

Product Name: SUNPHOSATE 450 SL HERBICIDE
APVMA Approval No: 69408/118854



Label Name:	SUNPHOSATE 450 SL 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:	450 g/L GLYPHOSATE PRESENT AS THE ISOPROPYLAMINE SALT Also contains: 144 g/L ETHOXYLATED TALLOW AMINE.
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Mode of Action:	GROUP M HERBICIDE
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Statement of Claims:	Water soluble herbicide for non-selective control of many annual and perennial weeds.
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Net Contents:	1000L 110L 200L 20L
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Restrains:	
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	WITHHOLDING PERIOD: PRE-HARVEST SORGHUM: DO NOT HARVEST FOR 7 DAYS OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED
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Trade Advice:

General Instructions:

GENERAL INSTRUCTIONS

Sunphosate 450 SL Herbicide is a non-volatile, non selective, water soluble liquid herbicide with non-selective herbicidal activity. It is absorbed by plant foliage and green stems and moves through the plant from the point of contact to and into the root system. Effects may not be apparent for 3–7 days (annual weeds) or 2–3 weeks (perennial weeds) or longer under cool, cloudy conditions.

Sunphosate 450 SL Herbicide will control emerged weeds only, and provides no residual weed control. Apply treatments to weeds which have at least one true leaf (broadleaf weeds) or two leaves (grasses) to provide an adequate surface area for herbicide uptake. Sunphosate 450 SL Herbicide may be used prior to sowing any crop (edible or non edible) but not prior to transplanting tomato seedlings.

A withholding period for grazing 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 of perennial weeds are present, to ensure absorption of Sunphosate 450 SL Herbicide. Certain plants (eg. Soursob, variegated thistle) may be naturally toxic to stock. Where known toxic plants are present, do not allow stock to graze until complete browning of treated plants has occurred.

Weeds should be actively growing at the time of treatment. Do not treat weeds under poor growing or dormant conditions (such as occur in drought, water logging, 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.

Rainfall occurring up to 6 hours after application may reduce effectiveness. Rain fastness or general efficacy may be reduced if weeds are not actively growing, are under stress or conditions of low light intensity/darkness. Heavy rainfall within 2 hours after 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 run off when plants are disturbed. Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since severe injury or destruction may result.

CROP ESTABLISHMENT

Sunphosate 450 SL Herbicide is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to provide seed bed conditions satisfactory for crop germination and development. Spraying early to control young weeds will favour preparation of suitable seed beds. On friable soils and where there is only 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 satisfactory seed bed. 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 correct seeding depth, and avoid use of pre-emergence herbicides where label directions advise of risk of retarded crop emergence.

MIXING

Sunphosate 450 SL Herbicide mixes readily with water. 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.

DO NOT mix, store or apply this product or spray solutions of this product in galvanised steel or unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. Use stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined

containers or spray tanks. Ensure the sprayer is free of any residue of previous spray materials. Use spray solutions promptly and certainly within 5 days since a gradual loss of activity will occur. Fill the spray tank with one half the required amount of clean water and add the proper amount of Sunphosate 450 SL Herbicide. Mix well before adding the remaining portion of water. Add surfactant near the end of the filling process to minimize foaming. Placing the filling hose below the surface of the spray solution will prevent excessive foaming. Removing hose from tank immediately after the filling will prevent back siphoning into water source.

DO NOT use mechanical agitators as these may cause excessive foaming. Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application to prevent corrosion.

TANK MIXTURES/COMPATIBILITY

Sunphosate 450 SL Herbicide may be tank-mixed with the following herbicides, insecticides and additives. Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix products.

MIXING INSTRUCTIONS FOR ALL TANK MIXTURES

1. Fill the spray tank 1/3 to 1/2 full with clean water and start agitation.
2. Use Spraymate Liase (Ammonium sulphate) where required.
3. Add recommended herbicide/insecticide/additive to the spray tank and mix thoroughly.
4. Add Sunphosate 450 SL Herbicide and the remaining water. Mix thoroughly.
5. Add surfactant, if required, near the end of the filling process to minimize foaming.
6. Always maintain adequate agitation during application and use the tank mix promptly.

TANK MIXTURES – HERBICIDES

Atrazine*, flowable or granular, (Do not apply the tank mix for control of Barnyard grass or Liverseed grass), 2, 4-D ester, dicamba, Express®, triclopyr 600, trifluralin, fluroxypyr, chlorsulfuron, simazine* flowable or granular, Yield®, pendimethalin, metsulfuron methyl, triasulfuron, clopyralid, L.V.E. MCPA and Striker. *Ammonium sulfate may improve the performance of tank mixtures of Sunphosate 450 SL Herbicide and atrazine or simazine. See directions below.

