

CAUTION

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

Rygel

ClearUp 450 SL Herbicide

Active Constituent: 450g/L GLYPHOSATE present as the MONOETHANOLAMINE SALT

Rygel ClearUp 450 SL Herbicide is a non-selective herbicide that will kill most emerged weeds and plants.

APVMA Approval No: 59778/0805

Pack Size: 20L, 110L, 200L, 1000L

GENERAL INSTRUCTIONS

Product Description

Rygel ClearUp 450 SL Herbicide is a non-selective herbicide that will kill most emerged weeds and plants. It provides no residual weed control and may therefore be used before sowing any crop, but not prior to transplanting tomato seedlings. If required, Rygel ClearUp 450 SL Herbicide can be mixed with certain other herbicides to achieve both knockdown and residual weed control (see Tank Mixtures).

Rygel ClearUp 450 SL Herbicide is absorbed by foliage and green stems and moves into the root system. Weeds should be actively growing when treated. Do not treat weeds under poor growing or dormant conditions (such as occur in drought, waterlogging, disease, insect damage or following frosts), as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust or silt. Prior herbicide application may also induce stress in weeds.

For annual weeds, it may be 3 to 7 days before the effects of the treatment become apparent; for perennials, it may be as much as 2 to 3 weeks or more if cool and cloudy.

Rygel ClearUp 450 SL Herbicide is a non-volatile liquid that mixes readily with water. Just mix with the required volume of water, add a non-ionic wetting agent, and spray.

Rain occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours of application may wash the chemical off the foliage and a repeat treatment may be required. Delay treatment of plants wet with dew or rain, if water droplets runoff when plants are disturbed.

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result.

Rygel ClearUp 450 SL Herbicide is compatible with certain herbicides, insecticides and additives (see Compatibility). The active constituent of Rygel ClearUp 450 SL Herbicide is 450 g/L glyphosate present as the monoethanolamine salt.

A withholding period for stock is not required, however, it is recommended that grazing of treated plants be delayed for one day after treatment of annual weeds, or 7 days if perennial weeds are

present to ensure absorption of Rygel ClearUp 450 SL Herbicide.

Certain plants (eg. Soursob, variegated thistle) may be naturally toxic to stock. When known toxic plants are present, do not allow stock to graze until complete browning of treated plants has occurred.

Resistant Weed Warning

Rygel ClearUp 450 SL Herbicide is a member of the Glycines group of herbicides and has the inhibition of EPSP Syntheses mode of action. For weed resistance management Rygel ClearUp 450 SL Herbicide is a group M Herbicide. Some naturally-occurring weed biotypes resistant to Rygel ClearUp 450 SL Herbicide and other inhibitions of EPSP Syntheses mode of action herbicides may exist through normal genetic variability in any weed population. These resistant weeds will not be controlled by Rygel ClearUp 450 SL Herbicide or other inhibitions of EPSP Synthase herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Rygel Australia Pty Ltd accepts no liability for any losses that may result from the failure of Rygel ClearUp 450 SL Herbicide to control resistant weeds.

Crop Establishment

This product is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to produce the most satisfactory seedbed for crop germination and development, proceed as follows:

- Spray Rygel ClearUp 450 SL Herbicide early when the weeds are young.
- If weeds are few and the soil is friable, you can start seeding as early as one day after spraying.
- If the weed density is high, you should delay sowing until the dead weeds are sufficiently decayed, to ensure that crop emergence is not delayed as a result of dead green or decaying weeds being incorporated by cultivation or sowing. This is particularly important in cold or wet weather. Grazing will help to reduce the weed density, and you can assist weed decay by cultivation to leave trash on the surface.
- If seedbed conditions are marginal, be careful to seed at the correct depth. Do not use pre-

emergent herbicides if their labels indicate that they may delay crop emergence.

MIXING

NOTE: Reduced results may occur if water containing soil is used, eg. water from ponds and unlined ditches; or if hard water containing calcium salts is used.

