



Australian Pesticides &  
Veterinary Medicines Authority

Product Name: QA Paraquat/Diquat 250 SL Herbicide  
APVMA Approval No: 91135/149854

Label Name:	QA Paraquat/Diquat 250 SL Herbicide
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Signal Headings:	DANGEROUS POISON KEEP OUT OF REACH OF CHILDREN CAN KILL IF SWALLOWED DO NOT PUT IN DRINK BOTTLES KEEP LOCKED UP READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	115 g/L DIQUAT PRESENT AS DIQUAT DIBROMIDE 135 g/L PARAQUAT PRESENT AS PARAQUAT DICHLORIDE
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Mode of Action:	GROUP 22 HERBICIDE
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Statement of Claims:	For control of a wide range of grasses and broadleaf weeds. Can be utilised in crop establishment programs. Contains non-ionic wetter
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Net Contents:	10L - 1000L
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Restraints:	RESTRAINTS: DO NOT spray plants which are waterlogged, under stress of any kind or covered with soil or dust. DO NOT spray plants covered with heavy dew, but rain following spraying will not affect results. DO NOT sow or cultivate for 1 hour after spraying. For ground application only - DO NOT use through aircraft, misting machines or handheld ultra low volume-controlled droplet applicators (CDA units) or back mounted equipment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	FOR USE ONLY AS AN AGRICULTURAL HERBICIDE. THIS PRODUCT IS TOO HAZARDOUS TO BE USED IN THE HOME GARDEN
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Withholding Periods:	<b>WITHHOLDING PERIOD:</b> DO NOT GRAZE OR CUT SPRAYED VEGETATION FOR STOCK FOOD FOR AT LEAST 1 DAY OR GRAZE HORSES FOR 7 DAYS AFTER APPLICATION. REMOVE STOCK FROM TREATED AREAS 3 DAYS BEFORE SLAUGHTER. COTTON: DO NOT HARVEST EARLIER THAN 7 DAYS AFTER APPLICATION.
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<b>RESISTANT WEEDS WARNING GROUP 22 HERBICIDE</b>  QA Paraquat/Diquat 250 SL Herbicide is a member of the bipyridyls group of herbicides. QA Paraquat/Diquat 250 SL Herbicide has the inhibitors of photosynthesis at photosystem I mode of action. For weed resistance management QA Paraquat/Diquat 250 SL Herbicide is a Group 22 herbicide. Some naturally occurring weed biotypes resistant to QA Paraquat/Diquat 250 SL Herbicide and Group 22 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 QA Paraquat/Diquat 250 SL Herbicide or other Group 22 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Quantum Agrosciences Holdings Pty Ltd accepts no liability for any losses that may result from the failure of QA Paraquat/Diquat 250 SL Herbicide to control resistant weeds.
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Precautions:	
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Protections:	<b>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</b> DO NOT apply under weather conditions or from spraying equipment which may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.  <b>PROTECTION OF LIVESTOCK</b> Domestic pets and poultry - keep away from treated areas. Low hazard to bees. No special precautions are required. This formulation should not be applied on or near water which is used for livestock watering.  <b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b> DO NOT contaminate streams, rivers or waterways with the chemical or used containers. This formulation should not be applied on or near water which is used for human consumption, livestock watering or irrigation purposes or water used for commercial or recreational fishing.
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Storage and Disposal:	<b>STORAGE AND DISPOSAL</b>
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Store in the closed, original container in a dry, cool, well-ventilated, locked room or a place away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight. Triple-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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

#### STORAGE AND DISPOSAL (Refillable containers)

Store in the closed, original container in a dry, cool, well ventilated, locked room or a place away from children, animals, food, feedstuffs, seed and fertilisers. 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.

Safety Directions:	<p><b>SAFETY DIRECTIONS</b></p> <p>Very dangerous, particularly the concentrate. Product is poisonous if absorbed by skin contact, inhaled or swallowed. Will irritate the eyes, nose, throat and skin. Attacks eyes. Protect eyes while using. Avoid contact with eyes, skin and clothing. DO NOT inhale spray mist. When opening the container, preparing product for use and using the prepared spray, wear:</p> <ul style="list-style-type: none"><li>• cotton overalls buttoned to the neck and wrist,</li><li>• a washable hat,</li><li>• elbow-length PVC gloves,</li><li>• face shield or goggles and</li><li>• half face piece respirator or disposable respirator.</li></ul> <p>If clothing becomes contaminated with product, or wet with spray, remove contaminated clothing immediately. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Avoid contact with spray mist. DO NOT inhale spray mist. 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, respirator and if rubber wash with detergent and warm water, face shield or goggles and contaminated clothing.</p> <p><b>SPRAY APPLICATION</b></p> <ul style="list-style-type: none"><li>• DO NOT work in spray mist.</li><li>• DO NOT continue to use if skin irritation or nosebleed occurs. This may be caused by exposure to spray mist as the result of incorrect use of equipment or adverse climatic conditions. Stop and review handling and spraying techniques before further spraying. If symptoms persist, seek medical advice.</li><li>• When there is a risk of exposure to spray mist, wear waterproof footwear and waterproof protective clothing, impervious gauntlet length gloves (rubber or PVC), goggles and a face mask and respirator covering nose and mouth and capable of filtering spray droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirement of AS1716 (Standards Association of Australia). Further advice on safety equipment should be obtained from a safety equipment manufacturer.</li><li>• Avoid contacting vegetation wet with spray, but if necessary to do so, wear waterproof footwear and waterproof protective clothing and gloves.</li></ul>
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First Aid Instructions:	<p><b>FIRST AID</b></p> <p>If poisoning occurs, get to a doctor or hospital quickly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.</p>
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First Aid Warnings:	Note to Physicians
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For additional advice on the treatment of Paraquat poisoning, consult any available booklets on the treatment of Paraquat poisoning and contact Poisons Information Centre. Phone Australia 13 11 26.

