

DANGEROUS POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

CAN KILL IF SWALLOWED

DO NOT PUT IN DRINK BOTTLES

KEEP LOCKED UP



F.S.A.

PARAQUAT 250

HERBICIDE

ACTIVE CONSTITUENT: 250 g/L PARAQUAT 250
present as **PARAQUAT DICHLORIDE**

F.S.A. Paraquat 250 Herbicide is for the control of a wide range of Grasses and Broadleaf Weeds as per Directions for Use

IMPORTANT: READ THIS BOOKLET
BEFORE USING THIS PRODUCT



DIRECTIONS FOR USE

RESTRAINTS

DO NOT add wetter unless spraying at high volume. Where F.S.A. Paraquat 250 Herbicide is mixed with water at less than 400 mL/100 L of water, add 100 mL Wetter 1000 per 100 L of spray.

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 but operations should commence within 7 days.

For ground application only - do not use through aircraft, misting machines or hand-held ultra low volume controlled droplet applications (CDA units).

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Aid to Cultivation to minimise cultivation and prepare a clean bed for sowing.	Annual grass and broadleaf weed control. Early autumn sowing.	All States	1.2 to 1.6 L	Where cultivation follows spraying, it may commence one hour after spraying but should be completed within 7 days. Where heavy weed growth is present at spraying a better seedbed will result if cultivation is delayed 3 - 5 days.
	Winter, spring and early summer sowing.		1.6 to 2.4 L	
	Wild oats at 2-5 leaf stage in autumn / winter.	Qld, Vic, SA, Tas, NT only	600 to 800 mL	Use the higher rates for dense, more mature weed stands. Wild oats must have at least two leaves. Where "Reglone" is used the lower F.S.A. Paraquat 250 Herbicide rate should be sufficient to control dense, mature weeds. Pasture: Remains of old pasture should be reduced by continuous heavy grazing. Remove stock 3 - 5 days before spraying to allow to freshen up.
	NSW, ACT only	600 mL		
Rice	Annual grass and broadleaf weed control.	Qld, NSW, NT only	1.6 L	Pre-sowing.
			800 mL	Post- sowing, pre-crop emergence.
Wild Oat control in Spring Fallows	Wild oats at 2 to 5 leaf stage.	Qld, NSW, NT, ACT only	1.2 to 2 L	Use higher rate for summer growth. Avoid spraying under hot, dry conditions. Best results will be obtained when spraying is carried out in the late evening.
Kikuyu / Paspalum Pasture	To suppress growth to oversow winter seed.	Qld, NSW, ACT only	1.6 to 2.4 L	Use the high rate for February spraying and the low rate in March.

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Selective Weed Control Autumn / early Winter annual and perennial clover	Annual grass and some broadleaf weed control except Paterson's Curse, Sorrel, Dock, Shepherd's Purse and some thistles. Control of some broadleaf weeds, including; Patterson's Curse, Sorrel, Dock, Shepherd's Purse and some thistles will not be achieved. Alternative methods such as the spray-graze technique with 2,4-D or MCPA should be considered.	All States Qld, NSW, Vic, SA, Tas, NT, ACT only	600 mL to 1.2 L 1.2 to 1.6 L	Use the higher rate for dense weed stands.
	Late winter/ early spring - Annual and perennial clovers - Cocksfoot - Perennial ryegrass - Phalaris - Demeter fescue only		1.6 to 2.4 L	Use the higher rate in winter/early spring when barley grass is present. All applications: Graze pastures continuously after the seasonal break to a height of 2 -4 cm. Remove stock 2 -3 days before spraying to allow weeds to freshen up. Do not apply until clover has reached the 6 leaf stage. Do not spray clovers, which are affected by insect attack, disease or moisture stress. Do not use on clover pastures growing in water repellent sands or other situations subject to moisture stress at or immediately following treatment. Poor recovery of the clover will result. Use the lower rate for Cocksfoot and Perennial Ryegrass and the higher rate for Phalaris and Demeter Fescue. The perennial grasses must be at least 12 months old at spraying. DO NOT APPLY TO MEDICS
	Yorkshire Fog Grass		1.2 L	Apply in early spring to reduce Yorkshire Fog Grass component and increase the clover and desirable grass component. Mixed pastures will be scorched initially but should show good recovery and beneficial changes in composition following spring rainfall and growth. In lower rainfall areas application in mid to late winter may be almost as effective but allow better pasture recovery. If pasture has been grazed allow for sufficient time for pasture and fog grass recovery before spraying. Apply in spray volumes of 100 to 250 L/ha, the latter for dense or tall ungrazed pastures. Add Wetter 1000 at 120 mL per 100 L.