Rygel ClearUp 450 SL Herbicide is a non-volatile liquid that mixes readily with water. DO NOT mix or store or apply this product in galvanised steel, unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. So use only spray tanks and equipment made of plastic or plastic lined, fibreglass, rubber, aluminium, brass, copper, or stainless steel.

1. Make sure the spray tank is completely free of previous spray residues.
2. Half fill the spray tank with clean water. Where possible avoid using turbid water, or hard water containing calcium salts, as this may reduce weed control.
3. If Rygel ClearUp 450 SL Herbicide is being used alone, go to step 5.
4. If Rygel ClearUp 450 SL Herbicide is being used with insecticides, other herbicides or additives (see *Tank Mixtures*), add these products now according to their label directions. If ammonium sulphate is required, add it first using 2 kg/100 L of spray volume. Use only crystalline ammonium sulphate, not the prilled or granulated forms, and wash it into the tank through a mesh screen. If the quality is in doubt, add 40 g to two litres of water and swirl for two minutes. If insoluble particles remain, pre-dissolve the ammonium sulphate in water and add it to the spray tank through a screen.
5. Add the required volume of Rygel ClearUp 450 SL Herbicide, and mix well. Mechanical agitators may cause excessive foaming and should not be used unless required by any tank mix partners.
6. Add the rest of the water. Near the end, add a non-ionic wetting agent, see below. Make sure the filling hose is submerged to avoid excessive foaming, and on completion remove it immediately to avoid back siphoning into the water supply. Use the tank mix promptly. And certainly within 5 days since a gradual loss of activity will occur.

Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application to prevent corrosion.

Surfactant Addition

The use of a non-ionic surfactant may improve weed control where water rates are high or product rates low. Use the following amounts of non-ionic wetting agent per 100L spray mix:

- 200mL Rygel Cropwett 1000 Surfactant
- Do not add any other agricultural chemicals, spraying oils or other materials except as directed on the label.

APPLICATION

Rygel ClearUp 450 SL Herbicide is a non-selective translocated herbicide. Direct spray contact or

even slight drift may cause severe injury or destruction of any growing crop or other desirable plants including trees. Thoroughly flush your mixing and spray equipment with clean water after use.

Ground Application

- Apply 25-100 L of spray mix per hectare.
- Where possible use fan nozzle equipment with pressures of 240-280 kPa.
- Set the boom high enough to ensure double overlap of nozzle patterns at the top of the weed canopy.

Aerial Application

- Use aerial spraying only in pasture or fallow before establishing new pasture, field crops or fodder crops, or for pre-harvest application to Sorghum. **Do not apply Rygel ClearUp 450 SL Herbicide by air within intensive cropping areas as the consequences of accidental drift damage are too extreme.**
- Do not exceed 3.2 L of Rygel ClearUp 450 SL Herbicide per hectare.
- Use at least 15 L/ha with Micronair or boom equipment.
- On cool days apply at least 15 L of spray mix per hectare using an average droplet size (or VMD) of 250-350 microns and a swath 15-17 metres wide.
- On hilly terrain, increase the water volume to 30-80 L/ha and the minimum average droplet size to 300 micron.
- At 25°C increase the water volume to at least 30 L/ha and the minimum average droplet size to 300 micron to compensate for evaporation. Do not spray by air at temperatures above 35°C as excessive evaporation may occur that will reduce weed control.
- Drift is likely when droplet size is 150 microns or less, when wind speed is near zero or over 8 km/hr, the air is hot and dry, or there is a temperature inversion. Do not spray under these conditions.
- After each day of spraying, thoroughly wash the aircraft and landing gear with clean water to remove herbicide residues.

Drift Warning

DO NOT use when breeze is blowing towards nearby desirable plants. DO NOT apply under weather conditions, or from spraying equipment that may cause spray to drift onto nearby susceptible plants, crops, cropping lands or pastures.

