

CAUTION

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



Nufarm
weedMaster[®]
XXX dual salt technology[®] herbicide **DUO**

ACTIVE CONSTITUENT: 360g/L GLYPHOSATE
(present as the isopropylamine and mono-ammonium salts)

GROUP M HERBICIDE

For the control of annual, perennial and aquatic
weeds in many situations as per the Direction for
Use table.



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DIRECTIONS FOR USE**RESTRAINTS**

DO NOT disturb treated weeds by cultivation, sowing or grazing for 1 day after treatment of annual weeds and 7 days for perennial weeds.

DO NOT treat weeds under poor growing or dormant conditions such as occur in drought, water logging, disease, insect damage or following frost. Reduced control may also occur when treating weeds heavily covered with dust or silt. Rainfall occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours of application may wash the chemical off the foliage and a repeat treatment may be required.

DO NOT use prior to sowing tomatoes.

1. GENERAL WEED CONTROL

SITUATION	CRITICAL COMMENTS
<p>For general weed control in Domestic areas (Home gardens), Commercial, Industrial and Public Service areas, Agricultural buildings and other farm situations.</p> <p>For specific weeds, brush and woody weeds or unwanted trees, refer to the appropriate WEEDS CONTROLLED table.</p>	<p>For the control of many grasses and broadleaf weeds.</p> <p>RATE: 10mL/L of water</p> <p>Apply when weeds are actively growing. Apply to ensure complete and uniform wetting of foliage.</p> <p>Visible symptoms may take from 3-7 days to develop.</p>

2. ANNUAL WEED CONTROL

SITUATION	WEED	RATE	CRITICAL COMMENTS
Non-Cultivated Situations	Amaranth	<i>Amaranthus</i> spp.	Annual weeds may be sprayed anytime they are actively growing. Use the lower rate on weeds up to 15cm tall; increase to the higher rate where weeds are over 15cm tall. Visible symptoms develop in 3-7 days, but complete desiccation may take 20-30 days under cool conditions. This product does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds. For residual control of ANNUAL weeds, this product may be used as a tank mixture with certain residual herbicides. See TANK MIXTURES for directions. For annual weed control in cultivated situations see: 9. CONSERVATION TILLAGE USES.
	Barley grass	<i>Hordeum leporinum</i>	
	Barnyard grass	<i>Echinochloa</i> spp.	
	Brome grass	<i>Bromus</i> spp.	
	Caltrop	<i>Tribulus terrestris</i>	
	Canary grass	<i>Phalaris</i> spp.	
	Annual phalaris		
	Capeweed	<i>Arctotheca calendula</i>	
	Cereals	(volunteer wheat, barley, oats, sorghum)	
	Chickweed	<i>Stellaria media</i>	
	Cobbler's pegs	<i>Bidens pilosa</i>	
	Dead nettle	<i>Lamium amplexicaule</i>	
	Double gee	<i>Emex australis</i>	
	Fumitory	<i>Fumaria officinalis</i> <i>F. muralis</i>	
	Ground cherry	<i>Physalis angulata</i>	
	Lesser swinecress	<i>Coronopus didymus</i>	
	Liverseed grass	<i>Urochloa panicoides</i>	
	Mintweed	<i>Salvia reflexa</i>	
	Paradoxa grass	<i>Phalaris paradoxa</i>	
	Paterson's curse	<i>Echium plantagineum</i>	
	Pigweed	<i>Portulaca oleracea</i>	
	Potato weed	<i>Galinsoga parviflora</i>	
	Ryegrass	<i>Lolium rigidum</i>	
	Saffron thistle	<i>Carthamus lanatus</i>	
	Silver grass	<i>Vulpia</i> spp.	
	Sowthistle	<i>Sonchus oleraceus</i>	
	Spear thistle	<i>Cirsium vulgare</i>	
	Spiny burgrass	<i>Cenchrus</i> spp.	
	Spurge	<i>Euphorbia</i> spp.	
	Sub. clover	<i>Trifolium subterraneum</i>	
	Thornapple	<i>Datura</i> spp.	
	Wild mustard	<i>Sisymbrium officinale</i>	
	Wild oats	<i>Avena</i> spp.	
Wild turnip	<i>Brassica tournefortii</i>		
Winter grass	<i>Poa annua</i>		
Variegated thistle	<i>Silybum marianum</i>		

3. PERENNIAL WEED CONTROL

WEEDS	RATE			CRITICAL COMMENTS
	BOOM	HANDGUN	KNAPSACK	
Alligator weed*	-	1L/100L	150mL/15L	Apply when actively growing, from Summer through Winter. Floating form only.
Bamboo (<i>Bambusa</i> spp.)	-	1L/100L	150mL/15L	Apply to actively growing foliage and/or regrowth which is between 1m and 2m tall. Cut stump: Dilute 1:6 ie. mix 1 part of this product plus 6 parts water. Cut stems back to 20cm high, pour mixture down hollow stem or wet the cut.
Bent grass (<i>Agrostis capillaris</i>)	2.5L/ha	500mL/100L	75mL/15L	Apply to actively growing plants in late Spring when they have some seed head development but before Summer moisture stress. Bent grass should NOT be heavily grazed at spraying. Follow up management is required to limit seedling re-establishment. Full disturbance with a 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>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants at the early head stage.