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Lucerne Autumn/ early winter	Annual grass and some broadleaf weeds.	Qld, Vic, SA, WA, Tas, NT only	1.2 to 1.6 L	<p>Use the higher rates for dense weed stands. Do not spray Lucerne stands under 12 months old.</p> <p>If mintweed is present use atrazine (900g/kg) at 600g/ha.</p> <p>WARNING - In certain areas, an uncommon species of barley grass (<i>H. glaucum</i> - common species of barley grass is <i>H. leporinum</i>) resistant to paraquat based products has become established. It may regrow after an initial scorch by F.S.A. Paraquat 250 Herbicide. Where this problem is suspected use fluazifop-p-butyl for grass weed control. If F.S.A. Paraquat 250 Herbicide has been applied use fluazifop-p-butyl at 1 L/ha after regrowth but before heading.</p>
		NSW only	1.2 L	
Late winter/early Spring		Qld, Vic, SA, WA, Tas, NT only	1.6 to 2.4 L	
		NSW, ACT only	1.2 L	
Perennial Grass Seed Crops Cocksfoot, Perennial ryegrass, Phalaris and Demeter Fescue only	Annual grass and some broadleaf weeds.	All States	600 mL to 1.2 L	<p>Use the low rate for Cocksfoot and perennial ryegrass and the higher rate for Phalaris and Demeter Fescue.</p> <p>Spray about 4 weeks after a full weed germination following the autumn break. The perennial grasses must be at least 12 months old at spraying.</p>
Spray topping to reduce seed set Chickpeas, Faba beans, Field peas, Lentils, Lupins, Vetch	Annual ryegrass	All States	400 mL or 800 mL	<p>As an aid in managing annual ryegrass resistance. For use on escapes from a previous herbicide application in the current crop.</p> <p>Spray the crop when the ryegrass is at the optimum stage, that is when the last ryegrass seed heads at the bottom of the plant have emerged and the majority are at or just past flowering (with anthers present or glumes open) but before haying-off is evident - usually October to November. Use of the higher rate in these crops is usually more reliable and gives a greater reduction in seed set.</p> <p>Reduction in crop yield may occur especially if the crop is less advanced relative to the ryegrass - that is if crops have a majority of green immature pods. The higher rate may also increase any yield reduction.</p> <p>In practice crop losses in excess of 25% may occur.</p> <p>Apply by ground boom only in 50 - 100L/ha. Spray with a calibrated boom spray raised to give double overlap at the level of the ryegrass seed heads. Pressures of 250 - 350 kPa and use of 110015 or 02 nozzles or equivalent will aid coverage.</p>

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Spray topping to reduce seed set Pastures	Grasses generally (particularly annual ryegrass).	All States	400 mL	Heavily graze paddocks during spring flush to encourage even head development. Remove stock 2 - 3 weeks before the anticipated maturity date of the target species. However, if this is not feasible through lack of stock it is preferable to allow the pasture to mature ungrazed. Delay spraying until the last seed-heads at the bottom of the plant have emerged and initial signs of haying-off appear. Spray with a calibrated boom spray raised to give double overlap at the level of the seed heads.
	Barley grass			Manage paddocks as above. Spray after head emergence but when all seed heads are green and there is no sign of haying-off. Inspect paddocks before returning stock. Provided spraying was carried out before hardening seeds are present harrow to knock seed from the heads. Do not introduce lambs into paddock until safe from risk of seed injury. If seasonal conditions favour regeneration, stock should be returned to selectively graze new shoots. Spray with a calibrated boom spray raised to give double overlap at the level of the seed heads.
	Saffron thistle	NSW, SA, ACT only		Spray after the plant begins to run to head until flowering.
Prevention of annual ryegrass toxicity	Spray top - graze to destroy seed heads.	WA only	400 mL	Grazing management as for spray topping above. Remove stock 3 - 4 weeks before anticipated maturity date. Spray must be applied within 10 days after emergence of the first ryegrass seed heads. To ensure adequate control of toxin development, heavy continuous grazing is essential from 1 day after spraying until the pasture has completely hayed off. The required stocking rate will vary but must be sufficient to keep all regrowth after spraying completely eaten off to prevent further growth producing new seed heads, which could become toxic.
Hay Freezing	Maximum retention of protein in standing dry feed.	All States	800 mL	Graze paddocks as for spray topping above. Remove 3 - 4 weeks before the anticipated maturity date. Apply prior to commencement of haying-off regardless of the grass species involved. Spray with a calibrated boom spray raised to give double overlap at the level of the seed heads.
General Weed control Bananas	Annual weed control	Qld, NSW, NT only	1.6 to 3.2 L sprayed ha. 160 to 320 mL per 100 L Misterters 8 mL/L	Spray as necessary for control of annual weeds. Avoid contacting crop foliage. Apply soon after emergence and before weeds reach 15 cm in height. Use spraying pressure less than 240 kPa. Avoid chemical contact with roots and peepers near pseudo stem. Repeat as required.

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Hops	Annual grasses	Vic, Tas, only	* 1.2 to 1.6 L plus 1.1 kg/ha simazine (900 g/kg) and/or 750 mL to 1.4 L/ha diquat 200 g/L	Apply as a directed inter-row spray prior to crop emergence from winter dormancy, using a minimum of 250 L/ha spray volume to ensure good and even coverage of weeds.
Orchards and Vineyards	Annual weed control	Qld, Vic, SA, WA, Tas, NT only	* + 1.6 to 3.2 L per sprayed ha (a) (b) see below	Spray as necessary for control of annual weeds. Avoid contacting crop foliage. F.S.A. Paraquat 250 Herbicide will not harm trees or vines with mature brown bark if this alone is sprayed. Use the higher rate for dense weed growth.
		NSW only	* + 1.7 L per sprayed ha (a) (b) see below	If fat hen <i>Chenopodium album</i> or <i>Portulaca</i> spp. are present and F.S.A. Paraquat 250 Herbicide rate is less than the ratio 800 mL/100 L add 120 mL 1000 g/L non-ionic wetter per 100 L of spray mix.
Peanuts Post-emergence (in-crop)	<i>Datura</i> spp. (2 - 4 leaf)	Qld, NT only	400 mL	Spray peanuts up to 7 - 8 leaf stage but before majority of plants flowering. Foliage will be scorched following application but plants recover rapidly. Apply in 200 - 250 L/ha for thorough coverage of weed foliage. A dense canopy of weeds may reduce weed control due to shielding. Add 60 mL 1000 g/L non-ionic wetter per 100 L of spray mix.
	Annual ground cherry (2 - 3 leaf) Apple-of-Peru (2 - 4 leaf) Milkweed (2 - 3 leaf)		600 mL	
	Stagger weed (2 - 3 leaf) Blue heliotrope (2 - 3 leaf) Wandering Jew (2 - 3 leaf) Anoda weed (2 - 4 leaf)		800 mL	
	Bellvine (2 - 3 leaf) Common morning glory (2 leaf)		1 L	
Potatoes	General weed control (in-crop)	All States	* 1.2 to 1.6 L	Spray at early crop emergence (no later than 25% emergence of potato shoots). Use the higher rate for dense weed growth.
	Pre-harvest weed control		* 2.8 L	Spray about one week before digging and after tops have died down.
Row Crops, Vegetables and Market Gardens	Pre-planting and pre-crop emergence	All States	* + 1.2 to 1.6 L or 200 mL/100 L	To control weeds in seedbeds. Treat no less than three days before sowing or before crop emergence. Use the lower rate for early autumn applications.

CROP USE OR SITUATION	WEEDS CONTROLLED	STATE	RATE/ha	CRITICAL COMMENTS
Row Crops, Vegetables and Market Gardens <i>cont'd</i>	Post-emergence inter-row weed control	All States	* + 1.2 to 1.6 L or 200 mL/ 100 L	Apply after crop seedlings have emerged or when transplanted crops are established. Direct the spray so that it does not touch the crop. Use shielded nozzles.
	Seedling weeds			Seedling weeds - use the lower rate for early autumn applications.
	Older weeds		* 2.4 L or 400 mL/100 L	More mature stages of weed growth.
Sugar Cane (Plant and ratoon)	Grass and some broadleaf weeds	Qld, NSW, NT only	Up to 5 cm high 1.2 to 1.6 L per sprayed ha	Apply as a broadcast spray over-the-top of plant cane up to the 3 - 4 leaf stage. Cane foliage will be scorched but new leaves will appear in 7 - 10 days. In plant cane between the 3 - 4 leaf stage and the formation of the true stem use a directed, interspace spray. The Irvin spray boom (or other suitable equipment) is the most suitable to avoid excessive spray drift onto the cane foliage while spraying at the bases of plant and ratoon cane. After the formation of the true stem, which is resistant to F.S.A. Paraquat 250 Herbicide, droppers can be raised to overlap the spray pattern to give weed control in the stool. Use the higher rate for dense more mature weeds. F.S.A. Paraquat 250 Herbicide can be mixed with F.S.A. Atrazine 900WG to give residual weed control when used as a blanket or directed spray (refer to atrazine label for specific rates). Always add 120 mL of 1000 g/L non-ionic surfactant per 100 L of spray mix
Non-Agricultural situations, around sheds, roadways, paths	Annual weed control	All States	* + 1.6 to 4 L/ha or 200 mL/100 L	Spray to thoroughly wet weed growth. F.S.A. Paraquat 250 Herbicide can be combined with soil residual herbicides F.S.A. Simazine 900WG or F.S.A. Atrazine 900WG to give rapid knockdown and prolonged weed control. Use the higher rate for dense weed growth.
	Columbus grass	NSW only	+ Spot spraying 160 mL/ 100 L plus 1 L flupropanate (745 g/L) Boomspray 2.3 to 4.5 L/ha plus 12 to 22 L flupropanate (745 g/L)	

3 Wetting agent

This product contains a wetting agent and additional wetter is not required unless high volume spraying results in excessive dilution of wetter content. This will occur when product rates fall below 400 mL per 100 L of spray. Under such circumstances wetter should be added at the rate of 100 mL of 1000 g/L non-ionic wetter per 100 L of spray mix.

Where Fat Hen or Portulaca are present in orchard or vineyard situations, extra wetter should be used when this product ratio is less than 800 mL per 100 L. Add wetter at double the above recommendations. Do not use alkaline or anionic wetting agents.

4 Clean water

Mix this product with **clean water** only. 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.

5 Application

(i) Cereals and Broadacre Spraying

Use only through a properly calibrated boom spray that 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 200 - 300 kPa. Speed of travel should be in the range of 6 - 15 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. It is essential to obtain good leaf coverage with the spray and volumes of dilute spray must be adjusted according to density of weed growth. 100 L/ha may be used for seedlings or well grazed weeds up to 2 cm high. For plant height 2 - 5 cm use 150 L/ha and up to 6 - 10 cm use 200 L/ha. Spray volumes may be as low as 50 L/ha (30 L/ha in WA) for weed growth below 5 cm high, or for spray topping and hay freezing. Equipment must be appropriate to this volume, properly calibrated and fitted with spraying tips designed to give droplets in the 200 - 250 µm Volume Median Diameter range.