Tank Mixtures — Compatibility

Rygel ClearUp 450 SL Herbicide may be tank-mixed with the following. Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix product:

Herbicides: 2,4-D ester, dicamba, metsulfuron, chlorsulfuron, oxyfluorfen, atrazine* flowable or granular (Do not apply the tank mix for control of Barnyard grass or Liverseed grass) simazine* flowable or granular, triasulfuron, pendimethalin.

Insecticides: dimethoate, phosmet, omethoate, chlorpyrifos.

Additives: Ammonium Sulphate.

The addition of ammonium sulphate to Rygel ClearUp 450 SL Herbicide, when used to control annual weeds, MAY improve the performance of Rygel ClearUp 450 SL Herbicide under adverse environmental conditions such as cool cloudy weather. Ammonium sulphate may also improve the performance of tank mixtures of Rygel ClearUp 450 SL Herbicide and atrazine or simazine. If ammonium sulphate, is required, add it first using 2 kg/100 L of spray volume. Use only crystalline ammonium sulphate, not the prilled or granulated forms, and wash it into the tank through a mesh screen. To test quality of crystalline forms, dissolve 2 tablespoons in 2 litres of water and swirl gently for 2 minutes. If undissolved particles remain it is advisable to pre-dissolve the ammonium sulphate in water prior to adding to spray tank through a screen. Ammonium sulphate may be corrosive to metal parts of the sprayer. Thoroughly flush tanks, pumps and nozzles with water after use.

Additives: Non Ionic Wetting Agents as specified in the Directions for Use.

Tank Mixtures — How to Choose

Use the following list of suggestions to determine the appropriate tank mixtures. **Adhere to manufacturers' instructions in all cases.**

- **To improve knockdown and give residual weed control**
 - Atrazine (flowable only) can be added. Use with ammonium sulphate (crystalline only) to overcome antagonism. Do not spray by air. This mixture does not control barnyard grass.
 - in fallow or in crop.** Chlorsulfuron can be added.
 - prior to sowing lupins.** Simazine (flowable only) can be added. Use with ammonium sulphate (crystalline only) to overcome antagonism.
- **To improve and accelerate knockdown symptoms prior to planting wheat or barley.** Add 75 mL of Goal CT per hectare.
- **To improve control of certain broadleaved weeds.** Add 2,4-D Ester. Observe any regional restrictions on use.
- **To improve control of Sorrel, Subterranean Clover, Medics, and White Clover.** Add Dicamba. Observe any regional restrictions on use.
- **To improve control of Annual Ryegrass, Silver grass, and perennial grasses.** Add 200mL of Wetting agent per 100L of spray mix. Use only if recommended.
- **To compensate for adverse growing conditions such as cool or cloudy weather.** Control of annual weeds by Rygel ClearUp 450 SL Herbicide alone may possibly be improved by adding 2kg of crystalline ammonium sulphate per 100L of spray mix.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result.

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

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Do not contaminate dams, rivers or streams with the product or used container. Do not apply to weeds growing in or over water. Do not spray across open bodies of water.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool well-ventilated area out of direct sunlight.

Triple or preferably, pressure rinse empty containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point.

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

For refillable containers: Empty containers fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Will damage eyes and will irritate skin. Avoid contact with eyes and skin. When opening the container and preparing product and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves and goggles. If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. Wash hands after use. After each days use, wash gloves and goggles and contaminated clothing.

FIRST AID

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

CONDITION OF SALE

The use of Rygel ClearUp 450 SL Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Rygel Australia Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Rygel Australia Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

In an Emergency Dial 000 Police or Fire Brigade

DIRECTIONS FOR USE

Restraints

To ensure herbicide absorption, DO NOT disturb weeds by cultivation, sowing or grazing for 1 day after treatment of annual weeds and 7 days for perennial weeds, except where noted.