WEEDS	RATE			CRITICAL COMMENTS
	BOOM	HANDGUN	KNAPSACK	
Bracken (<i>Pteridium esculentum</i>)	9L/ha plus Pulse® Penetrant 500mL/100L spray	1.5L/100L	225mL/15L	For boom application, always add Pulse® Penetrant, otherwise reduced results will occur. Addition of Pulse® Penetrant (500mL/100L spray) may improve control with handgun application. Wiper application is recommended, see WIPER EQUIPMENT. Double pass application is required for ropewick equipment. Bracken should be slashed in Winter/Spring prior to treatment. Apply this product when fronds are fully unfurled actively growing fronds but prior to frosts. Visible symptoms may not be fully apparent until the next season. Complete control will not be achieved from one application. Repeat treatment is recommended, preferably associated with pasture improvement.
Brown beetle grass [^] (<i>Diplachne</i> spp.)	3L/ha	500mL/100L	75mL/15L	Apply to actively growing plants. DO NOT apply to partially submerged plants.
Carpet grass (<i>Axonopus</i> spp.)	3L/ha	500mL/100L	75mL/15L	Apply to actively growing plants at the early head stage.
Cocksfoot (<i>Dactylis glomerata</i>)	3L/ha	700mL/100L	100mL/15L	Apply to actively growing plants at the early head stage.
Couch (<i>Cynodon dactylon</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants when most have reached the early head stage. In SA and WA apply to active plants during Oct-Nov for best results. Addition of Pulse® Penetrant (500mL/100L spray) may improve control. No disturbance for 5 weeks minimum after application.
Cumbungi [^] (<i>Typha</i> spp.)				Apply to actively growing plants at the early head to full head stage (Summer-Autumn). Re-treatment may be required to restrict seedling re-establishment. Application by wiper equipment is recommended (not Tasmania). Refer WIPER EQUIPMENT section.
Flatweed (Cat's ear) (<i>Hypochoeris radicata</i>)	3L/ha	700mL/100L	100mL/15L	Apply to fully developed rosettes at the early flower stage.
Glyceria (<i>Glyceria maxima</i>)	6L/ha	1L/100L	150mL/15L	Apply to actively growing plants at the mature head stage in late Summer-Autumn. Add Nufarm LI 700® at 250-500mL/100L. NOTE: Control of Glyceria is only allowable in dry drains and channels and dry margins of dams, lakes and streams. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and DO NOT allow spray to enter water. DO NOT allow water to return to dry channels within 4 days of application.
Guinea grass (<i>Panicum maximum</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants when most have reached the early head stage. For WIPER application refer WIPER EQUIPMENT section.
Hoary cress (<i>Cardaria draba</i>)	1.5L/ha	500mL/100L	75mL/15L	For maximum long term reduction, apply from late July to September when plants are in late rosette to flowering stage. Plants should be actively growing and not under stress of drought, frost or waterlogging. Application may be integrated with long fallows. Cultivation may start 7 days after spraying. Wiper equipment may be used where sufficient stem elongation occurs, refer to WIPER EQUIPMENT section. In Tasmania add Nufarm LI 700 at 250-500mL/100L spray.
Johnson grass (<i>Sorghum halepense</i>) Kangaroo grass (<i>Themeda australis</i>) Kikuyu grass (<i>Pennisetum clandestinum</i>)	6L/ha	1L/100L	150mL/15L	Apply to actively growing plants at the early head stage. For application by wiper equipment on Johnson grass, off-type and Volunteer sorghum refer to WIPER EQUIPMENT section.
Lovegrass, African (<i>Eragrostis curvula</i>)	6L/ha	1L/100L	150mL/15L	Apply to actively growing plants. Re-treatment and/or pasture improvement is recommended to restrict seedling re-establishment.
Ludwigia <i>peruviana</i>	-	1L/100L	150mL/15L	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>)	6L/ha	1L/100L	150mL/15L	NON-CULTIVATED SITUATIONS: Apply to actively growing plants in late Summer-Autumn (Feb-Apr) when at least 20% have reached the head stage. ARABLE LAND: Make FIRST APPLICATION to actively growing plants when at least 20% have reached the head stage (normally about Feb). After allowing maximum re-emergence to occur (normally in 6-8 weeks) it is essential to make a SECOND APPLICATION. NOTE: In arable land Nutgrass may rapidly regenerate from isolated nuts. Follow up treatments should be made as part of a Nutgrass control program.
Does not refer to other <i>Cyperus</i> spp. which may be locally known as nutgrass.	3L/ha plus 3L/ha	700mL/100L plus 700mL/100L	100mL/15L plus 100mL/15L	
Pampas grass (<i>Cortaderia</i> spp.)	-	1L/100L or 1.3L/100L	150mL or 200mL/15L	Apply to actively growing plants during Spring, Summer or Autumn. Ensure complete coverage of the foliage. For best results, apply after flowering. For easier access, large plants may be cut or burnt prior to spraying, but first allow regrowth to reach 1m. Use the higher rate on plants over 1m high. LOW VOLUME APPLICATION: Use 1:9 mixture of this product to water. Apply 2x2mL per 0.5m height. Ensure spray contacts all foliage.
Paragrass [^] (<i>Brachiara mutica</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants when most have reached the early head stage.
Paspalum (<i>Paspalum dilatatum</i>)	6L/ha	1L/100L	150mL/15L	
Pellitory (<i>Parietaria judaica</i>)	-	1L/100L	150mL/15L	Apply to actively growing plants prior to seeding. Repeat applications may be necessary to control seedlings and/or regrowth.
Phalaris (<i>Phalaris aquatica</i>)	3-6L/ha	500mL-1L/100L	75-150mL/15L	Apply to actively growing plants during Winter-Spring. Use the lower rate where only knockdown is required eg. prior to burning of firebreaks. Burning can usually start 14-21 days after spraying. For long term control increase to the higher rate.
Phragmites, Common reed [^] (<i>Phragmites australis</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing, fully developed plants approaching the early head stage. Visible symptoms of control may be slow to develop and may not be fully apparent until the next season. For application by wiper equipment refer to WIPER EQUIPMENT section.
Plantains (<i>Plantago</i> spp.)	3L/ha	700mL/100L	100mL/15L	Apply to actively growing plants at the early head stage. Symptoms may be slow to develop.

WEEDS	RATE			CRITICAL COMMENTS
	BOOM	HANDGUN	KNAPSACK	
Prairie grass (<i>Bromus unioloides</i>) Qld Blue grass (<i>Dichanthium sericeum</i>) Redleg grass (<i>Brothriochloa ambigua</i>) Rhodes grass (<i>Chloris gayana</i>)	6L/ha	1L/100L	150mL/15L	*Note: Also refer to the Critical Comments of the AQUATIC WEEDS Section, for important restrictions in the application of GLYPHOSATE in aquatic situations. Apply to actively growing plants at the early head stage.
Rope twitch (<i>Agropyron repens</i>)	6L/ha	1L/100L	150mL/15L	Apply in late Summer-Autumn to actively growing plants with foliage at least 20cm high. To ensure maximum shoot emergence the area should NOT be cultivated in the period from the preceding Winter until the time of spraying.
Rushes* (<i>Juncus</i> spp.)	-	-	-	Apply by wiper equipment to actively growing plants. Where there is a large proportion of dead foliage, pre-slashing is recommended. Allow adequate regrowth before treatment. Refer WIPER EQUIPMENT section for application instruction.
Sedge, tall* (<i>Carex appressa</i>)	2L or 4L/ha	500mL/100L or 1L/100L	75mL/15L or 150mL/15L	Apply to actively growing plants in flowering to post-flowering period (Oct-Apr). Use the lower rate only if the stand has been slashed prior to treatment. Re-treatment may be necessary. Visible symptoms may not be fully apparent for up to 3 months. Use of CDA equipment is not recommended.
Silverleaf nightshade (<i>Solanum elaeagnifolium</i>)	-	2L/100L	300mL/15L	Use ONLY under good soil moisture conditions. Apply to actively growing plants at the late flowering to berry stage. Repeat spraying will be necessary to restrict regrowth and seedling re-establishment.
Sorrel (<i>Rumex acetosella</i>)	6L/ha	1L/100L	150mL/15L	Apply to actively growing plants when most have reached the early bud stage. In Conservation Tillage situations, 1.5L/ha provides seasonal suppression. Refer to Conservation Tillage Uses table.
Soursob (<i>Oxalis pes-caprae</i>)	1.5L/ha	500mL/100L	75mL/15L	For maximum long term reduction apply from late July to early September but before natural plant yellowing (senescence) occurs. Soursob should be actively growing and not under stress of drought or waterlogging. If heavy frosting has occurred allow recovery before spraying. If heavy grazing has occurred allow recovery of foliage to at least 5cm before spraying. In Conservation Tillage (eg. direct drilling) situations, application in May-July immediately prior to sowing will give control of top growth and give partial reduction of plant numbers. Refer Conservation Tillage Uses table.
St John's wort (<i>Hypericum perforatum</i>)	3L/ha	500mL/100L	75mL/15L	Apply to actively growing plants in the flowering to post-flowering, procumbent stem stage (generally Nov-May). Re-treatment or oversowing with improved pasture species may be necessary to restrict seedling re-establishment.
Thistle, artichoke (<i>Cynara cardunculus</i>)	3L/ha	500mL/100L	75mL/15L	Apply at the rosette-early head stage.
Thistle, Californian (<i>Cirsium arvense</i>)	6L/ha	1L/100L	150mL/15L	Apply to actively growing plants at the flowering stage. To ensure maximum shoot emergence the area should NOT be cultivated prior to spraying. Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment.
Water couch* (<i>Paspalum distichum</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants in late Summer-Autumn (February-March). DO NOT treat after March because of the onset of Winter dormancy. Full results may not be visible until the following Spring. Not more than 1/4 of the weed should be submerged at the time of treatment.
Water hyacinth*	6L-9L/ha	1-1.3L/100L	150- 200mL/15L	Apply when actively growing and at or beyond the early bloom stage of growth. Use the higher rate on dense infestations.
Water lettuce*	-	1-1.3L/100L	150- 200mL/15L	Best results are obtained from mid-Summer through to Winter. Use the higher rate on dense infestations.
Waterlily, yellow*	6L/ha	1L/100L	150mL/15L	Apply when there is a maximum emergence of floating leaves. Allow 2-3 weeks for symptoms to develop and then retreat any unaffected plants. Use low volume sprayer. Refer to Table 6: Aquatic Weed Control.
Yorkshire fog (<i>Holcus lanatus</i>)	3L/ha	700mL/100L	100mL/15L	Apply to actively growing plants at the early head stage.

4. BRUSH AND WOODY WEEDS

Use of CDA equipment not recommended for brush and woody weed control.

WEEDS	RATE			CRITICAL COMMENTS
	HANDGUN	KNAPSACK	LOW VOLUME Product:Water	
Bitou bush/ Boneseed (<i>Chrysanthemoides monilifera</i>)	500mL/100L or 1L/100L	75mL/15L or 150mL/15L	1:29 or 1:19	Apply to actively growing plants. Spray to wet all foliage. Best results are achieved when treated at peak flowering during Winter. DO NOT apply during periods of drought stress. Use the higher rate on bushes over 1.5m. Further treatment may be necessary to restrict seedling re-establishment. Low Volume Application: (eg. Gas gun and Splatter Gun). Ensure spray contacts all foliage. Use the higher rate (1:19) on bushes over 1.5m high.
Boxthorn, African (<i>Lycium ferocissimum</i>)	700mL-1L/100L	100- 150mL/15L	-	Use the lower rate for young bushes; increase to the higher rate for large, mature bushes. Spray to wet all foliage. DO NOT spray during hot, dry Summer periods. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Use of CDA equipment is not recommended.
Blackberry (<i>Rubus fruticosus</i>)	1-1.3L/100L	150- 200mL/15L	-	Apply from flowering to leaf fall (generally Jan-May). Plants should not be under stress of high temperature, drought or frost. Spray to wet all foliage. Use the higher rate on old, dense infestations over 2m high. Visible symptoms may not be fully apparent until the next season. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Use of CDA equipment is not recommended. In Tasmania, DO NOT treat bushes bearing mature fruit.
Crofton weed (<i>Eupatorium adenophorum</i>)	500mL/100L	75mL/15L	-	Apply to actively growing plants with full foliage. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment.

WEEDS	RATE			CRITICAL COMMENTS
	HANDGUN	KNAPSACK	LOW VOLUME Product:Water	
Gorse (Furze) (<i>Ulex europaeus</i>)	1L/100L plus Pulse® Penetrant 200mL/100L	-	-	Apply all year round, but only to actively growing plants. Always add Pulse® Penetrant, otherwise reduced results will occur. Spray to wet all foliage. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth.
Groundsel bush (<i>Baccharis halimifolia</i>)	700mL- 1L/100L	100mL- 150mL/15L	1:9	Apply to actively growing plants. DO NOT apply during Winter, nor during periods of Summer drought stress. Use the higher rate on bushes over 2m tall. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to control seedlings and/or regrowth. LOW VOLUME APPLICATION (eg. Splatter Gun and Gas Gun): Use 1:9 (10%) mixture of product:water. Apply 2x2mL dose per 0.5m bush height. Ensure spray contacts all foliage. Use of CDA equipment is not recommended.
Hawthorn (<i>Crataegus</i> spp.)	1-1.3L/100L	150- 200mL/15L	1:9	Apply to actively growing plants from flowering to leaf fall. Spray to wet all foliage. Use the higher rate on bushes over 2m tall. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. LOW VOLUME APPLICATION (eg. Splatter Gun and Gas Gun): Use 1:9 mixture of product:water. Apply 2x5mL dose per 0.5m bush height. Ensure spray contacts all foliage.
Lantana (<i>Lantana camara</i>)	1L/100L	150mL/15L	1:9	Apply to actively growing plants with full foliage. Ensure complete treatment of individual plants. DO NOT spray during periods of Summer drought stress. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. Addition of Pulse® Penetrant (200mL/100L) may improve control. LOW VOLUME APPLICATION (eg. Splatter Gun and Gas Gun): Use 1:9 (10%) mixture of product:water. Apply 2x2mL dose per 0.5m bush height. Ensure spray contacts all foliage. SPRINKLER SPRAYER: Apply 6mL of a 1:9 (10%) solution to every square meter of treated area. Use of CDA equipment is not recommended.
Mistflower (<i>Eupatorium riparium</i>)	500mL/100L	75mL/15L	1:9	Apply to actively growing plants with full foliage. Spray to wet all foliage. Further treatment and/or pasture improvement are recommended to restrict seedling re-establishment. SPRINKLER SPRAYER: Apply 3mL of a 1:9 (10%) solution to every square meter of treated area.
Sifton bush/Chinese scrub (<i>Cassinea arcuata</i>)	1L/100L or 1.3L/100L	150mL/15L or 200mL/15L	1:9	Apply when actively growing. Ensure complete coverage of the bush. Pasture improvement and/or re-treatment is recommended to control seedlings and/or regrowth. HIGH VOLUME: Use the higher rate on bushes over 1m. LOW VOLUME: Apply 40mL per 0.5m height. WIPER APPLICATION: Double pass application is required. Application is best made to small (less than 1m) green bushes.
Sweet briar (<i>Rosa rubiginosa</i>)	1.5-2L/100L	225- 300mL/15L	1:9	Apply to actively growing plants from late flowering to leaf fall. Spray to wet all foliage. Use the higher rate on bushes over 1.5m high. Burning (after complete brownout), pasture improvement and/or further treatment are recommended to control seedlings and/or regrowth. LOW VOLUME APPLICATION: (eg. Splatter Gun and Gas Gun): Use 1:9 (10%) mixture of product:water. Apply 2x5mL dose per 0.5m bush height. Ensure spray contacts all foliage.

5. PASTURES, FORESTS, COMMERCIAL AND INDUSTRIAL AREAS, RIGHTS OF WAY, DOMESTIC AND PUBLIC SERVICE AREAS: MIXES WITH ASSOCIATE®

ALL STATES

PLANTING INTERVAL: 1 DAY PER GRAM ASSOCIATE A MINIMUM BEFORE PLANTING

SITUATION	WEEDS CONTROLLED	RATE – AERIAL OR BOOM	RATE – HANDGUN OR KNAPSACK	CRITICAL COMMENTS
Pastures and Forests. Planting interval: wait a minimum of 1 day per gram Associate before planting.	Blackberry (<i>Rubus</i> spp.) Volunteer pine wildings (suppression only)	8L weedmaster® DUO plus 60g Associate per ha	400mL Roundup/ weedmaster DUO plus 3g Associate per 100L water	For Blackberries, apply from flowering until prior to leaf yellowing. Due to widespread picking of Blackberries by the public, it is not recommended that the product be applied to bushes bearing mature fruit. Use Pulse Penetrant at the rate of 500mL per 100L water. Application to Pine wildings less than 50cm in height should be controlled when actively growing.
	Coppice control (<i>Eucalyptus globulus</i>)	8L weedmaster® DUO plus 60g Associate per ha		Use Pulse Penetrant at the rate of 500mL per 100L water. For coppice control, apply using a minimum 400L/ha using a double pass application method to coppice up to a maximum 1.5m in height. Target every stem separately. DO NOT disturb for 6 weeks to allow maximum translocation.
	Bracken (<i>Pteridium esculentum</i>)	4L weedmaster® DUO plus 30g Associate® per ha		For Bracken, apply when fronds are fully unfurled but prior to first frosts. For boom application, refer to Boom application section. Use Pulse Penetrant at the rate of 500mL per 100L of water. DO NOT disturb Bracken for minimum 6 weeks after application.
Commercial and Industrial areas, Rights of way, Domestic and public service areas				Use Pulse® Penetrant at the rate of 500mL per 100L of water.
DO NOT USE ON ALKALINE SOILS	Fog grass (<i>Holcuslanatus</i>) Gorse (<i>Ulex europaeus</i>), Lantana (<i>Lantana camara</i>), St John's wort (<i>Hypericum perforatum</i>), Sorrel (<i>Rumex acetosella</i>) Sweet briar (<i>Rosa rubiginosa</i>) Topped lavender (<i>Lavandula stoechas</i>)	4L weedmaster® DUO plus 30g Associate® per ha		For Gorse, apply when actively growing at any time of year, except Spring. For Lantana, apply when actively growing. DO NOT apply during periods of Summer drought stress. For St John's wort, apply when actively growing from Spring to Summer. For Sweet briar, apply when in full leaf, prior to leaf fall. For Topped lavender, Fog grass and Sorrel, apply when actively growing. For Sorrel apply 10-30g when actively growing. DO NOT apply during periods of Summer drought stress.

6. UNWANTED TREE CONTROL

– ensure trees are actively growing at time of treatment and not under stress of drought, waterlogging or cold.

METHOD	SPECIES CONTROLLED	TREE SIZE	MIXTURE (BY VOL.) Product:Water	CRITICAL COMMENTS
Cut Stump	Jarrah (<i>Eucalyptus marginata</i>), Longleaf box (<i>E. goniocalyx</i>), Marri (<i>E. calophylla</i>), Messmate stringybark (<i>E. obliqua</i>), Narrowleaf peppermint (<i>E. radiata</i>)	0-10cm basal diameter	1:15	Dilute with water in the recommended ratio. Cut tree close to ground and immediately wet stump surface thoroughly using Splatter Gun, spray, swab or bush. Remove any branches on the stump and treat any cut surface.
	Privet (<i>Ligustrum</i> spp.), Rhus (<i>Toxicodendron succedaneum</i>)	0-30cm basal diameter	1:1	
Foliar Application: Low Volume (Gas Gun or Splatter Gun)	Bullich (<i>Eucalyptus megacarpa</i>), Marri (<i>E. calophylla</i>), Jarrah (<i>E. marginata</i>)	0-1.5m height	1:15 Add Pulse® Penetrant at 20mL/10L spray mixture	Dilute in the recommended ratio. Calibrate Splatter Gun to apply 5mL of solution per dose, as a fine spray. Apply 5mL per 0.5m tree height. Ensure spray contacts all foliage.
	<i>Eucalyptus</i> spp.	0-1.5m height	1:5 Add Pulse® Penetrant at 20mL/10L spray mixture	
Foliar Application: High Volume (Knapsack or Handgun)	<i>Eucalyptus</i> spp. Willows (<i>Salix babylonica</i>)	0-2m height	1L-1.3L per 100L For <i>Eucalyptus</i> spp. Add Pulse® Penetrant at 200mL/100L spray mixture	Spray to wet all foliage. Use the higher rate for trees 1 to 2m high.
Stem Injection	Flooded gum (<i>Eucalyptus grandis</i>), Ghost gum (<i>E. papuana</i>), Gum topped bloodwood (<i>E. dichromophloia</i>), Messmate stringybark (<i>E. obliqua</i>), Narrowleaf ironbark (<i>E. crebra</i>), Pink bloodwood (<i>E. intermedia</i>), Poplar box (<i>E. populnea</i>), Silverleaf ironbark (<i>E. melanophloia</i>), Silvertop ash (Ironbark) (<i>E. sieberi</i>), Spotted gum (<i>E. maculata</i>), Swamp mahogany (<i>Tristania suaveolens</i>), White mahogany (<i>E. acmenoides</i>), Willows (<i>Salix babylonica</i>), Privet (<i>Ligustrum</i> spp.) Rhus (<i>Toxicodendron succedaneum</i>)	0-25cm basal diameter	Undiluted 1mL/cut	Use an applicator calibrated to deliver 1 or 2mL per cut. Make 5cm cuts at an oblique angle to penetrate the sapwood beneath the bark. Space cuts at 13cm centers around tree circumference below any branching, otherwise remove or treat all branches below cuts. On multiple trunk trees ensure each trunk is treated.
		Over 25-60cm basal diameter	Undiluted 2mL/cut	
		Camphor laurel (<i>Cinnamomum camphora</i>)	Basal diameter to 25cm	
		Basal diameter over 25-60cm	Undiluted 2mL/cut	

7. AQUATIC WEED CONTROL

SITUATION	WEEDS	CRITICAL COMMENTS
AQUATIC AREAS For the control of emerged weeds in all bodies of fresh and brackish water which may be flowing, non-flowing or transient. Also for weeds on margins of streams, lakes and dams and in channels and drains	For specific rates of application refer to the Aquatic Weeds Table below.	Reduction in effectiveness may result if more than 1/4 of the above ground portion of the weed is submerged at treatment. Submerging the treated plants following treatment may result in the spray being washed from the plant surface, thus reducing effectiveness. DO NOT apply this product within 0.5km up-stream of potable water intake in flowing water (ie river or stream, etc) or within 0.5km of a potable water intake in a standing body of water such as a lake, pond or reservoir. Applications to moving bodies of water should be made while travelling upstream wherever possible to prevent concentration of this herbicide in water. When making any bankside applications, DO NOT overspray more than 0.5m into open water. Avoid spraying across moving bodies of water, or where weeds do not exist. When spraying floating weeds, use a low volume, low pressure boom sprayer, CDA or sprinkler sprayer. DO NOT submerge the weeds when spraying as this may wash the herbicide off the leaves. When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid sudden impact on habitat.

