

Product Name: F.S.A. PARAQUAT + DIQUAT 250 HERBICIDE  
APVMA Approval No: 95027/144493



Label Name:	F.S.A. PARAQUAT + DIQUAT 250 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:	ACTIVE CONSTITUENTS : 135 g/L PARAQUAT PRESENT AS PARAQUAT DICHLORIDE 115 g/L DIQUAT PRESENT AS DIQUAT DIBROMIDE MONOHYDRATE ALSO CONTAINS: 30 g/L POLYETHANOXY (15) TALLOW AMINE
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Mode of Action:	GROUP 22 HERBICIDE
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Statement of Claims:	For the 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:	20L to 1000L
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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, knapsack sprayers or hand held ultra low volume controlled droplet applicators (CDA units).  SPRAY DRIFT RESTRAINTS Specific definitions for terms used in this section of the label can be found at <a href="http://apvma.gov.au/spraydrift">apvma.gov.au/spraydrift</a>
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	<p>DO NOT allow bystanders to come into contact with the spray cloud.</p> <p>DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.</p> <p>DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.</p> <p>DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.</p>
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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:	<p>Grazing 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.</p> <p>Harvest Cotton: DO NOT HARVEST EARLIER THAN 7 DAYS AFTER APPLICATION. All Other Crops: NOT REQUIRED WHEN USED AS DIRECTED.</p>
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>Resistant Weeds Warning</p> <p>GROUP 22 HERBICIDE</p> <p>PARAQUAT + DIQUAT 250 Herbicide is a member of the pyridinium group of herbicides. PARAQUAT + DIQUAT 250 has the PS I electron diversion mode of action. For weed resistance management, PARAQUAT + DIQUAT 250 is a Group 22 herbicide. Some naturally occurring weed biotypes resistant to PARAQUAT + DIQUAT 250 and other 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 PARAQUAT + DIQUAT 250 or other Group 22 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Four Seasons Agribusiness Pty Ltd accepts no liability for any losses that may result from the failure of PARAQUAT + DIQUAT 250 to control resistant weeds</p>
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Precautions:	
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Protections:	<p><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.</p> <p><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.</p> <p><b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b>  DO NOT contaminate streams, rivers or watercourses 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.</p>
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Storage and Disposal:	<p>Store in the closed, original container in a dry, cool, well-ventilated locked room or 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.</p> <p>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.</p> <p>Refillable containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage</p>
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Safety Directions:	<p>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</li> <li>• half facepiece respirator or disposable respirator.</li> </ul> <p>If product on skin, immediately wash area with soap and water. If clothing becomes contaminated with product, or wet with spray, remove contaminated clothing immediately. 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> <p>DO NOT work in spray mist.</p> <p>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.</p> <p>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</p>
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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.  
Avoid contacting vegetation wet with spray, but if necessary to do so, wear waterproof footwear and waterproof protective clothing and gloves

First Aid Instructions:	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. NOTE TO PHYSICIANS: For additional advice on the treatment of paraquat poisoning, please consult the booklet "The Treatment of Paraquat Poisoning: A Guide for Doctors." Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.
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First Aid Warnings:	
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## SOUTHERN AUSTRALIA - FULL DISTURBANCE

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>SOUTHERN AUSTRALIA</b>  <b>DIRECT DRILLING</b> with full combine  or  with cultivation before spraying  or  with cultivation after spraying as an aid in the establishment of crops including:  <b>Winter</b> Canola, Chickpeas, Cereals (Wheat, Barley, Oats, Rye, Triticale), Field Beans, Field Peas, Lentils, Linseed (Linola), Lupins, Vetch	<b>Seedling grasses</b> Annual Ryegrass, Barley Grass, Brome Grass, Volunteer Cereals, Wild Oats	<i>Lolium rigidum</i> , <i>Hordeum</i> spp., <i>Bromus</i> spp., <i>Avena</i> spp.	2 to 3 leaf 4 leaf to early tiller mid to fully tillered	0.6 to 0.8 L 0.8 to 1.6 L 1.6 to 2.4 L	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 L to 2.4 L/ha. For dense mature swards over 2 months old or spring crops, use rates up to 2.4 L/ha. ▲For control of Vulpia (Silver Grass), add a wettener such as AGRAL at 160 mL/100L or BS1000' at 100 mL/100L.
	Vulpia (Silver Grass, Sand Fescue)	<i>Vulpia</i> spp.	2 to 3 leaf 4 leaf to early tiller mid to fully tillered	0.6 to 0.8 L <sup>▲</sup> 0.8 to 1.6 L <sup>▲</sup> 1.6 to 2.4 L <sup>▲</sup>		
	<b>Seedling Brassica weeds</b> Ball Mustard, Charlock, Indian Hedge Mustard, Long Fruited Wild Turnip, Muskweed, Shepherds Purse, Short Fruited Wild Turnip, Ward's Weed, Wild Radish	<i>Neslia paniculata</i> , <i>Sinapsis arvensis</i> , <i>Sisymbrium orientale</i> , <i>Brassica tournefortii</i> , <i>Myagrum perfoliatum</i> , <i>Capsella bursa-pastoris</i> , <i>Rapistrum rugosum</i> , <i>Carrichtera annua</i> , <i>Raphanus raphanistrum</i>	1 to 5 cm diam 5 to 10 cm diam 10 to 20 cm diam	0.8 to 1.2 L 1.2 to 1.6 L 1.6 to 2.4 L		
	<b>Other seedling broadleaf weeds</b> Bedstraw, Bifora, Capeweed, Horehound, Ivy-leaf Speedwell, Lincoln Weed, Medic, Spiny Emex (Doublegee, Three Cornered Jack), Stinging Nettle, Storksbill (Wild Geranium, Crowsfoot), Subterranean Clover, Vetch (Tares)	<i>Gallium tricornutum</i> , <i>Bifora testiculata</i> , <i>Arctotheca calendula</i> , <i>Marrubium vulgare</i> , <i>Veronica hederifolia</i> , <i>Diplotaxis tenuifolia</i> , <i>Medicago</i> spp., <i>Emex australis</i> ,  <i>Urtica urens</i> , <i>Erodium</i> spp.,  <i>Trifolium subterraneum</i> , <i>Vicia</i> spp.	1 to 4 leaf or 1 to 4 cm diam. 4 to 8 leaf or 4 to 8 cm diam	0.8 to 1.2 L 1.2 to 1.6 L		<b>Also refer to Crop Establishment Procedure (3) - Cultivation After Spraying</b> Cultivation or sowing can commence 30 minutes after spraying but should be completed within 7 days unless a suitable residual herbicide is added or weeds are sprayed again. Where heavy weed growth is present at spraying, a better seed bed will result if cultivation or sowing is delayed 3 to 5 days to obtain maximum root release.
	Deadnettle, Fumitory, Melilotus, Pimpernel, Poppy, Saffron Thistle, Sheepweed	<i>Lamium amplexicaule</i> , <i>Fumaria</i> spp., <i>Melilotus</i> spp., <i>Anagallis</i> spp., <i>Papaver</i> spp., <i>Carthamus lanatus</i> , <i>Buglossoides arvensis</i>	1 to 10 leaf or 1 to 10 cm diam	0.8 to 1.2 L		<b>Also refer to Crop Establishment Procedure (4) - Cultivation Before Spraying</b> Spraying may be carried out before or after sowing or transplanting but 3 days before the crop emerges.
	Wireweed	<i>Polygonum aviculare</i>	1 to 4 leaf	0.8 to 1.2 L		<b>TANK MIX:</b> See Compatibility Section. Refer to partner product labels for suitability of use prior to sowing particular crops and relevant plant-back periods.
	Marshmallow	<i>Malva parviflora</i>	1 to 12 leaf	0.8 to 1.2 L plus 75 mL Goal		
	Volunteer Beans, Peas, Lupins		1 to 6 leaf	0.8 to 1.2 L plus 5 g Metsulfuron 600 or 0.8 to 1.2 L plus 140 g DICAMBA 700		

## SOUTHERN AUSTRALIA - FALLOW / MINIMUM DISTURBANCE

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<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>Pasture</b> Clover Grass, Lucerne, Medic	<b>Seedling grasses</b> Annual Ryegrass, Barley Grass, Brome Grass, Volunteer Cereals, Wild Oats	<i>Lolium rigidum</i> , <i>Hordeum</i> spp., <i>Bromus</i> spp., <i>Avena</i> spp.	2 to 3 leaf 4 leaf to early tiller mid to fully tillered	1.0 to 1.2 L 1.2 to 2.4 L 2.4 to 3.2 L	Sthn NSW, Vic, Tas, SA, WA only	Refer to Crop Establishment Procedures (1), (6) or (7b) as appropriate to the particular situation 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 narrow points. Under less favourable conditions or where spraying is delayed until winter or in higher rainfall areas or for fallow weed control, use higher rates in the range 2.4 to 3.2L/ha. For dense swards or spring application, use rates in the range 2.4 to 3.2L/ha. ^For control of Vulpia (Silver Grass) add a wetter such as AGRAL at 160 mL/100L or BS1000 at 100 mL/100L.
	Vulpia (Silver Grass, Sand Fescue)	<i>Vulpia</i> spp.	2 to 3 leaf 4 leaf to early tiller mid to fully tillered	1.0 to 1.2 L <sup>A</sup> 1.2 to 2.4 L <sup>A</sup> 2.4 to 3.2 L <sup>A</sup>		
	<b>Seedling Brassica weeds</b> Ball Mustard, Charlock, Indian Hedge Mustard, Long Fruited Wild Turnip, Muskweed, Shepherds Purse, Short Fruited Wild Turnip, Ward's Weed, Wild Radish	<i>Neslia paniculata</i> , <i>Sinapis arvensis</i> , <i>Sisymbrium orientale</i> , <i>Brassica tournefortii</i> , <i>Myagrum perfoliatum</i> , <i>Capsella bursa-pastoris</i> , <i>Rapistrum rugosum</i> , <i>Carrichtera annua</i> , <i>Raphanus raphanistrum</i>	1 to 5 cm diam 5 to 10 cm diam 10 to 20 cm diam	1.2 to 1.8 L 1.8 to 2.4 L 2.4 to 3.2 L		
	<b>Other seedling broadleaf weeds</b> Bedstraw, Bifora, Capeweed, Horehound, Ivy-leaf Speedwell, Lincoln Weed, Spiny Emex (Doublegee, Three Cornered Jack), Stinging Nettle, Storksbill (Wild Geranium, Crowsfoot), Vetch (Tares)	<i>Gallium tricornutum</i> , <i>Bifora testiculata</i> , <i>Arctotheca calendula</i> , <i>Marrubium vulgare</i> , <i>Veronica hederifolia</i> , <i>Diplotaxis tenuifolia</i> , <i>Emex australis</i> ,  <i>Urtica urens</i> , <i>Erodium</i> spp., <i>Vicia</i> spp.	1 to 4 leaf or 1 to 4 cm diam. 4 to 8 leaf or 4 to 8 cm diam	1.2 to 1.8 L 1.8 to 3.2 L		
	Deadnettle, Fumitory, Melilotus, Pimpernel, Poppy, Saffron Thistle, Sheepweed	<i>Lamium amplexicaule</i> , <i>Fumaria</i> spp., <i>Melilotus</i> spp., <i>Anagallis</i> spp., <i>Papaver</i> spp., <i>Carthamus lanatus</i> , <i>Buglossoides arvensis</i>	1 to 10 leaf or 1 to 10 cm diam	1.2 to 3.2 L		
	Wireweed	<i>Polygonum aviculare</i>	1 to 4 leaf	1.2 to 3.2 L		
	Marshmallow	<i>Malva parviflora</i>	1 to 12 leaf	1.2 to 1.8 L plus 75 mL Goal		
	Volunteer Beans, Peas, Lupins		1 to 6 leaf	1.2 to 1.8 L plus 5 g Metsulfuron 600 or 1.2 to 1.8 L plus 140 g DICAMBA 700		

**SOUTHERN AUSTRALIA - FALLOW / MINIMUM DISTURBANCE, continued**

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>SOUTHERN AUSTRALIA DIRECT DRILLING with minimum disturbance (disc drill, modified combine, sod seeder)</b>  or <b>FALLOWS cultivated or non-cultivated as an aid in establishing crops or establishing and maintaining a fallow</b>	Medic, Subterranean Clover	<i>Medicago</i> spp., <i>Trifolium subterraneum</i>	1 to 4 leaf or 1 to 4 cm diam	1.2 to 1.8 L plus 140 g DICAMBA 700	Sthn NSW, Vic, Tas, SA, WA, only	For sub clover control without the addition of DICAMBA 700, in crops sown with triple disc, modified combine or sod seeder, use a split application. Apply the second application 7 to 14 days after the first application and when green regrowth is present. For control prior to sowing with combine, use a split application. Apply the first application in autumn to mid winter. Apply second application 7 to 14 days later and when green regrowth is present. Apply the first application in late winter and follow with second application 7 to 14 days later when green regrowth is present. If there is excess leaf growth, ie more than 10 cm, split the recommended rate in half and apply second part 7 to 14 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 the second application.
			4 to 8 leaf or 4 to 8 cm diam	1.8 to 3.2 L plus 5 g Metsulfuron 600		
	Split application for Subterranean Clover	<i>Trifolium subterraneum</i>	1 to 8 leaf or 1 to 8 cm diam	1.2 L followed by 1.2 L		
			4 leaf to early tiller	1.2 L followed by 1.2 L		
				mid to fully tillered		
	Perennial Ryegrass	<i>Lolium perenne</i>	weeds higher than 10 cm	2.4 to 3.2 L		
	Most annual weeds				SA only	For use in summer fallows only. Add 275 g/ha Diuron 900 WG to enhance control of larger weeds.
	Potato Weed	<i>Heliotropium europaeum</i>	1 to 15 cm	1.2 to 1.6 L		
			15 to 30 cm	1.6 to 2.4 L		

## NORTHERN AUSTRALIA - FULL DISTURBANCE

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>NORTHERN AUSTRALIA</b>	<b>Seedling grasses (not regrowth or rhizomes)</b>		2 to 3 leaf	0.8 to 1.2 L	Qld,	<b>Refer to Crop Establishment Procedure (7a)</b>
	Barnyard Grass, Buffel Grass, Columbus Grass, Johnson Grass, Liverseed Grass, Mossman River Grass, Paradoxa Grass, Rhodes Grass, Summer Grass, Sweet Summer Grass, Volunteer Barley, Volunteer Wheat, Wild Oats	<i>Echinochloa</i> spp., <i>Cenchrus ciliaris</i> , <i>Sorghum x alnum</i> , <i>Sorghum halepense</i> , <i>Urochloa panicoides</i> , <i>Cenchrus echinatus</i> , <i>Phalaris paradoxa</i> , <i>Chloris gayana</i> , <i>Digitaria ciliaris</i> , <i>Brachiaria eruciformis</i> , <i>Hordeum vulgare</i> , <i>Triticum aestivum</i> , <i>Avena ludoviciana</i> , <i>A. fatua</i>	4 leaf to early tiller	1.2 to 1.6 L	Nthn NSW,	Apply in 50 to 100 L of clean water/ha. Avoid spraying under hot dry conditions. Best results will be obtained when spraying is carried out in humid or low light conditions. 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 L to 2.4 L/ha.
<b>DIRECT DRILLING with full combine as an aid in the establishment of crops including:</b>			mid to fully tillered	1.6 to 2.4 L	NT only	
<b>Broadacre crops</b> <b>Winter</b> Cereals (Wheat, Barley, Oats, Rye, Triticale), Canola, Chickpeas, Field Beans						Ensure weeds are not dusty or covered with soil as PARAQUAT + DIQUAT 250 effectiveness will be reduced.
<b>Broadacre crops</b> <b>Summer</b> Cotton, Maize, Millet, Mungbeans, Navy Beans, Peanuts, Pigeon Peas, Safflower, Sorghum, Soybeans, Sunflower	<b>Seedling broadleaf weeds</b> African Turnip Weed <sup>Δ</sup> , Annual Saltbush, Australian Bindweed, Australian Bluebell, Blackberry Nightshade, Bathurst Burr, Bellvine, Black Pigweed, Bladder Ketmia, Caltrop, Caustic Weed, Climbing Buckwheat, Cowvine, Cudweeds, Deadnettle, European Bindweed, Fat Hen, Fireweed, Fleabanes, Fumitory, Hogweed, Malvastrum, Mexican Poppy, Mintweed, Mungbean	<i>Sorghum bicolor</i> , <i>Eragrostis cilianensis</i> <i>Sisymbrium thellungi</i> <sup>Δ</sup> , <i>Atriplex muelleri</i> , <i>Convolvulus erubescens</i> , <i>Wahlenbergia gracilis</i> , <i>Solanum nigrum</i> , <i>Xanthium spinosum</i> , <i>Ipomoea plebeia</i> , <i>Trianthema portulacastrum</i> , <i>Hibiscus trionum</i> , <i>Tribulus terrestris</i> , <i>Euphorbia</i> spp., <i>Polygonum convolvulus</i> , <i>Ipomoea lonchophyla</i> , <i>Gnaphalium</i> spp., <i>Lamium amplexicaule</i> , <i>Convolvulus arvensis</i> , <i>Chenopodium album</i> , <i>Senecio madagascariensis</i> , <i>Conyza</i> spp., <i>Fumaria</i> spp., <i>Zaleya galericulata</i> , <i>Malvastrum americanum</i> , <i>Argemone</i> spp., <i>Salvia reflexa</i> , <i>Vigna radiata</i>	2 to 3 leaf only	0.8 to 1.2 L		<b>TANK MIX:</b> See Compatibility Section. <sup>Δ</sup> 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.

NORTHERN AUSTRALIA - FULL DISTURBANCE, *continued*

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>NORTHERN AUSTRALIA</b>  <b>DIRECT DRILLING</b> with full combine as an aid in the establishment of crops <i>continued</i>	<b>Seedling broadleaf weeds</b> <i>(continued)</i> Native Rosella, New Zealand Spinach, Noogora Burr, Parthenium Weed, Peppergrass, Phyllanthus, Prickly Lettuce, Prickly Paddymelon, Red Pigweed, Rhynchosia, Sesbania Pea <sup>Δ</sup> , Sida, Smooth Cucumber, Soft Roly Poly, Sowthistle, Soybean, Spiny Emex, Sunflower <sup>Δ</sup> , Thornapples, Variegated Thistle, Wild Gooseberry	<i>Abelmoschus ficulneus</i> , <i>Tetragonia tetragonoides</i> , <i>Xanthium pungens</i> , <i>Parthenium hysterophorus</i> , <i>Lepidium</i> spp., <i>Phyllanthus</i> spp., <i>Lactuca serriola</i> , <i>Cucumis myriocarpa</i> , <i>Portulaca oleracea</i> , <i>Rhynchosia</i> spp., <i>Sesbania cannabina</i> <sup>Δ</sup> , <i>Sida</i> spp., <i>Cucumis</i> spp., <i>Salsola kali</i> , <i>Sonchus</i> spp., <i>Glycine max</i> , <i>Emex australis</i> , <i>Helianthus annuus</i> <sup>Δ</sup> , <i>Datura</i> spp., <i>Silybum marianum</i> , <i>Physalis minima</i>	1 to 4 leaf	0.8 to 1.6 L	Qld,	<b>Refer to Crop Establishment Procedure (7a)</b> Apply in 50 to 100 L of clean water/ha. Avoid spraying under hot dry conditions. Best results will be obtained when spraying is carried out in humid or low light conditions. 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. Under less favourable conditions or where spraying is delayed or where narrow points are fitted, use higher rates in the range 1.6 L to 2.4 L/ha.
			4 to 8 leaf	1.6 to 2.4 L	Nthn	Ensure weeds are not dusty or covered with soil as PARAQUAT + DIQUAT 250 effectiveness will be reduced.  <b>TANK MIX:</b> See Compatibility Section.  <sup>Δ</sup> 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.
			8 to 12 leaf	2.4 L	NSW, NT only	
			1 to 4 leaf	1.2 to 1.6 L		
			4 to 8 leaf	1.6 to 2.4 L		
			1 to 4 leaf	1.2 to 1.6 L		
			1 to 8 leaf	0.8 to 1.2 L		

## NORTHERN AUSTRALIA - FALLOW / MINIMUM DISTURBANCE

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>NORTHERN AUSTRALIA</b> <b>DIRECT DRILLING</b> with minimum disturbance or <b>FALLOWS</b> cultivated or non-cultivated as an aid in establishing or maintaining a fallow or the establishment of crops including  <b>Broadacre crops -</b> <b>Winter</b> Cereals (Wheat, Barley, Oats, Rye, Triticale), Chickpeas	<b>Seedling grasses</b> (not regrowth or rhizomes) Barnyard Grass, Liverseed Grass, Paradoxa Grass, Stink Grass, Volunteer Barley, Volunteer Wheat, Wild Oats		2 leaf to pre-tillering early tillering	1.2 to 1.6 L 1.6 to 2.4 L	Qld, Nthn NSW, NT only	<b>Refer to Procedures (5), (6) or (7b) as appropriate to the particular situation</b> 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 L to 2.4 L/ha. Apply in 50 to 100 L of clean water/ha. Avoid spraying under hot dry conditions. Best results will be obtained when spraying is carried out in low light or in humid conditions.
	<b>Seedling broadleaf weeds</b> Bathurst Burr, Bellvine, Black Pigweed, Bladder Ketmia, Caltrop, Fat Hen, Fireweed, Fumitory, Mintweed, Mungbean <sup>A</sup> , New Zealand Spinach, Prickly Paddymelon, Sesbania Pea <sup>A</sup> , Smooth Cucumber, Sunflower <sup>A</sup> , Thornapples, Volunteer Cotton (including Roundup* Ready cotton), Wild Gooseberry	<i>Xanthium spinosum</i> , <i>Ipomoea plebeia</i> , <i>Trianthema portulacastrum</i> , <i>Hibiscus trionum</i> , <i>Tribulus terrestris</i> , <i>Chenopodium album</i> , <i>Senecio madagascariensis</i> , <i>Fumaria spp.</i> , <i>Salvia reflexa</i> , <i>Vigna radiata</i> <sup>A</sup> , <i>Tetragonia tetragonoides</i> , <i>Cucumis myriocarpa</i> , <i>Sesbania cannabina</i> <sup>A</sup> , <i>Cucumis spp.</i> , <i>Helianthus annuus</i> <sup>A</sup> , <i>Datura spp.</i> , <i>Gossypium hirsutum</i> , <i>Physalis minima</i>	1 to 4 leaf	1.6 to 2.4 L		Ensure weeds are not dusty or covered with soil as PARAQUAT + DIQUAT 250 effectiveness will be reduced.
	Volunteer Cotton (including Roundup Ready cotton)	<i>Gossypium hirsutum</i>	5 to 9 leaf	2.4 to 3.2 L		<sup>A</sup> 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.
	Boggabri, Hexham Scent <sup>A</sup> , Wild Carrot, Phyllanthus	<i>Amaranthus mitchellii</i> , <i>Melilotus indicus</i> <sup>A</sup> , <i>Daucus glochidiatus</i> , <i>Phylanthus spp.</i>	1 to 8 leaf	1.6 to 2.4 L		<b>TANK MIX:</b> See Compatibility Section.
	Volunteer Barley Volunteer Wheat Bladder Ketmia Milk Thistle New Zealand Spinach	<i>Hordeum vulgare</i> , <i>Triticum aestivum</i> , <i>Hibiscus trionum</i> , <i>Sonchus oleraceus</i> , <i>Tetragonia tetragonoides</i>	1 to 4 leaf	1.6 to 2.4 L		<b>Refer to Procedure 5</b> DO NOT spray under hot, dry conditions or when weeds are covered with dust and/or trash. Best results will be obtained when spraying is carried in low light or humid conditions. Application is best carried out following rain.
<b>As an aid in post-harvest weed control - after winter cereals</b>						

## SUGARCANE

Crop/Situation	Weeds Controlled		Growth Stage	Rate/ha	States	Critical Comments
	Common Name	Botanical Name				
<b>NORTHERN AUSTRALIA</b>  <b>SUGARCANE ESTABLISHMENT AND FALLOWS PRIOR TO SUGARCANE PLANTING</b> cultivated or non-cultivated  <b>As an aid in establishing sugarcane or controlling weeds in a fallow prior to sugarcane</b>	<b>Seedling grasses</b> (not regrowth or rhizomes)	<i>Echinochloa</i> spp., <i>Urochloa panicoides</i> , <i>Eragrostis ciliaris</i>	2 leaf to pre-tillering	1.2 to 1.6 L	Qld, Nthn NSW, NT only	<b>SUGARCANE:</b> Prior to planting or for establishing or maintaining a fallow - refer to Procedure (6) and following
	Barnyard Grass, Liverseed Grass, Stink Grass		early tillering	1.6 to 2.4		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.
			mature annual grasses <sup>A</sup>	2.4 to 3.2 L <sup>A</sup>		<sup>A</sup> 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/100L or AGRAL at 200 mL/100 L. Control will be improved with the addition of an enhancement rate of Diuron 900 (500 g to 1 kg/ha) and if vines are present, add 2,4-D amine.
	<b>Seedling broadleaf weeds</b>	<i>Xanthium spinosum</i> , <i>Ipomoea plebeia</i> , <i>Trianthema portulacastrum</i> , <i>Hibiscus trionum</i> , <i>Tribulus terrestris</i> , <i>Chenopodium album</i> , <i>Fumaria</i> spp., <i>Salvia reflexa</i> , <i>Vigna radiata</i> , <i>Tetragonia tetragonoides</i> , <i>Cucumis myriocarpa</i> , <i>Sesbania cannabina</i> , <i>Cucumis</i> spp., <i>Datura</i> spp., <i>Physalis minima</i>	1 to 4 leaf	1.6 to 2.4 L		A split application of PARAQUAT + DIQUAT 250 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.
	Bathurst Burr, Bellvine, Black Pigweed, Bladder Ketmia, Caltrop, Fat Hen, Fumitory, Mintweed, Mungbean, New Zealand Spinach, Prickly Paddymelon, Sesbania Pea, Smooth Cucumber, Thornapples, Wild Gooseberry		mature broadleaf weeds <sup>A</sup>	2.4 to 3.2 L <sup>A</sup>		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 low light or humid conditions.
	Phyllanthus		1 to 8 leaf	1.6 to 2.4 L		Ensure weeds are not dusty or covered with soil as PARAQUAT + DIQUAT 250 effectiveness will be reduced.
			mature broadleaf weeds <sup>A</sup>	2.4 to 3.2 L <sup>A</sup>		<b>TANK MIX:</b> See Compatibility Section.

## **SUGARCANE, *continued***

Crop / Situation	Weeds Controlled		Weed Growth Stage	Rate/ha	States	Critical Comments		
	Common Name	Botanical Name						
<b>SUGARCANE PLANT &amp; RATOON</b>	<b>Most seedling broadleaf weeds including</b> Sicklepod, Bluetop, Phyllanthus, Calopo and <b>Most seedling grasses including</b> Awnless Barnyard Grass, Summer Grass, Guinea Grass, Hamil Grass, Green Summer Grass	Senna ( <i>Cassia</i> ) obtusifolia, <i>Ageratum houstonianum</i> , <i>Phyllanthus</i> spp., <i>Calapogonium mucronoides</i>	up to 5 cm high	1.2 to 1.6 L	Qld, NSW, WA, NT only	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 PARAQUAT + DIQUAT 250, 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. PARAQUAT + DIQUAT 250 can be mixed with GESAPRIM to give residual weed control when used as a directed spray. It may also be mixed Diuron 900 WG for residual control. To enhance activity of PARAQUAT + DIQUAT 250 under favourable growing conditions and in open sunny conditions, add 275 g/ha Diuron 900 WG. Complete spray coverage is essential. For grasses and broadleaf weeds up to 5 cm high, use a minimum of 250 L spray solution/ha. 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.		
			up to 50 cm high	1.2 to 1.6 L				
			up to 15 cm high	1.2 to 1.6 L				
			up to 15 cm high	1.2 to 1.6 L				
			3 to 5 leaves	1.6 to 2.0 L				
			up to 5 cm high	1.2 to 1.6 L plus 500 g Diuron 900				
	All above grasses		up to 10 cm high	1.2 to 1.6 L plus 1 kg Diuron 900		<b>DIURON TANK MIXES:</b> Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments withholding periods, regional use restrictions and safety directions for the tank mix products.		

## COTTON and LUCERNE

Crop/Situation	Use	States	Rate/ha	Critical Comments
<b>COTTON</b> Dryland and moisture stressed	Desiccant to aid harvest	Qld, NSW, only	1.2 to 1.6 L	<b>Apply by groundrig only.</b> Good spray coverage is essential. Apply in 50 to 100 L of water per hectare. 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. PARAQUAT + DIQUAT 250 can damage immature green bolls.
<b>LUCERNE established (at least 1 year old)</b> For improved grazing or oversowing	Most annual weeds including Capeweed and Erodium	All States	1.6 L	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.
For improved grazing, hay or seed production or oversowing	Most annual weeds including Capeweed and Erodium		2.4 L	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.  <b>WARNING</b> - continued use of PARAQUAT + DIQUAT 250 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.

**PUBLIC SERVICE AREAS, RIGHTS OF WAY, MARKET GARDENS, TROPICAL TREE CROPS, VEGETABLES, POTATOES, FORESTS, ORCHARDS, PLANTATIONS AND VINEYARDS**

Crop/Situation	Weeds Controlled	States	Rate		Critical Comments	
			High Volume or Power Sprayer			
			/ha	/100 L (Spot Spray)		
<b>Public Service Areas, Rights of Way, Market Gardens and 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 broadleaf 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 Goal at 250 mL/ha will improve control of Small Flowered Mallow, Evening Primrose and other weeds sensitive to Goal. Refer to the Goal 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> 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 PARAQUAT + DIQUAT 250 in this volume.</p>	
<b>Hazelnut Plantations</b> Plantation floor management only	Most annual grasses and broadleaf weeds		--	<p>Apply directed spray treatment, as required, to soil and to pest weeds around base of trees. Thoroughly wet foliage of weeds. Use higher application rate for dense, more established weeds.</p> <p>DO NOT allow immature (green) bark, desirable suckers, stems, leaves or fruit to be exposed to the spray or spray drift. Use suitable nozzle types and shields around nozzles to target spray and minimise spray drift.</p> <p>See <b>Note</b> on Spot spray rate above.</p>	<p>Apply directed spray treatment, as required, to soil and to pest weeds around base of trees. Thoroughly wet foliage of weeds. Use higher application rate for dense, more established weeds.</p> <p>DO NOT allow immature (green) bark, desirable suckers, stems, leaves or fruit to be exposed to the spray or spray drift. Use suitable nozzle types and shields around nozzles to target spray and minimise spray drift.</p> <p>See <b>Note</b> on Spot spray rate above.</p>	
	Sucker Management					
<b>Pistachio Nuts</b>	Most annual grasses and broadleaf weeds		2.4 to 3.2 L (a) see below		<p>Apply as required with the spray only to come in contact with the soil and weeds around the base of the trees.</p> <p>DO NOT allow immature (green) bark, suckers, stems, leaves or fruit to be exposed to the spray or spray drift. Use suitable nozzle types and shields around nozzles to minimise spray drift.</p> <p>Thoroughly wet foliage of weeds. Use higher application rate for dense, more established weeds.</p> <p>See <b>Note</b> on Spot spray rate above.</p>	
<b>Walnuts</b>	Most annual grasses and broadleaf weeds	NSW, SA, TAS, VIC, WA only	--		<p>Apply as required with the spray only to come in contact with the soil and weeds around the base of the trees.</p> <p>DO NOT allow immature (green) bark, suckers, stems, leaves or fruit to be exposed to the spray or spray drift. Use suitable nozzle types and shields around nozzles to minimise spray drift.</p> <p>Thoroughly wet foliage of weeds. Use higher application rate for dense, more established weeds.</p>	

**Wetting agent:**

- (a) If volume of water applied exceeds 200 L/ha, add 200 mL AGRAL or 120 mL BS1000 per 100 L of additional water
- (b) Add 170 mL AGRAL or 100 mL BS1000 per 100 L

**PUBLIC SERVICE AREAS, RIGHTS OF WAY, MARKET GARDENS, TROPICAL TREE CROPS, VEGETABLES, POTATOES, FORESTS, ORCHARDS, PLANTATIONS AND VINEYARDS, *continued***

Crop/Situation	Weeds Controlled	States	Rate		Critical Comments	
			High Volume or Power Sprayer			
			/ha	/100 L (Spot Spray)		
Pre-crop emergence weed control (vegetable crops)	Most annual grasses and broadleaf weeds	All States	2.4 to 3.2 L (a) see below	240 to 320 mL (b) see below	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. See <b>Note</b> on Spot spray rate above.	
Long term weed control					PARAQUAT + DIQUAT 250 can be mixed with soil residual herbicides GESAPRIM and simazine. (For further information see GENERAL INSTRUCTIONS) See <b>Note</b> on Spot spray rate above.	
Potatoes weed control	Most annual grasses and broadleaf weeds	All States	2.4 to 3.2 L (a) see below	240 to 320 mL (b) see below	After planting and hilling up, wait until 10 to 25% of potato shoots are emerged then blanket spray with PARAQUAT + DIQUAT 250. Emerged potato shoots will suffer a marginal leaf burn but will quickly recover. See <b>Note</b> on Spot spray rate above.	
Potatoes weed destruction prior to digging			3.2 L (a) see below	320 mL (b) see below	Spray 3 to 7 days before digging after all tops have died down. See <b>Note</b> on Spot spray rate above. <b>Note:</b> DO NOT use PARAQUAT + DIQUAT 250 for potato haulm desiccation.	
Avocados, Custard Apples, Lychees, Mangoes	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. See <b>Note</b> on Spot spray rate above. <b>WARNING:</b> Avoid spray drift onto trees.	
<b>Wetting agent:</b> (a) If volume of water applied exceeds 200 L/ha, add 200 mL AGRAL or 120 mL BS1000 per 100 L of additional water (b) Add 170 mL AGRAL or 100 mL BS1000 per 100 L						

**PUBLIC SERVICE AREAS, RIGHTS OF WAY, MARKET GARDENS, TROPICAL TREE CROPS,  
VEGETABLES, POTATOES, FORESTS, ORCHARDS, PLANTATIONS AND VINEYARDS, *continued***

Crop/Situation	Situation/Weeds	States	Rate per ha	Critical Comments
<b>Rice</b> <b>DO NOT apply if rice has emerged</b>	Annual weeds	NSW only	1.6 to 3.2 L	Refer to Direct Drilling Procedure - Rice (2)
	Annual weeds including Barnyard Grass		1.7 to 2.2 L	On rice stubbles after burning
	Clover control		2.2 L plus 140 g DICAMBA 700 as tank mix	Well grazed clover dominant pastures
	Annual Pasture		3.2 L	Pasture not properly managed. Use 100 L/ha water per 2 cm growth.
<b>Kikuyu/Paspalum Pastures</b>	To suppress growth to over sow winter feed	NSW only	2.4 L	Spray in autumn after grazing or slashing to 2 to 4 cm.
			3.2 L	For early spraying (February or March) or if lightly grazed.
<b>Established Pastures</b> Perennial grass crops, Cocksfoot, Perennial Ryegrass, Phalaris and Demeter Fescue	Control of annual weeds including Capeweed and Erodium for improved grazing, hay or seed production	NSW, Vic, SA, WA & Tas only	1.6 L	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. (Subterranean Clover should be past 6 true leaf stage).
			2.4 L	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.	Vic, NSW, TAS, SA & WA only	1.2 L	Spray in winter. Subterranean Clover should be past 6 true leaf stage. Only <b>suppresses</b> annual weeds (all States except Western Australia) and perennial weeds (Western Australia).
<b>Grasses</b> (particularly Annual Ryegrass)	To control grass seed set (Spray Top technique)	WA & SA only	<b>Boom Spray:</b> 800 mL/ha in a minimum of 50 L clean water	Apply at the end of growing season. HEAVILY GRAZE paddocks 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 boom spray at a height to give double overlap spray pattern AT THE TOP of the pasture being sprayed.
			1.5 L	HAY FREEZING for maximum retention of protein for summer grazing.
<b>Duboisia</b>	Annual weeds	QLD and NT only	2.4 to 3.2 L/ha OR <b>Spot Spraying:</b> 240 to 20 mL per 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 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</b> ( <i>Melaleuca alternifolia</i> )	Grasses and broadleaf weeds	NSW only	1.6 to 3.2 L	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

PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250, nor are weed seeds which germinate after spraying. At spraying, weeds should therefore not be covered by soil or dust as this may severely reduce efficacy.

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 PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 with other herbicides. The principle of selective weed control with this product is that annual weeds are controlled but perennial plants and clovers recover after an initial scorch. The control of annual weeds by spraying with this product will allow the desirable perennial species to thicken up at the expense of the weeds. Moisture and fertility should not be limited at spraying and the proportion of desirable species must be great enough for them to fill in the areas previously occupied by weeds. Refer to local pasture guidelines for optimum plant densities.

### Mixing

The recommended rate of PARAQUAT + DIQUAT 250 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. The following volumes are recommended:

Winter Rainfall Areas	Boom Spray	Summer Rainfall Areas: Weed Stage and Density
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 per 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 Boom Spray

Use only through a properly calibrated boom spray 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. Coverage of the weeds with the spray solution is critical for maximising efficacy. This is particularly important with fine leaf grasses. Use the recommended spray volume for the corresponding weed size and density from the Water Volume table above.

### Clean up

Wash spray equipment with clean water immediately after use. This product is corrosive to metals, particularly galvanised iron and aluminium and should not be left for long periods in tanks or equipment made of these materials.

### Direct Drilling Procedure (1)

Use of PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250. 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 PARAQUAT + DIQUAT 250/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 140 g DICAMBA 700/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 per 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)

Step	Critical Comments
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 PARAQUAT + DIQUAT 250. 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)

Step	Critical Comments
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 PARAQUAT + DIQUAT 250.

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 one 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 or FSA representative.

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

##### **Use of PARAQUAT + DIQUAT 250. for weed control after cereal harvest. Procedure (5)**

New Zealand Spinach, Bladder Ketmia 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 PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 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.

PARAQUAT + DIQUAT 250 provides an economical and reliable alternative for fallow weed control.

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

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

Seedling weeds should be sprayed with 1.0 to 3.2 L/ha PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250, many species will require a follow-up cultivation to complete the kill. PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 preferably spraying in the late afternoon or early evening

**Use of PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 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 PARAQUAT + DIQUAT 250 is recommended due to the absence of cultivation. Use PARAQUAT + DIQUAT 250 at 1.0 to 3.2 L/ha in Southern Australia; 1.2 to 3.2 L/ha in Northern Australia (Qld, Nthn NSW & NT only).

**DIURON TANK MIXES:** Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments withholding periods, regional use restrictions and safety directions for the tank mix products.

Tank mixes with 2,4-D and MCPA formulations should not be more concentrated than 2 parts PARAQUAT + DIQUAT 250 to 1 part 2,4-D or MCPA.

Refer to the manufacturers 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.

PARAQUAT + DIQUAT 250 is not compatible with copper, zinc or manganese sulphates.