WEEDS CONTROLLED (ALL STATES)	RATE	CRITICAL COMMENTS Read Application Checklist before using.
Amaranth (<i>Amaranthus spp.</i>) Barley grass (<i>Hordeum leporinum</i>) Barnyard grass (<i>Echinochloa crus-galli</i>) Brome grass (<i>Bromus spp.</i>) Caltrop (<i>Tribulus terrestris</i>) Canary grass (Annual phalaris) (<i>Phalaris spp.</i>) Capeweed (<i>Arctotheca calendula</i>) Cereals (volunteer wheat, barley, oats, sorghum) Chickweed (<i>Stellaria media</i>) Cobbler's pegs (<i>Bidens pilosa</i>) Deadnettle (<i>Lamium amplexicaule</i>) Doublegee (<i>Emex australis</i>) Fumitory (<i>Fumaria officinalis F.muralis</i>) Ground cherry (<i>Physalis ixocarpa</i>) Lesser Swinecress (<i>Coronopus didymus</i>) Liverseed grass (<i>Urochloa panicoides</i>) Mintweed (<i>Salvia reflexa</i>) Paradoxa grass (<i>Pharlaris paradoxa</i>) Paterson's Curse (<i>Echium plantagineum</i>) Pigweed (<i>Portulaca oleracea</i>) Potato weed (<i>Galinsoga parviflora</i>) Ryegrass (<i>Lolium rigidum</i>) Saffron thistle (<i>Carthamus lanatus</i>) Silvergrass (<i>Vulpia spp.</i>) Sowthistle (<i>Sonchus oleraceus</i>) Spear thistle (<i>Cirsium vulgare</i>) Spiny Burrgrass (<i>Cenchrus spp.</i>) Spurge (<i>Euphorbia spp.</i>) Sub. clover (<i>Trifolium subterraneum</i>) Thornapple (<i>Datura spp.</i>) Variegated thistle (<i>Silybum marianum</i>) Wild mustard (<i>Sisymbrium officinale</i>) Wild oats (<i>Avena spp.</i>) Wild turnip (<i>Brassica tournefortii</i>) Winter grass (<i>Poa annua</i>)	BOOM: 1.6 – 2.4L/ha Handgun: 400-600mL per 100L Knapsack: 60-80 mL per 15L	<ul style="list-style-type: none"> • Annual weeds may be sprayed anytime they are actively growing. • Use the lower rate on weeds up to 15 cm tall; increase to the higher rate where weeds are over 15 cm tall. • Visible symptoms develop in 3-7 days but complete desiccation may take 20-30 days under cool conditions. • Rygel ClearUp 450 SL Herbicide does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds. • For residual control of annual weeds, Rygel ClearUp 450 SL Herbicide may be tank-mixed with certain residual herbicides. See Tank Mixtures/Herbicides for directions.

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
TREE AND VINE CROPS. Avocado, Banana, Blueberries, Citrus fruit, Custard apples, Duboisia Figs - dessert, Guava, Kiwifruit, Litchi, Mango, Monstera - fruit, Nuts (including Almond, Pecan, Macadamia, Pistachio and Walnut), Olives. Pawpaw, Persimmons, Pome fruit, Raspberries, Stone fruit, Tea, Vineyards	All States	Amaranth, Barley grass, Barnyard grass, Brome grass, Caltrop, Canary grass (Annual phalaris), Capeweed, Chickweed, Deadnettle, Doublegee, Liverseed grass, Mintweed, Paterson's Curse, Pigweed, Ryegrass, Silvergrass, Spear thistle, Thornapple, Variegated thistle, Wild mustard, Wild oats, Wild turnip, Winter grass	Boom: 1.6 – 2.4 L/ha Handgun: 400-600mL per 100L Knapsack: 60-80mL per 15L	<ul style="list-style-type: none"> Apply as a directed or shielded spray or using wiper equipment. <p>DO NOT apply as a spray near trees or vines less than 3 years old unless they are protectively shielded from spray and spray drift. DO NOT allow wiper surface to contact any part of the tree, vine or palm.</p> <ul style="list-style-type: none"> Citrus fruit, Nuts, Olives, Pome fruit & Vineyards. DO NOT allow spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. Tea. Apply a maximum of 3.2L/ha by shielded boom or directed off-centre nozzle or 400mL/100L by directed handgun or knapsack to avoid application to the crop. All other crops. DO NOT allow spray or spray drift to contact any part of the plant including the trunk. CAUTION: Where split bark on Kiwifruit and green stems on Pawpaw occur, extreme care is required. For residual control of annual weeds, Rygel ClearUp 450 SL Herbicide may be tank-mixed with compatible herbicides which are labelled for use in the above crops. See Tank Mixtures/Herbicides for directions.
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	WA, SA, VIC, NSW only	Barley Grass, Brome grass, Volunteer cereals, Wild oats	400 – 800mL pre tillering 800mL – 1.0L post tillering	<p>Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8 cm before spraying and use the higher rate.</p> <p>RATE SELECTION: Increase to higher rates late in the season or when treating under cold/overcast conditions.</p>
		Annual phalaris (Canary grass), Annual ryegrass, Silvergrass, Winter grass	800 – 1.0 L pre tillering 1.0 L – 1.2 L post tillering	<p>FULL DISTURBANCE with cultivation or sowing with a tyned implement may start 1 day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob or Sorrel are present) and should occur within 21 days after treatment. Where cultivation or sowing does not occur within 21 days, new weed growth may require further treatment. When treating light infestations of seedling annual grasses (pre-tillering) and annual broadleaved weeds (less than 8cm diam/height) cultivation or sowing may start 6 hours after treatment and should occur within 21 days.</p>
		Calomba daisy, Capeweed, Doublegee (Spiny Emex)	400 – 800mL less than 8 cm diameter 800mL – 1.2L greater than 12 cm diameter	<p>CROP ESTABLISHMENT: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions</p>
		Amsinckia, Fumitory,	800 – 1.0L less than 12 cm	<p>ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES: Addition of</p>

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
		Paterson's Curse, Saffron Thistle, Scotch Thistle, Spear thistle, Variegated thistle, Volunteer lupins, Wild turnip	diameter 1.0L – 1.2L greater than 12 cm diameter	a non-ionic wetting agent, 200mL/100L of spray solution may improve control. When treating dense infestations of Silvergrass, use of low volume nozzles (eg. SS 11001, Hardi No 10) and a spray volume of 70 L/Ha or more is recommended to improve plant spray coverage.
		Dock (Seedling)	800mL – 1.2L	TANK MIXTURES: For improved control of clover add dicamba. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.
		Perennial phalaris, Skeleton weed fully emerged rosettes (NSW only), Sorrel, Soursob, Sub clover	1.2L	PERENNIAL WEEDS: For Perennial phalaris, Soursob, Skeleton weed and Sorrel, this product will provide knockdown, seasonal suppression and reduction in treated plant numbers.
	Tas only	All the above weeds	1.2 – 2.4 L	TASMANIA: Use 1.2L/ha on annual weeds. Increase to 2.4L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha of dicamba (200g/L). Observe dicamba label directions and plant back periods.
SOUTHERN AUSTRALIA Prior to establishing a crop or pasture with an implement that gives minimal or no soil disturbance.	NSW SA, VIC, WA, only	Barley grass, Volunteer cereals, Wild oats	800mL – 1.2L	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing of mature plants has occurred allow regrowth to 6-8 cm before spraying and use the higher rate. RATE SELECTION: Use the lower rate on young weeds, increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. Increase to higher rates in spring or when treating under cold/overcast conditions.
		Brome grass, Canary grass, Capeweed, Variegated thistle, Winter grass	1.0 – 1.6L	AERIAL APPLICATION: Use the higher rates. See also Aerial Application . ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES: Add a non-ionic wetting agent, 200mL/100L of spray solution. When treating dense infestations of Silvergrass, use of low volume nozzles (eg. SS 11001, Hardi No 10) and a spray volume of 70 L/Ha or more is recommended to improve plant spray coverage.
		Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2 – 1.6L	TANK MIXTURES: For improved control of Dock, Sorrel and Sub clover add dicamba. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products.