AQUATIC WEEDS TABLE

WEEDS	RATE			CRITICAL COMMENTS DO NOT add extra Surfactant/Wetter unless it is approved for use in aquatic situations.
	BOOM	HANDGUN	KNAPSACK	
Alligator weed	-	1L/100L	150mL/15L	Apply when actively growing, from Summer through Winter. Floating form only.
Cumbungi (<i>Typha</i> spp.)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants at the early head to full head stage (Summer-Autumn). Re-treatment may be required to restrict seedling re-establishment. Application by wiper equipment is recommended (not Tasmania). Refer WIPER EQUIPMENT section.
Paragrass (<i>Brachiara mutica</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants when most have reached the early head stage.
Phragmites, Common reed (<i>Phragmites australis</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing, fully developed plants approaching the early head stage. Visible symptoms of control may be slow to develop and may not be fully apparent until the next season. For application by wiper equipment refer to WIPER EQUIPMENT section.
Rushes (<i>Juncus</i> spp.)	-	-	-	Apply by wiper equipment to actively growing plants. Where there is a large proportion of dead foliage, pre-slashing is recommended. Allow adequate regrowth before treatment. Refer WIPER EQUIPMENT section for application instruction.

WEEDS	RATE			CRITICAL COMMENTS
	BOOM	HANDGUN	KNAPSACK	
Sedge, tall (<i>Carex appressa</i>)	2L or 4L/ha	500mL/100L or 1L/100L	75mL/15L or 150mL/15L	Apply to actively growing plants in flowering to post-flowering period (Oct-Apr). Use the lower rate only if the stand has been slashed prior to treatment. Re-treatment may be necessary. Visible symptoms may not be fully apparent for up to 3 months. Use of CDA equipment is not recommended.
Water couch (<i>Paspalum distichum</i>)	9L/ha	1.3L/100L	200mL/15L	Apply to actively growing plants in late Summer-Autumn (February-March). DO NOT treat after March because of the onset of Winter dormancy. Full results may not be visible until the following Spring. Not more than 1/4 of the weed should be submerged at the time of treatment.
Water hyacinth	6-9L/ha	1-1.3L/100L	150- 200/15L	Apply when actively growing and at or beyond the early bloom stage of growth. Use the higher rate on dense infestations.
Water lettuce	-	1-1.3L/100L	150mL- 200mL/15L	Best results are obtained from mid-Summer through to Winter. Use the higher rate on dense infestations.
Waterlily, yellow	6L/ha	1L/100L	150mL/15L	Apply when there is a maximum emergence of floating leaves. Allow 2-3 weeks for symptoms to develop, then retreat any unaffected plants. Use low volume sprayer. Refer to Table 6: Aquatic Weed Control.

8. GENERAL USES

– For home garden uses refer to Table 1 "GENERAL WEED CONTROL"

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
NON-AGRICULTURAL AREAS: Around buildings Commercial and Industrial areas, Domestic and public service areas, Rights of way Agricultural Areas	For specific rates of application refer Table 2. ANNUAL WEED CONTROL. Table 3. PERENNIAL WEED CONTROL.		This product does not provide residual weed control. For residual control of ANNUAL WEEDS only, this product may be used as a tank mixture with certain residual herbicides. Refer to Tank Mixtures.
Forests			This product may be used for control of annual and perennial weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop but not prior to transplanting tomato seedlings. For specific recommendations refer Table 9. CONSERVATION TILLAGE.
Pasture			This product 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.
			DIRECTED (SPOT) APPLICATION: This product is non-selective and may damage or kill any plant in the sprayed area. Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment. SELECTIVE, WIPER APPLICATION: refer WIPER EQUIPMENT. BOOM APPLICATION: This product may be used to suppress or kill existing pasture species prior to re-seeding, or establishment of other crops. Refer to 9. CONSERVATION TILLAGE. Where spot application (spray or wiper) is undertaken, grazing stock need not be removed. CAUTION: Certain plants may be naturally toxic to stock. Where known toxic plants are present DO NOT allow stock to graze until complete browning of treated plants has occurred.
PEANUTS, COTTON, SOYBEANS, SUGARCANE, NAVY BEANS & CHICKPEAS (using selective application equipment)	For specific rates of application refer Table 2. ANNUAL WEED CONTROL. Table 3. PERENNIAL WEED CONTROL.	Refer WIPER EQUIPMENT	Application by WIPER EQUIPMENT ONLY. Apply to weeds growing between crop rows or to weeds growing at least 15cm above the crop. DO NOT allow wiper to contact crop and ensure operating conditions do not allow solution to drip from applicator since severe injury may result. Refer to WIPER EQUIPMENT for application instructions. SHIELDED SPRAYERS (Cotton only). Apply to weeds growing between crop rows using a shielded sprayer. Refer to the Weeds Controlled tables for rates of application. DO NOT apply in crops less than 20cm high. DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury or destruction may result.
TREE AND VINE CROPS: Avocado, Banana, Blueberries, Citrus fruit, Custard apples, Duboisia, Figs dessert, Guava, Kiwifruit, Litchi, Mango, Monstera fruit, Nuts (including: almond, pecan, macadamia, pistachio, walnut), Olive, Pawpaw, Persimmons, Pome fruit, Raspberries, Stone fruit, Tea, Vineyards.	For specific rates of application refer Table 2. ANNUAL WEED CONTROL. Table 3. PERENNIAL WEED CONTROL.		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, Litchi, Nuts, Olive, Pome fruit, Vineyards: DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. Tea: Apply a maximum of 4L/ha by shielded boom or directed off-centre nozzle or 0.5L/100L 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 tree, vine or palm, including the trunk. CAUTION: Where split bark on Kiwifruit and green stems on pawpaw occur, extreme care is required. For residual control of annual weeds this product may be tank mixed with compatible herbicides which are labeled for use in the above crops. See Tank Mixtures for Directions.
ONIONS: Post-plant, pre-emergence application	Control of annual weeds & suppression of perennial weeds (including Rope Twitch)	1-3L/ha	Apply post-sowing and at least 7 days before crop is due to emerge. DO NOT apply to emerging onion plants as severe injury will result. Use the lower rate on small, actively growing annual weeds. Increase to the higher rate for larger annual weeds (over 15cm tall) and for suppression of perennial weeds.
SUGAR CANE Ratoon Spray out	Sugar cane ratoon regrowth	6-9L/ha	APPLY UNDER GOOD GROWING CONDITIONS ONLY to actively growing ratoons 60-120cm tall. DO NOT apply if plants are under stress of low moisture or water logging. RATE SELECTION: Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
COTTON PRE-HARVEST DO NOT use on crops intended for seed production.	Bathurst burr, Noogoora burr, Winter annual weeds including Sow thistle (Milk thistle) and seasonal suppression of Nutgrass.	2.5L/ha (for Nutgrass), 1.25-2.5L/ha (for the other weeds).	DO NOT APPLY TO CROPS INTENDED FOR SEED PRODUCTION. Apply alone or in tank mixtures with Dropp* or Harvade*. Apply when at least 60% of bolls are open and immature bolls cannot be easily cut with a sharp knife. Where a leafy crop canopy limits spray coverage, reduced weed control can be expected. For best results under these conditions, delay application until canopy re-opens following initial conditioning treatment. 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. RATE: Apply 2.5L/ha for Nutgrass control and 1.25-2.5L/ha for the other weeds. Use the lower rate on light infestations of small weeds, when 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.

9. CONSERVATION TILLAGE

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
SOUTHERN AUSTRALIA PRIOR TO SOWING A WINTER CROP OR PASTURE For weed control prior to disturbance with a cultivation or sowing with a tyned implement.	Barley grass, Brome grass, Volunteer cereals, Wild oats	500mL-1L/ha pre tillering, 1-1.25L/ha 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 to 6-8cm before spraying and use the higher rate. RATE SELECTION – Increase to HIGHER rates late in the season or when treating under cold/overcast conditions. FULL DISTURBANCE – With a cultivation or sowing with a tyned implement may start 1 day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob or Sorrel are present) and should occur within 21 days after treatment. Where cultivation or sowing does not occur within 21 days, new weed growth may require further treatment. CROP ESTABLISHMENT – Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions. TANK MIXTURES – (Glean*/Lusta®, Kamba® 500 (dicamba), Simazine, Atrazine Hi-Load 600, Estericide® Xtra 680 and insecticides). For improved control of clover add Kamba® 500 (dicamba). Read and follow all label directions, restraints, plant-back periods, withholding periods 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. TASMANIA only – Use 1.5L/ha on annual weeds. Increase to 3L/ha where perennial weeds are being treated. Added surfactant is recommended at all spray volumes. To control Clover and improve control of Sorrel and Dock, add 400mL/ha Kamba® 500 (dicamba). Observe Kamba® 500 label directions and plant-back periods.
	Annual phalaris, Annual ryegrass, Silver grass, Winter grass.	1-1.25L/ha pre tillering 1.25-1.5L/ha post tillering	
	Capeweed, Double gee (Spiny emex)	500mL-1L/ha less than 8cm diameter, 1-1.25L/ha greater than 8cm diameter	
	Amsinckia, Fumitory, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupins, Wild turnip	1-1.25L/ha less than 12cm diameter, 1.25-1.5L/ha greater than 12cm diameter	
	Dock (seedling)	1-1.5L/ha	
	Perennial phalaris, Sorrel, Sub. clover, Soursob, Skeleton weed fully emerged rosettes (NSW only)	1.5L/ha	
SOUTHERN AUSTRALIA LATE WINTER – SPRING TREATMENT For weed control to start a fallow or prior to sowing a Summer crop	Barley grass, Volunteer cereals, Wild oats	1-1.5L/ha	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying. RATE SELECTION – Use lower rates on young weeds or where cultivation is to follow within 21 days, increasing to the high rates where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. RYEGRASS – Add Wetter TX at 200mL/100L of spray solution. HOARY CRESS – Treat from late-rosette to early flowering. SOURSOB – Treat at tuber exhaustion. TANK MIXTURES – (Glean*/Lusta®, Kamba® 500 (dicamba), Estericide® Xtra 680 and insecticides). Read and follow all label directions, restraints, plant-back periods, withholding periods and safety directions for the tank mix products. See TANK MIXTURES for directions.
	Annual ryegrass, Brome grass, Silver grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.5-2L/ha	
	Hoary cress, Soursob	1.5L/ha	
NORTHERN AUSTRALIA For weed control in fallows or prior to sowing Winter or Summer crops	Annual phalaris, Barley grass, Volunteer cereals, Wild oats	500mL-1L/h	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying. Note that Barnyard grass and Liverseed grass (<i>Urochloa</i>) are particularly prone to moisture stress. RATE SELECTION – Use lower rate on the young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. At more advanced stages of growth certain broadleaf weeds require a higher rate range or the addition of Estericide Xtra 680. CROP ESTABLISHMENT – Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See CROP ESTABLISHMENT. TANK MIXTURES – (Glean*/Lusta®, Kamba® 500 (dicamba), Simazine, Atrazine Hi-Load 600, Estericide® Xtra 680 and insecticides). Read and follow all label directions, restraints, plant-back periods, withholding periods and safety directions for the tank mix products. See TANK MIXTURES. AERIAL APPLICATION – For instructions on aerial application under Summer conditions. See Aerial Equipment. DO NOT apply by aircraft when temperature is above 35°C. After stem elongation/ budding use 500mL-1.5L weedmaster® DUO plus 580-800mL Estericide® Xtra 680 or 1.5L weedmaster® DUO alone.
	Barnyard grass, Liverseed grass, Stinkgrass (Lovegrass), Sweet Summer grass, Volunteer sorghum	1-1.5L/ha	
	Amaranth, Australian bluebell (Qld only), Cudweed, Fumitory, Mexican poppy, Mintweed, New Zealand spinach, Noogoora burr, Saffron thistle, Spear thistle, Spurge, Stinking goosefoot, Variegated thistle, Volunteer sunflower, Yellowvine (Caltrop)	1-1.5L/ha	
Annual ground cherry (Goosefoot), Camel melon, Bladder ketmia, Sowthistle (Milk thistle), Turnip weed, Wild lettuce, Wild turnip	1-1.5L/ha prior to stem elongation		

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
POA TUSSOCK INFESTED PASTURE For reduction of ground cover allowing pasture renovation	Most annual weeds and suppression of Poa tussock (<i>Poa labillardieri</i>)	3-4L/ha	TIMING – Graze heavily and then remove stock at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the Autumn break but before heavy frosts (March- May). APPLICATION – Increasing to the higher rate may give more effective reductions. If aerial spraying, see AERIAL EQUIPMENT. FOLLOW-UP MANAGEMENT – Sowing may start from 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestation
BENT GRASS INFESTED PASTURE For control/ suppression prior to establishing crops or improved pasture species	Most annual weeds and Bent grass (<i>Agrostis tenuis</i>)	2.5L/ha	TIMING – Apply to actively growing plants in late Spring when they have some seedhead development, but before Summer moisture stress. Remove stock to ensure there is full leaf growth. FOLLOW-UP MANAGEMENT – Full disturbance with a tyned implement should follow 10-21 days after spraying. Then follow with a Summer crop, and/or re-seeded pasture or crop the following Autumn.
PASTURE TOPPING For annual grass and Capeweed seed-set reduction	Barley grass, Brome grass, Silver grass, Capeweed	300-450mL/ha	Remove stock prior to treatment to allow even regrowth. Apply to Capeweed and Annual ryegrass at FLOWERING. For other grasses, apply from HEAD TO MILKY DOUGH stage. Use the higher rate for dense infestations or where Annual ryegrass is present. Apply before signs of plants "haying off". Reduction in pasture legume population may occur as a result of treatment. DO NOT apply to clover medic crops intended for seed or hay. Application in water volumes of 50L/ha or less is preferred. Where water volumes exceed 50L/ha add LI700 at 250mL/100L spray solution.
	Annual ryegrass	450mL/ha	
PASTURE MANIPULATION For suppression or control of pasture species prior to drilling forage species or soybeans	Carpet grass, Kikuyu, Paspalum	1.4-6L/ha	RATE SELECTION – For suppression, apply the low rate. Where complete control is required apply up to the high rate. QLD only: Use 700mL-6L/ha on Kikuyu
SORGHUM CONTROL pre-harvest	Sorghum (Grain sorghum) (<i>Sorghum bicolor</i>) DO NOT apply to varieties intended for seed production or varieties prone to lodging.	1.5 or 2L/ha	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. RATE SELECTION – Use the lower rate for control of crop and late tillers and suppression of ratoon regrowth. Use the higher rate for improved suppression of ratoon growth. TIMING – Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred. CAUTION – Treatment may increase potential for crop lodging, particularly if poor moisture stress has occurred. Harvest as soon as sufficient dry down has occurred to avoid possible lodging. CAUTION – Sorghum may be naturally toxic to stock.
SORGHUM CONTROL post-harvest	Sorghum stubble (Grain Sorghum) (<i>Sorghum bicolor</i>)	1-1.5L/ha for fresh regrowth from slashed stubble 1.5-2L/ha for standing stubble if sufficiently green 1-1.5L/ha for fresh Spring regrowth	APPLY UNDER GOOD GROWING CONDITIONS ONLY. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. SLASHED STUBBLE & SPRING REGROWTH – Apply when fresh regrowth is at least 20cm high. STANDING STUBBLE – Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20cm before treatment. RATE SELECTION – Use the lower rate for knockdown and regrowth suppression where cultivation is to follow, increase to the higher rate for improved regrowth control. NOTE – Variable results occur where the crop has been subject to stress or growing conditions are marginal. Some varieties, particularly Goldrush 2, Ruby, Trump, Prize and Nugget 2, give variable results if they have not grown under ideal conditions CAUTION – Sorghum may be naturally toxic to stock.
RICE Direct Drilling	Annual phalaris (Canary grass), Annual ryegrass, Barley grass, Burr medic, Sub. clover, Winter grass	1-1.3L/ha	This product is less effective on drought stressed plants. In drought conditions a pre-watering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred, allow regrowth to 6-8cm before spraying. RYEGRASS – Add Chemwet 1000 at 200mL/100L of spray solution and, where dominant, use the higher rate. SOWING – Direct drilling may take place 1-14 days after spraying. This product does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continuing control of weeds.

