

CAUTION

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

FMC Glyder®

450 HERBICIDE

ACTIVE CONSTITUENT: 450 g/L GLYPHOSATE
present as the ISOPROPYLAMINE SALT

GROUP M HERBICIDE

A non-selective foliar herbicide for control of a wide range of annual, perennial, woody and aquatic weeds as specified in the DIRECTIONS FOR USE table.

IMPORTANT: READ THIS LEAFLET BEFORE USE

FMC

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DIRECTIONS FOR USE

RESTRAINTS

DO NOT spray if rainfall is expected as rainfall within 6 hours of treatment may reduce the effectiveness of this product. Heavy rainfall within 2 hours of treatment may wash the product from the leaf surface and re-treatment may be necessary.

DO NOT disturb treated weeds by grazing, cultivation, sowing, etc after treatment for 1 day for annual weeds and 7 days for perennial weeds to ensure complete uptake of the herbicide.

DO NOT treat weeds under stress from frost, cold, waterlogging, lack of moisture or disease. Plants must be actively growing to ensure optimum uptake of the product.

Annual Weed Control – All States

Weeds Controlled	Rate	Critical Comments
Amaranth Barley Grass Barnyard Grass Brome Grass Caltrop Canary Grass Capeweed Cereals – Volunteer Chickweed Cobbler's Peg Deadnettle Double Gee Fumitory Ground Cherry Lesser Swinecress Liverseed Grass Mintweed Paradoxa Grass Paterson's Curse/Salvation Jane Pigweed Potato Weed Ryegrass – Annual Saffron Thistle Silver Grass Sow Thistle Spear Thistle Spiny Burrgrass Spurge Sub Clover Thornapple Wild Mustard Wild Oats Wild Turnip Winter Grass Variegated Thistle	<p><i>Amaranthus spp.</i> <i>Hordeum leporinum</i> <i>Echinochloa crus-galii</i> <i>Bromus spp.</i> <i>Tribulus terrestris</i> <i>Phalaris spp.</i> <i>Arctotheca calendula</i></p> <p>Boom: 1.6 – 2.4 L/ha</p> <p>Handgun: 400 – 560 mL per 100 L water</p> <p>Knapsack: 60 – 80 mL per 15 L water</p> <p>Wiper equipment: See Application Section</p>	<p>All weeds: Spray actively growing plants. Use the lower rate on weeds up to 15 cm tall. Increase to be a higher rate when weeds are over 15 cm tall. If residual activity is required, this product may be mixed with certain residual herbicides – see Compatibility.</p>
<i>Stellaria media</i> <i>Bidens pilosa</i> <i>Lamium amplexicaule</i> <i>Emex australis</i> <i>Fumaria officinalis</i> <i>Physalis angulate</i> <i>Coronopus didymus</i> <i>Urochloa panicoides</i> <i>Salvia relexa</i> <i>Phalaris paradoxa</i> <i>Echium plantagium</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>		

Perennial Weed Control

Weeds Controlled	Rate			Critical Comments
	Boom (L/ha)	Knapsack (mL/15 L)	Handgun (vol/100 L)	
Bamboo (<i>Bambusa sp.</i>)	-	120	800 mL	Apply to actively growing foliage and/or regrowth, which is between 1 m and 2 m tall. Cut Stump: Dilute 1:6 (i.e. mix 1 part of this product with 6 parts water). Cut stems back to 20 cm high, or pour mixture down hollow stem or wet the cut.
Bent Grass (<i>Agrotis tenuis</i>)	2	60	400 mL	Apply to actively growing plants in late spring when they have some seed head development but before summer drought stress. Bent grass should NOT be grazed heavily at spraying. Follow-up management is required to limit seedling re-establishment. Full disturbance with tined implement should follow 10-21 days after spraying. Application of this product should be followed by a summer crop and/or by re-seeding pasture or crop the following autumn.
Blady Grass (<i>Imperata cylindrica</i>)	7.2	160	1 L	Spray at head stage while plants are in active growth stage.
Bracken (<i>Pteridium esculentum</i>)	7.2	175	1.2 L	For boom application, all please add an organosilicone penetrant (200 mL per 100 L spray) otherwise reduced results will occur. Addition of organosilicone penetrant (200 mL/100 L spray) may improve control with handgun application. Wiper application is recommended (see Wiper Equipment section of this label). Double pass application is required for ropewick equipment. Bracken should be slashed in winter/spring prior to treatment. Apply this product to fully unfurled actively growing fronds 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.
Carpet grass (<i>Axonopus spp.</i>)	2.4	60	400 mL	Spray at early head stage while in active growth stage.

Weeds Controlled	Rate			Critical Comments
	Boom (L/ha)	Knapsack (mL/15 L)	Handgun (vol/100 L)	
Cocksfoot (<i>Dactylis glomerata</i>)	2.4	80	560 mL	Spray at early head stage while in active growth stage.
Couch (<i>Cynodon dactylon</i>)	7.2	160	1 L	Spray at early head stage (late spring).
Flatweed (Cat's Ear) (<i>Hypochoeris radicata</i>)	2.4	80	560 mL	Spray at early flowering to fully developed rosettes.
Glyceria, Watermeadow Grass (<i>Glyceria maxima</i>)	4.8	120	800 mL	Apply to actively growing plants at the duo head stage in late summer/autumn. Add a non-ionic surfactant (50-60% ac) at 200-250 mL/100 L. NOTE: Control of Glyceria is only allowed in dry drains and channels and 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 or drains within 4 days of application.
Guinea Grass (<i>Panicum maximum</i>)	7.2	160	1 L	Spray at early head stage. As wiper equipment can be used, refer to Application Equipment section of this label: sub-heading Wiper Equipment.
Hoary Cress (<i>Cardaria draba</i>)	1.2	60	400 mL	Spray at late rosette to flowering stage, late July to September. At this time of year ensure frosts, waterlogging or possible drought stress are not a restraint is plants need to be in active growth stage. As wiper equipment can be used, refer to Application Equipment section of this label: sub-heading Wiper Equipment.
Johnson Grass (<i>Sorghum halepense</i>)	4.8	120	800 mL	Spray at early head stage when plants are actively growing or refer to Wiper Equipment section of this label (if this technique is to be used).
Kangaroo Grass (<i>Themeda australis</i>)	4.8	120	800 mL	Spray at early head stage when plants are actively growing.
Kikuyu Grass (<i>Pennisetum clandestinum</i>)	4.8	120	800 mL	Spray at early head stage when plants are actively growing.