**DIRECTIONS FOR USE:**

**SOUTHERN AUSTRALIA – FULL DISTURBANCE**

Crop /Situation	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
<b>SOUTHERN AUSTRALIA</b>  <b>DIRECT DRILLING with full combine or with cultivation before spraying or with cultivation after spraying as an aid in the establishment of crops including:</b>  <b>Winter</b> Canola, Chickpeas, Cereals (Wheat, Barley, Oats, Rye, Triticale), Field Beans, Field Peas, Lentils, Linseed, (Linola), Lupins, Vetch  <b>Spring/ Summer</b> Fodder Rape, Pigeon Peas, Safflower, Sorghum, Sunflower  <b>(Cont)</b> <b>Pasture</b> Clover Grass, Lucerne, Medic	<b><u>Seedling grasses</u></b>  Annual Ryegrass ( <i>Lolium rigidum</i> ), Barley Grass ( <i>Hordeum spp.</i> ), Brome Grass ( <i>Bromus spp.</i> ), Volunteer Cereals, Wild oats ( <i>Avena spp.</i> )	2 - 3 leaf	0.6 - 0.8	Sthn NSW, Vic, Tas, SA, WA only	<b>Refer to Crop Establishment Procedure (1)</b>  In WA apply after the autumn break within 4 weeks of weed germination. In the other States apply to young or well grazed weeds. In a typical mixed weed situation use the rate recommended for the growth stage of the hardest-to-kill weed species. Rates shown are for optimum conditions, for sowing equipment with wide points and overall soil disturbance. Under less favourable conditions or where spraying is delayed until winter or where narrow points are fitted or in higher rainfall areas, use higher rates in the range 1.2 to 2.4 L/ha. For dense mature swards over 2 months old or spring crops use rates up to 2.4 L/ha.
		4 leaf - early tiller	0.8 - 1.6		
		Mid - fully tillered	1.6 - 2.4		
	Vulpia (Silver Grass, Sand Fescue) ( <i>Vulpia spp.</i> )	2 - 3 leaf	0.6 - 0.8*		
		4 leaf - early tiller	0.8 - 1.6*		
		Mid - fully tillered	1.6 - 2.4*		
	<b><u>Seedling Brassica weeds</u></b>  Ball Mustard ( <i>Neslia paniculata</i> ), Muskweed ( <i>Myagrum perfoliatum</i> ), Shepherd's Purse ( <i>Capsella bursa-pastoris</i> ), Short Fruited Wild Turnip ( <i>Rapistrum rugosum</i> ), Ward's Weed ( <i>Carrichtera annua</i> ), Wild Radish ( <i>Raphanus raphanistrum</i> )	1 - 5 cm diameter	0.8 - 1.2		
		5 - 10 cm diameter	1.2 - 1.6		
		10 - 20 cm diameter	1.6 - 2.4		
	<b><u>Other seedling broadleaved weeds</u></b>  Bedstraw ( <i>Gallium tricornutum</i> ), Bifora ( <i>Bifora testiculata</i> ), Capeweed ( <i>Arctotheca calendula</i> ), Horehound ( <i>Marrubium vulgare</i> ), Ivy-leaf Speedwell ( <i>Veronica hederifolia</i> ), Lincoln Weed ( <i>Diplotaxis tenuifolia</i> ), Medic ( <i>Medicago spp.</i> ), Spiny Emex (Doublegee, Three Cornered Jack) ( <i>Emex australis</i> ), Stinging Nettle ( <i>Urtica urens</i> ), Storksbill (Wild Geranium Crowsfoot) ( <i>Erodium spp.</i> ), Sub Clover ( <i>Trifolium subterraneum</i> ), Vetch (tares) ( <i>Vicia spp.</i> ) Deadnettle	1 - 4 leaf or 1 - 4 cm diameter	0.8 - 1.2		
		4 - 8 leaf or 4 - 8 cm diameter	1.2 - 1.6		
		1 - 10 leaf or 1 - 10 cm diameter	0.8 - 1.2		

Crop /Situation	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
	( <i>Lamium amplexicaule</i> ), Fumitory ( <i>Fumaria spp.</i> ), Melilotus ( <i>Melilotus spp.</i> ), Pimpernel ( <i>Anagallis spp.</i> ), Poppy ( <i>Papaver spp.</i> ), Saffron Thistle ( <i>Carthamus lanatus</i> ), Sheepweed ( <i>Buglossoides arvensis</i> )				
	Paterson's Curse ( <i>Echium plantagineum</i> )	1 - 5 leaf	1.2 - 1.6		
	Wireweed ( <i>Polygonum aviculare</i> )	1 - 4 leaf	0.8 - 1.2		
	Marshmallow ( <i>Malva parviflora</i> )	1 to 12 leaf	0.8 to 1.2 L/ha + Diuron (500 g/SC) 75 mL/ha		
	Volunteer beans, peas & lupins	1 - 6 leaf	0.8 - 1.2 L/ha + Metsulfuron-methyl (600 g/kg) 5 g or 0.8 - 1.2 plus Dicamba 500 mL (200 g/L)		

## SOUTHERN AUSTRALIA-FALLOW/MINIMUM DISTURBANCE

Crop/ Situation	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
<b>SOUTHERN AUSTRALIA</b>  <b>DIRECT DRILLING</b> with minimum disturbance (disc drill, modified combine, sod seeder) or  <b>FALLOWS</b> cultivated or non-cultivated as an aid in establishing crops or Establishing and maintaining a fallow. Includes the following crops:  <b>Winter</b> Canola, Chickpeas, Cereals (Wheat, Barley, Oats, Rye, Triticale), Field Beans, Field Peas, Lentils, Linseed (Linola), Lupins, Vetch  <b>Spring/ Summer</b> Fodder Rape, Pigeon Peas, Safflower, Sorghum, Soybeans, Sunflower	<b>Seedling grasses</b> Annual Ryegrass ( <i>Lolium rigidum</i> ), Barley Grass ( <i>Hordeum spp</i> ), Brome Grass ( <i>Bromus spp</i> ), Volunteer Cereals, Wild oats ( <i>Avena spp</i> )	2 - 3 leaf	1.0 - 1.2	Sthn NSW, Vic, SA, WA, Tas only	<b>Refer to Crop Establishment Procedures (1), (6) or (7b) as appropriate to the particular situation</b> In WA apply after the autumn break within 4 weeks of weed germination. In the other States apply to young or well grazed weeds. In a typical mixed weed situation use the rate recommended for the growth stage of the hardest-to-kill weed species. Rates shown are for optimum conditions and for sowing equipment with wide points and overall soil disturbance. Under less favourable conditions or where spraying is delayed until Winter or in higher rainfall areas or for weed fallow control, use higher rates in the range 2.4 to 3.2 L/ha. For dense swards or spring application use rates in the range 2.4 - 3.2 L/ha.
		4 leaf - early tiller	1.2 - 2.4		
		Mid - fully tillered	2.4 - 3.2		
	Vulpia (Silvergrass, sand fescue) ( <i>Vulpia spp.</i> )	2 - 3 leaf	1.0 -- 1.2*		
		4 leaf - early tiller	1.2 - 2.4*		
		Mid - fully tillered	2.4 - 3.2*		
	<b>Seedling Brassica Weeds</b> Ball Mustard ( <i>Neslia paniculata</i> ), Charlock ( <i>Sinapsis arvensis</i> ), Indian hedge mustard ( <i>Sisymbrium orientale</i> ), Long fruited wild turnip ( <i>Brassica tournefortii</i> ), Muskweed ( <i>Myagrum perfoliatum</i> ), Shepherds Purse ( <i>Capsella bursa-pastoris</i> ), Short Fruited Wild Turnip ( <i>Rapistrum rugosum</i> ), Ward's Weed ( <i>Carrichtera annua</i> ), Wild Radish ( <i>Raphanus raphanistrum</i> )	1 - 5 cm diameter	1.2 - 1.8		
		5 - 10 cm diameter	1.8 - 2.4		
		10 - 20 cm diameter	2.4 - 3.2		
	<b>Other seedling broadleaved weeds</b> Bedstraw ( <i>Gallium tricornutum</i> ), Bifora ( <i>Bifora testiculata</i> ), Capeweed ( <i>Arctotheca calendula</i> ), Horehound ( <i>Marrubium vulgare</i> ), Ivy-leaf Speedwell ( <i>Veronica hederifolia</i> ), Lincoln Weed ( <i>Diplotaxis tenuifolia</i> ), Spiny Emex (Doublegee, Three Cornered Jack) ( <i>Emex australis</i> ), Stinging Nettle ( <i>Urtica urens</i> ), Storksbill (Wild Geranium, Crowsfoot) ( <i>Erodium spp</i> ), Vetch (tares) ( <i>Vicia spp</i> ), Deadnettle ( <i>Lamium amplexicaule</i> ), Fumitory ( <i>Fumaria spp</i> ), Melilotus ( <i>Melilotus spp</i> ), Pimpernel ( <i>Anagallis spp</i> ), Poppy ( <i>Papaver spp</i> ), Saffron Thistle ( <i>Carthamus lanatus</i> ), Sheepweed ( <i>Buglossoides arvensis</i> )	1 - 4 leaf or 1 to 4 cm diameter	1.2 - 1.8		
		4 - 8 leaf or 4 - 8 cm diameter	1.8 - 3.2		
		1 - 10 leaf or 1 - 10 cm diameter	1.2 - 3.2		

\* For control of Vulpia (Silvergrass) add a wetter such as Conquest Wetter 1000 at 100 mL/100 L.