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

10. GENERAL INSTRUCTIONS

This product is a non-volatile, water soluble liquid with non-selective herbicidal activity against many annual and perennial broadleaf weeds and grasses. This product may be used for weed control in agricultural land prior to sowing any edible or non-edible crop, but not prior to transplanting tomato seedlings. This product is absorbed by plant foliage and green stems. It is inactivated immediately in the soil and does not provide residual weed control. This product moves through the plant from the point of contact and into the root system. Visible effects on annual weeds take 3-7 days, but on perennial weeds may not be obvious for 2-3 weeks or longer in some cases.

Visible effects of control may be delayed by cool or cloudy weather at and following treatment. Visible effects are a gradual yellowing and wilting of the plant which advances to complete browning of above ground growth and deterioration of underground plant parts. Delay application until vegetation has emerged to the stages described in the "Weeds Controlled" tables. Unemerged parts arising from attached underground rhizomes or root stocks of perennials will not be affected by spray and will continue to grow. For this reason best control of most perennial weeds is obtained at late growth stages approaching maturity.

11. CROP ESTABLISHMENT

This product is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to provide seedbed conditions satisfactory for crop germination and development.

Spraying early to control young weeds will favour preparation of suitable seedbeds. On friable soils and where there is only light cover of young weeds, sowing may proceed satisfactorily from one day after spraying.

In situations of heavy weed growth sowing should be delayed until weed decay and soil conditions allow formation of a satisfactory seedbed. Incorporation of green or decaying vegetation and roots into seedbed by cultivation or sowing may cause retarded crop emergence, particularly in cold and/or wet conditions. Vegetation may be reduced by grazing, and weed decay may be assisted by cultivation to leave trash on the surface. In marginal seedbed conditions take care to achieve correct seeding depth, and avoid use of pre-emergence herbicides where label directions advise risk of retarded crop emergence.

12. MIXING INSTRUCTIONS

This product mixes readily with water. Reduced results may occur if water containing soil is used, eg. water from ponds and unlined ditches, or if hard water containing calcium salts is used. Ensure the spray tank is free of any residue of previous spray materials.

Fill the spray tank with one half the required amount of clean water and add the proper amount of this product. Mix well before adding the remaining portion of water. Placing the filling hose below the surface of the spray solution will prevent excessive foaming. Removing hose from tank immediately after filling will prevent back siphoning into water source. DO NOT use mechanical agitators as these may cause excessive foaming.

For mixing instructions for tank mixes, see **Tank Mixtures**

13. TANK MIXTURES

This product may be tank-mixed with the following herbicides, insecticides and additives where recommended. Read and follow all label directions, restraints, plant-back periods, withholding periods and safety directions for the tank mix products.

14. INSTRUCTIONS FOR THE MIXING OF ADDITIONAL PRODUCTS

1. Fill the spray tank 1/3 to 1/2 full with clean water and start agitation.
2. Add recommended herbicide/ insecticide/ additive to the spray tank and mix thoroughly.
3. Where ammonium sulphate is recommended, add Liase at a rate of 2L/100L spray solution and mix thoroughly.
4. Add weedmaster® DUO 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.

15. TANK MIXTURES - HERBICIDES

Atrazine Hi-Load 600[‡] and 900DF (DO NOT apply the tank mix for Barnyard grass control), Estericide® Xtra 680, Grunt® WDG 750* (ensure mixture includes Liase first), Kamba® 500 (dicamba), Glean*/Lusta®, Simazine flowable[‡] and 900DF, Oust*, Yield*, Rifle® 440, Stomp* 330 (pendimethalin), Nufarm Surpass®, Ally*/Associate®, Logran*/ Nugran, Flandor* 500, LVE MCPA and Striker®.

The addition of Striker at 75mL/ha to recommended rates of weedmaster® DUO prior to planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visible signs of phytotoxicity. Mixture requires a specific compatibility agent. Seek advice.

[‡]Add ammonium sulphate as per directions below.

16. TANK MIXTURE - ADDITIVES

Ammonium Sulphate: Add Liase to water first at a rate of 2L/100L spray solution. (DO NOT apply the tank mix for Barnyard grass control).

The use of Liase with weedmaster® DUO, when used to control ANNUAL weeds, MAY improve the performance of weedmaster® DUO under adverse environmental conditions such as cool, cloudy weather, and assist in minimising the antagonism in tank mixes of weedmaster® DUO and Flowable triazine herbicides, as well as Grunt 750 WDG.

Liase may be corrosive to metal parts of the sprayer. Thoroughly flush tanks, pumps and nozzles with water after use.

Pulse® Penetrant – RATE: 500mL/100L spray solution. Add when treating Bracken (boom application), Gorse, Eucalypt suckers, Coppice and Lantana.

17. TANK MIXTURES - INSECTICIDES

This product is compatible with the following insecticides: Dimethoate, Fenitrothion 1000, Imidan*, Le-Mat*/Comrad®, Lorsban* 500, Metasystox*, Perfekthion* EC400, ULV, and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

18. APPLICATION INFORMATION

This product is a non-selective translocated herbicide. Direct spray contact, or even slight drift, may cause severe injury or destruction of any growing crop or other desirable plants including trees. Clean all equipment after use by thoroughly washing with water.

BOOM EQUIPMENT

Use recommended rates of this product in 75-200L of clean water per hectare. When using this product at 500mL-1.5L/ha (eg. in conservation tillage) spray volumes in the range 25-100L/ha are preferred. Fan nozzle equipment is recommended, using pressures in the range 240-280kPa. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

HIGH VOLUME APPLICATION (eg. Knapsack and Handgun Equipment)

Adjust equipment to achieve an even spray pattern; for handgun equipment a D6 spray tip (Spraying Systems Australia P/L) or equivalent, and an operating pressure of 400-700kPa are recommended. Apply to ensure complete and uniform wetting of all foliage.