Weeds Controlled	Rate			Critical Comments
	Boom (L/ha)	Knapsack (mL/15 L)	Handgun (vol/100 L)	
Lovegrass, African	4.8	120	800 mL	Apply to actively growing plants. Re-treatment and/or pasture improvement is recommended to restrict seedling re-establishment.
Ludwigia peruviana	-	120	800 mL	Apply when actively growing and at or beyond the early bloom stage of growth, but before autumn colour changes occur. Thorough coverage is necessary for best control.
Nutgrass (<i>Cyperus rotundus</i>)	4.8	120	800 mL	Non-cultivated situations: Apply to actively growing plants in the late summer/autumn (February-April) when at least 20% have reached the head stage.
Nutgrass (<i>Cyperus rotundus</i>)	2.4 followed by 2.4	80 followed by 80	560 mL followed by 560 mL	If spraying is to be done on crop growing land, apply first spray in February, which is about the time that 20-25% of plants have reached heading stage. A second application is necessary about 2 months later, which gives adequate time for full emergence to occur. Because underground runners are broken up by cultivation, individual nuts may spring up and repeat treatments may be needed to obtain total control. On land that is primarily grazing or urban, spray in February-April so long as correct growing conditions are present. Ensure that 20-25% of plants have reached the head stage.
Pampas Grass	-	120-150	800 mL-1 L	Apply to actively growing plants during spring, summer or autumn. Ensure complete coverage of foliage. For best results apply after flowering. For easier access, large plants may be cut or burnt prior to spraying, but first allow re-growth to reach 1 m. Use the higher rate on plants over 1 m high.
Paragrass (<i>Brachiara mutica</i>)	7.2	160	1 L	Apply to actively growing plants at the early head stage.
Paspalum (<i>Paspalum dilatatum</i>)	4.8	120	800 mL	Spray at early head stage when plants are in active growth.
Pellitory (<i>Parietaria judaica</i>)	-	120	750 mL	Apply to actively growing plants prior to seeding. Repeat applications may be necessary to control seedlings and/or regrowth.
Phalaris (<i>Phalaris aquatic</i>)	2.4 – 4.8	60 - 120	400 mL to 1 L	For medium to longer term control, use the higher rates while plants are in active growth phase during winter/spring. The lower rates may be used in conjunction with burning (fire breaks). This will give a brown out and better burning conditions. Leave for 2-3 weeks after spraying before burning.

Weeds Controlled	Rate			Critical Comments
	Boom (L/ha)	Knapsack (mL/15 L)	Handgun (vol/100 L)	
Plantains (<i>Plantago</i> spp)	2.4	80	560 mL	Spray when plants have reached the early head stage. Bear in mind that Plantains (<i>Plantago</i> spp) are slow to develop toxicity symptoms.
Prairie grass (<i>Bromus unioloides</i>)	4.8	120	800 mL	Spray at early head stage while plants are in active growth phase.
Old Blue grass (<i>Dichanthium sericium</i>)	4.8	120	800 mL	Spray at early head stage while plants are in active growth phase.
Redleg grass (<i>Bothriochloa macra</i>)	4.8	120	800 mL	Spray at early head stage while plants are in active growth phase.
Rhodes grass (<i>Chloris gayana</i>)	4.8	120	800 mL	Spray at early head stage while plants are in active growth phase.
Rope Twitch (<i>Agropyron repens</i>)	4.8	120	800 mL	Leave the ground in a dormant state for 8 months prior to spraying in late summer/autumn, so that the foliage to uptake the product is fully available (at least 20 cm in height). Ensure drought stress conditions do not exist at time of spraying.
Silverleaf Nightshade (<i>Solanum elaeagnifolium</i>)	-	240	1.6 L	Spray actively growing plants when good soil moisture is present. Spray when plants are in the late flowering to berry stage. Follow-up sprays will be required to maximise control.
Sorrel (<i>Rumex acetosella</i>)	4.8	120	800 mL	Spray at bud stage so long as plants are in an active growth phase. See also 'Conservation Tillage' section of this leaflet.
Soursob (<i>Oxalis pes-caprae</i>)	1.2	60	400 mL	Best results can be obtained by late winter/early spring sprays. Ensure foliage is in a healthy, actively growing stage at time of spraying. See also 'Conservation Tillage' section of this leaflet.
St John's Wort (<i>Hypericum perforatum</i>)	2.4	60	400 mL	Spray at the flowering to post-flowering stage in summer/autumn period. As spraying is only part of the total management concept of pasture improvement, follow-up sprays may be needed.

Weeds Controlled	Rate			Critical Comments
	Boom (L/ha)	Knapsack (mL/15 L)	Handgun (vol/100 L)	
Thistle Artichoke (<i>Cynara cardunculus</i>)	2.4	60	400 mL	Spray when plants have reached rosette/early heading stage. Plants should be free of soil deposits, particularly when spraying along roadsides.
Thistle Californian (<i>Cirsium arvense</i>)	4.8	120	800 mL	Spraying at the flowering stage. As spraying is only part of the total management concept of pasture improvement, follow-up sprays may be needed.
Yorkshire fog (<i>Holcus lanatus</i>)	2.4	80	560 mL	Spray when plants have reached the early heading stage and are in an active growth phase.

Aquatic Weeds

Weeds Controlled	Rate			Critical Comments
	Boom L/ha	Knapsack mL/15 L	Handgun vol/100 L	
				Reduction in effectiveness may result if more than ¼ 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 the 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 lake, pond or reservoir. Application 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 0.5 m 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 spray, CDA 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 the habitat.

Weeds Controlled	Rate			Critical Comments
	Boom L/ha	Knapsack mL/15 L	Handgun vol/100 L	
Alligator Weed	-	120	800 mL	Apply to actively growing plants in summer through winter. Floating form only.
Brown Beetle Grass	2.4	60	400 mL	Apply to actively growing plants. Do not apply to partially submerged plants.
Cumungi (<i>Typha sp</i>)	7.2	160	1 L	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	7.2	160	1 L	Spray at early head stage when plants are in active growth.
Phragmites Common Reed (<i>Phragmites australis</i>)	7.2	160	1 L	If the wiper technique is to be used, refer to 'Wiper Equipment' section of this leaflet. Spray when plants are getting close to early head stage and actively growing. Spray symptoms may not be observed for a season or more.
Rushes (<i>Juncus spp.</i>)	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 (<i>Cyperus gracilis</i>)				
Water Couch (<i>Paspalum disichum</i>)	7.2	160	1 L	Spray actively growing plants in February/March period. 75% of plants should be visible above the water at the time of spraying.
Water Hyacinth	4.6 - 7.2	120 - 150	800 mL - 1 L	Spray actively growing plants at or beyond the early bloom stage of growth. Use the higher rate on dense infestations.
Water Lettuce	-	120 - 150	800 mL - 1 L	Spray actively growing plants at or beyond the early bloom stage of growth. Use the higher rate on dense infestations.

Weeds Controlled	Rate			Critical Comments
	Boom L/ha	Knapsack mL/15 L	Handgun vol/100 L	
Waterlily, Yellow	4.5	120	800 mL	Apply where there is a maximum emergence of floating leaves. Allow 2-3 weeks for symptoms to develop, and then re-treat any unaffected plants. Use low volume sprayer.

Woody Weeds and Brush

Weeds Controlled	Handgun/ Knapsack (vol/1 L)	Critical Comments Read Application Checklist before using
Bitou Bush/Boneseed (<i>Chrysanthemoides monilifera</i>)	4 or 8 mL	Apply to actively growing plants. Do not treat plants that are stressed, particularly drought stressed. Spray to wet all foliage. Best results are achieved when treated during the winter at peak flowering. Use the higher rate on bushes over 1.5 m. Follow-up treatment may be required to prevent the establishment of germinating weeds.
Blackberry (<i>Rubus fruticosus</i>)	8 or 10 mL	Apply from January to May (flowering to leaf fall). Spray plants which are not under stress due to high temperatures, drought or frost. Spray to thoroughly wet all foliage. Use the higher rate for dense old stands over 2 m high. Further treatment may be needed to control seedlings and regrowth. Symptoms may be slow to appear and may not be apparent until the next season. Burning after complete brownout, pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. TAS only: Do not spray bushes bearing mature fruit.
Boxthorn, African (<i>Lycium ferocissimum</i>)	6-8 mL	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. Burning after complete brownout, pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.
Crofton Weed (<i>Eupatorium adenophorum</i>)	4 mL	Apply to plants with full foliage which are actively growing. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment.
Gorse (Furze) (<i>Ulex europaeus</i>)	8 mL plus organosilicone surfactant 2 mL	Apply at any time of year provided plants are actively growing. Always add an organosilicone penetrant to ensure good results. Spray to wet all foliage. Burning after complete brownout, pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.

Weeds Controlled	Handgun/ Knapsack (vol/1 L)	Critical Comments Read Application Checklist before using
Groundsel Bush (<i>Baccharis halimifolia</i>)	6-8 mL	Apply to actively growing plants using the higher rate for plants over 2 m tall. Do not spray during summer drought conditions or in winter. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to control seedlings and/or regrowth.
Hawthorn (<i>Crataegus</i> spp.)	8-10 mL	Spray from flowering to leaf fall when plants are actively growing. Use the higher rate on plants over 2 m tall. Spray to wet all foliage. Burning after complete brownout, pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.
Lantana (<i>Lantana camera</i>)	8 mL	Apply to actively growing plants with full foliage. Spray to thoroughly wet all foliage and individual plants. 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. Addition of organosilicone penetrant (200 mL/100 L) may improve control.
Mistflower (<i>Eupatorium riparium</i>)	4 mL	Apply to actively growing plants with full foliage. Spray to thoroughly wet all foliage and individual plants. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment.
Sifton Bush/Chinese Scrub (<i>Cassubua arcutata</i>)	8 or 10 mL	Apply to actively growing plants ensuring complete coverage of the bush. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment and/or regrowth. For high-volume application, use the higher rate when bushes are over 1 m. For wider application a double pass application is required. Best results are achieved if bushes are less than 1 m tall and green at the time of application.
Sweet Briar (<i>Rosa rubiginosa</i>)	12-16 mL	Apply from late flowering to leaf fall to actively growing plants. Spray to thoroughly wet or foliage. Use the higher rate for bushes over 1.5 m high. Burning after complete brownout, pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.

DIRECTIONS FOR USE - Conservation Tillage

RESTRAINTS

DO NOT spray if rainfall is expected as rainfall within 6 hours of treatment may reduce the effectiveness of this product. Heavy rainfall within 2 hours of treatment may wash the product from the leaf surface and retreatment may be necessary. DO NOT disturb treated weeds by grazing, cultivation, sowing, etc after treatment for 1 day for annual weeds and 7 days for perennial weeds to ensure complete uptake of the herbicide. DO NOT treat weeds under stress from frost, cold, waterlogging, lack of moisture or disease. Plants must be actively growing to ensure optimum uptake of the product.

Crop/ Situation	Weeds	State	Boom Spray Rate/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 tined implement	Barley grass (<i>Hordeum leporinum</i>) Volunteer cereals Wild oats (<i>Avena spp.</i>)	NSW, Vic, SA, Southern WA Only	400 - 800 mL pre-tillering 800 mL - 1.0 L post tillering	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth for 6-8 cm before spraying and use of the higher rate. Rate Selection: Increase to higher rates late in the season or when treating and cold/overcast conditions. Full Disturbance with cultivation or sowing with a tined 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. Crop Establishment: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions. Annual Ryegrass, Silvergrass and Perennial Grasses: Addition of a suitable wetter may improve control. When treating dense infestations of Silvergrass (<i>Vulpia</i> spp) use of low-volume nozzles (e.g. SS 11001, Hardi No 10) and a spray volume of 70 L/ha or more is recommended to improve plant spray coverage. Tank Mixtures: For improved control of clover add dicamba. Always read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions. Perennial Weeds: For Perennial Phalaris, soursob, skeleton weed and sorrel, this product will provide knockdown, seasonal suppression and reduction in treated plant numbers.

Crop/ Situation	Weeds	State	Boom Spray Rate/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	Annual Phalaris (<i>Phalaris canariensis</i>), Annual Ryegrass (<i>Lolium rigidum</i>), Silvergrass (<i>Vulpia</i> spp), Winter Grass (<i>Poa annua</i>)		800 mL - 1.0 L pre-tillering 1.0 L - 1.2 L post tillering	(continued from previous page)
	Calomba Daisy (<i>Pentzia suffruticosa</i>), Capeweed (<i>Arctotheca calendula</i>), Spiny Emex / Doublegee (<i>Emex australis</i>)		400 - 800 mL if less than 8 cm diameter 800 mL - 1.0 L is greater than 8 cm diameter	
	Amsinckia (<i>Amsinckia</i> spp), Fumitory (<i>Fumaria officinalis</i> , <i>F. muralis</i>), Paterson's Curse / Salvation Jane (<i>Echium plantaginium</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Spear Thistle (<i>Cirsium vulgare</i>), Variegated Thistle (<i>Silybum marianum</i>), Volunteer Lupins (<i>Lupinus angustifolius</i>), Wild Turnip		800 mL - 1.0 L if less than 12 cm diameter 1.0 L - 1.2 L if greater than 12 cm diameter	
	Dock-seedling (<i>Rumex</i> spp)		800 mL - 1.2 L	
	Seasonal suppression of: Perennial Phalaris (<i>Phalaris</i>), Sorrel (<i>Rumex acetosella</i>), Sub Clover (<i>Trifolium subterraneum</i>), Soursob (<i>Oxalis pes-caprae</i>), Skeleton Weed (<i>Chondrilla juncea</i>), fully emerged rosettes (NSW only)		1.2 L	

Crop/ Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
	All the above weeds	Tas only	1.2 - 2.4 L	TAS ONLY: Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control white clover and improve control of sorrel (<i>Rumex acetosella</i>) and dock (<i>Rumex</i> spp) add 1 L/ha dicamba (200 g/L). Observe dicamba label directions and plant back periods.
SOUTHERN AUSTRALIA: Before sowing a crop or pasture. For weed control prior to establishing a crop or pasture with an implement that gives minimal or no disturbance	Barley grass (<i>Hordeum leporinum</i>) Volunteer cereals Wild oats (<i>Avena</i> spp.)	NSW, VIC, Southern WA, SA Only	800 mL - 1.2 L	Rate Selection: Use the higher rate when treating under 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. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6-8 cm before treatment and use the higher rate. Annual Ryegrass (<i>Lolium rigidum</i>), Silvergrass (<i>Vulpia</i> spp) and Perennial Grasses: Addition of a suitable wetter may improve control. It is recommended to use water volumes of 70 L/ha or more with low volume nozzles (e.g. SS11001, Hardi No 10) to improve control. Aerial Application: Maybe apply if a good seedbed has been established. Always use the higher rates. See also Aerial Equipment. Tank Mixtures: For improved control of Dock (<i>Rumex</i> spp) Sorrel and Sub Clover add dicamba. Read and follow all label directions, for the tank mix product. See Tank Mixtures for directions. Addition of ammonium sulphate, 2 L/100 L, may improve control when treating under adverse environmental conditions. ...continued>

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
SOUTHERN AUSTRALIA: Before sowing a crop or pasture. For weed control prior to establishing a crop or pasture with an implement that gives minimal or no disturbance	Brome Grass (<i>Bromus unioloides</i>), Canary Grass (<i>Phalaris spp.</i>), Capeweed (<i>Arctotheca calendula</i>), Variegated Thistle (<i>Silybum marianum</i>), Winter Grass (<i>Poa annua</i>)	NSW, VIC, Southern WA, SA Only	1.0 – 1.6 L	Pasture or Crop Establishment: Do NOT sow into excessive trash. Trash may be removed by grazing after treatment. Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for 3 days where annual weeds are large. Sowing may proceed when excessive trash is removed, but not sooner than one day after treatment of annual weeds and 7 days for perennial weeds. See also Crop Establishment. Aerial (or Surface) Seeding: Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertiliser and insecticides and follow-up management is undertaken as required.
	Annual Ryegrass (<i>Lolium rigidum</i>), Paterson's Curse/Salvation Jane (<i>Echium plantaginium</i>), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Silvergrass (<i>Vulpia spp.</i>), Spear Thistle (<i>Cirsium vulgare</i>), Wild Mustard (<i>Sisymbrium officinale</i>), Wild Radish (<i>Raphanus raphanistrum</i>), Wild Turnip (<i>Brassica tournefortii</i>)		1.2 - 1.6 L	
	Erodium (<i>Erodium cicutarium</i>), Perennial Phalaris (Phalaris aquatica), Plantain (<i>Plantago spp.</i>), Sorrel (<i>Rumex acetosella</i>), Sub Clover (<i>Trifolium subterraneum</i>), Yorkshire Fog (<i>Holcus lanatus</i>)		1.5 L - 2.0 L	
	Dock (<i>Rumex spp.</i>), Flatweed (<i>Hyochoeris radicata</i>)		2.0 L	
	All of the above weeds	Tas only	1.2 L - 2.4 L	TAS ONLY: Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White Clover and improve control of Sorrel and Dock, add 1 L/ha dicamba. Observe dicamba label directions and plant-back periods.

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
SOUTHERN AUSTRALIA For weed control to commence fallow	Barley Grass (<i>Hordeum leporinum</i>), Volunteer Cereals, Wild Oats (<i>Avena spp.</i>)	NSW, Vic, SA, Southern WA only	800 mL - 1.2 L	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow regrowth to 6-8 cm before spraying and use the higher rate. RATE SELECTION Use the lower rate on young weeds or where cultivation is to follow within 21 days. Increasing to the high rates where grasses reach full tillering or where broad leaf weeds reach stem elongation/budding. Sourso (Oxalis pes caprae): Treat at tuber exhaustion. Hoary Cress: Treat from late rosette too early flowering. Couch (Cynodon dactylon): 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. Annual Ryegrass, Silvergrass and Perennial Grasses: Addition of a suitable wetter may improve control. It is recommended to use water volumes of 70 L/ha or more with low volume nozzles (e.g. SS11001, Hardi No 10) to improve control. Tank Mixtures: Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.
	Annual Ryegrass (<i>Lolium rigidum</i>), Brome Grass (<i>Bromus unioloides</i>), Capeweed (<i>Arctotheca calendula</i>), Paterson's Curse/Salvation Jane (<i>Echium plantaginium</i>) (rosette), Saffron Thistle (<i>Carthamus lanatus</i>), Scotch Thistle (<i>Onopordum acanthium</i>), Spear Thistle (<i>Cirsium vulgare</i>), Wild Mustard (<i>Sisymbrium orientale</i>), Wild Radish (<i>Raphanus raphanistrum</i>), Wild Turnip (<i>Brassica tournefortii</i>)		1.2 – 1.6 L	
	Hoary Cress (<i>Cardaria draba</i>), Sourso (Oxalis pes-caprae)		1.2 L	
	Couch (<i>Cynodon dactylon</i>)		1.2 – 2.4 L	
All the above weeds	Tas only	1.2 – 2.4 L	Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1 L/ha dicamba (g/L). Observe dicamba label directions and plant-back periods.	

