



Australian Pesticides &
Veterinary Medicines Authority

Product Name: STRAVIA Glyphosate 450 SL Herbicide
APVMA Approval No: 95353/147896

Label Name:	STRAVIA Glyphosate 450 SL Herbicide
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 450 g/L GLYPHOSATE PRESENT AS THE ISOPROPYLAMINE SALT
Mode of Action:	GROUP 9 HERBICIDE
Statement of Claims:	A non-selective herbicide for the control of a broad range of annual and perennial weeds
Net Contents:	20 L - 1000 L
Restraints:	<p>DO NOT spray if rainfall is expected as rainfall within 6 hours of treatment may reduce the effectiveness of the product. Heavy rainfall within 2 hours of treatment may wash the product from the leaf surface and retreatment may be necessary.</p> <p>DO NOT disturb treated weeds by grazing, cultivation, sowing, etc after treatment for one day for annual weeds and 7 days for perennial weeds to ensure complete uptake of the herbicide.</p> <p>DO NOT treat weeds under any stress from frost, cold, disease, waterlogging, lack of moisture or disease. Plants must be actively growing to ensure optimum uptake of the product.</p> <p>Spray Drift Restraints Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift</p>

	<p>DO NOT allow bystanders to come into contact with the spray cloud.</p> <p>DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p> <p>DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.</p> <p>DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.</p>
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	NOT REQUIRED WHEN USED AS DIRECTED.
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Trade Advice:	
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General Instructions:	<p>This product is a non-selective liquid herbicide effective in the control of many annual and perennial grasses and broadleaf weeds in crop areas, land preparations and non-crop areas. This product is inactivated on contact with the soil and does not provide residual weed control. It is absorbed by the plant foliage and green stems and moves through the plant from point of contact to root system. Visible effects are gradual yellowing and wilting of the plant which advances to complete browning of growth above the ground and deterioration of underground plant parts. Visible effects takes 3 to 7 days on annual weeds, whereas on perennial weeds it may take 2 to 3 weeks or longer depending on weather conditions following spraying. No withholding period is required for this product. However, to ensure herbicide absorption, grazing of treated areas should be delayed at least one day after treatment of annual weeds and 7 days for perennial weeds. Certain plants (eg soursob, variegated thistle) are known to be naturally toxic to stock. Where known toxic plants are present, DO NOT allow stock to graze until complete brown out of treated plants has occurred.</p> <p>CROP ESTABLISHMENT</p> <p>This product is recommended for the control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to provide seedbed conditions satisfactory for crop germination and development.</p> <p>Spraying early to control young weeds will favour preparation of suitable seedbeds. On friable soils where there is only a light cover of young weeds, sowing may proceed satisfactorily from one day after spraying. In situations of heavy weed growth, sowing should be delayed until weed decay and soil conditions allow formation of a favourable seedbed. Incorporation of green or decaying vegetation and roots into the seedbed by cultivation or sowing may cause retarded crop emergence, particularly in cold and/or wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface. In marginal seedbed conditions take care to achieve the correct seeding depth and avoid use of pre-emergence herbicides where label directions advise risk of retarded crop emergence.</p> <p>MIXING</p> <p>1. Clean spray tank and assure it is free from residues of previous spray materials.</p>
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2. Fill the spray tank with half the required amount of clean water.
3. Add the required amount of STRAVIA Glyphosate 450 SL Herbicide and mix well before adding the remaining water.
4. If surfactant is required, add this last to minimise foaming.
5. Agitate well before spraying.
6. When preparing spray solution, use clean water since hard water containing calcium salts could inactivate glyphosate.
7. Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, brass, copper, fiberglass, plastic or plastic lined containers or spray tanks since a highly flammable gas may be formed. DO NOT mix or store the product or spray solutions in galvanized steel or unlined steel (except stainless steel).

TANK MIXES

When tank mixing with other products read and follow all label directions, restraints, plant back periods. Withholding periods and safety and first aid directions for the tank mix products. This product is compatible with the following insecticides: Chlorpyrifos, dimethoate, fenitrothion, Imidan*, Le Mat* and Sumithion*.

*Other insecticides have not been tested.

Atrazines/Triazines

STRAVIA Glyphosate 450 SL Herbicide may be tank mixed with Atrazine Flowable or Triazine Flowable for knockdown and residual weed control.