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
				See Tank Mixtures for directions. Addition of Ammonium Sulphate, 2kg/100L, may improve control when treating under adverse environmental conditions.
		Erodium, Perennial phalaris, Plantain, Sorrel, Sub clover, Yorkshire fog	1.5 – 2.0L	PASTURE OR CROP ESTABLISHMENT: Do NOT sow into excessive trash. Trash may be removed by grazing after treatment. Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for 3 days where annual weeds are large. Sowing may proceed when excessive trash is removed, but not sooner than one day after treatment of annual weeds and 7 days for perennial weeds. See also Crop Establishment
		Dock, Flatweed	2.0L	AERIAL (OR SURFACE) SEEDING: Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertilizer and insecticides and follow-up management is undertaken as required
	Tas only	All the above weeds	1.2 – 2.4L	TASMANIA: Use 1.2L/ha on annual weeds. Increase to 2.4L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha of dicamba (200g/L). Observe dicamba label directions and plant back periods.
SOUTHERN AUSTRALIA To commence a fallow	NSW, VIC, SA, WA only	Barley grass, volunteer cereals, Wild oats	800mL – 1.2L	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8 cm before spraying and use the higher rate. RATE SELECTION: Use the lower rate on young weeds, or where cultivation is to follow within 21 days, increasing to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding.
		Annual ryegrass, Brome grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2 - 1.6L	ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES: Add a non-ionic wetting agent, 200mL/100L of spray solution. When treating dense infestations of Silvergrass, use of low volume nozzles (eg. SS 11001, Hardi No 10) and a spray volume of 70 L/Ha or more is recommended to improve plant spray coverage. HOARY CRESS: Treat from late rosette to early flowering SOUSSOB: Treat at tuber exhaustion
		Hoary cress, Soursob	1.2L	COUCH: Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn, with autumn

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
				being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation.
		Couch	1.2 – 2.4L	TANK MIXTURES: Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.
	TAS only	All the above weeds	1.2 – 2.4L	TASMANIA: Use 1.2L/ha on annual weeds. Increase to 2.4L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha of dicamba (200g/L). Observe dicamba label directions and plant back periods
PASTURE TOPPING For annual grass, Capeweed and Calomba daisy seed-set reduction	WA, SA, VIC, TAS, NSW only	Barley grass, Brome grass, Capeweed, Silvergrass	240mL – 360mL	Remove stock prior to treatment to allow even regrowth. Apply to Capeweed and Annual ryegrass at FLOWERING. For other grasses apply from HEAD to MILKY DOUGH stage. Use the higher rate for dense infestations or where Annual ryegrass is present. Apply before signs of plants “haying off”. Reduction in pasture legume population may occur as a result. DO NOT apply to clover or medic crops intended for seed or hay.
		Annual ryegrass, Calomba daisy	360mL	
SEED- HEAD SUPPRESSION OF PERENNIAL GRASSES	VIC, TAS, NSW, WA, SA, only	Bent grass	300 – 500mL	TIMING: Treat from late October to late November. Apply before seedheads have emerged. Use the higher rate where growth is excessive and renovation is intended the following autumn. FOLLOW-UP MANAGEMENT: Graze hard after spraying
<i>BENT GRASS INFESTED PASTURE</i> For control/suppression prior to establishing crops or improved pasture species	VIC, TAS only	Most annual weeds and Bent grass	2.0L	TIMING: Apply to actively growing plants in late spring when they have some seed-head development, but before summer moisture stress. Remove stock to ensure there is full leaf growth. FOLLOW-UP MANAGEMENT: Full disturbance with a tined implement should follow 10-21 days after spraying. Then follow with a summer crop, and/or reseeded pasture or crop the following autumn.
<i>PASTURE MANIPULATION</i> For suppression or control of pasture species prior to drilling, improved pasture, forage species,	NSW, VIC, WA only	Carpet grass, Kikuyu, Paspalum	1.1 – 4.8L	RATE SELECTION: For suppression apply the low rate. Where complete control is required apply up to the high rate
	QLD only	Carpet grass, Paspalum	1.1 – 4.8L	BAND SPRAYING: Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coulter/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1.0m strips. Ensure minimal disturbance of the pasture. Excessive dust created in the