STRIKER

The addition of Striker at 75 mL/ha to recommended rates of Sunphosate 450 SL Herbicide prior to planting Wheat or Barley will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity

TANK MIXTURES – INSECTICIDES

Sunphosate 450 SL Herbicide is compatible with the following insecticides: Dimethoate, Imidan®, Le-mat® Chlorpyrifos 500, Perfekthion® EC 400, Sumithion® ULV, and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

TANK MIXTURES – ADDITIVES

417g/L Ammonium sulphate (Spraymate Liase)

Rate: 2kg or 2L per 100 litres spray solutions.

Spraymate Liase may be used as an adjuvant to alleviate the adverse conditions of high levels of calcium, magnesium and bicarbonate ions in water. The addition of Spraymate Liase to Sunphosate 450 SL Herbicide, when used to control annual weeds, MAY improve the performance of Sunphosate 450 SL Herbicide under adverse environmental conditions such as cool cloudy weather. Spraymate Liase may also improve the performance of tank mixtures of Sunphosate 450 SL Herbicide and atrazine or simazine. Ammonium sulphate may be corrosive to metal parts of the sprayer. Thoroughly flush tanks, pumps and nozzles with water after use.

Solubility and impurity profiles of other forms of ammonium sulphate can vary and may reduce performance of Sunphosate 450 SL Herbicide or tank mixtures.

SURFACTANT ADDITION

Spraymate LI 700 Surfactant

Rate: 250mL – 500mL per 100L

The addition of Spraymate LI 700 Surfactant MAY improve weed control. At rates of 300mL – 500mL per 100L, Spraymate LI 700 may modify the droplet spectrum produced by CP and flat fan nozzles. This may reduce the proportion of FINE droplets produced by these nozzles.

Non ionic surfactant

Rate: 70mL – 125mL per 100L

General purpose non-ionic surfactants may increase the production of FINE and VERY FINE droplets, which are prone to drift when used through certain nozzle types.

Octyl Phenol Ethoxylate Surfactant (e.g Trilogy)

RATE 200mL/100L spray solution. Add when treating Annual Ryegrass, Silvergrass and Perennial grasses. This is NOT a general purpose surfactant and should be used only where recommended.

DO NOT use spray oils, adjuvants or surfactants other than those recommended on this label.

APPLICATION

Sunphosate 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. Clean all equipment after use by thoroughly washing with water.

BOOM EQUIPMENT

Application of Sunphosate 450 SL Herbicide in spray volumes of 25-100 L/ha is recommended. Use nozzles that produce a MEDIUM to COARSE spray quality at target (ASAE S572). Environmental conditions, including delta T wind speed, and the size and density of the target weeds, should be taken into consideration when selecting nozzles. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

AERIAL EQUIPMENT

Aerial equipment may be used to apply Sunphosate 450 SL Herbicide only in pasture or fallow situations prior to establishment of field crops, fodder crops, or new pasture, and for pre-harvest application to sorghum crops. Do NOT use in intensive horticultural cropping areas. Use recommended rates of Sunphosate 450 SL Herbicide specified in this label up to a maximum limit of 3.2L/ha. For Micronair equipment, apply in a minimum spray volume of at least 20L/ha. Use nozzles that produce a MEDIUM to COARSE spray quality (ASAE S572) at the target are recommended. Swath width may need to be adjusted to take into account the aircraft type, wind conditions, target height and density.

DO NOT apply Sunphosate Glyphosate 450 by aircraft in temperatures above 30°C and increase spray output to at least 30L/ha if temperatures rise above 25°C. Avoid application if humidity falls below 35%. In multiple product tank mixes a minimum water volume of 50L/ha is recommended and local advice should be sought. Correct mixing order is important. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

Application on hilly terrain

Spraying height may vary. Increase water volume to 30-80 L/ha and use nozzles that produce a COARSE spray quality at the target (ASAE S572).

Application under hot conditions

High temperatures and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When temperature reaches 25°C, increase water volume to at least 30L/ha, and nozzles that produce a COARSE spray quality at the target (ASAE S572).

DO NOT apply Sunphosate 450 SL Herbicide by aircraft when temperature is above 30°C.

Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP M HERBICIDE</p> <p>Sunphosate 450 SL Herbicide is a member of the Glycines group of herbicides. Sunphosate 450 SL Herbicide has the inhibition of EPSP synthase mode of action. For weed resistance management Sunphosate 450 SL Herbicide is a Group M herbicide. Some naturally occurring weed biotypes resistant to Sunphosate 450 SL Herbicide and other inhibitors of EPSP synthase mode of action 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 Sunphosate 450 SL Herbicide or other inhibitors of EPSP synthase herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, ZHEJIANG XINAN CHEMICAL INDUSTRIAL GROUP CO., LTD accepts no liability for any losses that may result from the failure of Sunphosate 450 SL Herbicide to control resistant weeds.</p>
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Precautions:	
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Protections:	<p>PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since 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.</p> <p>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.</p>
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Storage and Disposal:	<p>STORAGE AND DISPOSAL Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. 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 500mm below 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, stage or territory government regulations. Do not burn empty containers or product.</p> <p>REFILLABLE containers: (110L and 1000L only) Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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Safety Directions:	<p>SAFETY DIRECTIONS Harmful if swallowed. Product will damage eyes and irritate the skin. Avoid contact with eyes and skin. When preparing product for use wear elbow-length PVC gloves and face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash contaminated clothing, gloves and face shield or goggles.</p>
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First Aid Instructions:	FIRST AID If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 1126. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.
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First Aid Warnings:	
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DIRECTIONS FOR USE

Restrains: 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.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
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	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying and use the higher rate.
		Annual phalaris (Canary grass), Annual ryegrass, Silvergrass, Winter grass	800mL – 1.0L pre tillering 1.0 – 1.2 L post tillering	RATE SELECTION Increase to higher rates late in the season or when treating under cold/overcast conditions. FULL DISTURBANCE with a cultivation or sowing with a tyned implement may start one day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob, or Sorrel are present) and should occur within 21 days after treatment.
		Calomba daisy, Capeweed, Doublegee/Spiny Emex	400 – 800mL less than 8cm dia/height 800mL – 1.2L greater than 8cm dia/height	When treating light infestations or seedling annual grasses (pre-tillering) and annual broadleaved weeds (less than 8cm dia/height), cultivation or sowing may start
		Amsinckia, Fumitory, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupins, Wild turnip	800 ml – 1.0L less than 12cm dia 1.0- 1.2L greater than 12cm dia	6 hours after treatment and should occur within 21 days. CROP ESTABLISHMENT Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions.
		Dock (seedling)	800mL – 1.2 L	ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES Addition of Octyl phenol ethoxylate surfactant (e.g Trilogy) 200mL/100L spray solution, may improve control. When treating dense infestations of Silvergrass, use of low volume nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve spray coverage. Good coverage of Silvergrass is critical for control.
		Perennial phalaris, Skeleton weedfully emerged rosettes (NSW only), Sorrel, Soursob, Sub.clover	1.2 L	TANK MIXTURES For improved control of clover add a registered 500g/L SL dicamba product. 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 WEEDS For Perennial phalaris, Soursob Skeleton weed and Sorrel, Sunphosate 450 SL Herbicide will provide knockdown, seasonal suppression and reduction in treated plant numbers.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement (continued)	TAS only	All the above weeds	1.2 – 2.4 L	TASMANIA Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 0.4 L/ha dicamba 500 SL herbicide product. 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 VIC SA WA only	Barley grass, Volunteer cereals, Wild oats	800 mL – 1.2L	<p>Treat only actively growing weeds not under stress low moisture, frost, cold, disease or waterlogging. If heavy grazing of mature plants has occurred, allow regrowth to 6-8cm before spraying and use the higher rate.</p> <p>RATE SELECTION Use the lower rate on young weeds; increase 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.</p> <p>AERIAL APPLICATION Use the higher rates. See AERIAL EQUIPMENT. ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES Add Octyl phenol ethoxylate surfactant (e.g Trilogy), 200mL/100L spray solution. When treating dense infestations of Silvergrass, use of low volume nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve spray coverage. Good coverage of Silvergrass is critical for control.</p> <p>TANK MIXTURES For improved control of Dock, Sorrel, and Sub.clover, add dicamba 500 SL herbicide product. 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. Addition of ammonium sulfate, 2 kg/100L, may improve control when treating under adverse environmental conditions.</p> <p>PASTURE OR CROP ESTABLISHMENT DO NOT sow into excessive trash. Trash may be removed by grazing after treatment. (continued over)</p>
		Brome grass, Canary grass, Capeweed, Variegated thistle, Winter grass	1.0 L – 1.6 L	
		Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2 L – 1.6 L	
		Erodium, Perennial phalaris, Plantain, Sorrel, Sub.clover, Yorkshire Fog	1.5 – 2.0 L	
		Dock, Flatweed	2.0 L	

