

# CAUTION

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



# Glyphosate 450CT

Herbicide

ACTIVE CONSTITUENT: 450 g/L GLYPHOSATE  
Present as the isopropylamine salt.

GROUP

**M**

HERBICIDE

A non-selective herbicide that will kill most emerged weeds and plants in situations as indicated in the Directions for Use.

**IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USING THIS PRODUCT.**

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**Contents:**  
**5L, 110L, 200L, 1000L**

## 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.

CROP/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, ACT only	Barley Grass, Brome Grass, Volunteer Cereals, Wild Oats	400mL-800mL pre tillering  800mL-1.0L post tillering	<p>Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying and use the higher rate.</p> <p><b>RATE SELECTION:</b> Increase to higher rates late in the season or when treating under cold/overcast conditions.</p> <p><b>FULL DISTURBANCE</b> with cultivation or sowing with a tyned implement may start 1 day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob or Sorrel are present) and should occur within 21 days after treatment. Where cultivation or sowing does not occur within 21 days, new weed growth may require further treatment. When treating light infestations of seedling annual grasses (pre-tillering) and annual broadleaved weeds (less than 8cm dia./height) cultivation or sowing may start 6 hours after treatment and should occur within 21 days.</p> <p><b>CROP ESTABLISHMENT:</b> Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See <b>Crop Establishment</b> for directions.</p> <p><b>ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES:</b> Addition of Wetter TX, 200mL/100L of spray solution may improve control. When treating dense infestations of Silvergrass, nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silvergrass is critical for control.</p> <p><b>TANK MIXTURES:</b> For improved control of clover add Kamba<sup>+</sup> 500 (dicamba). Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See <b>Tank Mixtures</b> for directions.</p> <p><b>PERENNIAL WEEDS:</b> For Perennial Phalaris, Soursob, Skeleton Weed and Sorrel, this product will provide knock down, seasonal suppression and reduction in treated plant numbers</p>
		Annual phalaris (Canary Grass), Annual Ryegrass, Silvergrass, Winter Grass	800mL-1.0L pre tillering  1.0L-1.2L post tillering	
		Calomba Daisy, Capeweed, Doublegee (Spiny Emex)	400-800mL less than 8 cm diameter  800mL-1.2L greater than 12cm diameter	
		Amsinckia, Fumitory, Paterson's Curse, Saffron Thistle, Scotch Thistle, Spear Thistle, Variegated Thistle, Volunteer Lupins, Wild Turnip	800mL-1.0L less than 12 cm diameter  1.0L-1.2L greater than 12 cm diameter	
		Dock (Seedling)	800mL-1.2L	
		Perennial Phalaris, Skeleton Weed fully emerged rosettes (NSW only), Sorrel, Soursob, Sub Clover	1.2L	
	TAS Only	All of the above weeds	1.2-2.4L	
SOUTHERN AUSTRALIA Prior to establishing a crop or pasture with an implement that gives minimal or no soil disturbance	NSW, ACT, SA, VIC, WA only	Barley Grass, Volunteer Cereals, Wild Oats	800mL-1.2L	<p>Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing of mature plants has occurred allow regrowth to 6-8cm before spraying and use the higher rate.</p> <p><b>RATE SELECTION:</b> Use the lower rate on young weeds, increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. Increase to higher rates in spring or when treating under cold/overcast conditions.</p> <p><b>AERIAL APPLICATION:</b> Use the higher rates. See also <b>Aerial Application</b>.</p> <p><b>ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES:</b> Add Wetter TX, 200mL/100L of spray solution. When treating dense infestations of Silvergrass, nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silvergrass is critical for control.</p> <p><b>TANK MIXTURES:</b> For improved control of Dock, Sorrel and Sub clover add Kamba<sup>+</sup> 500 (dicamba). Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See <b>Tank Mixtures</b> for directions. Addition of Spraymate<sup>+</sup> Liase (ammonium sulphate), 2L/100L, may improve control when treating under adverse environmental conditions.</p> <p><b>PASTURE OR CROP ESTABLISHMENT:</b> 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 <b>Crop Establishment</b>.</p> <p><b>AERIAL (OR SURFACE) SEEDING:</b> 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.</p>
		Brome Grass, Canary Grass, Capeweed, Variegated Thistle, Winter Grass	1.0-1.6L	
		Annual Ryegrass, Paterson's Curse, Saffron Thistle, Scotch Thistle, Silvergrass, Spear Thistle, Wild Mustard, Wild Radish, Wild Turnip	1.2-1.6L	
		Erodium, Perennial Phalaris, Plantain, Sorrel, Sub Clover, Yorkshire fog	1.5-2.0L	
	Dock, Flatweed	2.0L		
TAS Only	All the above weeds	1.2-2.4L	<b>TASMANIA:</b> Use 1.2L/ha on annual weeds. Increase to 2.4L/ha where perennial weeds are being treated. To control White Clover and improve control of Sorrel and Dock, add 400mL/ha of Kamba <sup>+</sup> 500 (dicamba). Observe Kamba <sup>+</sup> 500 label directions and plant back periods.	

CROP/SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SOUTHERN AUSTRALIA To commence a fallow	NSW, ACT, VIC, SA, WA only	Barley Grass, Volunteer Cereals, Wild Oats	800mL-1.2L	<p>Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8 cm before spraying and use the higher rate.</p> <p><b>RATE SELECTION:</b> Use the lower rate on young weeds, or where cultivation is to follow within 21 days, increasing to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding.</p> <p><b>ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES:</b> Add Wetter TX, 200mL/100L of spray solution. When treating dense infestations of Silvergrass, nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. Good coverage of Silvergrass is critical for control.</p> <p><b>HOARY CRESS:</b> Treat from late rosette to early flowering.</p> <p><b>SOURSOB:</b> Treat at tuber exhaustion.</p> <p><b>COUCH:</b> 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<sup>†</sup> 500mL/100L may improve control.</p> <p><b>BATHURST BURR:</b> For mature weeds use the higher rate.</p> <p><b>TANK MIXTURES:</b> Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See <b>Tank Mixtures</b> for directions.</p>
		Annual Ryegrass, Brome Grass, Capeweed, Paterson's Curse (rosette), Saffron Thistle, Scotch Thistle, Silvergrass, Spear Thistle, Wild Mustard, Wild Radish, Wild Turnip	1.2-1.6L	
		Hoary Cress, Soursob	1.2L	
	NSW, ACT, VIC, SA, WA only	Couch	1.2-2.4L	
		Bathurst Burr	1.5-2.4L	
	TAS Only	All the above weeds	1.2-2.4L	
PASTURE TOPPING For Annual grass, Capeweed and Calomba Daisy seed-set reduction	WA, SA, VIC, TAS, NSW, ACT only	Barley Grass, Brome Grass, Capeweed, Silvergrass	240-360mL	<p>Remove stock prior to treatment to allow even regrowth. Apply to Capeweed and Annual Ryegrass at FLOWERING. For other grasses apply from HEAD to MILKY DOUGH stage. Use the higher rate for dense infestations or where Annual Ryegrass is present. Apply before signs of plants "haying off". Reduction in pasture legume population may occur as a result. DO NOT apply to clover or medic crops intended for seed or hay.</p>
		Annual Ryegrass, Calomba Daisy	360mL	
SEED-HEAD SUPPRESSION OF PERENNIAL GRASSES	VIC, TAS, NSW, ACT, WA, SA only	Bent Grass	300-500mL	<p><b>TIMING:</b> Treat from late October to late November. Apply before seed heads have emerged. Use the higher rate where growth is excessive and renovation is intended the following Autumn.</p> <p><b>FOLLOW-UP MANAGEMENT:</b> Graze hard after spraying.</p>
BENT GRASS INFESTED PASTURE For control/suppression prior to establishing crops or improved pasture species	VIC, TAS only	Most annual weeds and Bent Grass	2.0L OR 4mL per litre by handgun or knapsack	<p><b>TIMING:</b> 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.</p> <p><b>FOLLOW-UP MANAGEMENT:</b> Full disturbance with a tyned implement should follow 10-21 days after spraying. Then follow with a Summer crop, and/or reseeded pasture or crop the following Autumn.</p>
PASTURE MANIPULATION For suppression or control of pasture species prior to drilling, improved pasture, forage species, soybeans or Leucaena  BAND SPRAYING: May also be applied as a band or strip spray	NSW, ACT, VIC, WA only	Carpet Grass, Kikuyu, Paspalum	1.1 - 4.8L	<p><b>RATE SELECTION:</b> For suppression apply the low rate. Where complete control is required apply up to the high rate.</p> <p><b>BAND SPRAYING:</b> Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coulter/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1.0m strips. Ensure minimal disturbance of the pasture. Excessive dust created in the seeding operation may reduce herbicide activity. Pasture seed must be drilled at the appropriate depth and covered by soil.</p> <p><b>LEUCAENA (QLD ONLY):</b> Apply 2L/ha through a single taper fan nozzle LF1-80 mounted at the rear of the single row planter providing a 1m swath. Planting rows to be 4m apart.</p>
	QLD only	Carpet Grass, Paspalum	1.1-4.8L	
		Kikuyu	500mL-4.8L	
		Barbed Wire Grass, Black Speargrass, Love Grasses, Red Natal Grass, Wire Grasses	2.4L	
POA TUSSOCK INFESTED PASTURE For reduction of ground cover allowing pasture renovation	NSW, ACT, TAS, VIC, QLD only	Most annual weeds and suppression of Poa tussock	2.4-3.2L	<p><b>TIMING:</b> Graze heavily, then remove stock at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the Autumn break but before heavy frosts (March-May).</p> <p><b>APPLICATION:</b> Increasing to the higher rate may give more effective reductions. If aerial spraying see <b>Aerial Equipment</b>.</p> <p><b>FOLLOW-UP MANAGEMENT:</b> Sowing may start from 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestations.</p>

CROP/SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
NORTHERN AUSTRALIA In fallows or prior to sowing a crop	QLD, NSW, ACT only	Annual Phalaris (Canary Grass), Barley Grass, Volunteer Cereals, Wild Oats	400-800mL	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm. 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.  <b>RATE SELECTION:</b> 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 LV Ester 680.  <b>CROP ESTABLISHMENT:</b> Sowing should not proceed until conditions allow for a formation of a satisfactory seedbed. See <b>Crop Establishment</b> for directions.  <b>TANK MIXTURES:</b> 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.  <b>AERIAL APPLICATION:</b> For instructions on <b>Aerial application under hot conditions</b> , see <b>Aerial Application</b> . DO NOT apply by aircraft when temperature is above 30°C.
		Barnyard Grass, Bathurst Burr, Button Grass, Columbus Grass (seedling), Liverseed Grass, Native Millet, Stinkgrass (Lovegrass), Volunteer Sorghum	800mL-1.6L	
		Australian Bluebell (QLD only), Cudweed, Fumitory, Mexican Poppy, New Zealand Spinach, Saffron Thistle, Spear Thistle, Spurge, Stinking Goosefoot	800mL-1.2L	
NORTHERN AUSTRALIA In fallows or prior to sowing a crop	QLD, NSW, ACT only	Black (giant) Pigweed, Boggabri Weed, Caltrop (Yellowvine), Indian Hedge Mustard, Mintweed, Summer Grass	400-800mL up to 5 true leaves or 3cm diameter. /height 800mL-1.2L greater than 3cm diameter. /height	Treat actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm. 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.  <b>RATE SELECTION:</b> 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 LV Ester 680.  <b>CROP ESTABLISHMENT:</b> Sowing should not proceed until conditions allow for a formation of a satisfactory seedbed. See <b>Crop Establishment</b> for directions.  <b>TANK MIXTURES:</b> 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.  <b>AERIAL APPLICATION:</b> For instructions on <b>Aerial application under hot conditions</b> , see <b>Aerial Application</b> . DO NOT apply by aircraft when temperature is above 30°C.
		African Turnip Weed, Deadnettle, Sweet Summer Grass, Variegated Thistle, Volunteer Sunflower	600-800mL up to 5 true leaves or 3cm diameter. /height 800mL-1.6L greater than 3cm diameter. / height	
		Annual Ground cherry (Gooseberry), Bladder Ketmia, Camel Melon, False Castor Oil plant/ Thornapple, Noogoora Burr, Turnip Weed, Wild Lettuce, Wild Turnip, Wireweed	800mL-1.2L prior to stem elongation / budding. After that use 400mL-1.2L plus 600-820mL LV Ester 680 OR 1.2-1.6L of this product alone	
NORTHERN AUSTRALIA In fallows or prior to sowing a crop <i>continued</i>	QLD, NSW, ACT only	Pigweed	800mL-1.6L up to 20cm diameter	Use a higher rate on larger weeds. Control of Pigweed over a wide range of growth stages can be obtained with the addition of Associate <sup>†</sup> Herbicide. Observe recropping intervals.
		Prickly Paddy Melon	770mL-1.6L plus 80mL of Grando 600	DO NOT add crop oil.
		Sowthistle / Milkthistle	600-800mL rosette up to 3cm diameter 800mL-1.6L greater than 3cm diameter	Previously grazed plants may be difficult to control without allowing full recovery.
		Couch	1.2-2.4L	Use the higher rate for dense infestations. Apply sequential treatments during Summer and Autumn, with Autumn being most effective. Repeat applications may be required for full control. For improved control use in conjunction with cultivation. The use of LI700 <sup>†</sup> 500mL/100L may improve control.
		Johnson Grass	1.6-2.4L	Use the higher rates 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 + 2.4L	Make first application to actively growing plants when at least 20% have reached the head stage (normally about February). After allowing maximum re-emergence to occur (normally in 6-8 weeks), it is essential to make a second application. NOTE: Follow-up treatments should be made as part of a Nutgrass control program.

CROP/SITUATION	STATE	WEEDS CONTROLLED	RATE Vol/ha	CRITICAL COMMENTS
SORGHUM CONTROL Pre-harvest	QLD, NSW, ACT only	Sorghum, Grain Sorghum  DO NOT apply to varieties intended for seed production or varieties prone to lodging	1.2 or 1.6L	<b>DO NOT</b> apply if crop is under stress from low moisture, frost, cold or waterlogging. <b>RATE SELECTION:</b> 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. <b>TIMING:</b> Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred. <b>CAUTION:</b> Treatment may increase potential for CROP LODGING, particularly if prior moisture stress has occurred. Harvest as soon as sufficient dry down has occurred to avoid possible lodging. Speed of dry down is dependant on physiological maturity, soil moisture and climatic conditions. <b>CAUTION:</b> Sorghum may be naturally toxic to stock.
SORGHUM CONTROL Post-harvest	QLD, NSW, ACT only	Sorghum stubble, Grain Sorghum	800mL-1.2L for fresh regrowth from slashed stubble.  1.2-1.6L for standing stubble if sufficiently green and for fresh Spring regrowth.	<b>APPLY UNDER GOOD GROWING CONDITIONS ONLY.</b> DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. <b>SLASHED STUBBLE AND SPRING REGROWTH:</b> Apply when fresh regrowth is at least 20 cm high. <b>STANDING STUBBLE:</b> Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20 cm high before treatment. <b>RATE SELECTION:</b> Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Increase to the higher rate for improved regrowth control. <b>NOTE:</b> Variable results occur where the crop has been subject to stress or the growing conditions are marginal. <b>CAUTION:</b> Sorghum may be naturally toxic to stock.
SUGAR CANE Ratoon spray out	QLD, NSW only	Sugar Cane ratoon regrowth	4.8 – 7.2 L	<b>APPLY UNDER GOOD GROWING CONDITIONS ONLY</b> to actively growing ratoons 60-120 cm tall. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.
RICE Direct Drilling	NSW only	Annual Phalaris (Canary Grass), Annual Ryegrass, Barley Grass, Burr Medic, Sub-Clover, Winter Grass	800mL-1.0L	This product is less effective on drought stressed plants. In drought conditions a pre-watering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred allow regrowth to 6-8cm before spraying. <b>ANNUAL RYEGRASS:</b> Add Wetter TX at 200mL/100L spray solution and when dominant use the higher rate. <b>SOWING:</b> Direct drilling may take place 1-14 days after spraying. This product does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continual control of weeds.
COTTON PRE-HARVEST Do not use on crops intended for seed production.	QLD, NSW only	Bathurst Burr, Noogoora Burr, Winter annual weeds including Sowthistle / Milkthistle	1.0-2.0L	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 better results under these conditions, delay application until canopy re-opens following initial conditioning treatment.  Where control of Nutgrass or Noogoora Burr is required, treatment should be applied prior to the onset of frosts. When tank mixed with defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label directions for tank mix products.
		Nutgrass (seasonal suppression only)	2.0L	
COTTON Shielded Sprayers	QLD, NSW only	Refer to weeds controlled section Northern Australia in fallows or prior to sowing a crop		Apply this product to weeds growing between crop rows using a shielded sprayer. DO NOT apply in crops less than 20cm high. DO NOT allow spray or spray drift to contact any part of the cotton plants as severe injury or destruction may result.

## DIRECTIONS FOR USE Continued

General Weed Control – All States	
SITUATION	CRITICAL COMMENTS - Read General Application Information before using
For general weed control in Domestic areas (Home gardens), Commercial, Industrial and Public Service areas. Agricultural buildings and other farms situations. For specific weeds, brush and woody weeds or unwanted trees, refer to the appropriate Weeds Controlled table.	<ul style="list-style-type: none"> <li>- For the control of many grasses and broadleaf weeds</li> <li><b>Rate: 8mL per Litre of water.</b></li> <li>- Apply when weeds are actively growing</li> <li>- Apply to ensure complete and uniform wetting of foliage</li> <li>- Visible symptoms may take from 3 to 7 days to develop</li> </ul> <p>When spraying Sabakem Glyphosate 450CT in high volumes typical of spot spraying (except where a specific wetter such as Pulse<sup>1</sup> Penetrant is recommended), the addition of 200mL per 100L of a 1000g/L wetter (or equivalent) such as BS 1000 is recommended.</p>
<b>USE SITUATIONS - All states (except where noted). For rates of application and weeds controlled, see Weeds Controlled table.</b>	
NON-AGRICULTURAL AREAS Around buildings, Commercial and Industrial areas, Domestic and public service areas, Right-of-ways.	Sabakem Glyphosate 450CT does not provide residual weed control. For residual control of annual weeds, Sabakem Glyphosate 450CT may be tank-mixed with certain residual herbicides. <b>See TANK MIXTURES/COMPATIBILITY</b>
AGRICULTURAL AREAS	Sabakem Glyphosate 450CT may be used for control of annual and perennial weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.
DRY DRAINS AND CHANNELS Dry margins of dams, lakes and streams situations.	DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
FORESTS	Sabakem Glyphosate 450CT may be used prior to establishment of nurseries, for site preparation prior to planting and amongst established trees using a directed or shielded spray, or using selective wiper equipment. DO NOT allow wiper surface to contact any part of the tree. DO NOT allow spray or spray drift to contact foliage or green bark of desirable trees, since severe injury may result.
PEANUTS, COTTON, SOYBEANS, SUGARCANE, NAVY BEANS AND CHICKPEAS Application using selective equipment Qld, NSW only	Wiper Equipment. Apply Sabakem Glyphosate 450CT to weeds growing between crop rows or to weeds growing at least 15cm above the crop. DO NOT allow wiper to contact crop and ensure operating conditions do not allow solution to drip from applicator since severe injury may result. Refer to <b>WIPER EQUIPMENT</b> in the <b>APPLICATION</b> section of the label. Shielded Sprayers (Cotton only). Apply Sabakem Glyphosate 450CT to weeds growing between crop rows using a shielded sprayer. Refer to the Weeds Controlled tables for rates of application. DO NOT apply in crops less than 20 cm high. DO NOT allow spray or spray drift to contact any part of the cotton plants as severe injury or destruction may result.
TREE AND VINE CROPS including: Avocado, Banana, Blueberries, Citrus Fruit, Custard Apples, Duboisia, Figs - dessert, Guava, Kiwifruit, Litchi, Mango, Monstera - fruit, Nuts (including Almond, Pecan, Macadamia, Pistachio and Walnut), Olives, Pawpaw, Persimmons, Pome Fruit, Raspberries, Stone Fruit, Tea, Vineyards	Apply as directed or shielded spray or using wiper equipment. DO NOT apply as a spray near trees or vines less than 3 years old unless they are effectively shielded from spray and spray drift. DO NOT allow wiper surface to contact any part of the tree, vine or plant. <b>Citrus fruit, Nuts, Olives and Pome fruit &amp; vegetables</b> DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. <b>Tea</b> Apply a maximum of 3.2L/ha by shielded boom or directed off-centre nozzle or 0.4L/100L by directed handgun or knapsack to avoid application to the crop. <b>All other crops</b> DO NOT allow spray or spray drift to contact any part of the plant including the trunk. <b>CAUTION:</b> Where split bark on Kiwifruit and greens stems on Pawpaw occur, extreme care is required. For residual control of annual weeds, Sabakem Glyphosate 450CT may be tank-mixed with compatible herbicides which are labelled for use in the above crops. See Tank Mixtures/Compatibility for directions.
PASTURE	<b>DIRECTED (SPOT) APPLICATION:</b> Sabakem Glyphosate 450CT is non-selective and may damage or kill any plant in the sprayed area. Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment. <b>SELECTIVE APPLICATION: SEE WIPER EQUIPMENT</b> <b>BOOM APPLICATION:</b> Sabakem Glyphosate 450CT may be used to suppress or kill existing pasture species prior to re-seeding or establishment of other crops. Where spot application (spray or wiper) is undertaken, grazing stock need not be removed. <b>CAUTION:</b> Certain plants 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.
ONIONS Post-plant, Pre-emergence application. Tas only	For control of annual weeds and suppression of perennial weeds, including Rope Twitch. Apply Sabakem Glyphosate 450CT at 800 mL-2.4L/ha post-sowing and at least 7 days before crop is due to emerge. DO NOT apply to emerging onion plants as severe injury will result. Use the lower rate on small, actively growing annual weeds. Increase to the higher rate for larger annual weeds (over 15 cm tall) and for suppression of perennial weeds.

ANNUALWEEDS - NON-CULTIVATED OPTIONS			
Weeds Controlled (All States)	Rate	Critical Comments (Read application Checklist before using)	
Amaranth Barley Grass Barnyard Grass Brome Grass Caltrop Canary Grass (annual phalaris) Capeweed Cereals Chickweed Cobbler's Pegs Deadnettle Doublegee Fumitory Ground Cherry Lesser Swinecress Liverseed Grass Mintweed Paradoxa Grass Paterson's Curse Pigweed Potato Weed Ryegrass Saffron Thistle Silver Grass Sow Thistle Spear Thistle Spiny Burr Grass Spurge Sub. Clover Thornapple Wild Mustard Wild Oats Wild Turnip Winter Grass Variegated Thistle	<i>Amaranthus spp.</i> <i>Hordeum leporinum</i> <i>Echinochloa crus-galli</i> <i>Bromus spp.</i> <i>Tribulus terrestris</i> <i>Phalaris spp.</i> <i>Arctotheca calendula</i> (volunteer wheat, barley, oats, sorghum) <i>Stellaria media</i> <i>Bidens pilosa</i> <i>Lamium amplexicaule</i> <i>Emex australis</i> <i>Fumaria officinalis, F. muralis</i> <i>Physalis ixiocarpa</i> <i>Coronopus didymus</i> <i>Urochloa panicoides</i> <i>Salvia reflexa</i> <i>Phalaris paradoxa</i> <i>Echium plantagineum</i> <i>Portulaca oleracea</i> <i>Galinsoga parviflora</i> <i>Lolium rigidum</i> <i>Carthamus lanatus</i> <i>Vulpia spp.</i> <i>Sonchus oleraceus</i> <i>Cirsium vulgare</i> <i>Cenchrus spp.</i> <i>Euphorbia spp.</i> <i>Trifolium subterraneum</i> <i>Datura spp.</i> <i>Sisymbrium officinale</i> <i>Avena spp.</i> <i>Brassica tournefortii</i> <i>Poa annua</i> <i>Silybum marianum</i>	BOOM 1.6-2.4L per ha  HANDGUN 400-560mL per 100L  KNAPSACK 60-80mL per 15L  WIPER EQUIPMENT and CONTROLLED DROPLET APPLICATORS  See APPLICATION section	Annual weeds may be sprayed anytime they are actively growing. Use the lower rate on weeds up to 15 cm tall; increase to the higher rate where weeds are over 15 cm tall. Visible symptoms develop in 3-7 days but complete desiccation may take 20-30 days under cool conditions. Sabakem Glyphosate 450CT does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds. For residual control of annual weeds, Sabakem Glyphosate 450CT may be tank- mixed with certain residual herbicides. See TANK MIXTURES/COMPATIBILITY for directions. When applying in high volume e.g. by handgun or knapsack, add BS 1000 or similar 100% wetter (or equivalent) at 200mL per 100L of spray mix. For aquatic weeds refer to critical comments for aquatic weeds to minimise the entry of spray into water.

PERENNIAL WEEDS				
Weeds Controlled	State	Rate		Critical Comments
		Boom L/ ha	Handgun / Knapsack vol/1 Litre	
Bamboo ( <i>Bambusa spp.</i> )	All States	-	8mL	Read General application information before using. Apply to actively growing foliage and/or regrowth which is between 1m and 2m tall. Cut Stump: Dilute1:6 i.e. mix 1 part Sabakem Glyphosate 450CT plus 6 parts water. Cut stems back to 20 cm high, pour mixture down hollow stem or wet the cut.
Bent Grass ( <i>Agrostis spp.</i> )	Vic, Tas only	2L	4mL	Apply to actively growing plants in late spring when they have some seed-head development, but before summer moisture stress. Follow-up management is required. 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 in the following Autumn.
Blady Grass ( <i>Imperata cylindrica</i> )	Qld, NSW, ACT only	7.2L	10mL	Apply to actively growing plants at the early head stage.
Bracken ( <i>Pteridium esculentum</i> )	All States	7.2L	12mL	For boom application, always add Pulse <sup>1</sup> Penetrant (200mL per 100L spray) otherwise reduced results will occur. Addition of Pulse <sup>1</sup> Penetrant (200mL/100L spray) may improve control with handgun application. Wiper application is recommended, see WIPER EQUIPMENT. Double pass application is required for pipewick equipment. Bracken should be slashed in Winter/Spring prior to treatment. Apply Sabakem Glyphosate 450CT in March/May to fully unfurled actively growing fronds but prior to frosts. Visible symptoms may not be fully apparent until the next season. Complete control will not be achieved from one application. Repeat treatment is recommended, preferably associated with pasture improvement.
Brown Beetle Grass ( <i>Leptochloa fusca</i> )	NSW, ACT only	2.4L	4mL	Apply to actively growing plants. DO NOT apply to partially submerged plants. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
Carpet Grass ( <i>Axonopus spp.</i> )	All States	2.4L	4mL	Apply to actively growing plants at the early head stage.
Cocksfoot ( <i>Dactylis glomerata</i> )	All States	2.4L	6mL	Apply to actively growing plants at the early head stage.
Couch ( <i>Cynodon dactylon</i> )	All States	7.2L	10mL	Apply to actively growing plants at the early head stage. The use of LI 700 <sup>1</sup> 500mL/100L may improve control.
Cumbungi ( <i>Typha spp.</i> )	All States	7.2L	10mL	Apply to actively growing plants at the early head to full head stage (Summer/Autumn). Re-treatment may be required to restrict seedling re-establishment. Wiper application is recommended (not in Tasmania) see WIPER EQUIPMENT. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.

Weeds Controlled	State	Rate		Critical Comments
		Boom L/ ha	Handgun / Knapsack vol/1 Litre	
Flatweed (Cat's Ear) ( <i>Hypochoeris radicata</i> )	All States	2.4L	6mL	Read General application information before using. Apply to fully developed rosettes at the early flower stage.
Glyceria ( <i>Glyceria Maxima</i> )	Tas only	4.8L	8mL	Apply to actively growing plants at the mature head stage in late Summer/ Autumn. Add Shirwet <sup>†</sup> 600 at 200-250mL/100L. NOTE: Control of Glyceria is only allowable in dry drains and channels and dry margins of dams, lakes and streams. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
Guinea Grass ( <i>Panicum maximum</i> )	All States	7.2L	10mL	Apply to actively growing plants at the early head stage. For wiper application, see Wiper Equipment.
Hoary Cress ( <i>Cardaria draba</i> )	NSW, ACT, Vic, Tas only	1.2L	4mL	For maximum long term reduction, apply from late July to September when plants are in late rosette to flowering stage. Plants should be actively growing and not under stress of drought, frost or water- logging. Application may be integrated with long fallow. Cultivation may start 7 days after spraying. Wiper application may be used where sufficient stem elongation occurs, see Wiper Equipment. In Tasmania addition of Shirwet <sup>†</sup> 600 at 200-250mL/100L spray, is recommended.
Johnson Grass ( <i>Sorghum halepense</i> ), Kangaroo Grass ( <i>Themeda australis</i> ), Kikuyu Grass ( <i>Pennisetum clandestinum</i> )	All States	4.8L	8mL	For maximum long term reduction apply to actively growing plants at the early head stage. For wiper application on Johnson Grass, off-type and volunteer sorghum, see Wiper Equipment.
Lovegrass, African ( <i>Eragrostis curvula</i> )	NSW, ACT, Vic, WA only	4.8L	8mL	Apply to actively growing plants. Re-treatments and/or pasture improvement is recommended to restrict re-establishment.
Nutgrass ( <i>Cyperus rotundus</i> ) Does not refer to other Cyperus species which may be locally known as nutgrass	All States	4.8L	8mL	Not cultivated Situations: Apply to actively growing plants in late Summer/Autumn (Feb/Apr) when at least 20% have reached the head stage.
		2.4L followed by 2.4L	6mL followed by 6mL	Arable Land: 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: In arable land Nutgrass may rapidly regenerate from isolated nuts. Follow-up treatments should be made as part of a Nutgrass control program
Pampas Grass ( <i>Cortaderia spp.</i> )	All States	-	8mL or 10mL	Apply to actively growing plants during Spring, Summer or Autumn. Ensure complete coverage and the foliage. For best results apply after flowering. For easier access, large plants may be cut or burnt prior to spraying, but first allow regrowth to reach 1m. Use the higher rate on plants over 1m high. Low Volume Applications: Use 1:9 (10%) mixture of Sabakem Glyphosate 450CT: Water. Apply 2 x 2mL per 0.5m height. Ensure spray contacts all foliage.
Paragrass ( <i>Brachiaria mutica</i> )	All States	7.2L	10mL	DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
Paspalum ( <i>Paspalum dilatatum</i> )	All States	4.8L	8mL	Apply to actively growing plants at the early head stage.
Pellitory ( <i>Parietaria judaica</i> )	NSW, ACT	-	8mL	Apply to actively growing plants prior to seeding. Repeat applications may be necessary to control seedlings and/or regrowth.
Phalaris ( <i>Phalaris aquatica</i> )	NSW, ACT, Vic, SA only	2.4-4.8L	4-8mL	Apply to actively growing plants during Winter-Spring. Use the lower rate where only knockdown is required e.g. prior to burning of firebreaks. Burning can usually start 14-21 days after spraying. For long term control increase to the higher rate.
Phragmites, Common Reed ( <i>Phragmites australis</i> )	All States	7.2L	10mL	Apply to actively growing, fully developed plants approaching the early head stage. Visible symptoms of control may be slow to develop and may not be fully apparent until the next season. For wiper application, see Wiper Equipment. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
Plantains ( <i>Plantago spp.</i> )	All States	2.4L	6mL	Apply to actively growing plants at the early head stage. Symptoms may be slow to develop.
Prairie Grass ( <i>Bromus unioloides</i> ), Qld Blue Grass ( <i>Dichanthium sericeum</i> ), Red-leg Grass ( <i>Bothriochloa macra</i> ), Rhodes Grass ( <i>Chloris gayana</i> )	All States	4.8L	8mL	Apply to actively growing plants at the early head stage.
Rope Twitch ( <i>Agrapyron repens</i> )	Vic, Tas only	4.8L	8mL	Apply in late Summer-Autumn to actively growing plants with foliage at least 20cm high. To ensure maximum shoot emergence the area should NOT be cultivated in the period from the preceding Winter until the time of spraying.
Rushes ( <i>Juncus spp.</i> )	All States	-	8mL	Where there is a large proportion of dead foliage, pre-slashing or burning is recommended. Allow adequate regrowth before treatment. Apply when plants growing actively with sufficient green tissue. See Wiper Equipment. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.



Weeds Controlled	State	Rate		Critical Comments
		Boom L/ha	Handgun / Knapsack vol/1 Litre	
Sedge, Tall ( <i>Carex appressa</i> )	NSW, ACT, Vic, Tas only	1.6 or 3.2L	4-8mL	Read General application information before using.  Apply to actively growing plants in flowering to post-flowering period (Oct/April). Use the lower rate only if the stand has been slashed prior to treatment. Re-treatment may be necessary. Visible symptoms may not be fully apparent for up to 3 months. Use of CDA equipment is not recommended.  DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
Silverleaf Nightshade ( <i>Solanum elaeagnifolium</i> )	NSW, ACT only	-	16mL	Use ONLY under good soil moisture conditions. Apply to actively growing plants at the late flowering to berry stage. Repeat spraying will be necessary to restrict regrowth and seedling re-establishment.
Sorrel ( <i>Rumex acetosella</i> )	All States	4.8L	8mL	Apply to actively growing plants when most have reached the early bud stage.
Soursob ( <i>Oxalis pes-caprae</i> )	NSW, ACT, Vic, SA, WA, Tas only	1.2L	4mL	For maximum long term reduction apply from late July to early September but before natural plant yellowing (senescence) occurs. Soursob should be actively growing and not under stress of drought or waterlogging. If heavy frosting has occurred, allow recovery before spraying. If heavy grazing has occurred, allow recovery of foliage to at least 5cm before spraying.
St. John's Wort ( <i>Hypericum perforatum</i> )	All States	2.4L	4mL	Apply to actively growing plants in the flowering to post-flowering, procumbent stem stage (generally November/May). Re-treatment, or oversowing with improved pasture species may be necessary to restrict seedling re-establishment.
Thistle, Artichoke ( <i>Cynara cardunculus</i> )	Vic, SA only	2.4L	4mL	Apply to the rosette-early stage.
Thistle, Californian ( <i>Cirsium arvense</i> )	Vic, Tas only	4.8L	8mL	Apply to actively growing plants at the flowering stage. To ensure maximum shoot emergence the area should NOT be cultivated prior to spraying.  Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment.
Yorkshire Fog ( <i>Holcus lanatus</i> )	All States	2.4L	6mL	Apply to actively growing plants at the early head stage.

## UNWANTED TREES

Sabakem Glyphosate 450CT may be used for control of many tree species. Ensure trees are actively growing at the time of treatment and not under stress of drought, waterlogging or cold.

STATE	METHOD	UNWANTED TREES	TREE SIZE	MIXTURE GLYPHOSATE: WATER	CRITICAL COMMENTS
Qld, NSW, Vic, WA, Tas, NT only	Cut Stump	Jarrah ( <i>Eucalyptus marginata</i> ) Longleaf Box ( <i>E. goniocalyx</i> ) Marri ( <i>E. calophylla</i> ) Messmate Stringybark ( <i>E. obliqua</i> ) Narrowleaf Peppermint ( <i>E. radiata</i> )	0-10cm basal diameter	1:15	Dilute Sabakem Glyphosate 450CT with water in the recommended ratio.  Cut tree close to ground and immediately wet stump surface thoroughly using splatter gun, spray, swab or brush. Remove any branches on the stump and treat cut surface.
		Privet ( <i>Ligustrum spp.</i> ) Rhus ( <i>Toxicodendron succedanea</i> )	0-30cm basal diameter	1:1	
	Foliar Application: Low Volume (Gas gun or Splatter gun)	Bullick ( <i>Eucalyptus megacarpa</i> ) Marri ( <i>E. calophylla</i> ) Jarrah ( <i>E. marginata</i> )	0-1.5m height	1:15 Add Pulse <sup>†</sup> Penetrant at 20mL/10L spray mixture	Dilute Sabakem Glyphosate 450CT in the recommended ratio. Calibrate splatter gun to apply 4mL of Sabakem Glyphosate 450CT solution per dose, as fine spray. Apply 4mL per 0.5m tree height.  Ensure spray contacts all foliage
		Eucalyptus spp.	0-1.5m height	1:5 Add Pulse <sup>†</sup> Penetrant at 20mL/10L spray mixture	
	Foliar Application: High Volume (Knapsack or Handgun)	Eucalyptus spp. Willows ( <i>Salix babylonica</i> )	0-2.0m height	800mL:1L per 100L For Eucalyptus spp. Add Pulse <sup>†</sup> Penetrant at 200mL/100L spray mixture	Spray to wet foliage. Use the higher rate for trees 1.0 to 2.0 high.
	Stem Injection	Flooded Gum ( <i>Eucalyptus grandis</i> )	Basal diameter 0-25cm	Undiluted 1mL/cut	Use an applicator calibrated to deliver 1 or 2mL per cut. Make 5cm cuts at an oblique angle to penetrate the sapwood beneath the bark. Space cuts at 13cm centres around tree circumference below any branching, otherwise remove or treat all branches below cut. On multiple trunk trees ensure each trunk is treated.
		Ghost Gum ( <i>E. papuana</i> ) Gum Topped Bloodwood ( <i>E. dichromophloia</i> ) Messmate Stringybark ( <i>E. obliqua</i> ) Narrowleaf Ironbark ( <i>E. crebra</i> ) Pink Bloodwood ( <i>E. intermedia</i> ) Poplar Box ( <i>E. populnea</i> ) Silverleaf Ironbark ( <i>E. melanophloia</i> ) Silvertop Ash ( <i>E. sieberi</i> ) Spotted Gum ( <i>Corymbia maculata</i> ) Swamp Mahogany ( <i>E. robusta</i> ) White Mahogany ( <i>E. acmenoides</i> ) Willows ( <i>Salix babylonica</i> ) Privet ( <i>Ligustrum spp.</i> ) Rhus ( <i>Toxicodendron succedanea</i> )	Basal diameter Over 25 to 60cm	Undiluted 2mL/cut	
		Camphor Laurel ( <i>Cinnamomum camphora</i> )	Basal diameter 0.25cm	Mixture 1:1 2mL/cut	
			Basal diameter Over 25 to 60cm	Undiluted 2mL/cut	

# BRUSH AND WOODY WEEDS

WEEDS CONTROLLED	STATE	RATE		CRITICAL COMMENTS
		Handgun / Knapsack vol/1 Litre	Low Volume Glyphosate: Water	
Bitou Bush/Boneseed ( <i>Chrysanthemoides monilifera</i> )	Qld, NSW, ACT, Vic, Tas only	4mL or 8mL	1:29 or 1:19	Apply to actively growing plants. Spray to wet all foliage. Best results achieved when treated at peak flowering during Winter. DO NOT apply during periods of drought stress. Use the higher rate on bushes over 1.5m. Further treatment may be necessary to restrict re-establishment.  Low Volume Application (e.g. Gas gun and Splatter gun). Ensure spray contacts all foliage. Use the higher rate (1:19) on bushes over 1.5 m high.
Boxthorn, African ( <i>Lycium ferocissimum</i> )	All States	5.6-8mL		Use the lower rate for young bushes; increase to the higher rate for large mature bushes. Spray to wet all foliage. DO NOT spray during hot, dry Summer periods. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Use of CDA equipment is not recommended.
Blackberry ( <i>Rubus fruticosus</i> )	All States	8-10mL		Apply from flowering to leaf fall (generally Jan-May). Plants should not be under stress of high temperature, drought or frost. Spray to wet all foliage. Use the higher rate on old, dense infestations over 2m high. Visible symptoms may not be fully apparent until the next season. Burning (after complete brown out), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Use of CDA equipment is not recommended. In Tasmania, do not treat bushes bearing mature fruit.
Crofton Weed ( <i>Eupatorium adenophorum</i> )	Qld, NSW, ACT only	4mL		Apply to actively growing plants with full foliage. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment.
Gorse (Furze) ( <i>Ulex europaeus</i> )	All States	8mL plus Pulse <sup>†</sup> Penetrant 2mL		Apply all year round, but only to actively growing plants. Always add Pulse <sup>†</sup> Penetrant, otherwise reduced results will occur. Spray to wet all foliage. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedling and/or regrowth
Groundsel Bush ( <i>Baccharis halimifolia</i> )	Qld, NSW, ACT only	5.6-8mL	1:9	Apply to actively growing plants. DO NOT apply during Winter, nor during periods of Summer drought stress. Use the higher rate on bushes over 2m tall. Spray to wet all foliage. Further treatment and/or pasture improvements are recommended to control seedlings and/or regrowth.  Low Volume Application (e.g. Splatter Gun and Gas Gun): Use 1:9 (10%) mixture of Sabakem Glyphosate 450CT : water. Apply 2 x 2mL dose per 0.5 m bush height. Ensure spray contacts all foliage. Use of CDA equipment is not recommended.
Hawthorn ( <i>Crataegus spp.</i> )	NSW, Vic, SA, WA, Tas only	8-10mL	1:9	Apply to actively growing plants from flowering to leaf fall. Spray to wet all foliage. Use the higher rate in bushes over 2m tall. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedling and/or regrowth.  Low Volume Application (e.g. Splatter Gun and Gas Gun). Use 1:9 (10%) mixture of Sabakem Glyphosate 450CT : water. Apply 2 x 4mL dose per 0.5m bush height. Ensure spray contacts all foliage.
Lantana ( <i>Lantana camara</i> )	Qld, NSW, ACT, NT only	8mL	1:9	Apply to actively growing plants with full foliage. Ensure complete treatment of individual plants. DO NOT spray during periods of Summer drought stress. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Additional Pulse <sup>†</sup> Penetrant (200mL/100L) may improve control. Low Volume: (e.g. Splatter Gun and Gas Gun): Apply 2 x 2mL dose per 0.5m bush height. Ensure spray contacts all foliage.  Sprinkler Sprayer: Apply 5mL of a 1:9 (10%) solution to every square metre of treated area. Use of CDA equipment is not recommended.
Mistflower ( <i>Eupatorium riparium</i> )	Qld, NSW, ACT only	4mL	1:9	Apply to actively growing plants with full foliage. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment.  Sprinkler Sprayer: Apply 3mL of a 1:9 (10%) solution to every square metre of treated area.
Sifton Bush/Chinese Scrub ( <i>Cassinia arcuata</i> )	Qld, NSW, ACT only	8 or 10mL	1:9	Apply when actively growing. Ensure complete coverage of the bush. Pasture improvement and/or re-treatment is recommended to control seedlings and/or regrowth.  High Volume: Use the higher rate on bushes over 1m. Low Volume: Apply 32mL per 0.5m height.  Wiper Application: Double pass application is required. Application is best made to small (less than 1m) green bushes.
Sweet Briar ( <i>Rosa rubiginosa</i> )	NSW, ACT, Vic, SA, WA, Tas only	12-16mL	1:9	Apply to actively growing plants from late flowering to leaf fall. Spray to wet all foliage. Use the higher rate on bushes over 1.5 m high. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.  Low Volume: (e.g. Splatter Gun and Gas Gun): Apply 2 x 4mL dose per 0.5m bush height. Ensure spray contacts all foliage.

# 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**

## GENERAL INSTRUCTIONS

- Sabakem Glyphosate 450CT Herbicide is a non-selective herbicide that will kill most emerged weeds and plants. It provides no residual weed control and may therefore be used before sowing any crop, but not prior to transplanting tomato seedlings.
- If required, Sabakem Glyphosate 450CT Herbicide can be mixed with certain other herbicides to achieve both knockdown and residual weed control (see Tank Mixtures).
- Sabakem Glyphosate 450CT Herbicide is absorbed by foliage and green stems and moves into the root system. Weeds should be actively growing when treated. DO NOT treat weeds under poor growing or dormant conditions (such as occur in drought, waterlogging, disease, insect damage or following frosts), as reduced weed control may result.
- Reduced results may also occur when treating weeds heavily covered with dust or silt. Prior herbicide application may also induce stress in weeds.
- For annual weeds, it may 3 to 7 days before the effects of the treatment become apparent; for perennials, it may be as much as 2 to 3 weeks or more if cool and cloudy.
- Sabakem Glyphosate 450CT Herbicide is a non-volatile liquid that mixes readily with water. Just mix with the required volume of water, add a non-ionic wetting agent, and spray.
- Rain occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours of application may wash the chemical off the foliage and a repeat treatment may be required. Delay treatment of plants wet with dew or rain, if water droplets runoff when plants are disturbed.
- Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result.
- Sabakem Glyphosate 450CT Herbicide is compatible with certain herbicides, insecticides and additives (see Compatibility). The active constituent of Sabakem Glyphosate 450CT Herbicide is 450g/L glyphosate present as the isopropylamine salt.
- A withholding period for stock is not required, however, it is recommended that grazing of treated plants be delayed for one day after treatment of annual weeds, or 7 days if perennial weeds are present to ensure absorption of Sabakem Glyphosate 450CT Herbicide.
- Certain plants (e.g. Soursob, Variegated thistle) may be naturally toxic to stock. When known toxic plants are present, do not allow stock to graze until complete browning of treated plants has occurred.

## Resistant Weed Warning

GROUP	<b>M</b>	HERBICIDE
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Sabakem Glyphosate 450CT Herbicide is a member of the Glycines group of herbicides. Sabakem Glyphosate 450CT Herbicide has the inhibition of EPSP Synthase mode of action. For weed resistance management Sabakem Glyphosate 450CT Herbicide is a group M herbicide. Some naturally-occurring weed biotypes resistant to Sabakem Glyphosate 450CT Herbicide and other Group M 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 Sabakem Glyphosate 450CT Herbicide or other Group M herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Sabakem Pty Ltd accepts not liability for any losses that may result from the failure of Sabakem Glyphosate 450CT Herbicide to control resistant weeds.

## Crop Establishment

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

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

## Mixing

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

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

1. Make sure the spray tank is completely free of previous spray residues.
2. Half fill the spray tank with clean water. Where possible avoid using turbid water, or hard water containing calcium salts, as this may reduce weed control.

3. If Sabakem Glyphosate 450CT Herbicide is being used alone, go to step 5.
4. If Sabakem Glyphosate 450CT Herbicide is being used with insecticides, other herbicides or additives (see **Tank Mixtures**), add these products now according to their label directions. If ammonium sulphate is required, add Spraymate<sup>+</sup> Liase first using 2L/100L of spray volume.
5. Add the required volume of Sabakem Glyphosate 450CT Herbicide, and mix well. Mechanical agitators may cause excessive foaming and should not be used unless required by any tank mix partners.
6. Add the rest of the water. Near the end, add a non-ionic wetting agent, see below. Make sure the filling hose is submerged to avoid excessive foaming, and on completion remove it immediately to avoid back siphoning into the water supply. Use the tank mix promptly. And certainly within 5 days since a gradual loss of activity will occur.

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

## Surfactant Addition

### Spot Spraying (handgun/knapsack)

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

- 200mL of BS1000
- 300mL of Shirwet<sup>+</sup> 600, Agral<sup>+</sup> Spray Activator Wetting and Spreading Agent.

### Boom Spraying

When spraying annual ryegrass, silver grass (*Vulpia*) or perennial grasses, addition of 200mL of BS1000 per 100L of spray mix may improve control.

For boom and high volume spraying of certain perennial and brush/woody weeds such as bracken, gorse, lantana, addition of an organosilicone wetter such as Pulse<sup>+</sup> Penetrant at 200mL per 100L of spray solution may improve control.

DO NOT add any other agricultural chemicals, spraying oils or other materials except as directed on the label.

## Application

Sabakem Glyphosate 450CT Herbicide is a non-selective translocated herbicide. Direct spray contact or even slight drift may cause severe injury or destruction of any growing crop or other desirable plants including trees. Thoroughly flush your mixing and spray equipment with clean water after use.

## Boom Equipment

Use recommended rates of Sabakem Glyphosate 450CT Herbicide in 25 to 200 litres of clean water per hectare.

When using Sabakem Glyphosate 450CT at 400mL-1.2L/ha, spray volumes in the range 25-100L/ha are preferred. Use nozzles that produce a MEDIUM or COARSE spray quality at the target (ASAE S572).

Environmental conditions including delta T and wind speed, and the size and density of the target weed, 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.

## High Volume Application

(e.g. Knapsack/Handgun Equipment)

The dilution rate is given as vol/1 Litre e.g.: 8mL Sabakem Glyphosate 450CT per Litre of water. This is equal to 120mL Sabakem Glyphosate 450CT per 15 litres of water or 800mL Litre per 100 litres of water. Adjust equipment to achieve an even spray pattern. Apply to ensure complete and uniform wetting of all foliage. For handgun equipment, select a nozzle configuration and pressure to ensure good coverage with minimal production of fine droplets so as to reduce likelihood of off-target drift.

## Low Volume Application

(e.g. Gas Gun or Splatter Gun)

Apply as an even spray to cover all foliage.

Refer to Weeds Controlled for the dilution and volume of mixture to be applied. The dilution is specified as "Low volume mixture, Sabakem Glyphosate 450CT : Water". For example, a 1:9 mixture equals one part Sabakem Glyphosate 450CT plus 9 parts water.

## Wiper Equipment

Wiper Equipment (e.g. ropewick, canvas, felt or carpet applications) may be used to apply Sabakem Glyphosate 450CT onto weeds growing in oilseed crops, sugarcane, cotton, seed and pod vegetables, tree and vine crops specified in this label, pasture and non-crop areas. Avoid contact with desirable vegetation. Operate wiper equipment a minimum of 10 cm above the crop or pasture. Weeds should be at least 15 cm above the crop or pasture at time of application. Speed of travel should be no greater than 8km/h. Best results are achieved at lower speeds and where two applications are made in opposite directions (double pass).

Where weeds are of variable height, or occur in dense infestations or clumps, some plants may not be contacted by the herbicide solution. In these cases repeat treatment may be necessary.

Mix only enough herbicide solution for immediate requirements. DO NOT store mixed solution for more than a few days. Flush out equipment with water after use.

RATE: Mix 1L Sabakem Glyphosate 450CT with 2.5 litres of clean water to prepare a 29% solution.

Sabakem Glyphosate 450CT may be used according to the above directions for suppression or control of many annual and perennial weeds. See Weeds Controlled tables for specific use recommendations.

## Controlled Droplet Application Equipment (CDA)

Use the following table as a guide for achieving the correct application rates using the Micron 10 Herbi or similar equipment. See Weeds Controlled tables for specific rates and use recommendations. For hand held equipment a walking speed of approximately

1m/sec (4km/h) is recommended.

DO NOT add oils to Sabakem Glyphosate 450CT/water mixture, otherwise difficulty in application and reduced weed control may occur.

CAUTION: CDA equipment produces a fine spray pattern, which is not easily visible.

Ensure spray pattern or drift does not contact foliage or any other green tissue of desirable plants, since severe injury or destruction may result.

Rate of Sabakem Glyphosate 450CT delivered at 1m/sec	2.4L/ha	4.8L/ha	7.2L/ha
Mix ratio (by volume) Sabakem Glyphosate 450CT : Water	1:4	2:3	9:8
Quantity by volume to make 1L spray solution Sabakem Glyphosate 450CT + water	200mL + 800mL	400mL + 600mL	530mL + 470mL
Micron Herbi, nozzle	Blue	Blue	Yellow

## Aerial Application

- Use aerial spraying only in pasture or fallow before establishing new pasture, field crops or fodder crops, or for pre-harvest application to Sorghum. **DO NOT apply Sabakem Glyphosate 450CT Herbicide by air within intensive cropping areas as the consequences of accidental drift damage are too extreme.**
- DO NOT exceed 3.2L of Sabakem Glyphosate 450CT Herbicide per hectare.
- 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 aircraft type, wind conditions, target height and density.
- Avoid application when relative 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.
- On hilly terrain, spraying height may vary. Increase the water volume to 30-80L/ha and use nozzles that produce a COARSE spray quality at the target (ASAE S572).
- At 25°C increase the water volume to at least 30L/ha and nozzles that produce a COARSE spray quality at the target (ASAE S572) to compensate for evaporation. DO NOT spray by air at temperatures above 30°C as excessive evaporation may occur that will reduce weed control.
- Drift is likely when droplet size is 150 microns or less, when wind speed is near zero or over 8km/hr, the air is hot and dry, or there is a temperature inversion. DO NOT spray under these conditions.
- After each day of spraying, thoroughly wash the aircraft and landing gear with clean water to remove herbicide residues.

## Tank Mixtures - Compatibility

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

**Herbicides:** Associate<sup>†</sup>, Avadex<sup>†</sup> Xtra, Kamba<sup>†</sup> 500, Lusta<sup>†</sup>, LV Ester 680, Striker, Hi-Load Atrazine 600 or Atradex<sup>®</sup>/Atragranz<sup>†</sup> (Do not apply the tank mix for control of Barnyard grass or Liverseed grass or for non-crop situations) plus Spraymate<sup>†</sup> Liase, Simazine flowable or granular plus Spraymate<sup>†</sup> Liase.

**Insecticides:** Dimethoate, chlorpyrifos, Imidan<sup>†</sup>, Le-Mat<sup>†</sup>.

**Additives:** Spraymate<sup>†</sup> Liase (Ammonium Sulphate), Shirwet<sup>†</sup> 600/BS1000 (Non Ionic Wetting Agents), Pulse<sup>†</sup> Penetrant (Organosilicone Penetrants) and LI700<sup>†</sup> as specified.

## Tank Mixtures – How to Choose

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

- **To improve knockdown and give residual weed control.**
- Hi-Load Atrazine 600 can be added. Use with Spraymate<sup>†</sup> Liase to overcome antagonism.
  - DO NOT spray by air. This mixture does not control Barnyard grass.
  - **In fallow or in crop.** Lusta<sup>†</sup> can be added.
  - **Prior to sowing lupins.** Flowable Simazine can be added. Use with Spraymate<sup>†</sup> Liase to overcome antagonism.
- **To improve control of certain hard-to-kill weeds such as Marshmallow and Paterson's Curse and accelerate knockdown symptoms on broadleaf weeds prior to planting cereal, pulse or oilseed crops.** Add 25 to 75mL of Hammer per hectare.
- **To improve and accelerate knockdown symptoms prior to planting wheat or barely.** Add 75mL of Striker per hectare.
- **To improve control of certain broadleaved weeds.** Add LV Ester 680. Observe any regional restrictions on use.
- **To improve control of Sorrel, Subterranean Clover, Medics, and White Clover.** Add Kamba<sup>†</sup> 500 (dicamba). Observe any regional restrictions on use.
- **To improve control of Annual Ryegrass, Silver grass, and perennial grasses.** Add 200mL of Wetter TX per 100L of spray mix. Use only if recommended.
- **To compensate for adverse growing conditions such as cool or cloudy weather.** Control of annual weeds by Sabakem Glyphosate 450CT Herbicide alone may possibly be improved by adding 2L of Spraymate<sup>†</sup> Liase per 100L of spray mix.
- **To improve control on Couch.** Add 500mL/100L LI700<sup>†</sup>.

## PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, as severe injury or destruction may result. DO NOT apply under weather conditions, or from spraying equipment that may cause spray to drift onto nearby susceptible plants, crops, cropping lands or pastures.

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

## **STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. The method of disposal of the container depends on the container type. Read the Storage and Disposal instructions on the label that is attached to the container.

## **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. When using controlled droplet applicators wear protective waterproof clothing and impervious footwear. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each days use, wash gloves, face shield or goggles and contaminated clothing.

## **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

## **MATERIAL SAFETY DATA SHEET**

Additional information is listed in the Material Safety Data Sheet which can be obtained from the supplier.

## **CONDITIONS OF SALE**

The use of this product is beyond the control of Sabakem Pty Ltd. No warranty is expressed or implied regarding the suitability or efficiency for any purpose for which it is used by the buyer. Sabakem Pty Ltd accepts no responsibility for any consequences resulting from the use of this product. Sabakem Pty Ltd will not be held liable for any loss, injury or damage arising from the sale, supply or use of this product, whether through negligence or otherwise. No responsibility will be accepted for any consequences whatsoever resulting from the use of this product.

**For specialist advice in an emergency dial  
1 800 638 556  
24 hours Australia wide.**

APVMA Approval No: 67384/55928

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