

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

GRASS VALLEY

POTASSIUM GLYPHOSATE 450

HERBICIDE

ACTIVE CONSTITUENT:
450 g/L GLYPHOSATE present as the Potassium salt

GROUP	M	HERBICIDE
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A NON-SELECTIVE HERBICIDE THAT WILL KILL MOST EMERGED WEEDS AND PLANTS IN SITUATIONS AS INDICATED IN THE DIRECTIONS FOR USE.

IMPORTANT: READ ATTACHED LEAFLET BEFORE USE

Contents: 5, 10,20,110, 200, 1000 Litres

Grass Valley Formulators Pty Ltd
Lot 8 Leeming Road
Northam WA 6403
Phone: 08 9622 9999

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 or preferably pressure 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 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 contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Product will irritate the eyes and 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. When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126)

MATERIAL SAFETY DATA SHEET

Additional information is listed in the MSDS, which is available from the supplier.

CONDITIONS OF SALE

The use of Grass Valley Potassium Glyphosate 450 Herbicide is beyond the control of the Grass Valley Formulators Pty Ltd and no warranty, expressed or implied, is given by Grass Valley Formulators Pty Ltd regarding its suitability or efficacy for any purpose for which it is used by the buyer, except the non-excludable rights under State/Territory or Federal legislation.

Batch Number:

Date of Manufacture:

APVMA Approval No:

CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

GRASS VALLEY POTASSIUM GLYPHOSATE 450 HERBICIDE

ACTIVE CONSTITUENT: 450 g/L GLYPHOSATE PRESENT
AS THE POTASSIUM SALT

GROUP	M	HERBICIDE
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A non-selective herbicide that will kill most emerged weeds and plants in situations as indicated in the directions for use table.

APVMA APPROVAL NO:

THIS LEAFLET IS PART OF THE LABEL

Grass Valley Formulators Pty Ltd
Lot 8 Leeming Road
Northam WA 6403
Phone: 08 9622 9999

DIRECTIONS FOR USE

Restrictions:

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	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</i> spp.)	NSW, VIC, Southern WA, SA only	400mL-800mL pre tillering 800mL-1.0L 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 ie fully tillered grasses or broadleaf weeds at budding or stem elongation.
	Annual phalaris (<i>Phalaris canariensis</i>), Annual Ryegrass (<i>Lolium rigidum</i>), Silver Grass (<i>Vulpia</i> spp.), Winter Grass (<i>Poa annua</i>)		800mL-1.0L pre tillering 1.0L-1.2L post tillering	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.
	Calomba daisy (<i>Pentzia suffruticosa</i>), Capeweed (<i>Arctotheca calendula</i>), Spiny Emex/Doublegee (<i>Emex australis</i>)		400mL-800mL less than 8cm diameter 800mL-1.2L greater than 12cm diameter	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.
	Amsinkia (<i>Amsinkia</i>), Fumitory (<i>Fumaria officinalis</i> , <i>F. muralis</i>), Patterson'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>)		800mL-1.0L less than 12cm diameter 1.0L-1.2L greater than 12cm diameter	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.
	Dock – seedling (<i>Rumex</i> spp.)		800mL-1.2L	For perennial weeds perennial phalaris, Soursob, Skeleton weed and Sorrel this product will provide knockdown, seasonal suppression and reduction in treated plant numbers.
	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>)		1.2L	

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	All the above weeds	TAS only	1.2L-2.4L	TAS ONLY: Use 1.2L on annual weeds and 2.4L 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</i> spp.)	NSW, VIC, Southern WA, SA only	800mL-1.2L	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 ie 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 70L/ha or more with low volume nozzles to improve control. Do not sow if heavy trash is present. 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 2kg/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.
	Brome Grass (<i>Bromus unioloides</i>), Canary Grass (<i>Phalaris</i> spp.), Capeweed (<i>Arctotheca calendula</i>), Variegated Thistle (<i>Silybum marianum</i>), Winter Grass (<i>Poa annua</i>)		1.0L – 1.6L	
	Annual Ryegrass (<i>Lolium rigidum</i>), Paterson's Curse/Salvation Jane (<i>Echium plantaginium</i>), Saffron Thistle (<i>Onopordum acanthium</i>), Silver Grass (<i>Vulpia</i> spp.), Spear Thistle (<i>Cirsium vulgare</i>), Wild Mustard (<i>Sisymbrium officinale</i>), wild radish (<i>Raphanus raphanistrum</i>), Wild Turnip (<i>Brassica tournefortii</i>)		1.2L – 1.6L	
	Erodium (<i>Erodium cicutarium</i>), Plantain (<i>Plantago</i> spp.), Perennial Phalaris (<i>Phalaris aquatica</i>), Sorrel (<i>Rumex acetosella</i>), Sub Clover (<i>Trifolium subterraneum</i>), Yorkshire fog (<i>Holcus lanatus</i>)		1.5L – 2.0L	
	Dock (<i>Rumex</i> spp.), Flatweed (<i>Hypochoeris radicata</i>)		2.0L	

