

CAUTION

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

***Agro-Essence* Glyphosate 510 Herbicide**

**ACTIVE CONSTITUENT: 510 g/L GLYPHOSATE present
as the ISOPROPYLAMINE SALT**

GROUP M HERBICIDE

Agro-Essence Glyphosate 510 Herbicide is a Non-selective Water Soluble Herbicide for Control of a Wide Range of Annual and Perennial Weeds in Wide Variety of Situations as Indicated in the Directions for Use

IMPORTANT: READ THE ATTACHED BOOKLET BEFORE USING THIS PRODUCT



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DIRECTIONS FOR USE**RESTRAINTS**

DO NOT disturb treated weeds by grazing, cultivation or sowing for 6 hours of daylight following treatment of annual weeds and 7 days for perennial weeds to ensure herbicide absorption, unless specified in the critical comments.

DO NOT treat weeds under stress from frost, cold, disease, waterlogging, lack of moisture.

Plants must be actively growing to ensure optimum uptake of the product.

Crop & Situation	Weeds Controlled	State	Rate Vol/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, Brome grass, Volunteer cereals, Wild oats	NSW, Vic, SA, WA, ACT only	350 – 700mL pre tillering	RATE SELECTION: Use the higher rate when treating in cold/overcast conditions, when using late in the season. Use the lower rate on young weeds and the higher rate on mature weeds i.e. fully tillered grasses or broadleaf weeds at budding or stem elongation.
	Annual phalaris (Canary grass), Annual ryegrass, Silvergrass, Winter grass		700 – 900mL post tillering	If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before spraying and use the higher rate. Cultivation or planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.
			700 – 900mL pre tillering	
			900mL – 1.0L post tillering	
	Capeweed, Doublegee (Spiny Emex)		350 – 700mL less than 8 cm diameter	If cultivation or sowing does not take place within 21 days re-treatment may be necessary.
			700 – 900mL greater than 8 cm diameter	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. Addition of a non-ionic 1000 surfactant at 200mL/100L spray solution may improve control.
	Amsinckia, Fumitory, Paterson's Curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupins, Wild turnip		700 – 900mL less than 12 cm diameter	CROP ESTABLISHMENT: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions.
			900mL – 1.0L greater than 12 cm diameter	
	Dock (Seedling)		700mL – 1.0L	PERENNIAL WEEDS: For Perennial phalaris, Soursob, Skeleton weed and Sorrel, this product will provide knockdown,
	Perennial phalaris, Skeleton weed fully emerged rosettes (NSW & ACT only), Sorrel, Soursob, Sub clover		1.0L	seasonal suppression and reduction in treated plant numbers.
All the above weeds	Tas only	1.0 – 2.0L	TASMANIA: Use 1.0L/ha on annual weeds. Increase to 2.0L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha of dicamba (200g/L). Observe dicamba label directions and plant back periods. Addition of a non-ionic 1000 surfactant at 200mL/100L spray solution may improve control.	

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
<p>SOUTHERN AUSTRALIA</p> <p>Before sowing a crop or pasture</p> <p>For weed control prior to sowing a crop or pasture with minimal or no soil disturbance.</p>	Barley grass, volunteer cereals, Wild oats	NSW, ACT, SA, VIC, WA, only	700mL – 1.0L	<p>RATE SELECTION: Use the higher rate when treating in cold/overcast conditions, when using late in the season. Use the lower rate on young weeds and the higher rate on mature weeds i.e. fully tillered grasses or broadleaf weeds at budding or stem elongation.</p> <p>If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before spraying and use the higher rate.</p> <p>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. Addition of a non-ionic 1000 surfactant at 200mL/100L spray solution may improve control.</p> <p>Do not sow if heavy trash is present.</p> <p>AERIAL APPLICATION: May be applied by air provided a good seed bed has been established. Always use the higher rates.</p> <p>TANK MIXTURES: For improved control of dock, sorrel, sub-clover add dicamba. Read and follow all label directions for the tank mix product. Addition of crystalline ammonium sulphate (2kg/100L) may improve control when treating under adverse environmental conditions.</p> <p>PASTURE OR CROP ESTABLISHMENT: Do NOT sow into excessive trash. Cultivation or planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. Trash may be removed by grazing after treatment. Grazing may commence 6 hours after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for 3 days where annual weeds are large.</p> <p>See also Crop Establishment.</p> <p>AERIAL (OR SURFACE) SEEDING: Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertilizer and insecticides and follow-up management is undertaken as required.</p>
	Brome grass, Capeweed, Variegated thistle, Winter grass	Tas	900mL – 1.4L	TASMANIA: Use 1.0L/ha on annual weeds. Increase to

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
	Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Wild mustard, Wild turnip	only	1.0 – 1.3L	2.0L/ha on perennial weeds. The product may be tank mixed with dicamba to improve control of Sorrel, Dock and White clover. Observe dicamba label directions and plant back periods.
	Erodium, Perennial phalaris, Plantain, Sorrel, Sub clover		1.2 – 1.8L	Addition of a non-ionic 1000 surfactant at 200mL/100L spray solution may improve control.
	Dock, Flatweed		1.8L	
	All the above weeds		1.0 – 2.0L	
Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
SOUTHERN AUSTRALIA For weed control before a fallow	Barley grass, volunteer cereals, Wild oats	NSW, VIC, WA, SA only	700mL – 1.0L	RATE SELECTION: Use the lower rate on young weeds, or where cultivation is to follow within 21 days.
	Annual ryegrass, Brome grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip		1.0 - 1.3L	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
	Hoary cress, Soursob		1.0L	ANNUAL RYEGRASS, SILVERGRASS AND PERENNIAL GRASSES: It is recommended to use water volumes of 70L/ha or more with low volume nozzles to improve control. Addition of a non-ionic 1000 surfactant at 200mL/100L spray solution may improve control.

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
<p>NORTHERN AUSTRALIA</p> <p>For weed control prior to sowing a summer or winter crop or in a fallow</p>	Annual phalaris (Canary grass), Barley grass, volunteer cereals, Wild oats	NSW, QLD only	350 - 700mL	<p>RATE SELECTION: 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 of growth certain broadleaf weeds require a higher rate range or the addition of 2,4-D.</p> <p>In winter (cold) conditions, symptoms on Deadnettle may be slow to develop.</p> <p>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.</p> <p>Liverseed grass and Barnyard grass may be sensitive to moisture stress. Dense stands may require re-treatment.</p> <p>For AERIAL APPLICATION see General Instructions. Do not apply by air if temperature is over 30oC.</p> <p>* Larger plants (>5cm) of Noogoora Burr, Variegated Thistle and Volunteer Sunflower may require up to 1.3L/ha to achieve control.</p> <p>CROP ESTABLISHMENT : Sowing should not proceed until conditions allow for a formation of a satisfactory seedbed. See Crop Establishment for directions.</p> <p>Sowthistle : Previously grazed plants may be difficult to control without allowing full recovery.</p>
	<p>Barnyard grass, Liverseed grass, Stinkgrass (Lovegrass), Volunteer Sorghum</p> <p>Australian bluebell (QLD only), Cudweed, Fumitory, Mexican poppy, Mintweed, New Zealand spinach, *Noogoora Burr, Saffron thistle, Spear thistle, Spurge, *Variegated Thistle, *Volunteer sunflower, Yellow vine/Caltrop</p> <p>Cont.</p>		<p>700mL –1.4L</p> <p>700mL - 1.0L</p>	

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
	Wireweed		700mL - 1.0L	
	Boggabri weed, Caltrop, Indian hedge mustard, Mintweed, Summer grass		350 – 700mL up to 5 true leaves or 3cm diameter/ height 700mL – 1.0L greater than 3cm diameter/ height or 5 true leaves	
	Annual ground cherry (Gooseberry), Bladder Ketmia, Sowthistle, Turnip weed, Wild lettuce, Wild turnip		700mL – 1.0L prior to stem elongation/ budding OR 1.0 – 1.3L after prior to stem elongation/ budding	

PASTUE RENOVATION and TOPPING

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
Pasture with Poa Tussock present as a weed. For pasture renovation	Annual weeds (see Annual Weeds table in this label) and Poa tussock (Poa labillardieri)	QLD , NSW, ACT , VIC, Tas only	2.1 – 2.8L	Before Spraying <input checked="" type="checkbox"/> Graze heavily <input checked="" type="checkbox"/> Remove stock 14 days or more before treatment <input checked="" type="checkbox"/> Apply after the autumn break when plants are actively growing but before heavy frosts (March – May). Increasing to the higher rate may give more effective reductions Sowing of new pasture may begin 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestations. May be aerially applied.
Pasture with Bent Grass present as a weed For control/ suppression of Bent grass before sowing a crop or pasture	Annual weeds (see Annual Weeds table in this label) and Bent grass (Agrostis capillaris)	VIC, TAS only	1.8L	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 reseeded pasture or crop the following autumn.

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
PASTURE TOPPING For the reduction of seed set of annual grass, Capeweed and Calomba daisy	Annual ryegrass, Calomba daisy	NSW, VIC, SA, WA, TAS only	330mL	Use the higher rate for dense infestations or where Annual ryegrass is present. Apply before signs of plants "haying off".
	Barley grass, Bromegrass, Capeweed, Silvergrass		210 – 330mL	Annual Ryegrass and Capeweed - Apply at flowering. Other weeds - apply from 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. Apply a maximum of 50L/ha water. Above this water volume add a non-ionic surfactant.
PASTURE MANIPULATION For the control / suppression of certain grasses before sowing soybeans, forage crops or Leucaena.	Carpet grass, Kikuyu, Paspalum	WA, NSW, VIC only	1.0 – 4.2L	Apply the lower rate for suppression only. The higher rate will provide control. Leucaena (QLD ONLY): Rows should be 4m apart. Use 1.8L/ha with a single taper fan nozzle LF1-80 mounted at the rear of the single row planter providing a 1m swath.
	Carpet grass, Paspalum	QLD only		
	Kikuyu		440mL – 4.2L	
	Barbed wire grass, Black Speargrass, Love grasses, Red Natal grass, Wire grasses		2.1L	

SUGARCANE (RATOON CONTROL) for QLD and NSW only

Crop & Situation	Variety	Rate Vol/ha	Critical Comments
SUGAR CANE Ratoon control	Q63, Q87, Q90, Q117, Q120, Q129, Q130, H56-752, Pindar, Triton	2.1 – 2.8L	Apply when ratoons are actively growing and are 60 – 100 cm tall. DO NOT apply if plants are under stress from low moisture or waterlogging.
	Q86, Q96, Q113	2.8 - 3.5L	Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.
	Cassius, Q115, Q122, Q94	3.5 – 4.2L	Boom height must allow for correct overlap of the spray pattern at the top of the crop canopy.
	NCO310, Q107	4.2 – 6.3L	

RICE DIRECT DRILLING for NSW only

Crop & Situation	Weeds Controlled	Rate Vol/ha	Critical Comments
RICE Direct drilling	Annual ryegrass, Annual phalaris (Canary grass), Barley grass, Burr medic, Sub-clover, Winter grass	700 – 900mL	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 control of Annual Ryegrass use the higher rate. And add a non-ionic 1000 surfactant at 200mL/100L of spray solution. Crop Sowing: Sow 1 – 14 days after treatment. Residual control will only be achieved by adding another suitable herbicide.

SORGHUM CONTROL

Crop & Situation	Weeds Controlled	State	Rate Vol/ha	Critical Comments
SORGHUM CONTROL Before harvest	Grain Sorghum (Sorghum bicolour)	QLD, NSW, only	1.0 or 1.3L	DO NOT apply to varieties intended for seed production or varieties prone to lodging. DO NOT apply to crops under stress from factors such as waterlogging, frost, disease, low moisture etc. TIMING: Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred. Use the lower rate for control of crop and 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 down to prevent further lodging. CAUTION: Sorghum may be naturally toxic to stock.
SORGHUM CONTROL Post-harvest	Sorghum stubble (grain sorghum), (Sorghum bicolour)	NSW, QLD only	700mL – 1.0L for new regrowth from slashed stubble. 1.2 – 1.6L for standing green stubble 800mL – 1.2 for fresh spring growth	DO NOT apply if plants are stressed from such factors as waterlogging, frost, disease, low moisture, etc. For slashed stubble and spring regrowth apply when regrowth is at least 20 cm high. Standing Stubble - apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20 cm high before treatment. Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Use the higher rate for better control of regrowth. It is important to note that variable results can occur if the crop has been under stress or grown under marginal conditions. The varieties: Ruby, Trump, Nugget 2, Goldrush 2 and Prize are particularly susceptible if growing conditions are not ideal. CAUTION: Sorghum may be naturally toxic to stock.

ANNUAL WEEDS - For All States

Weeds Controlled	Rate	Critical Comments
Amaranth (Amaranthus spp.) Barley grass (Hordeum leporinum) Barnyard grass (Echinochloa spp.) Brome grass (Bromus spp.) Caltrop (Tribulus terrestris) Canary grass (Phalaris spp.) Capeweed (Arctotheca calendula) Cereals Volunteer (barley, wheat, oats, sorghum) Chickweed (Stellaria media) Cobbler's Peg (Bidens pilosa) Fumitory (Fumaria officinalis) Ground Cherry (Physalis angulata) Lesser Swinecress (Coronopus didymus) Liverseed grass (Urochloa panicoides) Mintweed (Salvia reflexa) Paradoxa grass (Phalaris paradoxa) Paterson's Curse (Echium plantagineum) Pigweed (Portulaca oleracea) Potato weed (Galinsoga parviflora) Ryegrass Annual (Lolium rigidum) Saffron thistle (Carthamus lanatus) Silver grass (Vulpia spp.) Sow Thistle (Sonchus oleraceus) Spear Thistle (Cirsium vulgare) Spiny Burrgrass (Cenchrus spp.) Spurge (Euphorbia spp.) Sub Clover (Trifolium subterraneum) Wild Mustard (Sisymbrium officinale) Wild Oats (Avena spp.) Wild Turnip (Brassica tournefortii) Winter grass (Poa annua) Variegated Thistle (Silybum marianum)	<p>Boom: 1.3 – 2.1 L/ha</p> <p>Handgun: 350 – 490mL per 100L of water</p> <p>Knapsack: 50 – 70mL per 15L of water</p>	<p>* Apply only to plants which actively growing and not suffering stress.</p> <p>* Use the lower rate for weeds up to 15cm and the higher rate for weeds over 15cm.</p> <p>* The effects of the product may take 3-7 days to appear under normal conditions and up to 20-30 days in cool conditions.</p> <p>* No residual control will be provided by this product. Germinations after initial treatment may have to be re-sprayed.</p> <p>For residual control the product should be tank mixed with a suitable residual herbicide.</p>

PERENNIAL WEEDS

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Handgun mL/100L	Knapsack mL/15L	
Bamboo (Bambusa spp.)	All States	-	700	100	<p>Apply to actively growing foliage and/or re-growth, which are between 1 and 2m tall.</p> <p>Cut Stump – dilute the product 1:6 i.e. 1 part Agro-Essence Glyphosate 510 Herbicide to 6 parts water, cut stems back to 20cm high, pour mixture down hollow stem or paint the cut.</p>

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Handgun mL/100L	Knapsack mL/15L	
Bent grass (<i>Agro capillaris</i>)	Vic, Tas only	1.8	350	50	Apply to plants, which have some seed-head development late in the spring. Plants must be actively growing. It is necessary to follow-up spraying with full disturbance within 21 days and then plant to a summer crop and/or by re-seeded pasture or crop in autumn.
Blady grass (<i>Imperata cylindrica</i>)	Qld, NSW only	6.3	900	140	Apply to actively growing plants when most plants have reached the head stage.
Bracken (<i>Pteridium esculentum</i>)	All States	-	1L	160	For best control Wiper application is recommended. Bracken should be slashed in the previous Winter/Spring so that application is made to new growth. Apply to actively growing fully unfurled fronds in Autumn (March-May) before the onset of frosts. Symptoms may be slow to appear. Follow-up treatment is recommended, as control will NOT be achieved after one treatment.
Carpet grass (<i>Axonopus</i> spp)	All states	2.1	350	50	Apply to actively growing plants at early head stage.
Cocksfoot (<i>Dactylis glomerata</i>)	All states	2.1	500	70	Apply to actively growing plants at early head stage.
Couch (<i>Cynodon dactylon</i>)	All states	6.3	900	130	Apply to actively growing plants when most plants are at the early head stage. For best results in WA and SA apply in Oct-November.
Flatweed (Cat's Ear) (<i>Hypochaeris radicata</i>)	All states	2.1	500	70	Apply at early flowering to fully developed rosettes.
Guinea grass (<i>Panicum maximum</i>)	All states	6.3	900	130	Apply to actively growing plants at early head stage. May be applied by Wiper Equipment.
Hoary Cress (<i>Cardia draba</i>)	NSW, ACT, Tas, Vic only	1.0	350	50	Apply late July to September to actively growing plants at the late rosette to flowering stage. Ensure plants are not stressed at time of spraying. Where stems are long enough Wiper Equipment may be used. Tas: Add a non-ionic surfactant at the

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Handgun mL/100L	Knapsack mL/15L	
					recommended rate.
Johnson grass (<i>Sorghum halepense</i>) Kangaroo grass (<i>Themeda australis</i>) Kikuyu grass (<i>Pennisetum clandestinum</i>)	All states	4.2	700	100	Apply to actively growing plants at early head stage. May be applied by Wiper Equipment to Johnson grass.
Lovegrass – African (<i>Eragrostis curvula</i>)	Vic, NSW, ACT, WA only	4.2	700	100	Apply to actively growing plants. To restrict seedling re-establishment pasture improvement is recommended.
Nutgrass (<i>Cyperus rotundus</i>)	All states	4.2	700	100	Non-cultivated situations. Apply to actively growing plants in February – April.
		2.1 followed by 2.1	500 followed by 500	70 followed by 70	Cultivated Situations: Make first application when at least 20% of plants have reached early head stage (about Feb). Make the second application when most plants have re-emerged (about 6-8 weeks after the first application). Follow-up treatments may e necessary as further plants emerge.
Paragrass (<i>Brachiara mutica</i>)	All states	6.3	900	130	Apply to actively growing plants at early head stage.
Paspalum (<i>Paspalum dilatatum</i>)	All states	4.2	700	100	Apply to actively growing plants at early head stage.
Phalaris (<i>Phalaris aquatica</i>)	SA, Vic, NSW only	2.1 or 4.2	350 or 700	50 or 100	Apply in Winter/Spring to actively growing plants. Use lower rates when only knockdown is required such as prior to burning for a firebreak. Burning should not take place for 2-3 weeks after spraying. The higher rate should be used for longer-term control.
Plantains (<i>Plantago</i> spp)	All states	2.1	500	70	Apply to actively growing plants at early head stage. Symptoms may be slow to appear.
Prairie Grass (<i>Bromus unioloides</i>) Qld Blue grass (<i>Dichanthium sericium</i>)	All states	4.2	700	100	Apply to actively growing plants at early head stage.

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Handgun mL/100L	Knapsack mL/15L	
Redleg grass (Bothriochloa ambigua) Rhodes grass (Chloris gayana)					
Rope Twitch (Agropyron repens)	Tas, Vic only	4.2	700	100	Apply in 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.
Sorrel (Rumex acetosella)	All states	4.2	700	100	Apply to actively growing plants when the majority of plants are at the early bud stage.
Soursob (Oxalis pes-caprae)	NSW, ACT, Vic, SA, WA, Tas only	1.0	350	50	Apply to actively growing plants late July to early September prior to plant senescence (yellowing). Ensure plants are not stressed at time of application. If plants have been grazed or frosted allow re-growth before treatment.
St John's Wort (Hypericum perforatum)	All states	2.1	350	50	Apply to actively growing plants at flowering to post-flowering, procumbent stem stage (about Nov-May). Pasture improvement or re-treatment may be necessary to prevent seedling re-establishment.
Thistle Artichoke (Cynara cardunculus)	Vic, SA only	2.1	350	50	Apply when plants are at the rosette to early head stage.
Thistle Californian (Cirsium arvense)	Vic, Tas only	4.2	350	50	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 (Holcus lanatus)	All states	2.1	500	70	Apply to actively growing plants at the early head stage.

WOODY WEEDS and BRUSH

Weeds Controlled	State	Rate		Critical Comments
		Handgun mL/100L	Knapsack mL/15L	
Bitou Bush/ Boneseed (Chrysanthemoides monilifera)	NSW, ACT, Qld, Vic, Tas only	350 or 700	50 or 100	Apply to actively growing plants. Do not treat plants, which are stressed, particularly drought stressed. Spray to wet all foliage. Best results are achieved when treated during the winter at peak flowering time. Use the higher rate on larger bushes. Follow-up treatment may be required to prevent the establishment of germinating weeds.
Blackberry (Rubus fruticosus)	All States	700 or 900	100 or 130	Apply from January to May (flowering to leaf fall). Spray plants which are not under stress to thoroughly wet all foliage. Use the higher rate for dense old stands over 2m high. Further treatment may be needed to control seedlings and re-growth. Symptoms may be slow to appear and may not be apparent until next season. Tas Only – Do not spray bushes bearing mature fruit.
Box Thorn (Lycium ferocissium)	All States	500 or 700	70 or 100	Spray to wet all foliage. Use the lower rate for young bushes and the higher rate for bigger mature bushes. Do not spray if conditions are hot and dry. Regrowth and seedling germination may have to be retreated.
Crofton Weed (Eupatorium adenophorum)	NSW, ACT, Qld only	350	50	Apply to plants with full foliage that are actively growing. Spray to wet all foliage. Seedling germination may have to be retreated.
Groundsel Bush (Baccharis halimifolia)	NSW, ACT, Qld only	500 or 700	70 - 100	Apply to actively growing plants using the higher rate for plants over 2m tall. Do not spray during summer drought stress conditions or in winter. Spray to wet all foliage. Seedling germination may have to be retreated.
Hawthorn (Crataegus spp.)	NSW, ACT, Vic, Tas, WA, SA only	700 - 900	100 - 130	Spray from flowering to leaf fall when plants are actively growing. Use the higher rate for plants over 2m tall. Spray to thoroughly wet all foliage. Seedling regrowth may have to be retreated.
Lantana (Lantana camara)	NSW, Qld only	700	100	Apply to plants with full foliage that are actively growing. Spray to thoroughly wet all foliage and individual plants. Seedling regrowth may have to be retreated.
Mistflower (Eupatorium riparium)	NSW, ACT, Qld only	350	50	Apply to plants with full foliage that are actively growing. Spray to thoroughly wet all foliage. Seedling regrowth may have to be retreated.
Sifton Bush/ Chinese Scrub (Cassinia arcutata)	NSW, ACT, Qld only	700 - 900	100 or 130	Apply to actively growing plants ensuring complete coverage. Seedling regrowth may have to be retreated. For high volume application-use the higher rate when bushes are over 1m. For Wiper application a double pass application is required. Best results are achieved if bushes are less than 1m tall and are green at time of application.
Sweet Briar (Rosa rubiginosa)	NSW, ACT, Vic, Tas, WA, SA only	1.0L or 1.3L	160 or 210	Apply from late flowering to leaf fall to actively growing plants. Spray to thoroughly wet all foliage. Use the higher rate for bushes over 1.5m tall. Seedling regrowth may have to be retreated.

AQUATIC WEED CONTROL

Reduction in effectiveness may result if more than $\frac{1}{4}$ of the aboveground portion of the weed is submerged at treatment. Submerging the treated plants following treatment may result in the spray being washed from the plant surface, thus reducing effectiveness.

Do not apply this product within 0.5 km of potable water intake in flowing water (e.g. river or stream), or within 0.5 km of a potable water intake in a standing body of water such as a lake, pond, or reservoir. Applications to moving bodies of water should be made while travelling upstream wherever possible to prevent concentration of this herbicide in water. When making bankside applications, do not overspray more than 0.5m into open water. Avoid spraying across moving bodies of water where weeds do not exist.

DO NOT ADD EXTRA SURFACTANT / WETTER, UNLESS IT IS APPROVED IN AQUATIC SITUATIONS.

When spraying floating weeds, use a low volume, low pressure boom sprayer or sprinkler sprayer. Do not submerge weeds when spraying as this may wash herbicide off the leaves.

When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid sudden impact on habitat.

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Knap - sack mL/15L	Hand-gun mL/100L	
Alligator Weed	All states	4.2	110	700	Apply when actively growing plants from summer through winter. Floating form only.
Brown Beetle grass	NSW, ACT only	2.1	55	350	Apply to actively growing plants. Do not apply to partially submerged plants.
Cumbungi (Typha spp)	All states	6.3	140	900	Spray during Summer or Autumn period during the heading stage. Except for Tasmania, Wiper equipment can be used. Refer to information on Application Equipment section of the label.
Paragrass (Brachiara mutica)	All states	6.3	140	900	Spray at early head stage when plants are in active growth.
Phragmites, Common Reed (Phragmites australis)	All states	6.3	140	900	If wiper technique is to be used, refer to Wiper Equipment section. Spray when plants are getting close to the early head stage and actively growing. Spray symptoms may not be observed for a season or more.
Rushes (Juncus spp)	All states	See Critical Comments			Use Wiper technique ensuring a high percentage of green matter is present. Refer to section of this booklet entitled 'Wiper Equipment' for directions for use.
Sedge, Tall (Cyperus gracilis)	NSW, ACT,				

Weeds Controlled	State	Rate			Critical Comments
		Boom L/ha	Knap- sack mL/15L	Hand-gun mL/100L	
	Tas, Vic only				
Water Couch (Paspalum distichum)	All states	6.3	140	900	Spray actively growing plants in February- March period. 75% of plants should be visible above the water line at time of spraying.
Water Hyacinth (Eichornia crassipes)	All states	4.2 to 6.3	110 to 140	700 to 900	Apply when actively growing and at or beyond the early bloom stage of growth. Use the higher rate for dense infestations.
Water Lettuce (Pistia stratiotes)	All states	-	110 to 140	700 to 900	Best results are obtained from mid-summer through to winter. Use the higher rate on dense infestations.
Waterlily, Yellow (Nymphaea mexicana)	All states	4.2	110	-	Apply when there is a maximum emergence of floating leaves. Allow 2-3 weeks for symptoms to develop then retreat any unaffected plants. Use low volume sprayer.

GENERAL USES – FOR ALL STATES UNLESS SPECIFIED

Situation	Weeds Controlled	Rate	Critical Comments
Agricultural Areas	See Weeds Controlled Table for Annual and Perennial Weeds and Brush and Woody weeds	See Weeds Controlled tables	For the control of weeds listed in 'Weeds Controlled' prior to sowing of crop.
Domestic areas, Commercial, Industrial areas, Public Service areas, Rights of -Way		7 mL per litre of water	* Ensure weeds are actively growing at time of application * Complete and uniform coverage is necessary to ensure best results * Symptoms may take from 3-21 days to appear * NO residual control is provided
Forestry Situations		See Weeds Controlled tables	This product may be used; 1. In site preparation before planting 2. Before establishment of nurseries 3. Amongst established trees by using selective wiper equipment, directed or shielded spray. This product must not contact foliage or green bark of desirable trees. The wiper should not contact any part of the tree.
HORTICULTURAL CROPS	See Weeds	See Weeds	This product can be used as a shielded or

Situation	Weeds Controlled	Rate	Critical Comments
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.	Controlled Table for Annual and Perennial Weeds and Brush and Woody weeds	Controlled tables	<p>directed spray, or using wiper equipment.</p> <p>DO NOT apply near trees or vines less than 3 years old unless they are adequately protected from spray and spray drift.</p> <p>DO NOT allow spray or spray drift to contact bark, leaves, wounds or any other plant parts as severe injury may occur.</p> <p>Tea: Apply a maximum of 2.8L/ha by shielded spray or directed off-centre nozzle or 350mL/100L by directed handgun or knapsack to avoid application to the crop.</p>
Pasture	See Weeds Controlled Table for Annual and Perennial Weeds and Brush and Woody weeds	See Weeds Controlled tables	<p>This product may be used by the following methods;</p> <p>Spot Application – To remove weeds by spot application within a pasture. This product is non-selective and may damage or kill any plant in the sprayed area. To prevent seedling establishment pasture improvement and/or re-treatment may be necessary.</p> <p>Boom application – This product may be used to suppress or kill existing pasture prior to reseedling or establishment of other crops.</p> <p>Selective Application – see Wiper equipment under General Instructions.</p>
Peanuts, Cotton, Soybeans & Sugar Cane (using selective application equipment only) QLD, NSW only	See Weeds Controlled Table for Annual and Perennial Weeds and Brush and Woody weeds	See Weeds Controlled tables	<p>Wiper Equipment</p> <p>Apply to the weeds growing between the rows or to weeds growing at least 15cm above the crop. DO NOT allow the herbicide to contact the crop or to drip from the applicator as serious injury may occur.</p> <p>Shielded Sprayers (cotton only)</p> <p>Apply to the weeds growing between the rows using a shielded sprayer. DO NOT apply unless the crop is at least 20cm high. Do not allow herbicide or drift to contact crop.</p>

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

MODE OF ACTION

Agro-Essence Glyphosate 510 Herbicide is a water soluble liquid herbicide. The product is non-selective and will control a wide range of emerged annual and perennial weeds. It provides no residual activity and is inactivated once it comes in contact with the soil.

Agro-Essence Glyphosate 510 Herbicide is absorbed by plant leaves and green stems and is then translocated throughout the plant to the root system. The product inhibits a plant enzyme causing a breakdown in the metabolic pathway leading to death of the plant.

Visible effects of the product efficacy are gradual wilting, yellowing leading to complete plant browning. For annual weeds effects are usually apparent in 3 - 7 days and for perennial weeds up to 14 – 21 days. The time taken for these effects to appear will vary depending on the speed of translocation which will be dependent on climatic conditions such as temperature, moisture conditions etc. Best results are obtained if plants are sprayed when they are actively growing and not under stress from factors such as disease, waterlogging, insect damage, drought stress etc.

Rain within 1 hour of application, which causes run-off, may require re-treatment. Rainfastness is reduced if weeds are not actively growing, under stress or conditions of low light intensity/darkness. The addition of non-ionic 1000 surfactant may improve rainfastness on winter annual grass weeds.

Plants which are covered in dust or which are wet with dew should not be treated.

CROP ESTABLISHMENT

Where the product is used to control weeds prior to the establishment of a new crop or pasture it is important that the crop or pasture not be sown until a suitable seedbed is present. Where a light cover weeds has been sprayed, it may be possible to sow after 1 hour of daylight after application. Where a large amount of dead matter or trash is present the seedbed needs to be adequately prepared before crop or pasture sowing.

MIXING AND APPLICATION

Agro-Essence Glyphosate 510 Herbicide may be applied by boom spray, air, knapsack, handgun or wiper application.

Boom Application

Spray volumes of 25 - 100L water/ha are recommended with fan nozzles at pressures of 240-280 kPa. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

Wiper Equipment

Rope wick, canvas, carpet of felt applicators maybe used to apply the product in the situation as per the directions for use table. Weeds should be at least 15cm, above the crop and the wiper equipment should be operated at least 10cm above the crop. Best results are obtained with the

lower speeds of application (do not exceed 8 kilometres per hour) and where two applications are made in opposite directions i.e. double pass. Where herbicide does not contact foliage (due to different levels of foliage) results may not be satisfactory and re-treatment may be required.

Do not store a mixed solution for more than 2 days.

Rate: 700mL of product to 2 litres of water.

Aerial Application

Apply a minimum spray volume of 20L/ha for Micronair and boom equipment,. Droplet size should be 250-350 micron and the swath width of 15-17 metres. Aerial application is only recommended in pasture or fallow situations before establishment of a new crop or pasture or in pre-harvest sorghum. On sloping ground, the spraying height may vary, so it is recommended that spray volume may be increased to 30-80L/ha with a droplet size to at least 300 micron.

Since the product is non-selective it is important to avoid spraying in conditions that are likely to cause drift, e.g. wind over 8 km/h, temperature inversion, still air and hot dry days.

DO NOT use in intensive horticultural areas.

Use recommended rates on this label up to a maximum limit of 2.8L/ha.

Applications in Hot Conditions

When the temperature reaches 25°C increase the water volume to at least 30L/ha and the droplet size to at least 300 micron VMD to compensate for additional evaporation of sprayed droplets. Do not use by the air in temperatures above 30°C.

SURFACTANT

The addition of surfactant may improve weed control where rates are high or product rates are low. Suggested surfactant rates are 200mL/100L of 1000g/L non-ionic surfactant or 250-500mL/100L of 700g/L surfactant. Do not add spraying oils, agricultural chemicals or any other material except as directed on the label.

MIXING

When the product is to be mixed with water it is important that clean water is used. Dirty water or hard water containing calcium salts may reduce the products effectiveness.

The following procedure should be followed:

1. Ensure spray tank is clean and that the previous chemicals used are washed from the tank
2. Half fill the tank with clean water; add the required amount of Agro-Essence Glyphosate 510 Herbicide.
3. Add the rest of the water.
4. Add surfactant last.

COMPATIBILITY

Agro-Essence Glyphosate 510 Herbicide may be mixed with a variety of products to broaden the spectrum of weeds control and to add residual control. Refer to the 'Directions for Use' Section for detailed information on tank mix situations.

Additives

Crystalline ammonium sulphate assists in minimising antagonism when mixed with flowable triazine herbicides. The only form of ammonium sulphate to be used is the crystalline form (not prilled or granule forms). Test the quality by dissolving 2 tablespoons in 2 litres of water. Swirl gently for 2 minutes. Should undissolved particles still remain at the end of that time, pre-dissolve them prior to adding product to the spray tank. Ensure solution is poured through a screen.

Herbicides:

Atrazine – flowable or granular (see additives above – do not apply the tank mix for control of Barnyard grass or Liverseed grass), Simazine –flowable or granular, diuron – flowable or granular, dicamba, Agro-Essence 2,4-D Ester 680, 2,4-D Amine 500, Agro-Essence 2,4-D Amine 625, tribenuron-methyl, Agro-Essence triclopyr 600, chlorsulfuron, Agro-Essence metsulfuron, pendimethalin, Agro-Essence triasulfuron, LVE MCPA, Agro-Essence oxyfluorfen, Agro-Essence trifluralin.

Oxyfluorfen

The addition of Agro-Essence oxyfluorfen at 75mL/ha to recommended rates of Agro-Essence Glyphosate 510 Herbicide used prior to the planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity.

Insecticides: Chlorpyrifos, dimethoate, fenitrothion, omethoate, and fenitrothion, lambda-cyhalothrin. Other insecticides have not been tested.

For tank mixing the following procedure should be undertaken

1. Half fill tank and start agitation.
2. Add crystalline ammonium sulphate if required through mesh screen.
3. Add companion product
4. Add Glyphosate 510 Herbicide and rest of water.
5. Add surfactant and maintain agitation while spraying.

EQUIPMENT MAINTENANCE AND USAGE

Agro-Essence Glyphosate 510 Herbicide should only be stored, mixed or applied in plastic or plastic lined, stainless steel, aluminium, copper, brass or fibreglass containers. The product and spray solutions react with galvanised steel and unlined steel tanks and containers to form hydrogen gas which may form a highly combustible gas mixture. This gas could cause an

explosion if ignited by an open flame. All application equipment including tanks, nozzles, hoses, aircraft and aircraft landing gear, should be thoroughly washed after use to prevent corrosion.

RESISTANT WEEDS WARNING

GROUP	M	HERBICIDE
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Agro-Essence Glyphosate 510 Herbicide is a member of the Glycines group of herbicides. Agro-Essence Glyphosate 510 Herbicide has the inhibitor of EPSP synthase mode of action. For weed resistance management Agro-Essence Glyphosate 510 Herbicide is a Group M herbicide.

Some naturally occurring weed biotypes resistant to Agro-Essence Glyphosate 510 Herbicide and other Group M mode of action herbicides may exist through normal genetic variability in any weed population. These resistant weeds will not be controlled by Agro-Essence Glyphosate 510 Herbicide or other Group M herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Agro-Alliance (Australia) Pty Ltd accepts no liability for any losses that may result from the failure of Agro-Essence Glyphosate 510 Herbicide to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

This product is non-selective and may severely injure or kill desirable plants should the product contact the foliage, green stems or fruit of such plants.

DO NOT spray under meteorological conditions or under spraying conditions, which could be expected to cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

DO NOT use prior to transplanting tomato seedlings.

PROTECTION OF LIVESTOCK

There is no withholding period for this product, but removal of stock may be necessary to achieve efficacy. It is recommended that stock be removed from the area to be treated 1 day after treatment of annual weeds and 7 days for perennial weeds. Certain plants (eg. soursob, variegated thistle) may be naturally toxic to stock. Where known toxic plants are present, do not allow stock to graze until complete browning of treated plants has occurred.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate dams, rivers or streams with the product or used containers. When controlling weeds near water, refer to the label directions to minimise the entry of spray into the water.

PRECAUTION

DO NOT store, mix or apply the product or spray solutions in unlined steel or galvanised containers as a highly flammable gas may form. Use stainless steel, brass, copper, aluminium, plastic or plastic-lined, fibreglass containers or spray tanks.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Do not contaminate seed, feed or foodstuff. Do not re-use container for any purpose.

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

If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

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. When using controlled droplet applicator 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 and goggles and contaminated clothing.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

For further information refer to the Material Safety Data Sheet (MSDS), which is available from the supplier.

CONDITIONS OF SALE

The use of Agro-Essence Glyphosate 510 Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Agro-Alliance (Australia) Pty Ltd regarding its suitability, fitness or efficacy for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Agro-Alliance (Australia) Pty Ltd accepts no responsibility for any consequences whatsoever resulting from the use of this product.

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