Addition of crystalline ammonium sulphate at 2% w/v (2 kg/100 litre spray solution) is recommended to avoid antagonism.

Dicamba

STRAVIA Glyphosate 450 SL Herbicide and Dicamba may be tank mixed for more effective control of Sorrel, Sub. Clover, medics.

2,4-D

STRAVIA Glyphosate 450 SL Herbicide may be tank mixed with 2,4-D Ester or 2,4-D Isopropylamine for improved control of broadleaf weeds.

Chlorsulfuron

STRAVIA Glyphosate 450 SL Herbicide and chlorsulfuron tank mix will provide knockdown and residual weed control in fallow and in crop. Observe plant back restrictions for chlorsulfuron.

Metsulfuron

STRAVIA Glyphosate 450 SL Herbicide and metsulfuron tank mix provide knockdown weed control in fallows and prior to planting certain winter cereals. Follow all label instructions on the metsulfuron label.

Goal1 CT

The addition of Goal CT at the rate of 75 mL/ha to the recommended rate of STRAVIA Glyphosate 450 SL Herbicide prior to planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visual symptoms of phytotoxicity.

GENERAL SPRAYING INSTRUCTIONS

DO NOT add extra surfactant or mix with other agricultural chemicals, herbicide oils or any other materials unless specifically directed on the label.

APPLICATION

Boom Equipment

Use at spray volume of 25 to 100 L/ha. Fan nozzles at pressure of 240 - 280 Kpa is recommended. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

Knapsack and Handgun Equipment

Adjust equipment to deliver a fine spray pattern and ensure a complete and uniform wetting of all foliage. DO NOT spray in conditions conducive to spray drift.

	<p>Aerial application</p> <p>Aerial equipment may only be used to apply this product in pasture or fallow situations prior to establishment of field crops, fodder crops, new pasture and for pre-harvest applications to sorghum crops. DO NOT use in intensive horticultural areas.</p> <p>Use the recommended rates on this label up to a maximum of 3.2 L/ha.</p> <p>For micronair and boom equipment apply in a minimum spray volume of at least 15 L/ha with an average droplet size of MEDIUM to COARSE. Swath width should be 15-17 m.</p> <p>Application on hilly terrain</p> <p>As spraying height may vary, to maximise target contact increase water volume to 30-80 L/ha and increase droplet size to at least COARSE.</p>
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Resistance Warning:	<p>RESISTANT WEEDS WARNING</p> <p>GROUP 9 HERBICIDE</p> <p>STRAVIA Glyphosate 450 SL Herbicide is a member of the glycine group of herbicides. STRAVIA Glyphosate 450 SL Herbicide has the inhibitor of EPSP synthase mode of action. For weed resistance management STRAVIA Glyphosate 450 SL Herbicide is a Group 9 Herbicide. Some naturally occurring weed biotypes resistant to the product and other inhibitors of EPSP synthase 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 STRAVIA Glyphosate 450 SL Herbicide or any other inhibitors of EPSP synthase herbicide. Since the occurrence of resistant weeds is difficult to detect prior to use, Stravia Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant weeds.</p>
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Precautions:	
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Protections:	<p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</p> <p>DO NOT contaminate dams, rivers or streams with the product or used containers.</p> <p>DO NOT apply to weeds growing in or over water.</p> <p>DO NOT spray across open bodies of water.</p> <p>Avoid contamination of seed, feed or foodstuffs. Keep container closed to prevent spills and contamination.</p> <p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</p> <p>Contact with desirable plants and trees may cause severe damage or destruction.</p> <p>DO NOT spray in conditions conducive to spray drift.</p> <p>DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift to nearby susceptible plants/crops, cropping lands or pastures.</p> <p>DO NOT re-use container for any other purpose.</p>
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Storage and Disposal:	<p>Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.</p> <p>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.</p> <p>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.</p> <p>For refillable containers: 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:	Will irritate the eyes and skin. Avoid contact with eyes and skin. When using together with other products, consult their label safety directions. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. In addition, wear face shield or goggles when mixing and loading. When using controlled droplet applicator wear protective waterproof clothing and impervious footwear. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.
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First Aid Instructions:	If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.
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First Aid Warnings:	
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DIRECTIONS FOR USE