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	1.2L-2.4L	TAS ONLY: Use 1.2L on annual weeds and 2.4L 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</i> spp.)	NSW, VIC, Southern WA, SA only	800mL-1.2L	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 70L/ha or more with low volume nozzles to improve control.
	Annual Ryegrass (<i>Lolium rigidum</i>), Brome Grass (<i>Bromus unoloides</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>)		1.2L-1.6L	
	Hoary Cress (<i>Cardaria draba</i>), Soursob (<i>Oxalis pes-caprae</i>)		1.2L	
	Couch (<i>Cynodon dactylon</i>)		1.2L-2.4L	
	All the above weeds		Tas only	

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 Phalaris (<i>Phalaris</i> spp.), Barley Grass (<i>Hordeum vulgare</i>), Volunteer cereals, Wild Oats (<i>Avena</i> spp.)	Northern NSW, QLD only	400mL-800mL	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 2,4-D. 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. Crop Establishment: Sowing should not proceed until conditions allow for formation of a satisfactory seedbed. See Crop Establishment for directions. 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.
	Barnyard Grass (<i>Echinochloa crus-galli</i>), Button Grass (<i>Dactyloctenium radulans</i>), Columbus grass (seedling) (<i>Sorghum xaimun</i>), Liverseed grass (<i>Urchloe</i> spp.), Lovegrass/Stink Grass (<i>Eragrosis cilanensis</i>), Native millet (<i>Panicum decomposition</i>), Volunteer Sorghum (<i>Sorghum halepense</i>)		800mL-1.6L	
	Aust Bluebell (Qld only), (<i>Wahlenbergia gracis</i>), Cudweed (<i>Gnaphalium luteo-ahum</i>), Fumitory (<i>Fumaria officinalis</i>), Mexican Poppy (<i>Argemone ochroleuca</i>), New Zealand Spinach (<i>Tetragonia tetragonoides</i>), Saffron Thistle (<i>Carthamus lanalus</i>), Spear Thistle (<i>Cirsium vulgare</i>), Spurge (<i>Euphorbia</i> spp.), Stinking goosefoot (<i>Chenopodium vulvaria</i>)		800mL-1.2L	
	Black (giant) pigweed (<i>Trianthema portulacastrum</i>), Boggabri weed (<i>Ameranthus 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>)		400-800mL up to 3 cm in height or diameter or up to 5 true leaves OR 800mL-1.2L greater than 3 cm in height or diameter or 5 true leaves	
	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 annuas</i>)		600-800 mL up to 5 true leaves or 3cm in height or diameter 800mL-1.6L greater than 3 cm in height or diameter	

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 ketrnia (<i>Hibiscus trionum</i>), Camel melon (<i>Citrullus lanalus</i>), False castor oil plant (<i>Dalura</i> spp.), 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	800mL-1.2L prior to stem elongation/budding. After that use 400mL-1.2L plus 500mL-700mL 2,4-D ester (800g/L or 1.2-1.6L of this product alone.	As above
	Pigweed (<i>Portulaca oleracea</i>)		800mL-1.6L up to 20cm in diameter	Use the higher rate on larger weeds. Control of pigweed over a wide range of growth stages can be achieved with Metsulfuron (600g/kg). Observe recropping intervals.
	Sowthistle (<i>Sonchus oleraceus</i>)		600mL-800mL rosettes up to 3cm in diameter. 800mL-1.6L greater than 3cm in diameter	Previously grazed plants may be difficult to control without allowing full recovery.
	Couch grass (<i>Cynodon dactylon</i>)		1.2-2.4L	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>)		1.5-2.4L	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 (<i>Cyperus rotundus</i>)		2.4-2.4L	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, VIC, TAS only	2.4-3.2L	Before spraying <ul style="list-style-type: none"> ◆ 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	2.0L	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 tyned 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, VIC, SA, WA, TAS only	360mL	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</i> spp.)		240-360mL	

SITUATION	WEEDS CONTROLLED	STATE	RATE (L/ha)	CRITICAL COMMENTS
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</i> spp.), Kikuyu (<i>Pennisetum clandestinum</i>), Paspalum (<i>Paspalum dilatatum</i>)	WA, NSW, VIC only	1.1-4.8L	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/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1m strips. Ensure minimal disturbance of pasture. Excessive dust created in the seedling operating may reduce herbicide activity. Pasture seed set must be drilled at the appropriate depth and covered by soil.
	Carpet Grass, Paspalum	QLD only	1.1-4.8L	Leucaena – (QLD ONLY) Rows should be 4m apart. Use 2L/ha with single taper fan nozzle LR-80 mounted at the rear of a single row planter giving a 1m swath.
	Kikuyu		500mL-4.8L	
Barbed wire grass (<i>Cymbopogon refractus</i>), Black spear grass (<i>Hederopogon contortus</i>), Wire grasses (<i>Aristida</i> spp.), Love Grasses (<i>Eragrostis</i> spp.), Red Natal Grass (<i>Rhynchalytrum repens</i>).		2.0L		

Crop/Situation	Weeds	State	Rate/ha	Critical Comments
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	1-2L	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 coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures of Harvade1 Or Dropp1. 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)		2L	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			Apply this product to weeds growing between crop rows using a shielded sprayer. Do not apply to crops less than 20cm 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

Crop/Situation	Weeds	State	Rate/ha	Critical Comments
Sugar Cane Ratoon Control	Sugar Cane ratoon regrowth	Qld, NSW only	3.2L-7.2L	APPLY UNDER GOOD GROWING CONDITIONS ONLY to actively growing ratoons 60-120cm tall. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. Use the Lower Rate for suppression or where control by cultivation is to follow. Use the Higher Rate for control.

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</i> spp.), Sub Clover (<i>Trifolium subterraneum</i>), Winter Grass (<i>Poa annua</i>)	800mL-1.0L	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, NSW only	1.2-1.6L	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, NSW only	800mL-1.2L for new regrowth from slashed stubble	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 regrowth is at least 20cm high. STANDING STUBBLE: Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20 cm high before treatment. RATE SELECTION: Use the Lower Rate for knockdown and regrowth suppression where cultivation is to follow. Use the Higher Rate for better control of regrowth. NOTE: Variable results can occur if the crop has been under stress or grown under marginal conditions. CAUTION: Sorghum may be naturally toxic to stock.
			1.2-1.6L 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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED

GENERAL INSTRUCTIONS

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 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.

RESISTANT WEEDS WARNING

GROUP	M	HERBICIDE
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Grass Valley Potassium Glyphosate 450 Herbicide is a member of the glycine group of herbicides. Grass Valley Potassium Glyphosate 450 Herbicide has the inhibitor of EPSP synthase mode of action. For weed resistance management Grass Valley Potassium Glyphosate 450 Herbicide is a Group M 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 Grass Valley Potassium Glyphosate 450 Herbicide or any other inhibitors of EPSP synthase herbicide.

Since the occurrence of resistant weeds is difficult to detect prior to use, Grass Valley Formulators Industries Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant weeds.

CROP ESTABLISHMENT

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. 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 seedling depth, and avoid use of pre-emergence herbicides where label directions advise risk of retarded crop emergence.

MIXING

1. Clean spray tank and assure it is free from residues of previous spray materials.
2. Fill the spray tank with half the required amount of clean water.
3. Add the required amount of Grass Valley Potassium Glyphosate 450 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, aluminium, brass, copper, fibreglass, 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, LeMat, metasystox and Sumithion.

Other insecticides have not been tested.

Atrazines/Triazines

Grass Valley Potassium Glyphosate 450 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

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

2,4-D

Grass Valley Potassium Glyphosate 450 Herbicide may be tank mixed with 2,4-D Ester or 2,4-D isopropylamine for improved control of broadleaf weeds.

Chlorsulfuron

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

Metsulfuron

Grass Valley Potassium Glyphosate 450 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 Grass Valley Potassium Glyphosate 450 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 spray this product if rain is likely to occur within 6 hours.

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.

Aerial application

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.

Use the recommended rates on this label up to a maximum of 3.2L/ha.

For micronair and boom equipment apply in a minimum spray volume of at least 15L/ha with an average droplet size of (or VMD) or 250-350 micron diameter. Swath width should be 15-17m.

Application on hilly terrain

As spraying height may vary, to maximise target contact increase water volume to 30-80L/ha and increase droplet size to at least 300 micron (VMD).

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate dams, rivers or streams with the product or used containers.

DO NOT apply to weeds growing in or over water.

DO NOT spray across open bodies of water.

DO NOT contaminate seed, feed or foodstuffs. Keep container closed to prevent spills and contamination.

PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS.

Contact with desirable plants and trees may cause severe damage or destruction.

DO NOT spray in conditions conducive to spray drift.

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.

DO NOT re-use container for any other purpose.

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 or preferably pressure 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 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 contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Product will irritate the eyes and 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.

When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131126)

MATERIAL SAFETY DATA SHEET (MSDS)

Additional information is listed in the MSDS, which is available from the supplier.

CONDITIONS OF SALE

The use of Grass Valley Potassium Glyphosate 450 Herbicide is beyond the control of the Grass Valley Formulators Pty Ltd and no warranty, expressed or implied, is given by Grass Valley Formulators Pty Ltd regarding its suitability or efficacy for any purpose for which it is used by the buyer, except the non-excludable rights under State/Territory or Federal legislation.