

Product Name: Agro-Essence Glyphosate 540 Herbicide
APVMA Approval No: 93907/140877



Label Name:	Agro-Essence Glyphosate 540 Herbicide
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Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	ACTIVE CONSTITUENT: 540 g/L GLYPHOSATE present as the potassium salt
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Mode of Action:	GROUP M HERBICIDE
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Statement of Claims:	Non-selective Herbicide for the Control of Many Annual and Perennial Weeds
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Net Contents:	5 - 1000 L
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Restrains:	<p>RESTRAINTS DO NOT disturb weeds by cultivation, sowing or grazing for 6 hours of daylight following treatment of annual weeds and seven days for perennial weeds to ensure herbicide absorption, unless specified otherwise in critical conditions.</p> <p>SPRAY DRIFT RESTRAINTS Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift</p> <p>DO NOT allow bystanders to come into contact with the spray cloud. DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p> <p>DO NOT apply unless the wind speed is between 4 and 12 kilometres per hour at the application site during the time of application.</p>
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DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Spray droplets not smaller than a MEDIUM spray droplet size category.

DO NOT apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a MEDIUM to COARSE spray droplet size category

Directions for Use:

This section contains file attachment.

Other Limitations:

Withholding Periods:

WHEAT AND LEGUMES: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION
ALL OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED

Trade Advice:

General Instructions:

GENERAL INSTRUCTIONS

PRODUCT INFORMATION

Agro-Essence Glyphosate 540 Herbicide is a non-volatile, non-selective, water-soluble liquid herbicide for the control of annual and perennial grasses and broadleaf weeds in a wide range of agricultural and non-agricultural use situations. Agro-Essence Glyphosate 540 Herbicide may be used for weed control on agricultural land prior to sowing any edible or non-edible crop but not prior to transplanting tomato seedlings. When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 2cm of natural rainfall or by applying water via a sprinkler irrigation system.

Agro-Essence Glyphosate 540 Herbicide is absorbed by plant foliage and green stems. It is inactivated in the soil and does not provide residual weed control. Agro-Essence Glyphosate 540 Herbicide moves through the plant from the point of contact to and into the root system. Initial visible effects on annual weeds take 3 to 7 days but may not be noticeable for 2 to 3 weeks under cool cloudy conditions or on some perennial weeds.

CROP ESTABLISHMENT

Agro-Essence Glyphosate 540 Herbicide is recommended for control of emerged weeds prior to crop establishment. Cultivation and/or planting operations which provide conditions suitable for crop emergence and establishment are required following herbicide application. Where heavy weed growth is present or soil conditions are unsuitable, planting should be delayed to allow for decay of weeds and/or development of more favourable soil conditions for the formation of a suitable seedbed. Incorporation of green or decaying vegetation may retard crop emergence under cold, wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface.

MIXING

Agro-Essence Glyphosate 540 Herbicide mixes readily with water. Reduced results may occur if water is used containing suspended clay or organic matter e.g., from dams, streams or irrigation channels, or high levels of calcium, magnesium, or bicarbonate ions. DO NOT mix, store, or apply this product in galvanised steel or unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. Use stainless steel,

aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks. Spray tanks, pumps, lines, and nozzles should be thoroughly rinsed with clean water following application. Ensure that the sprayer is free of any residues of previous spray materials prior to mixing. Use spray solutions promptly as a gradual loss of activity may occur over a period of days following spray preparation.

Mixing Instructions:

1. Fill the spray tank 1/3 to 1/2 full with clean water and start agitation.
2. Where ammonium sulphate is recommended, add liquid Nufarm Liase at 2 L/100 L spray solution and mix thoroughly.
3. Add recommended herbicide/insecticide/additive to the spray tank and mix thoroughly.
4. Add Agro-Essence Glyphosate 540 Herbicide and the remaining water. Mix thoroughly.
5. Add surfactant, if required, near the end of the filling process to minimise foaming.
6. Always maintain adequate agitation during application and use the tank mix promptly. Clean all equipment after use by washing thoroughly with clean water.

TANK MIXTURES

Agro-Essence Glyphosate 540 Herbicide may be tank-mixed with the following herbicides, insecticides, and adjuvants. Read and follow all label directions, restraints, plantback and withholding periods, and safety directions for the tank-mix products. In multiple product tank mixes, a minimum of water volume of 50 L/ha is recommended, and local advice should be sought. Correct mixing order is important as is good in-tank agitation when application/spraying is occurring.