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
SOUTHERN AUSTRALIA Before sowing a crop or pasture. For weed control prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement.	Barley Grass (<i>Hordeum leporinum</i>), Brome Grass (<i>Bromus unioloides</i>), Volunteer Cereals, Wild Oats (<i>Avena spp.</i>)	NSW, ACT, VIC, Southern WA, SA only	400 mL – 800 mL pre tillering. 800 mL – 1 L post tillering.	Use the Higher Rate when treating in cold/overcast conditions, when using late in the season use the lower rate on young weeds and the higher rate on mature weeds i.e. fully tillered grasses or broadleaf weeds at budding or stem elongation. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before treatment and use the higher rate. To allow for herbicide uptake DO NOT begin sowing for 1 day after application for annual weeds and 7-10 days for perennial weeds. If cultivation or sowing does not take place within 21 days retreatment may be necessary. Annual Ryegrass, Silver grass and Perennial grasses - It is recommended to use a water volume of 70L/ha or more with low volume nozzles to improve control. Crop Establishment: Sowing should not proceed until conditions allow for the formation of a satisfactory seedbed. See Crop Establishment for directions. Tank Mixtures: For improved control of clover add dicamba. Read and follow all label directions for the tank mix product. For perennial weeds perennial phalaris, Soursob, Skeleton weed and Sorrel this product will provide knockdown, seasonal suppression and reduction in treated plant numbers.
	Annual phalaris (<i>Phalaris canariensis</i>), Annual Ryegrass (<i>Lolium rigidum</i>), Silver Grass (<i>Vulpia spp.</i>) Winter Grass (<i>Poa annua</i>)		800 mL – 1 L pre tillering. 1 - 1.2 L post tillering.	
	Calomba daisy (<i>Pentzia suffructicosa</i>) Capeweed (<i>Arctotheca calendula</i>), Spiny Emex / Doublegee (<i>Emex australis</i>)		400 mL – 800 mL less than 8 cm diameter. 800 mL - 1 L greater than 8 cm diameter.	
	Amsinkia (<i>Amsinkia</i>), Fumitory (<i>Fumaria officinalis</i> , <i>F. muralis</i>), Paterson's Curse/Salvation Jane (<i>Echium plantaginium</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Spear Thistle (<i>Cirsium vulgare</i>), Variegated Thistle (<i>Silybum marianum</i>), Volunteer Lupins (<i>Lupinus angustifolius</i>), Wild Turnip (<i>Brassica tournefortii</i>)		800 mL – 1 L less than 12 cm diameter. 1 - 1.2 L greater than 12 cm diameter.	
	Dock -seedling (<i>Rumex spp.</i>)		800 mL - 1.2 L	

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
	Seasonal suppression of: Perennial Phalaris (<i>Phalaris</i>), Sorrel (<i>Rumex acetosella</i>), Sub Clover (<i>Trifolium subterraneum</i>), Sour sob (<i>Oxalis pes-caprae</i>), Skeleton Weed (<i>Chondrilla juncea</i>) - fully emerged rosettes (NSW only), Sub Clover (<i>Trifolium subterraneum</i>)		1.2 L	
SOUTHERN AUSTRALIA Before sowing a crop or pasture For weed control prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	All the above weeds	Tas only	1.2 L - 2.4 L	TAS ONLY: Use 1.2 L on annual weeds and 2.4 L on perennial weeds. The product may also be tank mixed with dicamba to improve control of sorrel, dock and white clover. Observe dicamba label directions and plant back periods.
SOUTHERN AUSTRALIA Before sowing a crop or pasture. For weed control prior to sowing a crop or pasture with minimal or no soil disturbance.	Barley Grass (<i>Hordeum leporinum</i>), Volunteer Cereals, Wild Oats (<i>Avena spp.</i>) Brome Grass (<i>Bromus unioloides</i>), Canary Grass (<i>Phalaris spp.</i>), Capeweed (<i>Arctotheca calendula</i>), Variegated Thistle (<i>Silybum marianum</i>), Winter Grass (<i>Poa annua</i>)	NSW, VIC, ACT, Southern WA, SA only	800 mL - 1.2 L 1 - 1.6 L	Use the Higher Rate when treating in cold/overcast conditions, when using late in the season. Use the lower rate on young weeds and the higher rate on mature weeds i.e. fully tillered grasses or broadleaf weeds at budding or stem elongation. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before treatment and use the higher rate. Annual Ryegrass, Silver grass and Perennial grasses - It is recommended to use water volumes of 70 L/ha or more with low volume nozzles to improve control. DO NOT sow if heavy trash is present.