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SOUTHERN AUSTRALIA Prior to establishing a crop or pasture with an implement that gives minimal or no soil disturbance (continued)	NSW VIC SA WA only			(continued from previous page) Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for three 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 fertilizer and insecticides and follow-up management is undertaken as required.
	TAS only	All the above weeds	1.2 – 2.4 L	TASMANIA Use 1.2L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 0.4 L/ha dicamba 500 SL herbicide product. 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	800 mL – 1.2 L	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth 6-8cm before spraying. RATE SELECTION Use lower rates on young weeds or where cultivation is to follow within 21 days. Increasing to the high rates where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES Add Octyl phenol ethoxylate surfactant (e.g Trilogy) at 200 mL/100L spray solution. When treating dense infestations of Silvergrass, use of low volume nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve spray coverage. Good coverage of Silvergrass is critical for control. HOARY CRESS Treat from late rosette to early flowering. SOURSOB Treat at tuber exhaustion.
		Annual ryegrass Brome grass Capeweed Paterson's curse Saffron thistle Scotch thistle Silvergrass Spear thistle Wild mustard Wild radish Wild turnip	1.2 L – 1.6 L	
		Hoary cress Soursob	1.2 L	

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SOUTHERN AUSTRALIA To commence a fallow	NSW VIC SA WA only	Couch	1.2 L – 2.4 L	COUCH Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation. The use of LI-700 500mL/100L may improve control. 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.
		Bathurst Burr	1.5 – 2.4L	
	TAS only	All the above weeds	1.2 L – 2.4 L	
PASTURE TOPPING For annual grass Capweed and Calomba daisy seed-set reduction.	WA SA VIC TAS NSW only	Barley grass Brome grass Capweed Silvergrass	240 mL – 360 mL	Remove stock prior to treatment to allow even regrowth. Apply to Capweed 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 of treatment. Do NOT apply to clover or medic crops intended for seed or hay.
		Annual ryegrass Calomba daisy	360 mL	
SEED-HEAD SUPPRESSION OF PERENNIAL GRASSES	VIC TAS NSW WA SA only	Bentgrass	300 – 500 mL	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.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
BENT GRASS INFESTED PASTURE For control/suppression prior to establishing crops or improved pasture species	VIC TAS only	Most annual weeds and Bent grass	2.0 L	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 tyned implement should follow 10-21 days after spraying. Then follow with a summer crop, and/or re-seeded pasture or crop the following autumn.
PASTURE MANIPULATION For suppression or control of pastures species prior to drilling improved pasture, forage species, Soybeans or Leucaena. BAND SPRAYING: May also be applied as a band or strip spray	NSW VIC WA only	Carpet grass Kikuyu Paspalum	1.1 –4.8 L	RATE SELECTION For suppression, apply the low rate. Where complete control is required apply up to the high rate. BAND SPRAYING Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coultter/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 seedling operation may reduce herbicide activity. Pasture seed must be drilled at the appropriate depth and covered by soil. LUCAENA (QLD ONLY) Apply 2 L/ha through a single taper fan nozzle LFI-80 mounted at the rear of the single row planter providing a 1 m swath. Planting rows to be 4 m apart.
	QLD only	Carpet grass Paspalum	1.1 – 4.8 L	
		Kikuyu	500mL – 4.8 L	
		Barbed wire grass Black speargrass Love grasses Red Natal grass Wire grasses	2.4 L	
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 L - 3.2L	TIMING Graze heavily, then remove 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 each treatment. Spot treatment will limit re-infestation.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS	
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	<p>Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying. 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.</p> <p>CROP ESTABLISHMENT Sowing should not proceed until conditions allow the formation of a satisfactory seed bed. See Crop Establishment for directions.</p> <p>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.</p> <p>AERIAL APPLICATION For instructions on aerial application, under hot conditions, see AERIAL EQUIPMENT. Do not apply by aircraft when temperature is above 30°C.</p>	
		Barnyard grass, Bathurst burr, Button grass, Columbus grass (seedling), Liverseed grass, Native Millet, Stinkgrass (Lovegrass), Volunteer sorghum	800 mL – 1.6L		