### **Also refer to Crop Establishment Procedure (3) – cultivation after spraying**

Cultivation can commence 30 minutes after spraying but should be completed within 7 days unless a suitable residual herbicide is added.

Where heavy weed growth is present at spraying a better seed bed will result if cultivation is delayed 3 to 5 days.

### **Also refer to Crop Establishment Procedure (4) – cultivation before spraying**

Spraying may be carried out before or after sowing, but 3 days before the crop emerges.

### **TANK MIX: see Compatibility Section.**

Refer to partner product labels for suitability of use prior to sowing particular crops and relevant plant-back periods.

Crop/ Situation	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
(Cont) <b>Pasture</b> Clover, Grass, Lucerne, Medic	Paterson's curse ( <i>Echium plantagineum</i> )	1 - 5 leaf	1.8 - 3.2	Sthn NSW, Vic, SA, WA, Tas only	(continued from previous page)
	Wireweed ( <i>Polygonum aviculare</i> )	1 - 4 leaf	1.2 - 3.2		
	Marshmallow ( <i>Malva parviflora</i> )	1 - 12 leaf	1.2-1.8 L/ha + Spark 75 mL/ha		
	Volunteer beans, peas & lupins	1 - 6 leaf	1.2-1.8 L/ha+ Associate 5 g or 1.2-1.8 L/ha + Dicamba 500 g/L SL 200 mL/ha		
	Medic ( <i>Medicago</i> spp), Sub Clover ( <i>Trifolium subterraneum</i> )	1 - 4 leaf or 1 - 4 cm diameter	1.2 to 1.8 plus 500 mL/ha Dicamba (200g/L)		
		4 - 8 leaf or 4 - 8 cm diameter	1.8 - 3.2 L/ha + 5 g metsulfuron methyl 600 WG		
	Split application for: Sub Clover ( <i>Trifolium subterraneum</i> ) Perennial Ryegrass ( <i>Lolium perenne</i> ) Most annual weeds	1 - 8 leaf or 1 - 8 cm dia.	1.2 L/ha followed by 1.2 L/ha		For Sub Clover control without the addition of Dicamba 500 g/L SL in crops sown with triple disc, modified combine or sod seeder use a split application. Apply second application 7 to 15 days after first application and when green regrowth is present. For control prior to sowing with combine use a split application. Apply first application in Autumn to mid Winter. Apply second application 7 to 15 days later and when green regrowth is present. Apply first application in late winter and follow with second application 7 - 15 days later when green regrowth is present. If there is excess leaf growth, i.e. more than 10 cm, split the recommended rate in half and apply second part 7 to 15 days after the first. Paddocks should be well grazed continuously from the break. The first application removes excess leaf growth, the second application is effective on residual green tissue. Green growth must be present for second application
		4 leaf - early tiller	1.2 L/ha followed by 1.2 L/ha		
		Mid - fully tillered	1.6 L/ha followed by 1.6 L/ha		
		Weeds higher than 10 cm	2.4 L to 3.2 L		
	Potato Weed ( <i>Heliotropium europaeum</i> )	1 - 15 cm	1.2 - 1.6		For use in Summer fallows only. Add 275 g/ha Diuron 900 DF to enhance control of larger weeds
		15 - 30 cm	1.6 - 2.4		

**NORTHERN AUSTRALIA- FULL DISTURBANCE**

Crop /situation	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
<b>NORTHERN AUSTRALIA DIRECT DRILLING with full combine as an aid in the establishment of crops including:</b>	<b><u>Seedling grasses</u></b> (not regrowth or rhizomes) Barnyard Grass ( <i>Echinochloa</i> spp), Columbus Grass ( <i>Sorghum x alnum</i> ), Johnson Grass ( <i>Sorghum halepense</i> ), Buffel Grass ( <i>Cenchrus ciliaris</i> ), Liverseed Grass ( <i>Urochloa panicoides</i> ), Mossman river grass ( <i>Cenchrus echinatus</i> ), Paradoxa grass ( <i>Phalaris paradoxa</i> ), Rhodes grass ( <i>Chloris gayana</i> ), Summer grass ( <i>Digitaria ciliaris</i> ), Sweet Summer grass ( <i>Brachiaria eruciformis</i> ), Volunteer barley ( <i>Hordeum vulgare</i> ), Volunteer wheat ( <i>Triticum aestivum</i> ), Wild oats ( <i>Avena ludoviciana</i> , <i>A. fatua</i> )	2 - 3 leaf	0.8 - 1.2	Qld, Nthn NSW, NT only	<b>Refer to Crop Establishment Procedure (7a)</b> Apply in 50 - 100 L of clean water/ha. Avoid spraying under hot dry conditions. Best results will be obtained when spraying is carried out in humid conditions or in the late evening. In a typical mixed weed situation use the rate recommended for the growth stage of the hardest-to-kill weed species. Rates shown are for optimum conditions and for sowing equipment with wide points and cultivating tynes. Under less favourable conditions or where spraying is delayed or where narrow points are fitted, use higher rates in the range 1.6 - 2.4 L/ha.
<b>Broadacre crops – Winter</b> Cereals (Wheat, Barley, Oats, Rye, Tricale), Canola, Chickpeas, Field Beans	4 leaf to early tiller	1.2 - 1.6			
<b>Broadacre crops – Summer</b> Cotton, maize, Millet, Mungbeans, Navy Beans, Peanuts, Pigeon Peas, Safflower, Sorghum, Soybeans, Sunflower	Mid to fully tillered	1.6 - 2.4			
	<b><u>Sorghum</u></b> ( <i>Sorghum bicolor</i> ), Stink grass ( <i>Eragrostis ciliaris</i> )	2 to 3 leaf only	0.8 to 1.2		<b>TANK MIX:</b> see Compatibility Section.  * For control of larger weeds prior to cereals add 0.5 L 2,4-D 625 g/L SL. Refer to relevant label for plant-back period
	<b><u>Seedling broadleaved weeds</u></b> African Turnip Weed* ( <i>Sisymbrium thellungi</i> ), Annual Saltbush ( <i>Atriplex muelleri</i> ), Australian Bindweed ( <i>Convolvulus erubescens</i> ), Australian Bluebell ( <i>Wahlenbergia gracilis</i> ), Blackberry Nightshade ( <i>Solanum nigrum</i> ), Bathurst Burr ( <i>Xanthium spinosum</i> ), Bellvine ( <i>Ipomoea plebeia</i> ), Black Pigweed ( <i>Trianthema portulacastrum</i> ), Bladder Ketmia ( <i>Hibiscus trionum</i> ), Caltrop ( <i>Tribulus terrestris</i> ), Caustic Weed ( <i>Euphorbia</i> spp), Climbing Buckwheat ( <i>Polygonum convolvulus</i> ), Cowvine ( <i>Ipomoea lonchophylla</i> ), Cudweeds ( <i>Gnaphalium</i> spp), Deadnettle ( <i>Lamium amplexicaule</i> ), European Bindweed ( <i>Convolvulus arvensis</i> ), Fat Hen ( <i>Chenopodium album</i> ), Fireweed ( <i>Senecio madagascariensis</i> ), Fleabanes ( <i>Conyza</i> spp), Fumitory ( <i>Fumaria</i> spp), Hogweed ( <i>Zaleya galericulata</i> ),	1 to 4 leaf	0.8 to 1.6		
		4 to 8 leaf	1.6 to 2.4		
		8 - 12 leaf	2.4		

(Cont)	<p>Malvastrum (<i>Malvastrum americanum</i>), Mexican Poppy (<i>Argemone</i> spp.), Mintweed (<i>Salvia reflexa</i>), Mungbean (<i>Vigna radiata</i>), Native Rosella (<i>Abelmoschus ficulneus</i>), New Zealand Spinach (<i>Tetragonia tetragonoides</i>), Noogora Burr (<i>Xanthium pungens</i>), Parthenium Weed (<i>Parthenium hysterophorus</i>), Peppergrass (<i>Lepidium</i> spp.), Phyllanthus (<i>Phyllanthus</i> spp.), Prickly Lettuce (<i>Lactuca seriola</i>), Prickly Paddymelon (<i>Cucumis myriocarpa</i>), Red Pigweed (<i>Portulaca oleracea</i>), Rhynchosia (<i>Rhynchosia</i> spp.), Sesbania Pea* (<i>Sesbania cannabina</i>), Sida (<i>Sida</i> spp.), Smooth cucumber (<i>Cucumis</i> spp.), Soft roly poly (<i>Salsola kali</i>), Sowthistle (<i>Sonchus</i> spp.) Soybean (<i>Glycine max</i>), Spiny Emex (<i>Emex australis</i>), Sunflower* (<i>Helianthus annuus</i>), Thornapples (<i>Datura</i> spp.), Variegated Thistle (<i>Silybum marianum</i>), Wild Gooseberry (<i>Physalis minima</i>)</p> <p>Native Jute (<i>Corchorus trilocularis</i>)</p> <p>Annual Ground Cherry (<i>Physalis angulata</i>)</p> <p>Turnip Weed (<i>Rapistrum rugosum</i>)</p> <p>Boggabri (<i>Amaranthus mitchellii</i>), Hexham Scent* (<i>Melilotus indicus</i>)*, Wild Carrot (<i>Daucus glochidiatus</i>), Speedy Weed (<i>Flaveria australasica</i>)</p>				
		1 - 4 leaf	1.2 - 1.6	Qld, Nthn NSW, NT only	
		4 - 8 leaf	1.6 - 2.4		
		1 - 4 leaf	1.2 - 1.6		
		1 - 8 leaf	0.8 - 1.2		

## NORTHERN AUSTRALIA-FALLOW/MINIMUM DISTURBANCE

Crop	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
<b>NORTHERN AUSTRALIA</b>	<b>Seedling grasses (not regrowth or rhizomes)</b>	2 leaf to pre-tillering	1.2 to 1.6		<b>Refer to Procedures (5), (6) or (7b) as appropriate to the particular situation</b>
<b>Direct drilling with minimum disturbance or</b>	Barnyard Grass ( <i>Echinochloa</i> spp.), Liverseed Grass ( <i>Urochloa panicoides</i> ), Paradoxa Grass ( <i>Phalaris paradoxa</i> ), Stink Grass ( <i>Eragrostis cilianensis</i> ), Volunteer Barley ( <i>Hordeum vulgare</i> ), Volunteer Wheat ( <i>Triticum aestivum</i> ), Wild Oats ( <i>Avena ludoviciana</i> ), ( <i>A. fatua</i> )	Early tillering	1.6 to 2.4	Qld, Nthn NSW, NT only	In a typical mixed weed situation use the rate recommended for the growth stage of the hardest-to-kill weed species. Rates shown are for optimum conditions and for row crop or no-till planters. Under less favourable conditions or where spraying is delayed or for fallow weed control use higher rates in the range 1.6 to 2.4 L/ha.
<b>FALLOWS cultivated or non-cultivated as an aid in establishing or maintaining a fallow or the establishment of crops including:</b>					Apply in 50 to 100 L of clean water/ha.
<b>Broadacre crops –Winter</b> Cereals (Wheat, Barley, Oats, Rye, Tricale), Chickpeas	<b>Seedling broadleaved weeds</b> Bathurst Burr ( <i>Xanthium spinosum</i> ) Bellvine ( <i>Ipomoea plebeia</i> ), Black Pigweed ( <i>Trianthema portulacastrum</i> ), Bladder Ketmia ( <i>Hibiscus trionum</i> ), Caltrop ( <i>Tribulus terrestris</i> ), Fat Hen ( <i>Chenopodium album</i> ), Fireweed ( <i>Senecio madagascariensis</i> ), Fumitory ( <i>Fumaria</i> spp.), Mintweed ( <i>Salvia reflexa</i> ), Mungbean* ( <i>Vigna radiata</i> )*, New Zealand Spinach ( <i>Tetragonia tetragonoides</i> ), Prickly Paddymelon ( <i>Cucumis myriocarpa</i> ), Sesbania Pea* ( <i>Sesbania cannabina</i> ) Smooth	1 to 4 leaf	1.6 to 2.4		Avoid spraying under hot dry conditions. Best results will be obtained when spraying is carried out in the evening or in humid conditions.  * For control of larger weeds prior to cereals add 0.5 to 1 L 2,4-D amine (500 g/L) – refer to relevant label for plant-back period.
<b>Broadacre crops –Summer</b> Cotton, Maize, Millet, Mungbeans, Safflower, Sorghum, Soybeans, Sunflower					<b>TANK MIX:</b> see Compatibility Section.

Crop	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
(Cont)	(Cont) Cucumber ( <i>Cucumis spp</i> ), Sunflower* ( <i>Helianthus annuus</i> )*, Thornapples ( <i>Datura spp</i> ), Wild Gooseberry ( <i>Physalis minima</i> )	(Cont)	(Cont)	(Cont)	(Cont)
	Boggabri ( <i>Amaranthus mitchellii</i> ) Hexham Scent* ( <i>Melilotus indicus</i> )*, Wild Carrot ( <i>Daucus glochidiatus</i> ), Phyllanthus ( <i>Phyllanthus spp</i> )	1 to 8 leaf	1.6 to 2.4		
<b>As an aid in post harvest weed control – after winter cereals</b>	Volunteer Barley ( <i>Hordeum vulgare</i> ), Volunteer Wheat ( <i>Triticum aestivum</i> ), Bladder Ketmia ( <i>Hibiscus trionum</i> ), Milk Thistle ( <i>Sonchus oleraceus</i> ), New Zealand Spinach ( <i>Tetragonia tetragonoides</i> )	1 to 4 leaf	1.6 to 2.4		<b>Refer to Procedure (5)</b> DO NOT spray under hot, dry conditions or when weeds are covered with dust and/or trash. Application is best carried out following rain.