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
	Annual Ryegrass (<i>Lolium rigidum</i>), Paterson's Curse/Salvation Jane (<i>Echium plantaginium</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Silver Grass (<i>Vulpia spp.</i>), Spear Thistle (<i>Cirsium vulgare</i>), Wild Mustard (<i>Sisymbrium officinale</i>), Wild radish (<i>Raphanus raphanistrum</i>) Wild Turnip (<i>Brassica tournefortii</i>)		1.2 - 1.6 L	Seeding may proceed 1 day after spraying annual weeds and 7 days after spraying perennial weeds. Aerial Application: May be applied by air provided a good seed bed has been established. Always use the higher rates. Tank Mixtures: For improved control of dock, sorrel and sub-clover add dicamba. Read and follow all label directions for the tank mix product. Addition of ammonium sulphate 2 kg/100L may improve control when treating under adverse environmental conditions. 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. Aerial (or Surface) Seeding: Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertiliser and insecticides and follow-up management is undertaken as required.
	Erodium (<i>Erodium cicutarium</i>), Plantain (<i>Plantago spp.</i>), Perennial Phalaris (<i>Phalaris aquatica</i>), Sorrel (<i>Rumex acetosella</i>), Sub Clover (<i>Trifolium subterraneum</i>), Yorkshire fog (<i>Holcus lanatus</i>)		1.5 – 2 L	
	Dock (<i>Rumex spp.</i>), Flatweed (<i>Hypochoeris radicata</i>)		2 L	

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
SOUTHERN AUSTRALIA Before sowing a crop or pasture. For weed control prior to sowing a crop or pasture with minimal or no soil disturbance.	All the above weeds	TAS only	1.2 L - 2.4 L	TASMANIA: Use 1.2 L on annual weeds and 2.4 L on perennial weeds. The product may also be tank mixed with dicamba to improve control of sorrel, dock and white clover. Observe dicamba label directions and plant back periods.
SOUTHERN AUSTRALIA For weed control to commence a fallow.	Barley Grass (<i>Hordeum leporinum</i>), Volunteer cereals, Wild Oats (<i>Avena spp.</i>)	NSW, VIC, ACT, Southern WA, SA only	800 mL - 1.2 L	Use the Lower Rate on young weeds or where cultivation is to take place within 21 days. Use the Higher Rate where broadleaf weeds reach stem elongation/budding or where grasses are fully tillered. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before treatment and use the higher rate. Soursob - Treat at tuber exhaustion. Hoary Cress -Treat from late rosette to early flowering. Annual Ryegrass, Silver grass and Perennial grasses - It is recommended to use water volumes of 70 L/ha or more with low volume nozzles to improve control.
	Annual Ryegrass (<i>Lolium rigidum</i>), Brome Grass (<i>Bromus unioloides</i>), Capeweed (<i>Arctotheca calendula</i>), Paterson's Curse/Salvation Jane (rosette) (<i>Echium plantaginium</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Spear Thistle (<i>Cirsium vulgare</i>), Wild Mustard (<i>Sisymbrium orientale</i>), Wild Radish (<i>Raphanus raphanistrum</i>), Wild Turnip (<i>Brassica tournefortii</i>)		1.2 - 1.6 L	
	Hoary Cress (<i>Cardaria draba</i>)		1.2 L	
	Soursob (<i>Oxalis pes-caprae</i>)		1.2 - 2.4 L	
	Couch (<i>Cynodon dactylon</i>)		1.2 - 2.4 L	
	All the above weeds	Tas only	1.2 - 2.4 L	TAS ONLY: Use 1.2 L/ha on annual weeds and 2.4 L/ha on perennial weeds. The product may also be tank mixed with dicamba to improve control of sorrel, dock and white clover. Observe dicamba label directions and plant back periods.
NORTHERN AUSTRALIA For weed control prior to sowing a summer or	Annual Phalaris (<i>Phalaris spp.</i>), Barley Grass (<i>Hordeum vulgare</i>), Volunteer cereals, Wild Oats (<i>Avena spp.</i>)	Northern NSW, QLD only	400 mL - 800 mL	Use the Lower Rate on young weeds. Use the Higher Rate where broadleaf weeds reach stem elongation/budding or where grasses are fully tillered. At more advanced stages certain broadleaf weeds may require the higher rate range or the addition of a 2,4-D Amine 625 g/L herbicide formulation.