LOW VOLUME APPLICATION (eg. Gas Gun or Splatter Gun)

Apply as an even spray to cover all foliage. Refer to Weeds Controlled for the dilution and volume of mixture to be applied. The dilution is specific as "Low volume mixture, Product:Water". For example, a 1:9 mixture equals one part product plus 9 parts water.

WIPER EQUIPMENT

Wiper equipment (eg. ropewick, canvas, felt or carpet applicators) may be used to apply this product on to weeds growing in oilseed crops, sugarcane, cotton, seed and pod vegetables and tree and vine crops specified in this label, and in pasture and non-crop areas. Avoid contact with desirable vegetation. Operate wiper equipment a minimum of 10cm above the crop or pasture. Weeds should be at least 15cm above the crop or pasture at time of application. Speed of travel should be no greater than 8km/h. Best results are achieved at lower speeds and where two applications are made in opposite directions (double pass). Where weeds are of variable height, or occur in dense infestations or clumps, some plants may not be contacted by the herbicide solution. In these cases repeat treatment may be necessary. Mix only enough herbicide solution for immediate requirements. DO NOT store mixed solution for more than a few days. Flush out equipment with water after use.

RATE: Mix 1L of this product with 2L clean water to prepare 33% solution. This product may be used according to the above directions for suppression or control of many annual and perennial weeds. See **Weeds Controlled** tables for specific use recommendations.

CONTROLLED DROPLET APPLICATION EQUIPMENT (CDA)

Use the following table as a guide for achieving correct application rates using the micron *Herbi or similar equipment. See **Weeds Controlled** tables for specific rates and use recommendations.

Rate of weedmaster DUO delivered at 1m/sec	3L/ha	6L/ha	9L/ha
Mixture (by volume) Wedmaster: water	1:3	1:1	2:1
Micron Herbi* nozzle	blue	blue	yellow

For hand held equipment a walking speed of approximately 1m/sec. (4km/h) is recommended.

*Trade Mark of Micron Sprayers Ltd, UK.

DO NOT add oils to weedmaster® DUO/ water mixture, otherwise difficulty in application and reduced weed control may occur.

CAUTION: CDA equipment produces a fine spray pattern which is not easily visible. Ensure that the spray pattern or drift does not contact foliage or any other green tissue of desirable plants, since severe injury or destruction may result.

Aerial equipment Aerial equipment may be used to apply this product only in pasture or fallow situations prior to establishment of field crops, fodder crops, or new pasture, and for pre-harvest application to sorghum crops. DO NOT use in intensive horticultural cropping areas. Use recommended rates specified in this label up to a maximum limit of 4L/ha. When applying this product by helicopter in combination with Associate® for control of Blackberry in forestry and other specific situations, the higher rate of weedmaster® DUO may be applied. Please refer to the Associate® label for specific recommendations. For Micronair and boom equipment, apply in a minimum spray volume of at least 20L/ha. Droplets with an average size (or VMD) of 250-350 micron diameter are recommended. Swath width should be 15-17m.

Thoroughly wash aircraft especially landing gear after each day of spraying to remove herbicide residues.

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

Application under Summer conditions: High temperatures and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When temperature reaches 25°C, increase water volume by at least 30L/ha, & increase droplet size to at least 300 micron VMD. DO NOT apply this product by aircraft when temperature is above 30°C.

Avoid Drift: DO NOT use when breeze is blowing toward nearby desirable plants. DO NOT use with spraying equipment or under meteorological conditions which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures. Equipment settings which produce fine droplets (150 microns or less), winds over 8km/h, inversion conditions, still air and hot dry days all contribute to drift.

19. APPLICATION CHECKLIST

- DO NOT treat weeds under poor growing or dormant conditions (such as occur in drought, waterlogging, disease, insect damage or following frosts) as reduced weed control may result. Reduced efficacy may also occur when treating weeds heavily covered with dust or silt.
- DO NOT add additional surfactant, or mix with any other agricultural chemicals, herbicide oils, or any other materials except as specifically directed on this label.
- Rainfall occurring up to 6 hours after application may reduce effectiveness. Heavy rainfall within 2 hours after application may wash the chemical off the foliage & a repeat treatment may be required.
- DO NOT disturb treated weeds by cultivation, sowing or grazing for one day after treatment of annual weeds and 7 days for perennial weeds, to ensure herbicide absorption.
- A Withholding Period for grazing stock is not required. However, it is recommended that grazing of treated plants be delayed (as recommended above) to ensure herbicide absorption. Certain plants such as, Soursob, St John's Wort & Bracken, may be naturally toxic to stock. Where known toxic plants are present, grazing should be delayed until complete browning of treated plants has occurred.
- The addition of non-ionic surfactant is recommended at a rate of 100mL of a 600g/L product (or equivalent) per 100L spray solution.
- Delay treatment of plants wet with dew or rain if water droplets run-off when plants are disturbed.

20. EQUIPMENT MAINTENANCE & USAGE

Spray solutions of this product should be mixed, stored & applied only in stainless steel, aluminium, brass, copper, fibreglass or plastic or plastic-lined containers. This product or spray solutions of this product, react with galvanised steel or unlined steel (except stainless steel) containers and tanks, to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture can flash or explode if ignited by open flame spark, welder's torch or other ignition source. Spray tank, pumps, lines & nozzles should be thoroughly rinsed with clean water following application to prevent extensive corrosion. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

21. RESISTANT WEEDS WARNING

GROUP	M	HERBICIDE
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Nufarm weedmaster® DUO Dual Salt Technology Herbicide ("weedmaster® DUO") is a member of the Glycines group of herbicides. weedmaster® DUO has the inhibitors of EPSP synthase mode of action. For weed resistance management weedmaster® DUO is a Group M herbicide. Some naturally-occurring weed biotypes resistant to weedmaster® DUO and other Group M herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by weedmaster® DUO or other Group M herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of weedmaster® DUO to control resistant weeds.

22. PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since severe injury or destruction may result.

Drift Warning: DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

23. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

24. STORAGE AND DISPOSAL

(1L, 5L, 10L, 20L, 200L)

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

Envirodrum 110L Mini Bulk Returnable Container

Store the original sealed Envirodrum in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any other foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase. The Envirodrum remains the property of Nufarm Australia Limited.

Refillable Container (400L, 800L 1000L)

Store in the closed, original container in a dry, cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

25. SAFETY DIRECTIONS

Product will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use, wear elbow-length PVC gloves and face shield or goggles. When using controlled droplet applicator wear protective waterproof clothing and impervious footwear. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

26. FIRST AID

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

27. ADDITIONAL STATEMENTS (WHS REGULATIONS 2011)

Not required – Not classified as hazardous.

Glyphosate is classified as non-carcinogenic by many international regulatory agencies. In 2015, the International Agency for Research on Cancer (IARC) classified glyphosate as "probably carcinogenic to humans" (Group 2A). In maintaining their position that glyphosate is non-carcinogenic, the regulatory agencies have taken the IARC classification into account.

28. SAFETY DATA SHEET

For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or from the Nufarm website – www.nufarm.com.au

In case of emergency: Phone 1800 033 498 Ask for shift supervisor. Toll free 24 hours.

29. CONDITIONS OF SALE

"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

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