(ii) High Volume Application

Higher volumes will generally be required to give good coverage of weed growth in situations other than those specified under cereals and other broadacre crops.

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

6 Compatibility

This product combines satisfactorily with the soil active herbicides F.S.A. Atrazine 900WG and F.S.A. Simazine 900WG where prolonged weed control is required as well as a quick knockdown.

This product is compatible with diquat, dicamba, dicamba + MCPA, MCPA Amine (no more than 1 L per 800 mL F.S.A. Paraquat 250 Herbicide), chlorsulfuron, tri-allate and trifluralin.

7 Spraying conditions

Avoid spraying plants under stress from waterlogging, frost, drought etc. or covered with dust and soil. Results will be better if application is made in dull weather or at the end of the day. Light rain following spraying will not affect results. Avoid drift into neighbouring crops.

RESISTANT WEEDS WARNING

GROUP	L	HERBICIDE
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F.S.A. Paraquat 250 Herbicide is a member of the bipyridyl group of herbicides. F.S.A. Paraquat 250 Herbicide has the inhibitor of photosynthesis at Photosystem I mode of action. For weed resistance management F.S.A. Paraquat 250 Herbicide is a Group L herbicide. Some naturally occurring weed biotypes resistant to F.S.A. Paraquat 250 Herbicide and other Group L 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 F.S.A. Paraquat 250 Herbicide or other Group L 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 F.S.A. Paraquat 250 Herbicide to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto susceptible plants/crops, cropping lands or pastures. This formulation should not be applied on or near water that is used for irrigation purposes.

PROTECTION OF LIVESTOCK

Domestic pets and poultry – keep away from treated areas.

This formulation should not be applied on or near water, which is used for livestock watering.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used container. 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.

STORAGE AND DISPOSAL

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.

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.

For refillable containers (1000L):

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

SAFETY DIRECTIONS

Very dangerous, particularly the concentrate. Product is poisonous if swallowed. Will irritate the nose, throat and skin. Attacks the eyes, protect the eyes while using. Avoid contact with the eyes, skin and clothing.

When mixing and using

When opening the container and preparing product for use wear elbow-length PVC gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If clothing becomes contaminated with product remove clothing immediately. If product in eyes, wash it out immediately with water. Avoid contact with spray mist. DO NOT inhale spray mist.

After use

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 and face shield or goggles and contaminated clothing.

SPRAY APPLICATION

DO NOT work in spray mist. DO NOT continue to use if skin irritation or nose bleed 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. When using misting machines for weed control in Banana Plantations, cut back to run at half throttle, thus preventing the production of fine droplets, the inhalation of which may be dangerous. When using misting machines in Banana Plantations, or where 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 capable of filtering spray droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirements of AS1716 (Standards Association of Australia).

Further advice on safety equipment should be obtained from a safety equipment manufacturer.

Avoid contacting vegetation with spray, but if necessary to do so wear waterproof footwear and waterproof protective clothing and gloves.

FIRST AID

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.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet that can be obtained from the supplier.

CONDITIONS OF SALE

The sale, supply, storage, use and application of this product is beyond the control of the manufacturer, and, subject to this provision, all warranties, conditions, rights and remedies express or implied under common law, statute or otherwise, in relation to the sale, supply, storage, use or application are excluded. Four Seasons Agribusiness Pty Limited and its associated entities shall not accept any liability whatsoever (including consequential loss) or however arising (including negligence) for any damage, injury or death connected with the sale, supply, storage, use or application of this product except for liability which cannot be excluded by statute.

Toxic if swallowed. Toxic in contact with skin. Fatal if inhaled. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If skin irritation occurs: Get medical advice. If eye irritation persists: Get medical advice. Collect spillage. Not combustible. Use extinguishing media suited to burning materials. Water fog or fine spray is the preferred medium for large fires.

**IN AN EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE**



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