winter crop or in a fallow.	Barnyard Grass (<i>Echinochloa crus-galli</i>), Button grass (<i>Dactyloctenium radulans</i>), Columbus grass (seedling) (<i>Sorghum xalmun</i>), Liverseed grass (<i>Urchloa spp.</i>), Lovegrass/Stink Grass (<i>Eragrostis cilianensis</i>), Native millet (<i>Panicum decomposition</i>) Volunteer Sorghum (<i>Sorghum halepense</i>)	800 mL - 1.6 L	In winter (cold) conditions, symptoms on Deadnettle may be slow to develop. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before treatment and use the higher rate. Liverseed Grass and Barnyard Grass may be very sensitive to moisture stress. Dense stands may require re-treatment. For aerial application see General Instructions. DO NOT apply by air if temperature is over 30°C.
	Aust Bluebell (Qld only), (<i>Wahlenbergia gracilis</i>), Cudweed (<i>Gnaphalium luteo-album</i>), Fumitory (<i>Fumaria officinalis</i>), Mexican Poppy (<i>Argemone ochroleuca</i>), New Zealand Spinach (<i>Tetragonia tetragonoides</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Spear Thistle (<i>Cirsium vulgare</i>), Spurge (<i>Euphorbia spp.</i>), Stinking goosefoot (<i>Chenopodium vulvaria</i>)	800 mL - 1.2 L	Crop Establishment: Sowing should not proceed until conditions allow for formation of a satisfactory seedbed. See Crop Establishment for directions.
	Black (giant) pigweed (<i>Trianthema portulacastrum</i>), Boggabri weed (<i>Amaranthus macrocarpus</i>), Caltrop (<i>Tribulis terrestris</i>), Indian Hedge Mustard (<i>Sisymbrium orientale</i>), Mintweed (<i>Salvia reflexa</i>), Summer grass (<i>Digitaria ciliaris</i>)	400 - 800 mL up to 3 cm in height or diameter or up to 5 true leaves OR 800 mL - 1.2 L greater than 3 cm in height or diameter or 5 true leaves.	Tank mixtures: Read and follow label directions, restraints, plant back periods, withholding periods and safety directions for the tank mix products. DO NOT tank mix with atrazine when spraying barnyard grass or liverseed grass.

<p>African turnip weed (<i>Sisymbrium thellungi</i>), Dead nettle (<i>Lamium amplexicaule</i>), Sweet summer grass (<i>Digitaria sanguinalis</i>), Variegated thistle (<i>Silybrum marianum</i>), Volunteer sunflower (<i>Helianthus annuus</i>)</p>	<p>600 – 800 mL up to 5 true leaves or 3 cm in height or diameter.</p> <p>800 mL – 1.6 L greater than 3 cm in height or diameter.</p>
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Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
NORTHERN AUSTRALIA For weed control prior to sowing a summer or winter crop or in a fallow.	Annual ground cherry (<i>Physalis ixocarpa</i>), Bladder ketmia (<i>Hibiscus trionum</i>), Camel melon (<i>Citrullus lanatus</i>), False castor oil plant (<i>Datura spp.</i>), Noogoora burr (<i>Xanthium occidentale</i>), Turnip weed (<i>Rapistrum rugosum</i>), Wild lettuce (<i>Lactuca saligna</i>), Wild Turnip (<i>Brassica tournefortii</i>), Wireweed (<i>Polygonum aviculare</i>)	Northern NSW, Qld only	800 mL – 1.2 L prior to stem elongation/ budding. After that use 400 mL – 1.2 L plus 825 mL of a 2,4- D Ester 680 LV Herbicide formulation or 1.2 – 1.6 L of this product alone.	As above
	Pigweed (<i>Portulaca oleracea</i>)		800 mL – 1.6 L up to 20 cm in diameter.	Use the higher rate on larger weeds. Control of pigweed over a wide range of growth stages can be achieved with Metsulfuron (600 g/kg). Observe recropping intervals.
	Sowthistle (<i>Sonchus oleraceus</i>)		600 mL – 800 mL rosettes up to 3 cm in diameter. 800 mL – 1.6 L greater than 3 cm in diameter.	Previously grazed plants may be difficult to control without allowing full recovery.
	Couch grass (<i>Cynodon dactylon</i>)		1.2 – 2.4 L	Use the higher rate for dense infestations. Apply sequential treatments during summer and autumn, with autumn being the most effective. Repeat applications will be required for complete control. For improved control use in conjunction with cultivation.
	Johnson grass (<i>Sorghum halepense</i>)		1.6 – 2.4 L	Use the higher rate 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 (<i>Cyperus rotundus</i>)		2.4 + 2.4 L	Make the first application to actively growing plants when at least 20% have reached the head stage (normally about Feb.). After allowing maximum re-emergence to occur (normally 6-8 weeks), it is essential to make a second application. NOTE: Follow up treatments should be made as part of a nutgrass control programme.