Tank Mixtures – Herbicides

2,4-D ester, 2,4-D IPA, atrazine flowable or granular, carfentrazone, chlorsulfuron, dicamba, imazapic, LVE MCPA, metsulfuron-methyl, oryzalin/trifluralin, oxyfluorfen, pendimethalin, simazine flowable or granular, sulfometuron methyl, triasulfuron, tri-allate, triclopyr, tribenuron.

The addition of oxyfluorfen at 75 mL/ha to recommended rates of Agro-Essence Glyphosate 540 Herbicide prior to planting winter cereals will improve the knockdown of certain weeds.

Tank Mixtures – Insecticides

This product is compatible with the following insecticides: dimethoate, fenitrothion, phosmet, omethoate, chlorpyrifos, fenitrothion ULV and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

Adjuvants – Non-ionic Surfactant Containing 1040 g/L octyl phenol ethoxylate

A non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate is recommended for the control of Silvergrass and Annual Ryegrass in late Winter and Spring. Octyl phenol ethoxylate surfactants are not a general-purpose surfactant and should only be used where recommended.

Rate: 200 mL/100 L spray solution.

Adjuvants – Pulse Penetrant

Pulse Penetrant is recommended for the control of Bracken and many woody weeds. Rate: 200 mL/100 L spray solution.

Adjuvants – Nufarm Liase (Ammonium Sulphate)

Nufarm Liase may be used as an adjuvant to alleviate the adverse effects of high levels of calcium, magnesium, and bicarbonate ions in water.

Add Nufarm Liase to water first at 2 L/100 L spray solution.

APPLICATION

Boom Equipment

For boom application, a spray volume of 80 L/ha or less is recommended for optimum performance. Nozzles and pressure settings should be selected to deliver spray droplets of a MEDIUM or MEDIUM-COARSE size droplet size droplet at the target. The use of nozzles and/or pressure settings that produce VERY FINE or FINE droplets should be avoided as

these are prone to loss or drift. In multiple product tank mixes, a minimum water volume of 50 L/ha is recommended, and local advice should be sought. Correct mixing order is important as is good in-tank agitation when application is occurring.

For shielded applications a spray volume of 80 L/sprayed ha is recommended using nozzle types and pressure settings to deliver a COARSE size droplet at the target. Crop damage may result if spray drift occurs through incorrect nozzle and/or pressure selection, inadequate shielding and/or wind strength, high evaporation rates or excessive ground speed.

Wiper Equipment

Wiper equipment (e.g., Ropewick, canvas, felt or carpet applicators) may be used to apply Agro-Essence Glyphosate 540 Herbicide. 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 8 km/h. Best results are achieved at lower speeds and where 2 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.

Rate: Mix 700 mL Agro-Essence Glyphosate 540 Herbicide with 2.3 litres clean water.

Adjust flow rate to suit equipment.

Aerial Equipment

Agro-Essence Glyphosate 540 Herbicide may be applied by aircraft for control of weeds in forests, cropland, or pasture prior to establishment of crops, new pastures, or new forest plantings and for pre-harvest applications to sorghum and cotton crops up to a maximum rate of 2.7 L/ha where specified by this label. DO NOT apply treatments by aircraft in situations where drift onto sensitive crops and pastures is likely to occur.

Apply treatments using boom or Micronair equipment using a spray volume not less than 20 L/ha and using settings to produce spray droplets of a MEDIUM to COARSE spray droplet size category. Swath width should be set to take into account aircraft type, wind conditions and target height. Swath width will need to be reduced to avoid stripping under light wind conditions and/or application to tall, dense targets e.g., pre-harvest application, treatments in heavy crop stubble. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

Application on Hilly Terrain

Increase water volume to 30-80 L/ha and increase the droplet diameter of output to no smaller than a COARSE spray droplet size category to optimise deposition of spray output onto weeds.

Air Temperature and Relative Humidity

DO NOT apply Agro-Essence Glyphosate 540 Herbicide by aircraft at temperatures above 30°C. Increase water volume output to at least 30 L/ha when temperatures rise above 25°C. Avoid application when relative humidity falls below 35%.

APPLICATION CHECKLIST

- DO NOT treat weeds under poor growing conditions due to moisture stress, waterlogging, severe frosting, insect damage etc. Reduced performance may also occur where weeds are covered with dust or silt.
- DO NOT add surfactants, adjuvants, or other pesticides except as specifically directed on this label.
- 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 a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate may improve rainfastness on Winter annual weeds.
- A withholding period for grazing is not required. However, it is recommended that grazing of treated plants be delayed to ensure herbicide uptake. Certain plants such as Soursob, Variegated Thistle, Sorghum and Johnson grass may be naturally toxic to stock when eaten in large quantities under certain conditions. Where plants are known to be toxic, grazing should be delayed until complete browning of treated plants has occurred.
- Apply treatments to weeds which have at least 1 true leaf (broadleaf weeds) or 2 leaves (grasses) to provide an adequate surface area for herbicide uptake.

	<ul style="list-style-type: none"> • If heavy grazing has occurred, allow regrowth to 6 to 8 cm before spraying and use the higher rates recommended.
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Resistance Warning:	<p>RESISTANCE WEED WARNING GROUP 9 HERBICIDE</p> <p>Agro-Essence Glyphosate 540 Herbicide is a member of the Glycines group of herbicides. Agro-Essence Glyphosate 540 Herbicide has the inhibition of EPSP synthase mode of action. For weed resistance management, Agro-Essence Glyphosate 540 Herbicide is a Group 9 Herbicide.</p> <p>Some naturally occurring weed biotypes resistant to Agro-Essence Glyphosate 540 Herbicide and other Group 9 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 Agro-Essence Glyphosate 540 Herbicide or other Group 9 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 540 Herbicide to control resistant weeds.</p>
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Precautions:	
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Protections:	<p>PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS DO NOT apply under weather conditions, or from spraying equipment that may cause drift onto nearby susceptible plants/crops, cropping lands, pastures, private properties, or public lands.</p> <p>Avoid contact with foliage, green bark or stems, canes, laterals, suckers, fresh wounds, exposed non-woody roots, flowers or fruit of crops, desirable plants and trees, since severe injury or destruction may result.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT DO NOT contaminate wetlands or watercourses with this product or used containers. Do not apply to weeds growing in or over water. DO not spray across open bodies of water.</p>
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Storage and Disposal:	<p>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.</p> <p>Triple-rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site.</p> <p>If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500mm below the surface in disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation, and tree roots, in accordance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.</p> <p>For refillable containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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Safety Directions:	<p>Will irritate the eyes. May irritate the nose and throat. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container, preparing spray, and using the prepared spray, wear cotton overalls buttoned to the neck and wrist or equivalent clothing, elbow length chemical or nitrile gloves and face shield or goggles. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>
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First Aid Instructions:	If poisoning occurs, contact a doctor or Poisons Information Centre, Phone Australia 13 11 26.
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First Aid Warnings:	
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DIRECTIONS FOR USE

CONSERVATION TILLAGE

Situation	Weeds Controlled	Boom Rate /ha	Critical Comments
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	Barley grass, Brome grass, Wild Oats Volunteer Cereals	340 – 660 mL pre-tillering 660 – 840 mL post-tillering	Rate Selection Use higher rates for advanced weed growth or when treating under cold/overcast conditions. 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. Silvergrass: When treating dense infestations of Silvergrass, add a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate and use water volumes of 70 L/ha or more and small droplets to improve coverage. Perennial Weeds. Agro-Essence Glyphosate 540 Herbicide will provide seasonal control and reduction in plant numbers. Control of Skeleton weed requires addition of full soil disturbance at planting. In Tasmania, for perennial weeds use 1 – 2 L/ha.
	Annual Phalaris, Annual Ryegrass, Silvergrass, Winter grass	660 – 840 mL pre-tillering 840 mL – 1 L post-tillering	
	Calomba Daisy, Capeweed, Doublegee/Spiny Emex, Fumitory, Volunteer Lupins, Volunteer Peas	340 – 660 mL less than 8 cm diam/height 660 mL – 1 L greater than 8 cm diam/height	
	Amsinckia Dock (seedlings), Paterson's Curse, Saffron Thistle, Scotch Thistle, Spear Thistle, Variegated Thistle, Wild Turnip	660 – 840 mL less than 12 cm diam/height 840 mL – 1 L greater than 12 cm diam/height	
	Perennial Phalaris, Skeleton weed, Sorrel, Sub Clover	1 L	
SOUTHERN AUSTRALIA To commence a fallow OR Prior to planting a crop or pasture with an implement that gives minimal soil disturbance or prior to surface seeding of pastures.	Barley grass, Canary grass, Wild Oats, Volunteer Cereals	660 mL – 1 L	Rate Selection Use the lower rate on young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds commence stem elongation or budding. Use higher rates in Spring and under cold conditions. In Tasmania use 1-2 L/ha with the higher rate for control of perennial weeds. Pasture or Crop Establishment DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. 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. Aerial (or Surface) Seeding Delay seeding until trash level is reduced to allow for satisfactory placement of broadcast seed on the soil surface. Bathurst Burr For mature weeds use a higher rate. Bent grass Use a rate of 1.7 L/ha. Apply in late Spring following initiation of seed-head emergence. Follow up with full disturbance with a tyned implement 10-21 days after spraying.
	Annual Ryegrass Brome grass, Capeweed, Hoary Cress, Paterson's Curse, Saffron Thistle, Scotch Thistle, Silvergrass, Soursob, Spear Thistle, Variegated Thistle, Wild Mustard, Wild Radish, Wild Turnip, Winter grass	1.0 – 1.3 L	
	Bent grass, Bathurst Burr, Couch, Dock, Erodium, Flatweed, Kikuyu, Plantain, Paspalum,	1.25 – 2 L	

Situation	Weeds Controlled	Boom Rate /ha	Critical Comments
	Phalaris, Sorrel, Sub-Clover, Yorkshire Fog grass		<p>Couch Use the higher rate on dense infestations. Apply sequential treatments during Summer and Autumn. Repeat application will be required for full control. For improved control, use in conjunction with cultivation.</p> <p>Kikuyu, Paspalum Use the low rate for suppression, the high rate for control.</p> <p>Dock, Flatweed Use the maximum rate for full control.</p> <p>Hoary cress Use at a rate of 1 L/ha. Treat from late rosette to early flowering.</p> <p>Silvergrass When treating dense infestations of Silvergrass, add a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate and use water volumes of 70 L/ha or more and small droplets to improve coverage.</p> <p>Soursob Use at a rate of 1 L/ha. Treat at tuber exhaustion.</p>
	Poa Tussock	2.0 – 2.7 L	<p>Timing Treat fresh regrowth (at least 14 days after heavy grazing) after Autumn break and before onset of heavy frosts. Sowing may start from 14 days after spraying.</p>
Pasture Topping	Annual Ryegrass	300 – 680 mL	<p>Remove livestock prior to application to allow even regrowth. Use lower rate if grasses are flowering and higher rate if at the milky dough stage.</p> <p>Apply to Capeweed and Calomba Daisy at flowering. DO NOT add a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate. DO NOT apply to clover or medic crops intended for seed production.</p>
	Barley grass, Brome grass, Capeweed, Silvergrass	200 – 300 mL	
	Calomba Daisy	300 mL	
Seed-head suppression	Bent grass	240 – 420 mL	<p>Apply treatments late October to late November, before seedheads have emerged. Add a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate. Use the higher rate where growth is excessive. Graze hard after spraying.</p>
<p>SOUTHERN AUSTRALIA NSW, ACT, VIC, TAS only</p> <p>For control/ suppression prior to establishing crops or improved pasture species</p>	Serrated Tussock	2.7 – 4.0 L	<p>Apply to actively growing and stress-free plants. Best results May to October.</p> <p>Application: Boom spray volume of 70 L/ha or more is recommended to improve plant coverage. Also see Aerial Equipment.</p> <p>Surfactants: Addition of 200 mL of a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate to 100 L of spraying solution may improve control of Serrated Tussock.</p> <p>Site Preparation: <i>Burning</i> of Serrated Tussock 10-12 months before spraying or <i>slashing / heavy grazing</i> (cell grazing) 2-weeks before spraying is essential for good results. (Note: Serrated Tussock is almost indigestible and prolonged exposure can lead to starvation and death of stock.).</p> <p>Rates: Use lower rate on Serrated Tussock regrowth after burning (no residual dead foliage). Use higher rate on Serrated</p>

Situation	Weeds Controlled	Boom Rate /ha	Critical Comments	
			Tussock that has been slashed or grazed (may contain some residual dead foliage).	
For prevention of seed head emergence and seed formation	Serrated Tussock	500 – 840 mL	Apply to actively growing and stress-free plants. Best results obtained during mid-September – mid October. Apply prior to any seed head emergence. Also see Aerial Equipment . Surfactants: Addition of 200 mL of a registered non-ionic surfactant containing 1040 g/L octyl phenol ethoxylate to 100 L of spraying solution may improve results. Rates: The lower rates will be less damaging to desirable pasture species. If seed head emergence is imminent, then higher rates will give better results.	
NORTHERN AUSTRALIA	Paradoxa grass, Volunteer Cereals, Wild Oats	340 – 660 mL	<p>Rate Selection Use the lower rates on young weeds and increase to the higher rate where weeds are dense or well developed. Dense infestations of some weeds e.g., Barnyard grass, Liverseed (Urochloa) grass may need follow up treatments for complete control.</p> <p>Tank mixtures Read and follow all label directions, restraints, plant-back and withholding periods, regional use restrictions and safety directions for the tank mix products. Tank mixes with atrazine may give unacceptable knockdown control of certain weeds. DO NOT apply the tank-mix for control of barnyard grass, Liverseed grass or milk Thistle. Ammonium sulphate may enhance knockdown weed control where tank mixtures of atrazine are used.</p> <p>Shielded Sprayers Apply Agro-Essence Glyphosate 540 Herbicide to weeds growing between crop rows using a shielded sprayer. DO NOT apply in cotton less than 20 cm high. DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury may result.</p> <p>Pasture or crop establishment DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Planting may proceed from 1 hour of sunlight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.</p>	
In fallow or prior to planting a crop.	African Turnip Weed, Black pigweed, Boggabri weed, Caltrop (Yellow vine), Deadnettle, Mintweed, Milk (sow) Thistle, Stinkgrass (Lovegrass), Sweet Summer grass, Variegated Thistle, Volunteer Sorghum	500 – 660 mL up to 5 true leaves or 3 cm in dia/height 660 mL – 1.35 L greater than 5 true leaves or 3 cm in dia/height.		
Cotton: Shielded Sprayers	Annual Ground Cherry, Barnyard grass, Bathurst Burr, Bladder Ketmia, Button grass, Camel (Afghan) Melon, Caustic Weed, Columbus grass, Liverseed grass, Mexican Poppy, Native Millet, New Zealand Spinach, Noogoora Burr, Pigweed (up to 25cm diam.), Spear Thistle, Stinking Goosefoot, Thornapple (Datura), Turnip weed, Wild / Prickly Lettuce, Wireweed	660 – 1.35 L		
	Prickly Paddy Melon	640 mL – 1.3 L plus 80 mL triclopyr (600 g/L)		DO NOT add crop oil.
	Climbing buckwheat (less than 12 leaves), Couch, Johnson grass	1.3 – 2 L		Use the higher rate on plants at the flowering/seedhead stage. For Johnson grass apply to plants with a minimum of 30cm new growth. For long-term control of Couch and Johnson grass, repeat applications will be required.

Situation	Weeds Controlled	Boom Rate /ha	Critical Comments
	Nutgrass (<i>Cyperus rotundus</i>)	2 L followed by 2 L	Make first application to actively growing plants when the majority of plants have reached at least the 6-8 leaf stage but preferably later. Allow for maximum re-emergence before retreating.
Sugarcane Inter-row Spraying	Annual and Perennial grasses and broadleaf weeds	1.2 – 5 L	Apply to weeds growing between crop rows using a ground based hooded and shielded sprayer. Apply at early growth stage of crop before formation of the cane. Apply no more than 3 applications, to a maximum of 12 L/ha per crop. DO NOT allow spray or spray drift to contact any part of the crop as severe injury may result.
Sugarcane Ratoon spray-out Qld, NSW only	Sugarcane ratoon regrowth	4 – 6 L	Apply under good growing conditions to actively growing ratoons 60-120 cm tall. DO NOT apply if plants are under stress from low moisture or water logging. Use the lower rate for suppression or where cultivation is to follow. Use higher rate for control.
Sorghum control	Grain-Sorghum (pre-harvest)	1 – 1.35 L	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. Apply when grain moisture is less than 25%. Use the higher rate where the crop has produced significant number of late tillers or where following crops will be established without further treatment. DO NOT apply to crops intended for seed production. Treatment may increase potential for crop lodging.
	Grain-Sorghum (post-harvest)	660 mL – 1.35 L	Slashed/grazed stubble. Apply when fresh regrowth is at least 20cm high. Use the higher rate on standing stubble or where regrowth from slashed sorghum has advanced beyond 50 cm in height.
Cotton Pre-harvest	Bathurst Burr, Noogoora Burr, Winter annual weeds	840 mL – 1.7 L	Treatments may be applied alone or in tank mix with Dropp or Harvade. Apply when at least 60% of bolls are open. When tank mixed with defoliants, a slightly higher proportion of cotton leaf may be retained particularly where higher rates are used and conditions are unfavourable for defoliation.
PRE-HARVEST APPLICATION to reduce viable seed set of weeds in: Field Peas (<i>Pisum sativum</i>), Faba Beans (<i>Vicia faba</i>)	Annual Ryegrass (<i>Lolium rigidum</i>)	320 – 680 mL	Use lower rate if Ryegrass is flowering and higher rate if Ryegrass is at milky dough stage. Application should be made at or after crop maturity. Application before this time may significantly reduce yields (in practice losses in excess of 25% can occur). Apply when the average seed moisture content is below 30%. For Faba Beans, this is indicated by the pods going black, and for Field Peas by the pods going yellow. DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprouting.
PRE-HARVEST APPLICATION as harvest aid and weed control:	Annual weeds	900 mL – 1.8 L	Apply to mature crop from late dough stage (28% moisture) onwards. The higher rate will be required when crops are heavy and leaf shading effects may occur.

Situation	Weeds Controlled	Boom Rate /ha	Critical Comments
Wheat (<i>Triticum aestivum</i>)			DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprouting. Where wheat is grown in rotation with any herbicide tolerant crops, management should be consistent with implementation of any management plan for herbicide tolerant crops.
<p>PRE-HARVEST APPLICATION</p> <p>To desiccate a crop as a harvest aid and weed control.</p> <p>Adzuki Beans Chickpeas Cowpea Faba Beans Field Peas Lentils Mungbeans Soybean</p> <p>(Application to crops intended for seed production or for sprouting may reduce germination percentage to commercially unacceptable levels.)</p>	Annual weeds	680 mL – 1.8 L	<p>Apply with boom or by air. Use higher rates where crops or weeds are dense and where faster desiccation is required.</p> <p>Application should be made at or after crop maturity:</p> <p>Chickpeas and Lentils – apply when physiologically mature and less than 15% green pods.</p> <p>Soybean – apply only after seed pods have lost all green colour and 80-90% of leaves have dropped.</p> <p>Mungbeans / Adzuki and Cowpea – apply to mature crops when pods are brown/black.</p> <p>Field peas - apply when seeds turn yellow and average seed moisture content is below 30%.</p> <p>Faba Beans – apply when pods turn black and average seed moisture content is below 30%.</p> <p>DO NOT harvest within 7 days of application. Speed of crop desiccation is dependent on crop stage, growing conditions, and weather conditions during and after application.</p>
<p>PRE-HARVEST APPLICATION</p> <p>To desiccate crop as harvest aid and weed control:</p> <p>Chickpeas (Application to crops intended for seed production or for sprouting may reduce germination percentage to commercially unacceptable levels.)</p>	Annual weeds	500 mL – 1.1 L plus 5g metsulfuron-methyl (600 g/kg)	<p>Apply by boom or by air. Apply when chickpeas are physiologically mature and less than 15% of green pods are present.</p> <p>Use higher rates where crops or weeds are dense and where faster desiccation is required.</p> <p>DO NOT harvest within 7 days of applications. Speed of desiccation is dependent on crop stage, growing conditions, and weather conditions during and after application.</p>

<p>Situation</p>	<p>Critical Comments READ APPLICATION CHECKLIST BEFORE USING. See Annual, Perennial and Woody weeds section below for most appropriate rate.</p>
<p>GENERAL WEED CONTROL For General Weed Control in Domestic Areas (Home Gardens), Commercial, Industrial and Public Service Areas, Agricultural Buildings and Other Farm Situations. For Specific Weeds Refer to the Appropriate Weeds Controlled Table.</p>	<p>For the control of many grasses and broadleaf weeds. RATE: 7 mL per litre of water. Apply when weeds are actively growing. Apply to ensure complete and uniform wetting of foliage. Visible symptoms may take from 3 to 7 days to develop.</p>
<p>AGRICULTURAL AREAS</p>	<p>Agro-Essence Glyphosate 540 Herbicide may be used for control of annual, perennial, and woody weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.</p>
<p>DRY DRAINS AND CHANNELS ONLY</p>	<p>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.</p>
<p>FORESTS</p>	<p>Agro-Essence Glyphosate 540 Herbicide 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.</p>
<p>NON-AGRICULTURAL AREAS Around Buildings, Commercial and Industrial Areas, Domestic and Public Service Areas, Right-of-Ways.</p>	<p>Agro-Essence Glyphosate 540 Herbicide does not provide residual weed control. For residual control, Agro-Essence Glyphosate 540 Herbicide may be tank mixed with certain residual herbicides. See Tank Mixtures/Compatibility.</p>
<p>TREE AND VINE CROPS Avocado, Banana, Blueberries, Citrus Fruits, Custard Apples, Duboisia, Figs-Dessert, Guava, Hops, Kiwifruit, Litchi, Mango, Monstera-Fruit, Nuts (Including Almond, Pecan, Macadamia, Pistachio and Walnut), Olives, Pawpaw, Persimmons, Pome Fruit, Raspberries, Stone Fruit, Tea, Vineyards.</p>	<p>Apply as a 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 palm. Citrus fruit, Nuts, Olives, Pome Fruit & Vineyards DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds foliage or fruit. Hops Apply in Winter, prior to crop emerging from dormancy. Tea Apply a maximum of 2.7 L/ha by shielded boom or directed off-centre nozzle or 340 mL/100 L by directed handgun or knapsack to avoid application to the crop. All other crops DO NOT allow spray or spray drift to contact any part of the plant including the trunk. CAUTION Where split bark on Kiwifruit and green stems on Pawpaw occur, extreme care is required.</p>

Weeds Controlled	Rate	Critical Comments
<p>ANNUAL WEEDS Amaranth, Bathurst Burr, Barley grass, Brome grass, Barnyard grass, Caltrop, Canary grass, Capeweed, Chickweed, Cobbler's Peg, Deadnettle, Doublegee, Fumitory, Ground Cherry, Hedge Mustard, Lesser swinecress, Liverseed grass, Mintweed, Noogoora Burr, Paradoxa grass, Paterson's Curse, Pigweed, Potato weed, Ryegrass, Saffron Thistle, Silvergrass, Sow Thistle, Spear Thistle, Spiny Burr grass, Spurge, Sub Clover, Thornapple, Wild Mustard, Wild Oats, Wild Turnip, Winter grass, Variegated Thistle, Volunteer Cereals.</p>	<p>Boom: 1.35 – 2 L/ha</p> <p>Handgun: 330 – 480 mL per 100 L</p> <p>Knapsack: 50 – 70 mL per 15 L</p>	<p>Apply to weeds whenever they are not subject to stress due to drought or frost. Use higher rate on weeds over 15 cm in height or diameter or where dense weed cover limits spray coverage. Use higher spot spraying rate when applying less than 5 L spray per 100sqm.</p> <p>Agro-Essence Glyphosate 540 Herbicide does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds.</p> <p>For residual control of annual weeds, Agro-Essence Glyphosate 540 Herbicide may be tank-mixed with certain residual herbicides. See Tank Mixtures in the General Instructions for directions. DO NOT use an atrazine tank-mix for control of barnyard grass or Liverseed grass.</p>
<p>PERENNIAL WEEDS Artichoke Thistle, African Lovegrass, Bent grass, Carpet grass, Cocksfoot, Flatweed, Johnson grass, Kangaroo grass, Kikuyu, Nutgrass (<i>Cyperus rotundus</i>), Paspalum, Phalaris, Plantains, Poa Tussock, Prairie grass, Qld Blue grass, Red-leg grass, Rhodes grass, Rope Twitch, Sorrel, Soursob, Yorkshire Fog grass.</p>	<p>Boom: 2 – 4 L/ha</p> <p>Handgun: 470 – 660 mL per 100 L</p> <p>Knapsack: 70 – 100 mL per 15 L</p>	<p>Control of established perennials is best obtained when plants are at the seedhead stage.</p> <p>In general, best control of Winter growing perennials is obtained with application during Winter-Spring.</p> <p>Best control of Summer growing perennials is obtained with application late Summer and Autumn.</p> <p>For Nutgrass in cultivated situations apply sequential low-rate treatments when Nutgrass has a minimum of 6-8 leaves. Use the higher rate in uncultivated situations. For Rhodes grass, Rope twitch, Prairie grass, Qld Blue grass, Johnson Grass, Kangaroo Grass, Kikuyu, Redleg grass, Paspalum and Sorrel, use the higher rates only.</p>
<p>Blady grass, Bracken, Couch, Guinea grass, *Paragrass, Silverleaf Nightshade, *Water Couch</p> <p>*Use on Dry Drains and Channels ONLY (See Use Situations critical comments above).</p>	<p>Boom: 6 L/ha</p> <p>Handgun: 870 mL or 1.35 L per 100 L</p> <p>Knapsack: 130 or 200 mL per 15 L</p>	<p>For Bracken add Pulse at 200 mL/100 L spray mix.</p> <p>Best control of Couch in WA and SA is obtained with Spring treatment. Most effective control of Couch in eastern states is obtained with Summer and Autumn treatments.</p> <p>In cultivated situations, use sequential treatments of 1.9 – 4.3 L/ha for control. Only use higher rate for handgun and knapsack for Silverleaf Nightshade.</p>
<p>WOODY WEEDS Bamboo, Bitou Bush, Boneseed, Boxthorn, Crofton weed, Gorse, Groundsel Bush, Lantana, Mistflower</p>	<p>Handgun: 330 – 660 mL per 100 L</p> <p>Knapsack: 50 -100 mL per 15 L</p>	<p>Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment.</p> <p>Bamboo: Apply when foliage/regrowth is 1-2 m tall, use higher rate only.</p> <p>Bitou Bush/Boneseed: Apply higher rate on bushes greater than 1.5 m. Best results are achieved when treated at peak flower during Winter.</p> <p>Boxthorn: Minimum rate is 470 mL for handgun and 70 mL for knapsack.</p> <p>Groundsel Bush: Apply higher rate on bushes greater than 2 m. DO NOT apply in Winter.</p>

Weeds Controlled	Rate	Critical Comments
		<p>Minimum rate is 470 mL for handgun and 70 mL for knapsack.</p> <p>Gorse, always at Pulse at 200 mL/100 L of spray mix, use higher rate only.</p> <p>Lantana: Use higher rate only. Addition of Pulse (200 mL/100 L) may improve control.</p> <p>Boxthorn, Gorse, Lantana: Removal of bushes (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth.</p>
<p>Blackberry, Chinese Scrub, Eucalyptus spp. (seedlings less than 2m), Hawthorn Bush, Pampas grass, Sifton Bush, Sweet Briar, Willow (less than 2m)</p>	<p>Handgun: 660 – 870 mL per 100 L</p> <p>Knapsack: 100 – 140 mL per 15 L</p>	<p>Apply to actively growing plants. Removal of bushes (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or regrowth.</p> <p>Blackberry: Apply from flowering to leaf fall, use higher rate on old dense infestations greater than 2m high. In Tasmania, do not treat bushes bearing mature fruit.</p> <p>Chinese Scrub: Use higher rates on bushes greater than 1 m.</p> <p>Eucalyptus spp: Add Pulse at 200 mL/100 L of spray mix.</p> <p>Hawthorn: Apply from flowering to leaf fall, use higher rates on bushes greater than 2m.</p> <p>Pampas grass: Allow regrowth to reach 1 m, best results – apply after flowering.</p> <p>Sifton Bush: Use higher rates on bushes greater than 1 m.</p> <p>Sweet Briar: Apply from late flowering to leaf fall, use 1 – 1.35 L/100 L and 150 – 200 mL/15 L; use higher rates on bushes greater than 1.5m.</p>

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