.
- **Clearfield canola:** Intervix[®] + Lontrel Advanced are compatible and selective.
- LONTREL ADVANCED is compatible with the following:

BROADLEAF HERBICIDES: 2,4-D amine, Affinity Force[®], Ally, Aptitude[®], atrazine, Broadstrike[™], bromoxynil, bromoxynil MA, Brushoff[®], chlorsulfuron, diuron, Eclipse, Eclipse/MCPA LVE, Ecopar[®], Eliminar C[®], Flight EC[®] Herbicide, Garlon[™] 600, Garlon[™] FallowMaster[™], chlorosulfuron, Jaguar[®], MCPA amine, LVE MCPA, metsulfuron, Paradigm[™], Paragon[®], Precept[®], simazine, Spray.Seed, Starane[™] Advanced, Stinger[™], sulfometuron methyl, terbacil/sulfometuron methyl, terbutryn, Tigrex, picloram/MCPA and Velocity[®].

GRASS HERBICIDES ON BROADLEAF CROPS: atrazine, clethodim, Intervix[®], simazine and Verdict 520 Herbicide.

GRASS HERBICIDES IN CEREAL CROPS: Achieve[®] WG, Atlantis[®] Selective OD, Axial[®], Crusader[™], diclofop methyl, Hussar[®], Monza[®], Topik[®] 240EC, Tristar[®] and Wildcat[®].

BROAD SPECTRUM HERBICIDES: glyphosate, paraquat and Spray.Seed.

ADJUVANTS: BS1000, Uptake Spraying Oil and Pulse[®].

- **Forestry:** Please consult with Dow AgroSciences for tankmix partners.

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APPLICATION

APVMA compliance instructions for mandatory COARSE or larger droplet size categories

Important information

These instructions inform those using this chemical product how to lawfully comply with the requirement of a COARSE or larger spray droplet size category for spray application.

Spray droplet size categories are defined in the ASAE S572 Standard (newer name may also be shown as ASABE) or the BCPC guideline. Nozzle manufacturers may refer to one or both of these documents, to identify droplet size categories; however, for a nozzle to comply with this requirement, the manufacturer must refer to at least one.

Complying with the label requirement to use a specific droplet size category means using the correct nozzle that will deliver that droplet size category under the spray operation conditions being used. The APVMA has approved only the following specific methods for choosing the correct nozzle. Use one of the methods specified in these instructions to select a correct nozzle to deliver a COARSE or larger droplet size category.

GROUNDBOOM

Instructions for ground application—for COARSE droplet size or larger categories

Mandatory instructions for ground applications

USE ONLY nozzles that the nozzles' manufacturer has rated to deliver a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category, as referenced in ASAE S572 or BCPC. Choose a nozzle that is specified to provide the droplet size category required in the label Spray Drift Restraints.

DO NOT use a higher spray system pressure than the maximum the manufacturer specifies for the selected nozzle to deliver the droplet size category required in the label Spray Drift Restraint.

- Apply in 50 - 100 L water/ha using at least a coarse spray through accurately calibrated equipment.
- Hardhead thistle – Use at least a coarse spray and 200 to 250 L/ha of water.
- Silver wattle – Use at least a coarse spray and 150 to 200 L/ha of water.

AERIAL APPLICATION

Instructions for fixed-wing aerial application—for COARSE droplet size or larger categories

Instructions in this section apply to fixed-wing aerial application of products for which the label Spray Drift Restraint requires a COARSE or a VERY COARSE spray droplet category.

Nozzle choices must be made using Option 1, 2 or 3 below. Option 1 nozzles are limited to a maximum aircraft speed of 110 knots and are for COARSE droplets only. Option 2 nozzles are limited to a maximum aircraft speed of 120 knots and are also for COARSE droplets only. Option 3 nozzles have their use conditions (maximum airspeed, nozzle spray angle, product used, orifice size and spray system pressure) specified in the APVMA Approved Aerial Agricultural Association of Australia (AAAA) Nozzle Calculator (described in Option 3). Depending on those use conditions, the calculator can identify a correct nozzle for either a COARSE or a VERY COARSE spray droplet category. (To use Option 3, aerial applicators must contact the AAAA for access to their approved nozzle calculator.)

- Apply in not less than 20 L water/ha using a COARSE spray through accurately calibrated equipment. **DO NOT** use less than 50 L/ha for silver wattle.

Mandatory instructions for fixed-wing aerial applications

Option 1

For up to a maximum aircraft speed of 110 knots and a COARSE droplet size category, **USE ONLY** solid stream 0° nozzles with orifice diameter greater than or equal to 1.5 mm and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 3 bar.

Mandatory Instructions for fixed-wing aerial applications (continued)

Option 2

For up to a maximum aircraft speed of 120 knots and a COARSE droplet size category, **USE ONLY** narrow angle flat fan nozzles with spray angle less than or equal to 40° and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 4 bar.

Mandatory instructions for fixed-wing aerial applications (continued)

Option 3

USE ONLY nozzles rated by the APVMA Approved AAAA Nozzle Calculator as COARSE or VERY

COARSE to comply with a product label's requirement for a COARSE or a VERY COARSE spray droplet size category. Use the AAAA Nozzle Calculator, and follow the additional instructions below in a), b) and c).

a) To identify a nozzle to comply with the required spray droplet category, aerial applicators must use only the droplet size category given in the nozzle calculator at the DV(0.1) position. The categories shown at the DV(0.5) and the DV(0.9) positions in the calculator must not be used for making a nozzle selection.

b) Aerial applicators must not apply the product at airspeeds greater than the speed used to select the nozzle. If an application airspeed that is slower than 100 knots (the minimum speed specified in the nozzle calculator) is planned, a nozzle identified as COARSE or VERY COARSE at 100 knots can also be used at these slower airspeeds, provided that the nozzle angle and system pressure are kept the same.

c) When a particular pesticide product is chosen within the nozzle calculator as one of the conditions set to select a nozzle, then aerial applicators must use that specific pesticide product with that nozzle. When a pesticide product is planned for use and is not available as a choice within the nozzle calculator, aerial applicators must use the category 'Other product' in the calculator to set the condition for selecting a nozzle.

Instructions for helicopter aerial application—for COARSE droplet size or larger categories

Instructions in this section apply to helicopter application of products where the label Spray Drift Restraint requires a **COARSE**, a **VERY COARSE** or an **EXTREMELY COARSE** spray droplet category. Nozzle choices must be made using Option 1, 2 or 3 below.

Mandatory instructions for helicopter aerial application

Option 1

For helicopter applications requiring a COARSE or a VERY COARSE spray droplet size category, USE ONLY nozzles selected with the methods previously specified for fixed-wing aircraft in Section 2.

Mandatory instructions for helicopter aerial Application (continued)

Option 2

When using Micronair controlled droplet applicators (Micron Sprayers Ltd), USE ONLY nozzles selected with the Micronair Droplet Size Prediction Models designed for Micronair products (and located on the company website) to choose a nozzle to satisfy the label requirement for a COARSE droplet size category. Important: to qualify for the COARSE category, the DV(0.1) value must be greater than 156 microns. Adjust parameters as necessary (eg lower the atomizer rotation rate) in order to achieve a DV(0.1) value greater than 156 microns.

Mandatory instructions for helicopter aerial application (continued)

Option 3

When using Accu-Flo nozzles (Bishop Equipment Mfg Inc), USE ONLY nozzles rated according to the manufacturer's instructions to select the correct nozzle to apply a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category to satisfy the label requirement for one of those specific droplet size categories.

MOTORISED HIGH VOLUME HAND GUN

- Apply the recommended mix to give full coverage of leaves and stems through a No. 6 - 8 tip at 700 to 1500 kPa. Spray volume for effective coverage of dense two metre high silver wattle should be 30 to 40 litres of spray per 100 m² (10 m x 10 m) of infestation. For larger areas an equivalent would be 3000 to 4000 litres per infested hectare.

STEM INJECTION

- To make a stem injection pocket at waist height, use a $\frac{3}{4}$ length axe with a blade of 5-7cm. The axe cut must be through the bark and deep enough to place all the chemical in contact with the sap wood.

- The chemical must be applied immediately after the injection pocket is made. Apply the chemical with a Phillips 5 mL vaccinator fitted with a tree injector kit which can be accurately calibrated. Set vaccinator to deliver 1 mL of the diluted mix.
- When treating regrowth less than the width of the axe, ensure chemical does not run out the sides of the cut, as reduced control will result. This can be overcome by using the corner of the axe to make the pocket in the stem.

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 LONTREL ADVANCED, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose. Quarter fill the tank with clean water and circulate through the pump, line, hoses and nozzles. Drain and repeat procedure twice.

COMPLETE CLEANING (before spraying crops that are susceptible to residues of Lontrel Advanced).

- After using Lontrel Advanced, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose. Quarter fill the tank with clean water and circulate as above, then drain.
- Quarter fill the tank again and add a liquid alkali detergent at 500 mL/100 L water and circulate throughout the system for at least fifteen minutes. If using a concentrated laundry detergent use 250 g (or mL)/100 L water. Do not use chlorine based cleaners.
- Drain, remove filters and nozzles and clean separately. Rinse inside the tank thoroughly using a pressure hose and flush system with clean water.
- These tank cleaning recommendations are for Lontrel only. Please consult tankmix partner labels to determine requirements for decontamination.

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.

PROTECTION OF CROPS, NATIVE AND OTHER 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.

Composts and mulches - **DO NOT** apply Lontrel Advanced to crops or pastures that will be used for the production of compost or mulches or mushroom substrate. Such compost or mulch made from plant material treated with Lontrel Advanced may cause damage to susceptible crops and plants.

Susceptible crops and plants include, but are not limited to chickpeas, clover, cotton, faba beans, field peas, fruit trees, lentils, lupins, lucerne, medics, ornamentals, potatoes, safflower, tomatoes, vegetables, grape and kiwifruit vines, vetches, and wattles. **Field peas, faba beans, lentils and vetches are particularly susceptible and should not be sown the season following an application of Lontrel Advanced at 250 mL/ha.**

Where Lontrel Advanced residue carryover from use rates of less than 250 mL/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 four to six 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 four to six weeks before desired planting date. If any herbicide symptoms are observed, only plant either canola or a 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 residues into the following season. **Where there is a heavy stubble burden and/or non-wetting soils, soils with low organic matter, grazing that causes surface sealing and reduced water penetration or Lontrel Advanced has been applied late in the previous season and less than the recommended rain amount 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 Lontrel Advanced in previous crop – planting crops ‘dry’ without significant rain (see below) in the ‘autumn break’ increases 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 < 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 summer cereal or canola.**

PLANTBACK PERIODS FOR SOUTHERN AUSTRALIAN WINTER DOMINANT RAINFALL AREAS (Sth NSW, VIC, SA, WA):

Required rainfall - A minimum 25 mm rain event in the post harvest summer to autumn period, with a subsequent extended period of at least two (2) weeks where the top 10 cm of the soil stays moist is required to enable breakdown of soil residues. Test this by use of a soil probe to see that soil has been thoroughly wet to 10cm or more, for a period of at least two (2) weeks. 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 two (2) weeks, the following plantback periods apply:

Following Crops	Rate (mL/ha) used previously	Plantback Interval
Clover, chickpea, faba bean, field pea, lentils, lupins, medics and vetch	Up to 150	9 months
	150 - 250	12 months
	>250	24 months

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

Required rainfall before plantback:

If planting susceptible summer crops – at least 100 mm rain or irrigation.

If planting susceptible winter crops – at least 150 mm rain or irrigation.

For all situations, sufficient rainfall or irrigation to enable soil wetting for at least one week is essential to enable residue breakdown before planting susceptible crops.

Where these requirements have been met, the following plantback periods apply:

Following Crops	Rate (mL/ha) and plantback interval	
	Up to 40 mL/ha	40 -150 mL/ha
Lucerne	9 months	9 months
Chickpea, Cotton Soybean, Sunflower	3 months	6 months
Maize, sorghum	1 week	2 weeks

Note: Susceptible crops should not be sown for at least two (2) years where Lontrel Advanced at more than 150 mL/ha has been used in Northern Australia.

Cereals and canola may be safely planted immediately after application. However, post-emergent weed control may be reduced due to soil disturbance if one week is not allowed after application.

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

- Lontrel Advanced has low toxicity to fish, birds, honey bees, livestock, earthworms and aquatic organisms.
- **DO NOT** contaminate streams, rivers or waterways with chemical or used containers.