PASTURE RENOVATION AND TOPPING

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
Pasture with Poa Tussock present as a weed. For reduction of ground cover allowing pasture renovation.	Most annual weeds and Poa tussock (<i>Poa labillardii</i>)	QLD, NSW, ACT, VIC, TAS only	2.4 - 3.2 L	Before spraying * graze heavily * remove stock 14 days or more before treatment * apply after autumn break when plants are actively growing but before frosts begin (March-May). Increasing to the higher rate may give more effective reductions. Sowing of new pasture may begin 14 days after sowing. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestation. May be aerially applied (see aerial equipment)
Pasture with Bent Grass present as a weed. For control/suppression of Bent Grass before sowing a crop or pasture.	Annual weeds and Bent Grass (<i>Agrostis tenuis</i>)	TAS, VIC only	2 L	Apply late spring when seed heads have developed but before the onset of summer moisture stress. Remove stock prior to spraying to achieve good foliage cover. Ensure plants are actively growing. 10-21 days after spraying fully disturb soil with a tined implement and then sow summer crop and/ or re-seeded pasture or crop the following autumn.
Pasture Topping for the reduction of seed set of annual grasses, Capeweed and Calomba daisy	Annual Ryegrass (<i>Lolium rigidum</i>), Calomba daisy (<i>Pentzia suffruticosa</i>)	NSW, ACT, VIC, SA, WA, TAS only	360 mL	Use the Higher Rate for heavy infestation or where annual ryegrass is present. Apply before "haying off". Annual Ryegrass and Capeweed - Apply at Flowering. Other weeds - Apply at head to milky dough stage. Stock should be removed before spraying to allow regrowth. Pasture legumes may be affected. DO NOT apply to medic/clover crops to be used for hay or seed.
	Barley Grass (<i>Hordeum leporinum</i>), Brome grass (<i>Bromus unioloides</i>), Capeweed (<i>Arctotheca calendula</i>), Silver Grass (<i>Vulpia spp.</i>)		240 – 360 mL	
Pasture manipulation for the control /suppression of certain grasses before sowing soybeans, forage crops or Leucaena. Band spraying may be also applied as a band or strip spray.	Carpet Grass (<i>Xonopus spp.</i>), Kikuyu (<i>Pennisetum clandestinum</i>), Paspalum (<i>Paspalum dilatatum</i>)	WA, ACT, NSW, VIC only	1.1 - 4.8 L	Apply the Lower Rate for suppression only. The Higher Rate will provide control. Band Spraying: Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coulter/tynes/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1 m strips. Ensure minimal disturbance of pasture. Excessive dust created in the seeding operation may reduce herbicide activity. Pasture seed set must be drilled at the appropriate depth and covered by soil. Leucaena - (QLD ONLY) Rows should be 4m apart. Use 2 L/ha with single taper fan nozzle LFI-80 mounted at the rear of a single row planter giving a 1 m swath.
	Carpet Grass, Paspalum	QLD only	1.1 - 4.8 L	
	Kikuyu		500 mL - 4.8 L	
	Barbed wire grass (<i>Cymbopogon refractus</i>), Black spear grass (<i>Hederopogon contortus</i>), Wire grasses (<i>Aristida spp.</i>), Love Grasses (<i>Eragrostis spp.</i>), Red Natal Grass (<i>Rhynchelytrum repens</i>),		2 L	

Cotton Pre Harvest DO NOT use on crops intended for seed production.	Bathurst Burr (<i>X. spinosum</i>) Noogoora Burr (<i>X. occidentale</i>) Winter Annual Weeds including Sow Thistle/milk thistle (<i>Sonchus oleraceus</i>)	Qld, NSW only	1 – 2 L	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 coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures with Harvade ¹ or Dropp ¹ . Apply when at least 60% of bolts are open and immature bolts cannot be easily cut with a sharp knife. Where a leafy canopy limits spray coverage, reduced weed control can be expected. For best results under these conditions, delay application until the canopy re-opens following initial conditioning treatment.
	Nutgrass (seasonal suppression only)		2 L	Where control of Nut grass or Noogoora burr is required, treatments 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 the label instructions for the tank mix product.
Cotton Shielded Sprayers	Refer to weeds controlled section NORTHERN AUSTRALIA: In fallows or prior to sowing a crop		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 to 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.

SUGAR CANE (RATOON CONTROL) FOR QLD AND NSW ONLY

Situation	Weeds Controlled	Rate (L/ha)	Critical Comments
Sugar Cane Ratoon Control	Q63, Q87, Q90, Q102, Q117, Q120, Q129, Q130, H56-752, Pindar, Triton	2.4 – 3.2 L	Apply when ratoons are actively growing and are 60 – 100 cm tall. DO NOT apply if plants are under stress from water logging or low moisture. Use the Lower Rate for suppression or where control by cultivation is planned. Use the Higher Rate for control. Boom height must allow for correct overlap of the spray pattern at the top of the crop canopy.
	Q86, Q96, Q113	3.2 – 4 L	
	Cassius, Q115, Q122, Q94	4 – 4.8 L	
	NCO310, Q107	4.8 – 7.2 L	

RICE DIRECT DRILLING FOR NSW ONLY

Situation	Weeds Controlled	Rate (L/ha)	Critical Comments
Rice Direct Drilling	Annual Ryegrass (<i>Lolium rigidum</i>), Annual Phalaris (<i>Phalaris canariensis</i>), Barley Grass (<i>Hordeum leporinum</i>), Burr Medic (<i>Medicago spp.</i>) Sub Clover (<i>Trifolium subterraneum</i>), Winter Grass (<i>Poa annua</i>)	800 mL – 1 L	If plants are drought stressed a pre watering must be applied. If the site has been grazed allow plants to regrow to 6-8 cm before treatment. For the control of Annual Ryegrass use the higher rate. Crop Sowing - Sow 1-14 days after treatment. Residual control will only be achieved by adding another suitable herbicide.

SORGHUM CONTROL

Situation	Weeds Controlled	State	Rate (L/ha)	Critical Comments
Sorghum control before harvest	Grain sorghum (<i>Sorghum bicolor</i>)	QLD, ACT, NSW only	1.2 - 1.6 L	DO NOT apply to varieties intended for seed production or varieties prone to lodging. DO NOT apply to crop under stress from factors such as waterlogging, frost, disease, low moisture etc. Apply when grain moisture is less than 25%. The product can be applied when some browning has occurred. Use the Lower Rate for control of the crop, late tillers and ratoon regrowth. Use the Higher Rate for better suppression of ratoon regrowth. Treatment may increase potential for crop lodging especially if the crop has been stressed by low moisture. In this situation harvest as soon as possible after sufficient dry brown to prevent further lodging. CAUTION: Sorghum may be naturally toxic to stock.
Sorghum control Post harvest	Sorghum stubble (grain sorghum) (<i>Sorghum bicolor</i>)	QLD, ACT, NSW only	800 mL - 1.2 L for new regrowth from slashed stubble.	DO NOT apply if plants are stressed from such factors as waterlogging, frost, disease, low moisture, etc. For slashed stubble and spring regrowth apply when regrowth is at least 20 cm high. Standing Stubble - apply only if sufficient green leaf is present. Allow regrowth of at least 20 cm if grazing has occurred. Use the Lower Rate for knockdown and regrowth suppression where cultivation is to follow. Use the Higher Rate for better control of regrowth. It is important to note that variable results can occur if the crop has been under stress or grown under marginal conditions. The varieties Ruby, Trump, Nugget 2, Goldrush 2 and Prize are particularly susceptible if growing conditions are not ideal. CAUTION: Sorghum may be naturally toxic to stock.
			1.2 - 1.6 L for standing green stubble.	Use this rate for standing stubble if sufficiently green and for fresh spring regrowth.

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