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
soybeans or Leucaena BAND SPRAYING May also be applied as a band or strip spray		Kikuyu	500mL – 4.8L	seeding operation may reduce herbicide activity. Pasture seed must be drilled at the appropriate depth and covered by soil. LEUCAENA (QLD ONLY): Apply 2L/ha through a single taper fan nozzle LF1-80 mounted at the rear of the single row planter providing a 1m swath. Planting rows to be 4m apart.
		Barbed wire grass, Black speargrass, Love grasses, Red Natal grass, Wire grasses	2.4L	
POA TUSSOCK INFESTED PASTURE For reduction of ground cover allowing pasture renovation	NSW, Tas, VIC, QLD only	Most annual weeds and suppression of Poa tussock	2.4 – 3.2L	TIMING: Graze heavily, then remove stock at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the autumn break but before heavy frosts (March – May) APPLICATION: Increasing to the higher rate may give more effective reductions. If aerial spraying see Aerial Equipment . FOLLOW-UP MANAGEMENT: Sowing may start from 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestations.
NORTHERN AUSTRALIA In fallows or prior to sowing a crop	QLD, NSW only	Annual phalaris (Canary grass), Barley grass, volunteer cereals, Wild oats	400 – 800mL	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8 cm. NOTE that under summer (hot) conditions, dense infestations of Barnyard grass and Liverseed grass may require follow-up treatment for complete control. In winter (cold) conditions, symptoms on Deadnettle may be slow to develop. RATE SELECTION: Use the lower rate on young weeds, increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. At more advanced stages of growth certain broadleaf weeds require a higher rate range or the addition of 2,4-D Ester. CROP ESTABLISHMENT: Sowing should not proceed until conditions allow for a formation of a satisfactory seedbed. See Crop Establishment for directions. TANK MIXTURES: Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. DO NOT tank mix with atrazine when spraying Barnyard grass or Liverseed grass. AERIAL APPLICATION: For instructions on Aerial application under hot conditions, see Aerial Application. DO NOT apply by
		Barnyard grass, Button grass, Columbus grass (seedling), Liverseed grass, Native Millet, Stinkgrass (Lovegrass), Volunteer Sorghum	800mL – 1.6L	
		Australian bluebell (QLD only), Cudweed, Fumitory, Mexican poppy, New Zealand spinach, Saffron thistle, Spear thistle, Spurge, Stinking goosefoot	800 m - 1.2 L	
		Black (giant) pigweed, Boggabri weed, Caltrop (Yellowvine), Indian hedge	400 – 800mL up to 5 true leaves or 3cm diameter/height 800mL – 1.2L greater than	

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
		mustard, Mintweed, Summer grass	3cm diameter/height	aircraft when temperature is above 30°C
		Annual ground cherry (Gooseberry), Bladder Ketmia, Camel melon, False castor oil plant/Thornapple, Noogoora burr, Turnip weed, Wild lettuce, Wild turnip, Wireweed	800 – 1.2L prior to stem elongation/ budding. After that use 400mL – 1.2L plus 500 to 700 mL 2,4-D Ester (800g/L) OR 1.2 – 1.6L of this product alone	
		Pigweed	800mL - 1.6L up to 20cm diameter	Use a higher rate on larger weeds. Control of Pigweed over a wide range of growth stages can be obtained with the addition of metsulfuron methyl. Observe re-cropping intervals.
		Sowthistle/ Milkthistle	600 – 800mL rosette up to 3cm diameter 800mL – 1.6L greater than 3cm diameter	Previously grazed plants may be difficult to control without allowing full recovery
		Couch	1.2 – 2.4L	Use the higher rate for dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications may be required for full control. For improved control use in conjunction with cultivation
		Johnson grass	1.5 – 2.4L	Use the higher rates on plants approaching seedhead stage. Apply to plants with a minimum of 30 cm new growth. Sequential treatments will be required for long term control.
		Nutgrass	2.4 + 2.4L	Make first application to actively growing plants when at least 20% have reached the head stage (normally about February). After allowing maximum re-emergence to occur (normally in 6-8 weeks), it is essential to make a second application. NOTE: Follow-up treatments should be made as part of a Nutgrass control program.
SORGHUM CONTROL Pre-harvest	QLD, NSW only	Sorghum, Grain Sorghum DO NOT apply to varieties intended for seed production or varieties prone to lodging	1.2 or 1.6L	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. RATE SELECTION: Use the lower rate for control of crop and late tillers and suppression of ratoon regrowth. Use the higher rate for improved suppression of ratoon regrowth. TIMING: Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred. CAUTION: Treatment may increase potential for CROP LODGING, particularly if prior moisture stress has occurred. Harvest as soon as sufficient dry down has occurred to avoid possible lodging CAUTION: Sorghum may be naturally toxic