## COTTON

Crop /Situation	Use	Rate L/ha	State	Critical Comments
<b>COTTON</b> Dryland and moisture stressed	Desiccant to aid harvest	1.2 to 1.6	Qld, NSW only	<b>Apply by groundrig only.</b> Good spray coverage is essential. Apply in 50 to 100 L water/ha. Use 5 hollow cone or 3 flat fan nozzles per row. Apply when at least 85% of bolls are open and remaining bolls are mature. QA Paraquat/Diquat 250 SL Herbicide can damage immature green bolls.

## LUCERNE

Crop Situation	Weeds controlled	Rate L/ha	State	Critical Comments
LUCERNE established (at least 1 year old)	Most annual weeds including Capeweed and Erodium	1.6	All states	Spray in autumn after weeds germinate. Graze the lucerne to reduce the height to 2 to 4 cm before spraying.  <b>Note:</b> If required, grass, clover or lucerne seed can be direct drilled to increase desirable plant population.
		2.4		Spray in winter. Graze the lucerne to reduce the height to 2 to 4 cm before spraying.  <b>Note:</b> If required, grass, clover or lucerne seed can be direct drilled to increase desirable plant population.
	As above plus Paterson's Curse and Shepherd's Purse	2.4 plus Diuron 900 WG 1 kg		For improved control of Paterson's Curse and Shepherd's Purse mix with Diuron 900 WG at 1 kg/ha in late winter. DO NOT use the tank mix if oversowing.
	Most annual weeds including Capeweed, Erodium, Paterson's Curse and Shepherd's Purse	2.4 plus Diuron 900 WG 1.9 kg		For short term residual control, tank mix with Diuron 900 WG at 1.9 kg/ha in late winter. Length of control may be shorter on heavy soils or under irrigation. DO NOT use the tank mix if oversowing.  <b>WARNING</b> – continued use of QA Paraquat/Diquat 250 SL Herbicide alone in certain areas, has resulted in the selection of resistant Barley Grass ( <i>Hordeum glaucum</i> , <i>H leporinum</i> ), Capeweed and Silver Grass ( <i>Vulpia</i> spp.). Where resistant Barley Grass is confirmed it may be controlled with Fusilade or Fusion. The use of the tank mix with Diuron 900 WG will assist in control of resistant Capeweed and Silver Grass and is recommended as a general weed resistance strategy for lucerne.

## SUGAR CANE

Crop	Weeds controlled	Growth stage	Rate L/ha	State	Critical Comments
NORTHERN AUSTRALIA  SUGAR CANE ESTABLISH- MENT AND FALLOWS PRIOR TO SUGAR CANE PLANTING CULTIVATED OR NON- CULTIVATED.  As an aid in establishing sugar cane or controlling weeds in a FALLOW PRIOR TO SUGAR CANE	<p><b>Seedling grasses (not regrowth or rhizomes)</b></p> <p>Barnyard Grass (<i>Echinochloa</i> spp), Liverseed Grass (<i>Urochloa panicoides</i>), Stink Grass (<i>Eragrostis ciliaris</i>)</p> <p><b>Seedling broadleaved weeds</b></p> <p>Bathurst Burr (<i>Xanthium spinosum</i>), Bellvine (<i>Ipomoea plebeia</i>), Black Pigweed (<i>Trianthema portulacastrum</i>), Bladder Ketmia (<i>Hibiscus trionum</i>), Caltrop (<i>Tribulus terrestris</i>), Fat Hen (<i>Chenopodium album</i>), Fumitory (<i>Fumaria</i> spp), Mintweed (<i>Salvia reflexa</i>), Mungbean (<i>Vigna radiata</i>), New Zealand Spinach (<i>Tetragonia tetragonoides</i>), Prickly Paddymelon (<i>Cucumis myriocarpa</i>), Sesbania Pea (<i>Sesbania cannabina</i>), Smooth Cucumber (<i>Cucumis</i> spp), Thornapples (<i>Datura</i> spp), Wild Gooseberry (<i>Physalis minima</i>)</p> <p>Phyllanthus (<i>Phyllanthus</i> spp)</p>	<p>2 leaf to pre-tillering</p> <p>Early tillering</p> <p>Mature annual grasses ‡</p> <p>1 to 4 leaf</p> <p>mature broadleaf weeds ‡</p> <p>1 to 8 leaf</p> <p>mature broadleaf weeds ‡</p>	<p>1.2 to 1.6</p> <p>1.6 to 2.4</p> <p>2.4 to 3.2‡</p> <p>1.6 to 2.4</p> <p>2.4 to 3.2‡</p> <p>1.6 to 2.4</p> <p>2.4 to 3.2‡</p>	Qld, Nthn NSW, NT only	<p><b>SUGAR CANE:</b> prior to planting or for establishing or maintaining a fallow – refer to Procedure (6) and following. Cultivated fallow – where seedling weeds have recently germinated, are growing well and are up to 10 cm high use rates of 1.6 to 2.4 L/ha in a spray volume of 150 to 200 L water/ha plus a wetter such as BS1000 at 120 mL/ha or Agral at 200 mL/100 L</p> <p>‡ Non-cultivated fallow – to control mature dense stands of annual weeds use rates of 2.4 to 3.2 L/ha in a spray volume of 400 L water /ha plus a wetter such as BS1000 at 120 mL/100 L or Agral at 200 mL/100 L. Control will be improved with the addition of an enhancement rate of Diuron WG (500 g to 1 kg/ha) and if vines are present add 2,4-D amine. A split application of QA Paraquat/Diquat 250 SL Herbicide, 10 to 12 days apart will also improve control of tall dense weeds. Only use 110° flat fan nozzles equivalent to Spraying Systems 03 for 200 L/ha and 04 for 250 to 400 L/ha.</p> <p>When dense weed growth is present implement penetration and the resulting seedbed may be improved if cultivation commences 4 to 5 days after spraying. Best results will be obtained when spraying is carried out in the evening or in humid conditions.</p> <p><b>TANK MIX:</b> see Compatibility section.</p>

## SUGAR CANE

Crop/Situation	Weeds Controlled	Growth stage	Rate L/ha	State	Critical Comments
(Cont)	<b>Most seedling broadleaf weeds including</b> Sicklepod ( <i>Senna (Cassia) obtusifolia</i> ), Bluetop ( <i>Ageratum houstonianum</i> ), Phyllanthus ( <i>Phyllanthus</i> spp), Calopo ( <i>Calapogonium muconoides</i> ),	Up to 5 cm high Up to 50 cm high Up to 15 cm high 3 to 5 leaves	1.2 to 1.6 1.6 to 2.0	(Cont)	Apply as a broadcast spray over-the-top of plant cane up to the 3 to 4 leaf stage or ratoon cane up to 10 cm high. Cane foliage will be scorched but new leaves will appear in 7 to 10 days. In plant cane between the 3 to 4 leaf stage and the formation of the true stem use a directed interspace spray. The Irvin spray boom is the most suitable equipment to avoid excessive drift onto cane foliage while spraying at the bases of plant and ratoon cane. After the formation of the true stem which is resistant to QA Paraquat/Diquat 250 SL Herbicide, the sprayer height can be raised to overlap the spray pattern to give weed control in the stool. Use the higher rate for dense, more mature weeds. QA Paraquat/Diquat 250 SL Herbicide can be mixed with Atrazine WG herbicide to give residual weed control when used as a directed spray. It may also be mixed with high rates of Diuron 900 WG for residual control. To enhance activity of QA Paraquat/Diquat 250 SL Herbicide under favourable growing conditions and in open sunny conditions add 275 g/ha Diuron 900 WG. Complete spray coverage is essential. For grasses and broadleaved weeds up to 5 cm high use a minimum of 250 L spray solution/ha, increase to 350 L/ha for weeds up to 10 cm high. Use a spray volume of 400 L/ha for dense mature weeds. Always add a wetter such as Agral at 200 mL/100 L or BS1000 at 120 mL per 100 L of water.
<b>SUGAR CANE - Plant &amp; Ratoon</b>	<b>Most seedling grasses including</b> Awnless Barnyard Grass ( <i>Echinochloa colona</i> ), Summer Grass ( <i>Digitaria ciliaris</i> ), Guinea Grass ( <i>Panicum maximum</i> ), Hamil Grass ( <i>Panicum maximum</i> cv Hamil), Green Summer Grass ( <i>Brachiaria miliformis</i> )	Up to 5 cm high Up to 10 cm high > 10 cm high and seeding	1.2 to 1.6 plus 500 g Diuron 900 WG 1.2 to 1.6 plus 1 kg Diuron 900 WG 1.6 plus 2.8 to 3.9 kg Diuron 900 WG	Qld, NSW, WA only	

**PUBLIC SERVICE AREAS, TROPICAL TREE CROPS, VEGETABLES, POTATOES, ORCHARDS AND VINEYARDS**

Crop Situation	Weeds controlled	State	Rate/ha		Critical Comments	
			High volume or power sprayer			
			/ha	/100 L (spot spray)		
<b>Public Service Areas, Rights of Way, Market Gardens, Nurseries, Orchards (including Bananas), Vineyards and Forests – Ring weeding around trees with brown bark and strip spraying in orchards and vineyards</b>	Most annual grasses and broadleaved weeds	All states	2.4 to 3.2 L (a) see below	240 to 320 mL (b) see below	<p>Thoroughly wet plant foliage. Use the high rate for dense more established weed growth. Repeat treatment on regenerated green perennial weeds (such as paspalum and docks) while plants are weakened from previous treatment. Addition of an oxyfluorfen 240 g/L EC at 250 mL/ha will improve control of Small Flowered Mallow, Evening Primrose and other weeds sensitive to an oxyfluorfen 240 g/L EC. Refer to the oxyfluorfen 240 g/L EC label.</p> <p><b>Note:</b> Spot spray rate assumes 1000 L water/ha. For lower water volumes increase dilution rate as below:  water volume 250 L/ha: use 960 to 1280 mL/100 L  water volume 500 L/ha: use 480 to 640 mL/100 L  water volume 750 L/ha: use 320 to 430 mL/100 L</p> <p><b>OR</b></p> <p>Measure how much spray is required to cover an area of 100 square metres using your normal application volume. Your dilution rate is 24 to 32 mL of QA Paraquat/Diquat 250 SL Herbicide in this volume.</p>	
<b>Pre-crop emergence weed control (vegetable crops)</b>					Prepare seed bed as long as possible before sowing to permit maximum weed germination. Spray the weeds, wait until they have dried off and then sow. If further weed germinations occur before crop emerges, spray again but at least 3 days before crop emerges. Spray when weeds are growing vigorously and not covered with soil or dust or wilting due to dry conditions. When rain follows dry conditions allow 7 days for weed growth to commence before spray application.	
<b>Long term weed control</b>					<b>See Note</b> on Spot spray rate above. QA Paraquat/Diquat 250 SL Herbicide can be mixed with soil residual herbicides containing 900 g/kg diuron. (For further information see General Instructions)	
<b>Potatoes</b> – weed control – weed destruction prior to digging					After planting and hilling up, wait until 10 to 25% of potato shoots are emerged then blanket spray with QA Paraquat/Diquat 250 SL Herbicide. Emerged potato shoots will suffer a marginal leaf burn but will quickly recover. <b>See Note</b> on Spot spray rate above.	

Crop Situation	Weeds controlled	State	Rate/ha		Critical Comments	
			High volume or power sprayer			
			/ha	/100 L (spot spray)		
<b>Avocados, Custard Apples, Lychees, Mangoes</b>	Most annual grasses and broadleaved weeds	All states	3.2 L (a) see below	320 mL (b) see below	Spray 3 to 7 days before digging after all tops have died down. <b>See Note</b> on Spot spray rate above.  <b>Note:</b> DO NOT use QA Paraquat/Diquat 250 SL Herbicide for potato haulm desiccation.	
	Most annual and perennial broadleaf weeds and grasses		-	120 to 240 mL (b) see below	Apply to the ground cover underneath trees from summer to autumn prior to harvest. A second spray may be required 14 days later to control growth not controlled by the initial spray. <b>See Note</b> on Spot spray rate above.  <b>WARNING:</b> Avoid spray drift onto trees.	

**Wetting Agent** (a) If volume of water applied exceeds 200 L/ha add 200 mL Agral or 120 mL Conquest Wetter 1000/100 L of additional water.

(b) Add 160 mL Agral or 100 mL Conquest Wetter 1000/100 L.

Crop Situation	Situation / weeds	State	Rate L/ha	Critical comments
<b>Rice</b> DO NOT apply if rice has emerged	Annual weeds	NSW only	1.6 to 3.2	<b>Refer to Direct Drilling Procedure – Rice (2)</b>
	Annual weeds including Barnyard Grass		1.7 to 2.2	On rice stubbles after burning.
	Clover control		2.2 L plus 200 mL Dicamba (500 g/L) as tank mix	Well grazed Clover dominant pastures.
	Annual pasture		3.2	Pasture not properly managed. Use 100 L/ha water per 2 cm growth.
	To suppress growth to over sow winter feed		2.4	Spray in autumn after grazing or slashing to 2 to 4 cm.
			3.2	For early spraying (February or March) or if lightly grazed.
<b>Established Pastures</b> Perennial Grass Crops, Cocksfoot, Perennial Ryegrass, Phalaris, Demeter Fescue	Control of annual weeds including Capeweed and Erodium for improved grazing, hay or seed production	NSW, Vic, Tas, SA, WA only	1.6	Spray in autumn (4 weeks after the break) to mid winter. Only spray stands which are at least 12 months old. Graze pastures to maintain length between 2 to 4 cm. (Sub clover should be past 6 true leaf stage).
			2.4	Spray in late winter. Only spray stands which are at least 12 months old. Continuously graze pasture to maintain length 2 to 4 cm.
<b>Pasture Improvement</b>	To increase the Perennial Grass and/or the Sub Clover or White Clover content of the pasture	NSW, Vic, Tas, SA, WA only	1.2	Spray in winter. Sub-clover should be past 6 true leaf stage. Only suppresses annual weeds. (All States except WA) and perennial weeds (WA).
<b>Grasses</b>	To control Grass Seed set	SA, WA	Boom-spray 800	Apply at the end of growing season. HEAVILY GRAZE paddocks

Crop Situation	Situation / weeds	State	Rate L/ha	Critical comments
(particularly Annual Ryegrass)	(SprayTop technique)	only	mL/ha in a minimum of 50 L clean water	during the spring flush period to prevent early seed heads emerging. REMOVE all stock about 3 weeks before the end of the growing season to allow seed heads to emerge evenly. Set boomspray at a height to give double overlap spray pattern AT THE TOP of the pasture being sprayed.
			1.5	HAY FREEZING for maximum retention of protein for summer grazing.
<b>Duboisia</b>	Annual weeds	Qld, NT only	2.4 to 3.2 L/ha OR Spot Spraying 240 to 320 mL/100 L	Apply as directed spray on to weeds around Duboisia plants. This treatment is most effective when applied to young weed seedlings. Product may be mixed with simazine or diuron or applied alone. Thoroughly wet foliage. It is essential to obtain good leaf/coverage and spray volumes of 50 to 200 L/ha are recommended, depending on density of weed cover. Refer to General Instructions for addition of wetter.
<b>Tea-trees (<i>Melaleuca alternifolia</i>)</b>	Grasses and broadleaf weeds	NSW only	1.6 to 3.2	Apply immediately after harvest to desiccated weeds. Avoid drift to unharvested areas.

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

## **GENERAL INSTRUCTIONS**

QA Paraquat/Diquat 250 SL Herbicide quickly kills a wide range of annual grasses, broadleaf weeds and some perennial grasses when sprayed directly onto the leaves. The active ingredients are rapidly and tightly absorbed by clay and silt particles in the soil and do not leave any effective soil residues. Thus, crops sown almost immediately after spraying are not affected by the chemicals, nor are weed seeds which germinate after spraying.

Where insect pests are anticipated use recommended insecticide treatment. Regular checks should be made before and after sowing.

Suitable residual herbicides can be tank mixed with QA Paraquat/Diquat 250 SL Herbicide to provide extended in-crop weed control in fallows and subsequent crops. Read label recommendations of the respective residual herbicides prior to their use and observe precautions against use of residual herbicides before planting susceptible crops. See compatibility statement on this label for compatibility of QA Paraquat/Diquat 250 SL Herbicide with other herbicides.

### **Mixing**

The recommended rate of QA Paraquat/Diquat 250 SL Herbicide should be added to water in the spray tank and agitated to give even mixing. Agitate again if left standing.

### **Water Volume**

It is essential to obtain good leaf coverage with the spray and the following volumes are recommended:

<b>Winter rainfall areas</b>	<b>Boomspray</b>	<b>Summer rainfall areas: Weed stage and density</b>
Plant height up to 2 cm	50 to 100 L/ha	Small plants (2 to 5 leaf) and well separated.
Plant height up to 2 to 5 cm	100 to 150 L/ha	5 leaf to early tiller/rosette; 30 to 50% ground cover.
Plant height up to 6 to 10 cm	150 to 200 L/ha	Advanced growth, dense and/or tall weed stands.
Above 10 cm	Use split application to remove excess growth. Use 150 L/ha	Very dense and tall weed growth.

### **Note:**

- (1) If the volume is increased above 100 L/ha additional wetter should be added at the rate of 200 mL of Agral\*/100 L or 120 mL BS1000\*/100 L of additional water.
- (2) Water should be clean and free from clay, silt and algae. Providing it meets this requirement, saline water, water collected from roofs, bore water, dam water and water from creeks may be used.

## **APPLICATION**

### **(1) Boomspray**

Use only through a properly calibrated boomspray which should be fitted with flat fan jets and adjusted to a height to give at least double overlap of the spray at the top of the weeds being sprayed. Spraying pressures should be in the range of 240 to 280 kPa. Speed of travel should be in the range of 6 to 10 km/hr. It is essential that a good marking system be used. If a disc marker is used it must be mounted so as to turn the soil back on to the area sprayed.

## DIRECT DRILLING PROCEDURE (1)

Use of QA Paraquat/Diquat 250 SL Herbicide in crop establishment with no working before sowing.

Step	Critical comments
1. Burn	If possible, crop stubble or pasture trash should be burnt early to avoid problems at sowing. Can also promote weed seed germination.
2. Shallow cultivation – optional.	Should be carried out on opening rains to a depth of no more than 2 cm. This will encourage early even germination of weeds particularly annual grasses.
3. Heavily graze paddocks continuously from germination.	This prepares the paddock for spraying by keeping the pasture short and open and at the same time restricts the development of the weed roots which will assist seed bed formation.
4. Remove stock 2 to 3 days before spraying.	Allow the weeds to freshen up – important for maximum uptake of QA Paraquat/Diquat 250 SL Herbicide. Spraying can, however, take place immediately after stock removal provided there is sufficient leaf cover and the pasture is not dusty.
5. Spraying with a boom spray.	Accurate application and full spray cover are essential to give weed control. Note limitations as outlined under Directions for Use.
6. Sow 3 to 5 days after spraying.	A rigid tine spring release combine is preferred to ensure adequate penetration. Points should not be worn. The combine must be level and set to work 3 to 5 cm and sow seed at recommended depth. Use standard seed and fertiliser rates. When harrowing is considered necessary use trailing harrows. Sowing can commence one hour after spraying and should be completed within 7 days. Where heavy weed growth is present a better seed bed will result if sowing is delayed for 3 to 5 days.

## DIRECT DRILLING (SOD SEEDING) PROCEDURE – RICE (2)

Step	Critical comments
1. Graze pasture heavily	Allow pasture to green up before spraying, generally about 1 week. Watering may be required. Where rice follows a cereal crop, the stubbles should be burnt well in advance of the anticipated date of sowing to allow weeds to germinate prior to spraying.
2. Spray the paddock before or after direct drilling	Use 1.6 to 3.2 L QA Paraquat/Diquat 250 SL Herbicide /ha. Use 1.7 to 2.2 L/ha for weeds, particularly Barnyard Grass, on rice stubbles after burning. Use 2.2 L/ha for well grazed pastures plus 200 mL Dicamba (500 g/L) /ha as a tank mix for clover dominant pastures. Up to 3.2 L/ha may be required where the pasture has not been properly managed prior to spraying. Use approximately 100 L clean water/ha/cm growth.
3. Direct drill rice	Drill at 2 to 3 cm depth within a few hours of spraying. DO NOT delay for more than a few days after spraying. Spraying may be carried out after drilling.

**CROP ESTABLISHMENT WITH A CULTIVATION AFTER SPRAYING. CROP ESTABLISHMENT PROCEDURE (3)**

<b>Step</b>	<b>Critical comments</b>
1. Graze paddocks continuously from germination	This prepares the paddock for spraying by keeping the pasture short and open and at the same time restricts the development of the weed roots, which will assist seed bed formation.
2. Remove stock 2 to 3 days before spraying	Allows the weeds to freshen up - important for maximum uptake of QA Paraquat/Diquat 250 SL Herbicide. Spraying can take place immediately after stock removal provided there is sufficient leaf cover and the pasture is not dusty.
3. Spray with a boom spray	Accurate application and full spray cover are essential to give weed control. Note limitations as outlined under Directions for Use.
4. Cultivate	Between 1 hour and 7 days after spraying. When dense weed growth is present implement penetration and resulting seed bed may be improved if cultivation commences 3 to 5 days after spraying. It is not necessary to cultivate deeper than sowing depth. Use scarifier or combine with heavy harrows.
5. Sow	Sow at the recommended seed and fertiliser rates and depth.

**CROP ESTABLISHMENT WITH A CULTIVATION BEFORE SPRAYING. CROP ESTABLISHMENT PROCEDURE (4)**

<b>Step</b>	<b>Critical comments</b>
1. Graze	Graze pasture or stubble to keep growth of weeds down to a minimum following the autumn break.
2. Cultivate 4 to 6 weeks prior to the anticipated sowing date	Cultivate after autumn rains when conditions are suitable to produce a seed bed and before heavy weed growth develops. A scarifier and heavy harrows should be used with the aim of killing existing weed growth and leaving the seed bed in a level condition. It is not necessary to cultivate deeper than the sowing depth.
3. Wait	Wait 4 to 6 weeks to allow a full germination of weeds. Graze if necessary.
4. Remove stock 2 to 3 days before spraying	Allow the weeds to freshen up – important for maximum uptake of QA Paraquat/Diquat 250 SL Herbicide.
5. Spray with a boom spray	Accurate application and full spray cover are essential to give weed control. Note limitations as outlined under Directions for Use.
6. Sow	Between 1 hour and 7 days after spraying, sow crop in the normal manner. Sow at recommended seed and fertiliser rates and depth. <b>NOTE:</b> Where heavy weed growth is present at spraying, a better seed bed will result if sowing is delayed for 3 to 5 days.

**NOTE:** For on the farm advice and assistance, contact your dealer.

**CONTROL OF WEEDS AFTER CROP HARVEST AND IN CULTIVATED AND NON-CULTIVATED FALLOWS – NORTHERN NEW SOUTH WALES AND QUEENSLAND ONLY**

**USE OF QA Paraquat/Diquat 250 SL Herbicide FOR WEED CONTROL AFTER CEREAL HARVEST PROCEDURE (5)**

New Zealand Spinach, Bladder Kutmia and Milk Thistle are often present after cereal harvest. They can be controlled by the application of 1.6 to 2.4 L/ha of QA Paraquat/Diquat 250 SL Herbicide in at least 100 L of clean water. Use a properly calibrated boom sprayer. Ensure that the boom is set for double overlap at the top of the weed canopy. The weed species must be free from dust and actively growing. They should not be shielded from the spray by stubble or trash. The use of a straw spreader at harvest is recommended.

## **USE OF QA Paraquat/Diquat 250 SL Herbicide FOR THE CONTROL OF WEEDS DURING THE FALLOW PROCEDURE (6)**

Weeds must be controlled during the fallow to conserve moisture. While cultivation can eliminate weeds it also exposes the soil to moisture loss. In addition, repeated cultivations destroy soil structure, reduce organic matter, and stubble cover. This leads to the formation of hard pans, soil crusts and increases the risk of erosion. Under moist soil conditions weeds are frequently transplanted and not killed, weed growth holds the soil in clods.

QA Paraquat/Diquat 250 SL Herbicide provides an economical and reliable alternative for fallow weed control.

For use in fallows to be planted to sugar cane and for weed control prior to planting sugar cane refer to the specific section of the label.

### **a) Seedling Weeds:**

Seedling weeds should be sprayed with 1 to 3.2 L/ha QA Paraquat/Diquat 250 SL Herbicide in 50 to 100 L of **clean** water (see Directions for Use table). Some difficult to control weeds may require a second application 7 to 21 days later, or control may be assisted by a following cultivation.

### **b) Advanced weed growth:**

While some advanced weeds will be controlled by a single application of QA Paraquat/Diquat 250 SL Herbicide many species will require a follow-up cultivation to complete the kill. QA Paraquat/Diquat 250 SL Herbicide rapidly desiccates plant material and causes weed roots to loosen their grip on the soil. The results are improved incorporation of plant material, a reduced number of large clods and a more reliable weed kill even in moist soil. Use the recommended rates of QA Paraquat/Diquat 250 SL Herbicide in 100 to 200 L of **clean** water.

### **Control of transplanted weeds:**

Weeds transplanted by unsuccessful cultivation present an extremely difficult problem. If there is a risk that cultivation will result in weeds being transplanted (particularly under moist soil conditions) it is recommended that the weeds be sprayed with QA Paraquat/Diquat 250 SL Herbicide prior to cultivation (see previous section). Weeds partly covered by soil and clods provide poor conditions for successful chemical weed control. The best results will be achieved by allowing the weeds to make some regrowth to provide an adequate chemical target. Apply the highest rate of QA Paraquat/Diquat 250 SL Herbicide preferably spraying in the late afternoon or early evening.

## **USE OF QA Paraquat/Diquat 250 SL Herbicide FOR THE CONTROL OF SEEDLING WEEDS IMMEDIATELY BEFORE SOWING PROCEDURE (7)**

### **(a) Sowing with full disturbance (full combine):**

The cultivation action of the combine aids in weed kill. Use 0.8 to 2.4 L of QA Paraquat/Diquat 250 SL Herbicide depending upon weed species (see Directions for Use table). Sowing should commence within 7 days of spraying.

### **(b) Sowing with minimum disturbance (row crop, no-till planters):**

A higher rate of QA Paraquat/Diquat 250 SL Herbicide is recommended due to the absence of cultivation. Use QA Paraquat/Diquat 250 SL Herbicide at 1 to 3.2 L/ha in Southern Australia; 1.2 to 3.2 L/ha in Northern Australia (Qld, Nthn NSW and NT only).

## **COMPATIBILITY**

QA Paraquat/Diquat 250 SL Herbicide is compatible with any one of the following herbicides: Paraquat 250, Dicamba 500 Herbicide, Atrazine 900 WG, Avadex\* BW, Banvel\* 200 (dicamba), Apparent 2,4-D Amine, Devrinol\*, Diuron WG, Dual\* Gold, Frenock\*, chlorsulfuron, metsulfuron, oxyfluorfen, Logran\*, Lontrel\*, MCPA (amine and ester), Reglone\*, Solicam\* DF, Simagranz\*, Spinnaker\*, Stomp\*, Surflan\*, trifluralin, Yield\*.

Tank mixes with 2,4-D and MCPA formulations should not be more concentrated than 2 parts QA Paraquat/Diquat 250 SL Herbicide to 1 part 2,4-D or MCPA.

Refer to the manufacturer's label for specific details on compatibility and weed control. Mixtures with more than one product may not be compatible and should be checked in a jar test first. Physical compatibility does not guarantee biological compatibility.

QA Paraquat/Diquat 250 SL Herbicide is compatible with any one of the following insecticides: Dominex\*, Imidan\*, Karate\*, Le-mat\*, Talstar\*. QA Paraquat/Diquat 250 SL Herbicide is compatible with Agral and BS1000 surfactants.

QA Paraquat/Diquat 250 SL Herbicide is NOT compatible with copper, zinc or manganese sulphates.