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
NORTHERN AUSTRALIA: For weed control prior to sowing a summer or winter crop or in a fallow	Annual phalaris (<i>Phalaris canariensis</i>), Barley grass (<i>Hordeum leporinum</i>), Volunteer cereals Wild oats (<i>Avena</i> spp)	Qld, Northern NSW only	400 – 800 mL	<p>Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow regrowth to 6 - 8 cm before spraying. 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.</p> <p>Rate Selection: Use the lower rate on young weeds or where cultivation is to take place within 21 days. Use the higher rate where broadleaf weeds reach stem elongation/ budding or where grasses reach full tillering. At more advanced stages of growth certain broadleaf weeds require a higher rate or the addition of 2,4-D.</p> <p>Aerial Application: See Aerial Application. Do not apply by air if temperature is over 30°C.</p> <p>Crop Establishment: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions.</p> <p>Tank Mixtures: Read and follow all label directions, restraints plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products.</p> <p>DO NOT tank mix with atrazine when spraying Barnyard Grass or Liverseed Grass.</p>

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
NORTHERN AUSTRALIA: For weed control prior to sowing a summer or winter crop or in a fallow	Barnyard Grass (<i>Echinochloa crus-galli</i>), Button Grass (<i>Dactyloctenium radulans</i>), Columbus Grass (seedling) (<i>Sorghum xalmun</i>), Liverseed Grass (<i>Urochloa</i> spp), Native Millet (<i>Panicum decomposition</i>), Stinkgrass/ Lovegrass (<i>Eragrostis cilianensis</i>), Volunteer Sorghum (<i>Sorghum halapense</i>)	Qld, Northern NSW only	800 mL - 1.6 L	Refer to CRITICAL COMMENTS section on page 16
	Australian Bluebell (<i>Wahlenbergia gracilis</i>) (QLD only), Cudweed (<i>Gnappalium luteo-album</i>), Fumitory (<i>Fumaria officinalis</i> , <i>F. muralis</i>), Mexican poppy (<i>Argemone ochroleuca</i>), New Zealand Spinach (<i>Tetragonia tetragonoides</i>), Safron thistle (<i>Carthamus lanatus</i>), Spear thistle (<i>Cirsium vulgare</i>), Spurge (<i>Euphorbia</i> spp), Stinking goosefoot (<i>Chenopodium vulvaria</i>)		800 mL - 1.2 L	

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
NORTHERN AUSTRALIA: For weed control prior to sowing a summer or winter crop or in a fallow	Black (Giant) Pigweed (<i>Trianthema portulacastrum</i>), Boggabri Weed (<i>Amaranthus macrocarpus</i>), Caltrop (Yellow vine) (<i>Tribulus terrestris</i>), Indian Hedge Mustard (<i>Sisymbrium orientale</i>), Mintweed (<i>Salvia reflexa</i>), Summer Grass (<i>Digitaria ciliaris</i>)	Qld, Northern NSW only	400 - 800 mL up to 5 true leaves or 3 cm diameter or height. 800 mL - 1.2 L greater than 5 true leaves or 3 cm diameter or height	Refer to CRITICAL COMMENTS section on page 16
	African Turnip Weed (<i>Sisymbrium thellungi</i>), Deadnettle (<i>Lamium amplexicaule</i>), Sweet Summer Grass (<i>Digitaria sanguinalis</i>), Variegated Thistle (<i>Silybum marianum</i>), Volunteer Sunflower (<i>Helianthus annuus</i>)		600 - 800 mL up to 5 true leaves or 3 cm diameter or height. 800 mL - 1.6 L greater than 3 cm diameter or height	
	Annual Ground Cherry (Gooseberry) (<i>Phsalis ixocarpa</i>), Camel Melon (<i>Citrullus lanatus</i>), False Castor Oil Plant (<i>Datura</i> spp), Noogoora Burr (<i>Zanthium occidentale</i>), Turnip Weed (<i>Rapistrum rugosum</i>), Wild lettuce (<i>Lactua saligna</i>), Wild Turnip (<i>Brassica tournefortii</i>), Wireweed (<i>Polygonum aviculare</i>)		800 mL - 1.2 L prior to stem elongation/budding. After that use 400 mL - 1.2 L plus 500 - 700 mL 2. 4-D ester (800 g/L) OR 1.2 - 1.6 L of this product alone	

Crop/Situation	Weeds	State	Boom Spray Rate/ha	Critical Comments
NORTHERN AUSTRALIA: For weed control prior to sowing a summer or winter crop or in a fallow	Pigweed (<i>Portulaca oleracea</i>)	Qld, Northern NSW only	800 mL - 1.6 L up to 20 cm dia	Use a higher rate on larger weeds. Control of pigweed over a wide range of growth stages can be obtained with the addition of metsulfuron-methyl (600 g/kg). Observe re-cropping intervals.
	Sowthistle (<i>Sonchus oleraceus</i>)		600 - 800 mL rosettes up to 3 cm diameter. 800 mL - 1.6 L greater than 3 cm diameter.	Previously grazed plants may be difficult to control without allowing full recovery.
	Couch (<i>Cynodon dactylon</i>)		1.2 L - 2.4 L	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.
	Johnson Grass (<i>Sorghum halapense</i>)		1.6 L - 2.4 L	Use the higher rate on plants approaching seedhead stage. Apply to plants with a minimum of 30 cm new growth. Sequential treatments will be required for long term control.
	Nutgrass (<i>Cyperus rotundus</i>)		2.4 L followed by 2.4 L	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.

Pasture Renovation and Topping

Crop/Situation	Weeds	State	Rate/ha	Critical Comments
<p>Pasture renovation with Poa tussock present as a weed.</p> <p>For reduction of ground cover allowing pasture renovation.</p>	Most annual weeds and Poa (<i>Poa labillardieri</i>)	QLD, NSW, ACT, VIC, TAS Only	2.4 - 3.2 L	<p>Before spraying: Graze heavily Remove stock for 14 days or more before treatment. Apply after autumn break when plants are actively growing but before heavy frosts (March – May). Application: Increasing to the higher rate makes more effective reductions.</p> <p>Follow-Up Management: Sowing of new pasture may begin 14 days after treatment. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestations (see Aerial Equipment).</p>
<p>Pasture with Bent grass present as a weed.</p> <p>For control/suppression prior to establishing crops or improved pasture species.</p>	Most annual weeds Bent grass (<i>Agrostis capillaris</i>)	VIC, TAS Only	2 L	<p>Apply late spring when seed-heads have developed, but before the onset of summer moisture stress. Remove stock prior to spraying to achieve good Bent foliage coverage. Ensure plants are actively growing.</p> <p>Follow-Up Management: 10-21 days after spraying fully disturb soil with a tined implement and then sow summer crop, and/or reseeded pasture or crop the following autumn.</p>
<p>Pasture topping for the production of seed set of annual grasses, Capeweed and Calomba Daisy</p>	<p>Annual ryegrass (<i>Lolium rigidum</i>), Calomba daisy (<i>Pentzia suffruticosa</i>)</p> <p>Barley grass (<i>Hordeum leporinum</i>), Brome grass (<i>Bromus unioloides</i>), Capeweed (<i>Arctotheca calendula</i>), Silver grass (<i>Vulpia spp.</i>)</p>	NSW, VIC, ACT, Tas, SA, WA Only	<p>360 mL</p> <p>240 – 360 mL</p>	<p>Use the higher rate for severe infestation or, where annual ryegrass (<i>Lolium rigidum</i>) is present, apply before “hay off”.</p> <p>Annual Ryegrass (<i>Lolium rigidum</i>) and Capeweed (<i>Arctotheca calendula</i>) – Apply at flowering.</p> <p>Other grasses - 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 clover or medic crops intended for seed or hay.</p>

Crop/Situation	Weeds	State	Rate/ha	Critical Comments
<p>Pasture manipulation for control/suppression of certain grasses before sowing soybeans, forage crops or Leucaena.</p> <p>Band Spraying may also be applied as a band or strip spray.</p>	<p>Carpet grass (<i>Xonopus spp.</i>) Kikuyu (<i>Pennisetum clandestinum</i>) Paspalum (<i>Paspalum dilatatum</i>)</p>	NSW, VIC, WA Only	4.8 L	<p>Rate Selection: Apply the lower rate for suppression only. The higher rate will provide control.</p> <p>Band Spraying: Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the couler/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1.0 m 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>Leucaena (Qld ONLY): Rows should be 4 m apart. Use 2 L/ha with a single taper fan nozzle LF1-80 mounted at the rear of the single row planter providing a 1 m swath.</p>
	<p>Carpet Grass, Paspalum</p>	Qld Only	1.1 – 4.8 L	
	<p>Kikuyu</p>		500 mL – 4.8 L	
	<p>Barbed Wire Grass (<i>Cymbopogon refractus</i>), Black Speargrass (<i>Hederopogon confortus</i>), Wire grasses (<i>Anistida spp.</i>), Love grasses (<i>Erostis spp.</i>), Red Natal Grass (<i>Rhynchelytrum repens</i>)</p>		2.4 L	

Rice – Direct Drilling for NSW Only

Situation	Weeds Controlled	Rate vol/ha	Critical Comments
Rice - direct drill	<p>Annual phalaris (Canary grass) Annual ryegrass (<i>Lolium rigidum</i>) Barley grass (<i>Hordeum leporinum</i>) Burr medic (<i>Medicago spp.</i>) Sub-clover (<i>Trifolium subterraneum</i>) Winter grass (<i>Poa annua</i>)</p>	800 mL - 1 L	<p>If plants are drought stressed a pre-watering prior must be applied. If the site has been grazed allow plants to regrow to 6 - 8 cm before treatment. For control of Annual Ryegrass (<i>Lolium rigidum</i>) use the higher rate. Crop Sowing: Sow 1 - 14 days after treatment. Residual control will only be achieved by adding another suitable herbicide.</p>

Cotton

Situation	Weeds Controlled	State	Rate vol/ha	Critical Comments
Cotton pre-harvest DO NOT use on crops intended for seed production	Bathurst Burr (<i>Xanthium spinosum</i>), Noogoora Burr (<i>Xanthium pungens</i>), Winter Annual weeds including Sow thistle/ Milk thistle (<i>Sonchus oleraceus</i>)	Qld, NSW only	1 - 2 L	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 knife. Where a leafy canopy limits spray coverage, reduced weed control can be expected. For best results under these conditions, delay application until canopy re-opens following the initial conditioning treatment.
	Nutgrass (seasonal suppression only)		2 L	Where control of Nutgrass or Noogoora Burr is required, treatments should be applied prior to the onset of frosts. When tank mixed with defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label directions for the tank mix products.
Cotton Shielded sprayers	Refer to Weeds Controlled section Northern Australia : In fallows or prior to sowing a crop	Qld, NSW only	-	Apply this product to weeds growing between the rows using a shielded sprayer. 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.

Sugar Cane (Ratoon Control) for Qld & NSW Only

Situation	Variety	Rate vol/ha	Critical Comments
Sugar Cane Ratoon control	Q63, Q87, Q90, Q102, Q117, Q120, Q129, Q130, H56-752, Pindar, Triton	2.4 - 3.2 L	Apply when the ratoons are actively growing and are 60 - 100 cm tall. DO NOT apply if plants are under stress from waterlogging or low moisture. Use the lower rate for suppression or where control by cultivation is planned. Use the higher rate for control. Boom height must allow the correct overlap of the spray pattern at the top of the crop canopy.
	Q86, Q96, Q113	3.2 - 4.0 L	
	Cassius, Q115, Q122, Q94	4.0 - 4.8 L	
	NC0310, Q107	4.8 - 7.2 L	

Sorghum Control

Situation	Weeds Controlled	State	Rate vol/ha	Critical Comments
Sorghum Control Before harvest	Grain sorghum (<i>Sorghum bicolor</i>)	QLD, NSW Only	1.2 - 1.6 L	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. Apply when grain moisture is less than 25%. The product can be applied when some browning has occurred. Use the lower rate for control of crop, late tillers and ratoon regrowth. Use the higher rate for better suppression of ratoon regrowth. Treatment may increase potential 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 lodging. CAUTION: Sorghum may be naturally toxic to stock.
Sorghum Control Post-harvest	Sorghum stubble (<i>grain sorghum</i>) (<i>Sorghum bicolor</i>)	QLD, NSW Only	800 mL - 1.2 L for new regrowth from slashed stubble	DO NOT apply if plants are stressed from factors such 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. Allow regrowth to at least 20 cm if grazing has occurred. Use the lower rate for knock down 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, Nugget2, Goldrush2 and Prize are particularly susceptible if growing conditions are not ideal. CAUTION: Sorghum may be naturally toxic to stock.
			1.2 - 1.6 L for standing stubble	Use this rate for standing stubble if sufficiently green and for fresh spring regrowth.

General Use Situations

Situation	Weeds Controlled	Application Rates	Critical Comments
Dry drains and channels, dry margins of dams, lakes and streams	For weeds controlled refer to list of species under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	For application rates refer to rates shown under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	See Critical Comments shown for section and individual weeds under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.
Forestry	For weeds controlled refer to list of species under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	For application rates refer to rates shown under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	Use situations include: Prior to nursery establishment. Site preparation prior to planting. In established tree areas using shielded or direct sprays or selective wiper equipment. DO NOT allow spray or spray drift to come into contact with foliage or green bark of desirable trees as severe damage may occur. DO NOT allow wiper surface to come into contact with any part of the tree.
Non-Agricultural Areas: Rights of way, domestic and public service areas, commercial and industrial areas and around buildings.			This product does not provide residual control.
Onions Post-plant, pre-emergence application	For weeds controlled refer to list of species under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	800 mL - 2.4 L/ha	Apply post-sowing and at least 7 days before the emergence of onion shoots. DO NOT apply to emerging onion plants, as severe injury will occur. For small annual weeds use the lower rate. For larger annual weeds (as a guide greater than 15 cm in height) and where perennial weeds are present, use the higher rates.
Pastures	For weeds controlled refer to list of species under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	For application rates refer to rates shown are under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	1. Directed (Spot) Application. 2. Selective Application (See Wiper Equipment). 3. Boom applications are used in pasture control prior to re-seeding of improved pasture crop. See Protection of Livestock, Wiper Equipment and Conservation Tillage sections of this label.

Situation	Weeds Controlled	Application Rates	Critical Comments
Tree & Vine Crops: Nuts (including Almond, Pecan, Macadamia, Pistachio and Walnut), Pome fruit, Litchi, Stone Fruit, Vineyards, Citrus Fruit, Avocado, Guava, Kiwifruit, Mango, Paw Paw, Bananas	For weeds controlled refer to list of species under ANNUAL WEED CONTROL and PERENNIAL WEED CONTROL in this leaflet.	See Wiper Equipment section of this label.	All Trees and Vines: DO NOT spray near trees or vines less than 3 years old. DO NOT allow wiper contact. Avocado, Banana, Guava, Kiwifruit, Litchi, Mango, Pawpaw, and Stone Fruit: Spray drift can cause damage if allowed to contact any part of the vine, palm, trunk or tree. Be careful to avoid contact with split bark on kiwifruit and green stems on pawpaw. Citrus, Litchi, Olives, Pome Fruit, Nuts and Vineyards: DO NOT allow spray to contact any part of the plant.
Row Crops: Cotton, Navy Beans, Peanuts, Soybeans, Sugarcane where wiper equipment or shielded sprayers are used to control weeds in Row crops			See 'For Wiper Equipment' section in this booklet. Apply to weeds growing 15 cm above the crop canopy or weeds growing between rows. DO NOT allow the product to come into direct contact with crops or solution to drip onto crops. DO NOT apply to crops less than 20 cm high. Shielded Sprayers (cotton only): Apply to weeds growing between crop rows using a shielded sprayer.

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

FMC Glyder 450 Herbicide is a non-selective herbicide, which is effective against a wide range of annual and perennial broadleaf weeds and grasses. It is translocated throughout the plant where it kills both foliage and roots.

Ideally the best time to use the product is when target species are in a state of active growth, moderate climatic conditions are present and plants are free of disease and dirt cover. The effects of the herbicide may not be visible for 3 - 7 days for annual weeds or 2 - 3 weeks for perennial weeds depending on water quality, weather conditions, weed species and rate used.

While cool and cloudy conditions can sometimes delay the appearance of chemical activity, it can generally be expected that symptoms of chemical effect will appear 2 - 7 days after spraying annual species, and 2 - 3 weeks after spraying perennial species. The symptoms are demonstrated by a yellowing and accompanying wilting, progressing to a brownout.

SPRAY PREPARATION

1. Make sure the spray tank is clean and residues from previous spray usage have been removed.
2. Fill the spray tank 1/2 to 3/4 full with clean water. Where possible avoid turbid water or hard water containing calcium salts, as this may reduce weed control.
3. Where ammonium sulphate is recommended, wash 2% V/V (2 L/100 L spray solution) through a top mesh screen into the tank and mix thoroughly.
4. Add the appropriate amount of FMC Glyder 450 as per the Direction for Use tables.
5. Add surfactant (if required). Mix well keeping the filling hose below surface to avoid foaming.
6. Add water to fill vat.
7. Remove hose from tank as soon as full to prevent back siphoning.

DO NOT use mechanical agitators, as they cause excessive foaming.

DO NOT add non-approved herbicides and insecticides.

Use ONLY plastic, plastic lined, stainless steel, aluminium, copper, brass or fibreglass tanks. Galvanised steel or unlined steel spray tanks can react with the product to produce hydrogen, which can form a combustible gas mixture, which can be flashed by ignition sources.

CROP ESTABLISHMENT

FMC Glyder 450 Herbicide is recommended for the control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing procedures are required to provide seedbed conditions favourable for crop germination and development.

Early spraying to control young weeds will favour preparation of suitable seedbeds.

On friable soils, where there is only a light cover of young weeds, sowing may proceed 1 day after spraying. In situations of heavy weed growth, sowing should be delayed until weed decay and soil conditions allow formation of a suitable seedbed.

Incorporation of green or decaying vegetation and roots into seedbeds by cultivation/sowing may cause retarded crop emergence especially in cold and/or wet conditions. Vegetation may be reduced by grazing and/or cultivation but trash should be left on the surface. Avoid use of pre-emergence herbicides where label directions advise a risk of retarded crop emergence, and in marginal seedbed conditions pay particular attention to correct seeding depth.

Surfactant

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

Organosilicone Penetrant

In certain situations such as for the control of brush and woody weeds (as indicated in the Directions for Use) weed control may be enhanced by the addition of an organosilicone penetrant at its label rate.

Rainfall Effects

Heavy rainfall within 2 hours of spraying can mean that the chemical may be washed off the plant, with the result that the herbicide may not be totally effective. Re-spraying may be needed. Normal rainfall up to 6 hours after application may reduce effectiveness. Adequate results may not be achieved if the product is applied when weeds are stressed by conditions such as drought, water logging or frost.

Soil Persistence

The product is not persistent in soils and is rapidly broken down by microbes present in the soil, as well as by hydrolysis caused by freestanding moisture or moisture that may be present in soil particles. Should residual activity be needed refer to the "Compatibility" section of this label.

RESISTANT WEEDS WARNING

FMC Glyder 450 Herbicide is a member of the glycine group of herbicides. FMC Glyder 450 Herbicide has the inhibitor of EPSP synthase mode of action. For weed resistance management FMC Glyder 450 Herbicide is a group "M" herbicide.

Some naturally occurring weed biotypes resistant to FMC Glyder 450 Herbicide and other inhibitors of EPSP synthase herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used

GROUP	M	HERBICIDE
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repeatedly. These resistant weeds will not be controlled by FMC Glyder 450 Herbicide or other inhibitors of EPSP synthase herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, FMC Crop Protection Pty Ltd accepts no liability for any losses that may result from the failure of FMC Glyder 450 Herbicide to control resistant weeds. **DO NOT** however assume resistance without first reviewing the method of application, timing, water quality and weather conditions.

APPLICATION EQUIPMENT

The following types of equipment may be used for applying the product: knapsack, wiper, handgun, aerial, boom.

For Knapsack and Handgun Equipment

Maximum efficiency can be achieved by using D6 spray plate and applying at a pressure of 400 - 700 kPa. As the product is translocated through contact points on the plant, good coverage and uniform wetting is needed to maximise uptake by the plant. The dilution rate is given as volume per litre. Adjust equipment to ensure even spray pattern.

For Boom Equipment

Maximum efficiency can be achieved by using fan nozzles at a pressure of 240 - 280 kPa. Boom height should be adjusted to ensure double overlap of nozzle patterns at the top of the weed canopy. Water volumes of 75 to 200 L of clean water per hectare are recommended. When using rates of 500 mL to 1.5 L/ha, spray volumes in the range of 25 - 100 L/ha are preferred.

For Aerial Equipment

For Micronair and boom equipment a droplet size of 250 - 350 micron diameter is recommended in a minimum spray volume of 20 L/ha. A swath width in the range of 15 - 17 m is most appropriate for this form of spraying.

When using this form of application give consideration to the fact that the product is highly non-selective and if desirable plants, trees, etc are in the vicinity of the area to be sprayed, they could be affected by drift or targeted contact. This would limit usage via this technique to such situations as weed control on fallows or pasture; control prior to establishment of crops or pasture.

In pasture establishment situations, it may also be necessary to spray hilly terrain and gullies in both directions to ensure good spray coverage of grass and broadleaf weeds and to avoid spray shielding effects from trees.

Hilly terrain: As spraying height may vary on hilly terrain, to maximise target contact, increase the water volume to 30 - 80 L/ha and increase the droplet size to a minimum of 300 micron average size.

Note: In high temperatures and dry conditions evaporation of droplets prior to reaching target species

can occur. It is important to increase water volume to at least 30 L/ha and average droplet size to 300 micron if temperatures are in excess of 25°C.

DO NOT SPRAY if temperature is above 30°C.

For Wiper Equipment

Wiper equipment such as ropewick applicators can be used to apply this product to weeds growing in oilseed crops, sugarcane, cotton, seed and pod vegetables, tree and vine crops, pasture and non-crop areas specified on this label. Weeds should be at least 15 cm above the crop or pasture. Operate wiper equipment a minimum of 10 cm above the crop or pasture. Speed of travel should be no greater than 8 km/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 clumps or in dense infestations some plants may not be contacted by the herbicide solution and re-treatment may be necessary. Mix only enough solution for immediate requirements. Do not store a mixed solution for more than a couple of days.

Rate: Mix 800 mL FMC Glyder 450 Herbicide with 2 L clean water to prepare a 33% solution. Refer to Weeds Controlled section of label for specific recommendations.

SPRAYER CLEAN UP

After use, clean all spray equipment by thoroughly washing with clean water, or commercial spray equipment cleaner, in order to prevent corrosion to tanks, lines and nozzles. Aircraft used in application should be thoroughly washed with particular attention to wheels and landing gear.

COMPATIBILITY

It has been established that a wide range of products may be tank mixed with glyphosate. The following products may be mixed with glyphosate to broaden the spectrum of weeds controlled, add soil residual activity, and improve performance. Refer to the Directions for Use section for detailed information on tank mix situations.

Additives: Liquid ammonium sulphate (2 L/100 L) can be used to minimise antagonism when mixed with flowable triazine herbicides; and help minimise the adverse effects of water quality problems, such as high pH and mineral content, that are common in creek and bore water, that can be antagonistic with glyphosate herbicide.

Herbicides: Atrazine - flowable or granular (see Additives above - do not apply the tank mix for control of Barnyard Grass (*Echinochloa crus-galli*)), dicamba, 2,4-D ester, chlorsulfuron, metsulfuron, Yield*, Stomp*, LVE MCPA, Goal CT*, simazine flowable.

Goal CT: The addition of Goal CT Herbicide at 75 mL/ha to recommended rates of this product prior to planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity. Add Flowright Compatibility agent to improve the

compatibility in cold water (less than 15°C). See directions below.

Insecticides: chlorpyrifos, dimethoate, fenitrothion, Gusathion*, Imidan*, Le-Mat*, Lorsban*, metasystox, Sumithion*, Perfekthion* EC 400.

Flowright Compatibility Agent

Rate: 200 mL/100 L spray solution. When mixing with Goal CT*, add to improve the compatibility in cold water (less than 15°C). Flowright must be pre-mixed with Goal CT* before adding to the spray tank. Refer to Flowright label for directions.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under meteorological conditions or from spraying equipment that could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, crop lands or pastures, private properties or public lands. **DO NOT** apply prior to transplanting tomato seedlings.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

PROTECTION OF LIVESTOCK

There is no withholding period for grazing stock, but to give the product a chance to be efficiently absorbed by sprayed vegetation, it is recommended that livestock be kept clear of treated annual weeds for 1 day after spraying, and for perennial weeds 7 days. For certain plants known to be toxic to stock, it is advisable to keep livestock away until complete browning occurs.

STORAGE AND DISPOSAL

Do not store the product in galvanised steel or unlined steel containers, as the product may react to produce hydrogen gas, which in turn could form a highly combustible gas that could explode if ignited by an open flame, or spark, lighted cigarette, etc.

Store in the closed original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no land fill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

For refillable containers

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

SAFETY DIRECTIONS

Product will irritate 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 day's use wash contaminated clothing, gloves and face shield or goggles.

FIRST AID

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

MSDS

Additional information is listed in the material safety data sheet (MSDS), which is available from the supplier.

WARRANTY

FMC Crop Protection Pty Ltd makes no warranty expressed or implied, concerning the use of this product other than that indicated on the label. Except as so warranted the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

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