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
				to stock.
SORGHUM CONTROL Post-harvest	QLD, NSW only	Sorghum stubble, Grain sorghum	800mL – 1.2L for fresh regrowth from slashed stubble. 1.2 – 1.6L for standing stubble if sufficiently green and for fresh spring regrowth	<p>APPLY UNDER GOOD GROWING CONDITIONS ONLY. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging.</p> <p>SLASHED STUBBLE AND SPRING REGROWTH: Apply when fresh regrowth is at least 20 cm high.</p> <p>STANDING STUBBLE: Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20 cm high before treatment.</p> <p>RATE SELECTION: Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Increase to the higher rate for improved regrowth control.</p> <p>NOTE: Variable results occur where the crop has been subject to stress or the growing conditions are marginal.</p> <p>CAUTION: Sorghum may be naturally toxic to stock</p>
SUGAR CANE Ratoon spray out	QLD, NSW only	Sugar Cane ratoon regrowth	3.2 - 7.2L	<p>APPLY UNDER GOOD GROWING CONDITIONS ONLY to actively growing ratoons 60 – 120 cm tall. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.</p>
RICE Direct drilling	NSW only	Annual phalaris (Canary grass), Annual ryegrass, Barley grass, Burr medic, Sub-clover, Winter grass	800mL – 1.0L	<p>This product is less effective on drought stressed plants. In drought conditions a pre-watering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred allow regrowth to 6-8 cm before spraying.</p> <p>ANNUAL RYEGRASS: Add non-ionic wetting agent at 200mL/100L spray solution and when dominant use the higher rate.</p> <p>SOWING: Direct drilling may take place 1 – 14 days after spraying. This product does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continual control of weeds.</p>
COTTON PRE-HARVEST Do not use on crops intended for seed production	QLD, NSW only	Bathurst burr, Noogoora burr, Winter annual weeds including Sowthistle/ Milkthistle	1.0 – 2.0L	<p>Use the lower rate on light infestations of small weeds, where the crop canopy allows adequate spray coverage of the weeds. Increase to the higher rate when the crop canopy may limit spray coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures with Dropp or Harvade. Apply when at least 60% of bolls are open</p>

CROP/ SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
				and immature bolls cannot be easily cut with a sharp knife. Where a leafy canopy limits spray coverage, reduced weed control can be expected. For better results under these conditions, delay application until canopy re-opens following initial conditioning treatment.
		Nutgrass (seasonal suppression only)	2.0L	Where control of Nutgrass or Noogoora burr is required, treatment should be applied prior to the onset of frosts. When tank mixed with defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label directions for tank mix products.
COTTON Shielded Sprayers	QLD, NSW only	Refer to weeds controlled section Northern Australia in fallows or prior to sowing a crop		Apply this product to weeds growing between crop rows using a shielded sprayer. Do not apply in crops less than 20 cm high. Do not allow spray or spray drift to contact any part of the cotton plants as severe injury or destruction may result.

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED