



Product Name: MACSPRED CLOMAC HERBICIDE

APVMA approval No.: 58844/120369

Label Name:	MACSPRED CLOMAC HERBICIDE
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Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	750 g/kg CLOPYRALID PRESENT AS THE POTASSIUM SALT
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Mode of Action:	GROUP I HERBICIDE
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Statement of Claims:	For the control of a wide range of broadleaf weeds in wheat, barley, oats, triticale, canola, pastures, fallow land, forests and industrial/commercial situations as specified in the Directions for Use table.
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Net Contents:	1kg - 10kg 2kg *(10x 200g) *water soluble container 2 kg - contains 10 x 200g water soluble measure packs which it is illegal to sell separately 200g Not to be sold separately. Before use read all directions on outer pack. Water soluble packaging. Keep dry.
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Restrains:	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 immediately before sowing susceptible crops, or sow susceptible crops into paddocks treated the previous year with Clomac until after the required plantback period has elapsed (see PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS section). DO NOT apply this product by air or mister within a Chemical Control Area in Victoria without a valid permit. DO NOT spray if rain is likely within 3 hours.
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	<p>DO NOT apply later than the 8 leaf stage of canola or the 1st node stage of winter cereals. DO NOT compost material from treated plants or crops before reading the PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS section.</p> <p>See GENERAL INSTRUCTIONS – APPLICATION section for application method details.</p> <p>IT IS ESSENTIAL to select a rate appropriate to weed size. Best results will be obtained when weeds are actively growing at treatment.</p>
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Directions for Use:	
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Other Limitations:	
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Withholding Periods:	<p>PASTURES, FALLOW LAND and INDUSTRIAL /COMMERCIAL SITUATIONS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.</p> <p>CEREALS and CANOLA: DO NOT GRAZE OR CUT TREATED CEREALS FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.</p> <p>FORESTS: NONE REQUIRED WHEN USED AS DIRECTED</p>
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Trade Advice:	
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General Instructions:	<p>GENERAL INSTRUCTIONS</p> <p>MIXING: Clomac granules are highly soluble in water and will dissolve rapidly once added to fast moving water. Due to the number of different types of boom sprays, and their differing methods and degrees of agitation, Macspred recommends the following procedures to ensure the granules completely dissolve.</p> <p>Maintain agitation at all times, including during mixing as well as spraying.</p> <ol style="list-style-type: none"> 1. Spray rigs that topfill For spray rigs that fill through hoses into the top of the tank, quarter fill the tank, add the Clomac, then continue to fill the tank. 2. Spray rigs with premix hoppers For spray rigs that have a drop down chemicals induction hopper, three-quarter fill this hopper with water and have the rinsing sprinkler operating. Add the Clomac and when dissolved, transfer this batch into the quarter filled main tank. Continue to rinse the hopper until the entire product has been washed through. 3. Spray rigs with limited bypass agitation For spray rigs that have limited bypass agitation, then as for most granulated formulations, pre-dissolve the Clomac in a bucket before adding to the main tank. Add Clomac while stirring until the granules have dissolved. 4. Tankmixes: The following order should be followed: <ol style="list-style-type: none"> 1. Quarter fill the spray tank maintaining agitation 2. Add Clomac granules, using the mixing procedure above 3. Add Halomac 520 if it is to be used in the tankmix. 4. Add water to half fill the spray tank 5. Add wettable powders, water dispersible granules or suspension concentrates 6. Add other emulsifiable concentrates including other selective grass herbicides
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7. If Uptake * Spraying Oil is to be used then add this when spray tank is half full.
 8. If other adjuvants or a wetting agent is to be used then add these according to their label
 9. Add water to bring to the final spray volume
- Only mix sufficient spray solution for immediate use and avoid storing.

COMPATIBILITY

Clomac is compatible with the following:

BROADLEAF HERBICIDES: Brushhoff®, glyphosate, oxyfluorfen, paraquat, simazine, Spray-Seed®, sulfometuron methyl, terbacil/sulfometuron methyl

GRASS HERBICIDES: Halomac 520 Herbicide

OILS/WETTERS: Uptake* Spraying Oil, Ulvapron®, and Pulse®

APPLICATION

DO NOT apply this product by air or mister within a Chemical Control Area in Victoria unless a permit has been issued by the Department of Primary Industries.

BOOM SPRAYING PLANTATION TREES, INDUSTRIAL/COMMERCIAL SITUATIONS, CROPS AND PASTURES:

Apply Clomac 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 50 L/ha water volume for boom sprayers or not less than 20 L/ha for aerial applications. Do not apply by aircraft in industrial/commercial situations.

Hardhead thistle - Use a spray volume of 200 to 250 L/ha of water. Silver wattle – Use a spray volume of 150 to 200 L/ha of water by ground boom spray and a minimum spray volume of 50 L/ha by aircraft.

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 2 m high silver wattle should be 30 to 40 L of spray per 100 m² (10 m x 10 m) of infestation. For larger areas an equivalent would be 3000 to 4000 L per infested hectare.

STEM INJECTION

To make a stem injection pocket at waist height, use a $\frac{3}{4}$ length axe with a blade width of 5 to 7 cm. 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 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 watercourses.

PARTIAL CLEANING (before spraying other labelled or tolerant crops)

After using Clomac 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 susceptible crops)

After using Clomac 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 an alkali detergent (e.g. Surf®, Omo®, Drive®) at 500 mL/100 L water or 500 g/100 L water and circulate throughout the system for at least 15 minutes.
 Drain, remove filters and nozzles and clean separately. Rinse inside the tank thoroughly using a pressure hose and flush system with clean water.

Resistance Warning:

**RESISTANT WEEDS WARNING
 GROUP I HERBICIDE**

Clomac Herbicide 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 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, Macspred Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant weeds. Strategies to minimize the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or local Macspred representative.

Precautions:

Protections:

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

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

DO NOT allow spray drift onto susceptible crops. Susceptible crops include tobacco, chickpeas, cotton, faba beans, field peas, fruit trees, lentils, lupins, lucerne, medics, ornamentals, potatoes, safflower, subclover, tomatoes, vegetables, vines, wattles and white clover.

Composts and Mulches – Do not apply Clomac herbicide 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 Clomac 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 Clomac at 200 g/ha

Where Clomac residue carry over from use rates of less than 200 g/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 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 residue into the following season. Where heavy stubble burdens and/or non-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 Clomac Herbicide 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 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.

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 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 plantback periods apply:

Following Crops Rate (g/ha) Used Previously Plantback Interval

Clover, chickpea, faba bean, field pea, lentils, lupins, medics and vetch Up to 120 9 months
> 120 – 200 12 months

>200 24 months

Barley, canola, wheat, oats All label rates 1 week

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

Required rainfall before plantback:

If planting susceptible summer crops – at least 100 mm rain

If planting susceptible winter crops - at least 150 mm 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 50 mm of rain or irrigation is required to enable soil wetting for at least one week. Where these requirements have been met the following plantback periods apply:

Following Crops Rate (g/ha) and Plantback Interval

Up to 30 g/ha >30 – 120 g/ha

Chickpea, cotton, soybean, sunflower 3 months 6 months

Lucerne 9 months 9 months

Maize, sorghum 1 week 2 weeks

Wheat, barley, oats, canola 1 week 1 week

Note: Susceptible crops should not be sown for at least 2 years where Clomac Herbicide at more than 120 g/ha has been used in northern Australia.

PROTECTION OF LIVESTOCK

DO NOT graze or cut treated plants for stockfeed for 14 days after application.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Clomac has low toxicity to fish, birds, honey bees, livestock, earthworms and aquatic organisms.

DO NOT contaminate streams, rivers or waterways with chemical or used container.

Storage and Disposal:

STORAGE AND DISPOSAL - cardboard box with plastic liner or foil

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

Single rinse or shake remainder into spray tank. Do not dispose of undiluted chemicals on site. Puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm 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. Empty bags and product should not be burnt.

HDPE

Store in the closed, original container in a dry, cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store near feedstuffs, fertilisers or seed. Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

SMALL SPILL MANAGEMENT

Sweep up material and contain in a refuse vessel for disposal in the same manner as for the packaging (see Storage and Disposal Section).

Safety Directions:

Will irritate the eyes. Avoid contact with eyes.

When mixing and loading wear cotton overalls, over normal clothing, buttoned to the neck and wrist, and elbow-length chemical resistant gloves. If applying by hand wear cotton overalls, or equivalent clothing, buttoned to the neck and wrist and elbow-length chemical resistant gloves.

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.

First Aid Warnings:

DIRECTIONS FOR USE

TABLE 1 – FORESTRY - 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	RATE/ha	CRITICAL COMMENTS
Capeweed, Thistles, Volunteer Legumes, Flatweed, Fleabanes	Pre-emergent	800-2400 g	Use the higher rate for extended pre-emergence control (>3 months)
<i>PINUS RADIATA</i> only			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE/ha	CRITICAL COMMENTS
Silver wattle (suppression)	Pre-emergence from seeds	2400 g	For best results apply Clomac 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)

TABLE 2 – FORESTRY - POST-PLANTING
- High volume spraying by hand gun

FORESTS AND PLANTATION TREES INCLUDING <i>EUCALYPTUS SPP.</i>, <i>CORYMBIA MACULATA</i> AND <i>PINUS RADIATA</i>			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE/100 L Water	CRITICAL COMMENTS
Groundsel bush	Young seedlings to mature plants	130 or 200 g	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	80 to 120 g	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 BS-1000 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.
Silver wattle	Active growth spring to summer	200 g	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	1300 g/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 100 g/L.

**TABLE 3 – 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/ha	CRITICAL COMMENTS
Flatweed, Capeweed, Thistles (except Hardhead thistle), Volunteer Legumes, Skeleton weed	Actively growing rosettes, seedlings up to 15 cm diameter or height	200 to 400 g	Cupping of the tip leaves and 'weepy leader' symptoms may occur on certain <i>Eucalyptus spp.</i> 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 400 g/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.
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	800 g	Use the 200 g rate until 3 months post-planting and the 400 g rate for trees 3 months and older. 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 Clomac can be tankmixed with Halomac 520 Herbicide. See also comments on mixing in Directions for Use. Uptake* Spraying Oil should not be used in tankmixes with Halomac 520 and Clomac on sensitive species such as blue gum, shining gum and spotted gum where rates of Clomac are more than 800 g/ha. Use a 100% non-ionic surfactant such as BS-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 BS-10000 at 0.1% v/v. A second annual application may also be required for best control.
Ragwort	Small rosettes to larger rosettes up to stem elongation and before flowering	400 or 800 g	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 BS-1000 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	2400 to 3400 g	Higher rates give better suppression. At rates greater than 2400 g use a directed spray to avoid tree injury.
<i>PINUS RADIATA</i> and <i>EUCALYPTUS SPP.</i> PLANTATIONS only			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE/ha	CRITICAL COMMENTS
Silver wattle	Active growth spring to summer (0.5 to 2 m tall)	2000 g	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 containing 25 to 50% by volume of anti-evaporant oil such as Ulvapron. Mix Clomac and water first and then add Ulvapron. Maintain continuous agitation. At rates of 2800 g and 3400 g for <i>Eucalyptus spp.</i> use a directed spray to avoid tree injury.
	Active growth spring to summer (2 to 4 m tall)	2800 g	
	Active growth spring to summer (4 to 8 m tall)	3400 g	

TABLE 4 – INDUSTRIAL/COMMERCIAL SITUATIONS *including RIGHTS OF WAY*
- Boom Application only

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Capeweed, Thistles, Volunteer Legumes, Flatweed, Fleabanes	Pre-emergent	All	800-2400 g	Use the higher rate for extended pre-emergence control (>3 months)
Flatweed, Capeweed, Thistles (except Hardhead thistle), Volunteer Legumes, Skeleton weed	Actively growing rosettes, seedlings up to 15 cm diameter or height	All	200 to 400 g	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 Clomac can be tankmixed with Halomac 520 Herbicide. See also comments on mixing in Directions for Use.
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		800 g	
Californian thistle	From early bud to flowering (December to February)		For best control of California thistle use a wetter such as BS-10000 at 0.1% v/v. A second annual application may also be required for best control.	
Ragwort	Small rosettes to larger rosettes up to stem elongation and before flowering		400 or 800 g	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 BS-1000 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 5 – INDUSTRIAL/COMMERCIAL SITUATIONS including RIGHTS OF WAY
- High volume spraying by hand gun

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/100 L Water	CRITICAL COMMENTS
Groundsel bush	Young seedlings to mature plants	Qld, NSW and ACT only	130 or 200 g	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	80 to 120 g	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 BS-1000 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	NSW, ACT, SA, Tas. and Vic. only	200 g	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	Vic. and Tas. only	1300 g/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 100 g/L.

TABLE 6 – PASTURES AND FALLOW LAND – POST-EMERGENCE (ESTABLISHED PERENNIAL GRASS AND SUB CLOVER BASED PASTURES)
(Boom spray application if not specified)

WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE/ha	CRITICAL COMMENTS
Hardhead thistle (Creeping knapweed, Russian knapweed)	Actively growing plants	Vic. and Qld only	Hand gun: 200 g/100 L of water. Boom spray: 800 g or 1600 g/ha	See CRITICAL COMMENTS below for spraying thistles in pastures and fallow land. Only use the 1600 g/ha rate in Qld by boom spray.
St Barnaby's thistle	5 to 8 leaf and 5 to 10 cm diameter	NSW, Vic., Tas., SA and Qld only	20 g or 40 g plus 0.5-1 L/ha 2,4-D amine or 1.5-2.5L/ha 2,4-DB or 1 L/ha Gramoxone or 1-1.5 L/ha Simazine + 1 L/ha 2,4-DB	
Thistles including: Nodding, Variegated, Scotch, Spear, Slender, Saffron, St Barnaby's	Rosette stage prior to stem elongation	WA, NSW, Vic., Tas., SA and Qld only	20 g or 28 g plus 1-1.5 L/ha MCPA amine (500 g/L)/ha Drench gun: 20 g/1 L of water. Hand gun: 100 g/100 L of water	
Nodding thistle	Rosettes up to 20 cm in diameter	NSW only	40 g	Apply the spray from September to October. Apply by boom spray only. DO NOT apply to thistles over 20 cm in diameter use Clomac plus MCPA (referred to above) Clover Damage: Damage to white clover will be no greater than damage with MCPA alone and less than damage by Clomac 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)	Vic. and Tas. only	Hand gun: 100 g/100 L of water. Boom spray: 800 g/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.
Lucerne	30 to 40 cm high preflowering	Qld, NSW, Vic., SA and WA only	120 g plus 1.5-2 L/ha Roundup CT Max + either 2 L/ha MCPA amine or 2 L/ha 2,4-D amine or 2 L/ha of 2,4-D ester	Treat healthy, actively growing Lucerne in early spring prior to flowering. After grazing or cutting, allow Lucerne to regrow for approx. 4 weeks before treatment. For best control, do not regrade for >2 weeks after application. For complete control of Lucerne in pasture, cultivate approx. 1 month after herbicide treatment.

CRITICAL COMMENTS - Thistle Control In Pastures

1. HARDHEAD THISTLES – DO NOT USE HAND GUN APPLICATION ON LUCERNE, CLOVERS AND MEDICS AS THEY 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 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 250 L of water/ha.

2. BOOM SPRAYING: Use the higher rates of Clomac 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. *Do not spray flowering thistles.*

3. PRE-SPRAYING 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 days to allow thistles to freshen prior to treatment.

4. POST-TREATMENT MANAGEMENT: Response of thistles to treatment with the Clomac 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.

5. CLOVER DAMAGE: Clomac plus MCPA or 2,4-D mixtures can be damaging to clover. The low rate is no more damaging than label rates of 2,4-D or MCPA. Use 20 g/ha mixes when clover is at the 6 trifoliate leaf stage to just prior to flowering. The 28 g/ha mix will reduce the clover component of the pasture for about two months. Use the 28 g/ha mix from 6 trifoliate leaf stage to flowering to minimize clover injury, and when clover has reached the 6 to 8 trifoliate 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 Clomac rate to minimize damage.

6. Gramoxone mixes are for Lucerne pasture use only. Simazine mixes are for silver grass control and for Lucerne based pastures only.

7. HAND GUN (Spot spray): Treat from rosette stage to early flowering. Thorough spraying is necessary.

8. DRENCH GUN: Apply 10 mL to rosette crown. To multicrown plants, apply 10 mL to each crown.

**TABLE 7 – AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY
– Stem Injection Application on Acacia Species**

Mix 200 g Clomac with 2.5 L of water and apply the diluted mix as directed below.

WEED GROWTH STAGE	RATE/ha	CRITICAL COMMENTS
Single stems less than 25 cm diameter at base	1 mL of the diluted mix per cut @ 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 multistem tree where possible.
Multiple stems or more than 25 cm diameter at base	2 mL of the diluted mix per cut @ 10 to 13 cm centres	

TABLE 8 – WINTER CEREALS AND CANOLA – PRE-SOWING KNOCKDOWN HERBICIDE

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Capeweed Chickpea (volunteer) Faba bean (volunteer) Sub Clover and Vetch	Up to 8 leaf and maximum 10 cm diameter	60 plus a knockdown herbicide	Pre-sowing: This rate should only be used in tank mixture with formulations of paraquat/diquat or glyphosate.

TABLE 9 – WINTER CEREALS AND CANOLA – POST-SOWING PRE-EMERGENCE TO 3 LEAF CROP STAGE

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Capeweed (in cereals only, WA only)	Pre-emergence to 8 leaf and maximum 10 cm diameter	60 plus diuron at 300 mL/ha	Post-sowing Pre-emergent to 3 Leaf: This rate should only be used in tank mixture with diuron for control of transplants.
Capeweed Faba bean (volunteer) and Sub Clover	Pre-emergence	120-240	Rates of 120-200 g/ha give good suppression (reduced seed set and up to 80% weed control) 240 g/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.

TABLE 10 – WINTER CEREALS – EARLY POST-EMERGENCE 2 LEAF TO 1ST NODE CROP STAGE

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Capeweed (WA only)	Cotyledons to 6 leaf and maximum 5 cm diameter	60	Early Post-emergent: Weeds should be young, actively growing and not larger than listed size. Weeds will become stunted and non-competitive soon after application, although final results may not show for some weeks.
Capeweed Soldier thistle St Barnaby's thistle	Up to 10 cm diameter (4 to 8 leaf)	120	
Chickpea Lentils and Safflower (volunteer)	Up to 6 leaf	100	
Faba bean and Lupins (volunteer)	Up to 4 leaf	100	Faba beans and lupins will usually survive, but will be stunted, uncompetitive and generally not set viable seed.
Field pea (volunteer)	Maximum 10 cm high or 6 nodes	60	
Medic and Lucerne seedlings (volunteer)	Up to 8 leaf	60-80	For best control of hairy leaved medics such as snail medic, add 500 mL Uptake* Spraying Oil / 100 L of water.
Sub-clover (volunteer)	Up to 6 leaf		
Vetch (volunteer)	Runners up to 10 cm and maximum 16 leaf	40	

**TABLE 11 – WINTER CEREALS – POST-EMERGENCE TANK MIXTURES
- WA, SA, VIC, TAS, NSW only (unless specified)**

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 5 cm across and higher rate mixtures for weeds up to 10 cm across. Use a surfactant such as BS-1000® for granular herbicides or the recommended adjuvant on the partner herbicide label.

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Capeweed	Up to 4 leaf, 10 cm diameter	80-120 plus 20 g/ha Glean®	Glean mixes – 2 leaf to 1 st node crop stage
		40 plus 5-7 g/ha Eclipse® + 0.35-0.5 L/ha MCPA LVE	Eclipse/MCPA LVE mixes – 3 leaf to 1 st node. Where 0.5 L/ha MCPA LVE added apply from 4-5 leaf to 1 st node crop stage.
		40 plus 5 g/ha Ally® + 0.5 L/ha MCPA LVE	Ally/MCPA LVE mixes – 4-5 leaf to 1 st node crop stage.
		40 plus 0.75 L/ha Tigrex®	Tigrex mixes – 3 leaf to 1 st node crop stage, but not on barley or Kulin wheat in WA.
Field pea (volunteer)	Up to 6 node, 10 cm diameter	40 plus 5-7 g/ha Eclipse + 0.5-0.7 L/ha bromoxynil/MCPA	Bromoxynil/MCPA Mixes – 3 leaf to 1 st node crop stage
Vetch (volunteer)	Up to 4 branch, 10 cm diameter	40 plus 5-7 g/ha Eclipse + 0.35-0.5 L/ha MCPA LVE	Eclipse/MCPA LVE mixes – 3 leaf to 1 st node. Where 0.5 L/ha MCPA LVE added apply from 4-5 leaf to 1 st node crop stage.
		40 plus 5 g/ha Ally® + 0.35 L/ha MCPA LVE or 30 plus 0.7 L/ha MCPA LVE	Use 30 g/ha only in combination with MCPA LVE. Clomac + MCPA LVE mixes – 4-5 leaf to 1 st node crop stage
		40 plus 5-7 g/ha Eclipse® + 0.5-0.7 L/ha Bromoxynil/MCPA	Bromoxynil/MCPA mixes – 3 leaf to 1 st node crop stage
Chickpea (volunteer)	Up to 4 branch, 10 cm diameter	40 plus 5-7 g/ha Eclipse® + 0.5-0.7 L/ha Bromoxynil/MCPA	Bromoxynil/MCPA mixes – 3 leaf to 1 st node crop stage
Faba bean (volunteer)	Up to 4 node, 10 cm tall	40 plus 5-7 g/ha Eclipse® + 0.35-0.5 L/ha MCPA LVE	Eclipse/MCPA LVE mixes – 3 leaf to 1 st node. Where 0.5 L/ha MCPA LVE added, apply from 4-5 leaf to 1 st node crop stage.
Lupin (volunteer)	Up to 6 leaf, 10 cm tall	40 plus 5 g/ha Ally®	Ally/MCPA mixes – 4-5 leaf to 1 st node crop stage
Sub-clover (volunteer)	Up to 5 trifoliolate, 5 cm diameter	40 plus 5-7 g/ha Eclipse® + 0.35-0.5 L/ha MCPA LVE	Eclipse/MCPA LVE mixes – 3 leaf to 1 st node. Where 0.5 L/ha MCPA LVE added, apply from 4-5 leaf to 1 st node crop stage.
Prickly lettuce	Up to 6 leaf, max 10 cm diameter	40 plus 5 g/ha Ally®	Ally/MCPA mixes – 4-5 leaf to 1 st node crop stage

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Medic (volunteer)	Up to 6 leaf, max 5 cm diameter	+ 0.35-0.7 L/ha MCPA LVE	
Prickly lettuce	Up to 6 leaf, max 10 cm diameter	60 plus 0.7 L/ha MCPA LVE	Clomac + MCPA LVE mixes – 4-5 leaf to 1 st node crop stage
Thistles including Nodding, Saffron, Scotch, Slender, Spear, Stemless, Variegated	Rosettes up to 10 max diameter	20 plus 1 L/ha MCPA amine (500 g/L) or 20 plus 0.7 L/ha MCPA LVE	For thistle control – Clomac 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 4-5 leaf to 1 st node crop stage.
St Barnaby's thistle	4 to 8 leaf 5 to 10 cm across	20 - 40 plus 0.5-1 L/ha 2,4-D amine or 1-1.5 L/ha MCPA amine	
Sowthistle (common) (WA, SA, Vic, Tas, NSW and Qld)	Young rosettes up to 8 true leaves	40 plus 0.8 L/ha Tordon 242 or 5 g/ha Ally + 0.7 L/ha MCPA LVE	Apply to actively growing young rosettes. Use Uptake Spraying Oil at 500 mL/100 L of water for improved control with Tordon 242 tank-mixes or BS-1000 with Ally/MCPA LVE tank-mixes. Apply tank-mixes from 4-5 leaf to 1 st node crop stage.
Skeleton weed (NSW, Vic, SA, WA only)	5 to 15 cm rosettes	200 plus 1 L/ha MCPA amine (500 g/L)	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 4-5 leaf to 1 st node crop stage.

TABLE 12 – CANOLA – POST-EMERGENCE 2 TO 8 LEAF CROP STAGE

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Capeweed, Cotula, Saffron thistle, Skeleton weed, Soldier thistle	Up to 10 cm diameter 4 to 8 leaf	120	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.
Chickpea, Lentils and Safflower (volunteer)	UP to 6 leaf	100	For the control of annual grasses: Clomac is compatible with Verdict* 520 Herbicide. Uptake Spraying Oil should be added to this tank-mix for best grass control. Clomac + Verdict 520 + Uptake Spraying Oil is compatible and selective to canola.
Faba beans and Lupins (volunteer)	Up to 4 leaf		Faba beans and lupins will usually survive, but will be stunted, uncompetitive and generally not set

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Field peas (volunteer)	Maximum 10 cm high or 6 nodes	60	viable seed. For best control of hair leaved medics such as snail medic, add 500 mL Uptake Spraying Oil / 100 L water.
Medics and Lucerne seedlings (volunteer)	Up to 8 leaf		
Sub clover (volunteer)	Up to 6 leaf		
Vetch (volunteer)	Runners to 10 cm max, 16 leaf	40	Will not control woolly pod vetch.
St Barnaby's thistle	4 to 8 leaf, 5 to 10 cm diameter	60 - 120	Clomac 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 13 – HERBICIDE TOLERANT CANOLA – POST-EMERGENCE 2 TO 8 LEAF CROP STAGE

WEED	WEED STAGE	RATE g/ha	CRITICAL COMMENTS
Clearfield Canola			
Cotula (common) Capeweed)	Up to 6 leaf	60 plus 40 g OnDuty*	Where capeweed is a significant component of the weed spectrum, a tank-mix with Clomac may be needed post-emergence. DO NOT exceed this rate 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	120	Clomac 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 Clomac + atrazine + Verdict 520 + Uptake Spraying Oil are compatible and selective to triazine tolerant canola.

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