		Australian bluebell (QLD only) Cudweed, Fumitory, Mexican poppy, New Zealand spinach, Saffron thistle, Spear thistle, Spurge, Stinking goosefoot	800mL – 1.2L		
		Black (giant) pigweed, Boggabri weed, Caltrop (Yellowvine), Indian hedge mustard, Mintweed, Summer grass	400 – 800 mL up to 5 true leaves or 3cm dia/height 800 mL – 1.2 L greater than 5 true leaves or 3cm dia/height		
		African turnip weed, Deadnettle, Sweet summer grass, Variegated thistle, Volunteer sunflower	600 – 800mL up to 5 true leaves or 3cm dia/height 800mL – 1.6 L greater than 3 cm dia/height		
		Annual ground cherry (Gooseberry), Bladder ketmia, Camel melon, False castor oil plant/Thornapple, Noogoora burr, Turnip weed, Wild lettuce, Wild turnip, Wireweed	800 mL – 1.2L prior to stem elongation/ budding. After that use 400 mL – 1.2L plus 500 – 700 mL 2,4-D ester (800g/L) or 1.2 – 1.6 L alone		
		Pigweed	800 mL – 1.6 L up to 20cm dia		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.
		Prickly Paddy Melon	770mL – 1.6L plus 80mL Triclopyr 600		DO NOT add crop oil.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
NORTHERN AUSTRALIA In fallows or prior to sowing a crop	QLD NSW only	Sowthistle/ milkthistle	600 – 800 mL rosettes up to 3 cm dia 800mL – 1.6 L greater than 3cm dia	Previously grazed plants may be difficult to control without allowing full recovery.
		Couch	1.2 – 2.4 L	Use the higher rate for dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation. The use of LI 700 may improve control.
		Johnson grass	1.6 – 2.4 L	Use the higher rate on plants approaching seedhead stage. Apply to plants with a minimum of 30cm new growth. Sequential treatments will be required for long term control.
		Nutgrass	2.4 + 2.4 L	Make 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 in 6-8 weeks), it is essential to make a second application. NOTE Followup 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 1.6 L	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 should commence at least 7 days after application, provided sufficient dry down has occurred to avoid possible lodging. CAUTION Sorghum may be naturally toxic to stock.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SORGHUM CONTROL Post-harvest	QLD NSW only	Sorghum stubble, grain sorghum	800 mL-1.2 L for fresh regrowth from slashed stubble 1.2-1.6 L for standing stubble if sufficiently green and for fresh spring regrowth	APPLY UNDER GOOD GROWING CONDITIONS ONLY. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. SLASHED STUBBLE AND SPRING REGROWTH apply when fresh regrowth is at least 20cm high. STANDING STUBBLE Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20cm before treatment. 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. NOTE Variable results occur where the crop has been subject to stress or growing conditions are marginal. CAUTION Sorghum may be naturally toxic to stock.
SUGAR CANE Ratoon spray out	Qld NSW only	Sugar cane ratoon regrowth	4.8 - 7.2L	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 or waterlogging. Use the lower rate for suppression or where cultivation is to follow. Use higher rate for control.
RICE Direct drilling	NSW only	Annual ryegrass Annual phalaris Canary grass Barley grass Burr medic Sub. Clover Winter grass	800mL- 1.0L	Sunphosate 450 SL Herbicide 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 6-8cm before spraying. ANNUAL RYEGRASS Add Octyl phenol ethoxylate surfactant (e.g Trilogy) at 200mL/100L of spray solutions and where dominant use the higher rate. SOWING Direct drilling may take place 1-14 days after spraying. Sunphosate 450 SL Herbicide does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continuing control of weeds.

SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
Cotton pre-harvest Do not use on crops intended for seed production	NSW Qld only	Bathurst burr Noogoora burr Winter annual weeds including Sowthistle / milkthistle	1-2L	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 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 best results under these conditions, delay application until canopy re-opens following initial conditioning treatment. Where control of Nutgrass 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 label direction for the tank mix products.
		Nutgrass (seasonal suppression only)	2L	
Cotton: Shielded sprayers	NSW Qld only	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 Sunphosate 450 SL Herbicide to weeds growing between crop rows using a shielded sprayer. Do not apply in crops less than 20cm high. Do not allow spray or spray drift to contact any part of the cotton plant 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:

PRE-HARVEST SORGHUM: DO NOT HARVEST FOR 7 DAYS

OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED