

Product Name: VALOR 500 WG HERBICIDE
APVMA Approval No: 61622/142014



Label Name:	VALOR 500 WG HERBICIDE
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Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	500 g/kg FLUMIOXAZIN
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Mode of Action:	<table><tr><td>GROUP</td><td>14</td><td>HERBICIDE</td></tr></table>	GROUP	14	HERBICIDE
GROUP	14	HERBICIDE		

Statement of Claims:	For knockdown and residual control of broadleaf weeds and grasses in a range of broadacre crops and fallow, and in non-crop situations, as specified in the DIRECTIONS FOR USE table
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Net Contents:	NET CONTENTS: 0.45 kg - 24 kg Size of sachets: 90 g - 1.75 kg Number of sachets: 5 - 20, each containing 1 water soluble bag, which it is illegal to sell separately Number of sachets: 5 - 10 large sachets, each containing 5 - 10 water soluble bags, which it is illegal to sell separately
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Restraints:	This section contains file attachment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	<p>WITHHOLDING PERIODS: All crops treated at knockdown spike rate of 30 g/ha and 45 g/ha as per table A & E: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING (FOR CROPS OTHER THAN COTTON): DO NOT ALLOW LIVESTOCK TO GRAZE VEGETATION PRESENT AT TIME OF TREATMENT FOR 2 WEEKS AFTER APPLICATION DO NOT GRAZE OR CUT FOR STOCK FOOD CROPS PLANTED FOLLOWING TREATMENT FOR 6 WEEKS AFTER APPLICATION</p> <p>Wheat (except when tank mixed with Avadex xtra and Triflurx) as per table B: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 6 WEEKS AFTER APPLICATION</p> <p>Wheat (when tank mixed with Avadex xtra and Triflurx) as per table B: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 12 WEEKS AFTER APPLICATION. FOLLOWING OBSERVATION OF THE 12 WEEK WITHHOLDING PERIOD, DO NOT SEND ANIMALS TO SLAUGHTER THAT HAVE CONSUMED TREATED FORAGE, HAY AND FAILED CROPS UNLESS THEY ARE FIRST PLACED ON CLEAN FEED FOR 28 DAYS BEFORE LEAVING THE FARM. THE CLEAN FEED INTERVAL DOES NOT APPLY TO GRAZING OF POST-HARVEST STUBBLE.</p> <p>Lucerne as per table C: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT CROPS FOR STOCKFOOD FOR 4 WEEKS AFTER APPLICATION</p> <p>Lentils, Chickpeas, Faba beans and Field peas as per table D: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 12 WEEKS AFTER APPLICATION</p> <p>Cotton as per table F & G: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT ALLOW LIVESTOCK TO GRAZE TREATED CROP, STUBBLE OR GIN TRASH</p> <p>Soybeans, Mungbeans, Pigeon pea and Navy beans as per table G: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 6 WEEKS AFTER APPLICATION</p> <p>Maize, Sorghum, Sunflower, Peanut and Fallow use as per table G: HARVEST: NOT REQUIRED WHEN USED AS DIRECTED GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 8 WEEKS AFTER APPLICATION</p> <p>Sugarcane as per table H & I: HARVEST: DO NOT HARVEST FOR 22 WEEKS AFTER APPLICATION GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 22 WEEKS AFTER APPLICATION</p>
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	<p>Tea Tree As Per Table J</p> <p>HARVEST: NOT REQUIRED WHEN USED AS DIRECTED</p> <p>GRAZING: DO NOT GRAZE OR CUT PLANTATION INTER ROWS FOR STOCK FOOD FOR 8 WEEKS AFTER APPLICATION</p> <p>Fencelines and non-crop boundary areas as per table K:</p> <p>GRAZING: DO NOT ALLOW LIVESTOCK TO GRAZE VEGETATION PRESENT AT TIME OF TREATMENT FOR 2 WEEKS AFTER APPLICATION</p> <p>Irrigation Channel Banks and Drainage Ditches As Per Table L</p> <p>GRAZING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 8 WEEKS AFTER APPLICATION</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>VALOR 500WG Herbicide is a member of the N-phenyl-imides group of herbicides. The mode of action of VALOR 500WG Herbicide is to inhibit protoporphyrinogen oxidase. For weed resistance management, VALOR 500WG Herbicide is a Group 14 Herbicide. Some naturally-occurring weed biotypes resistant to VALOR 500WG Herbicide and other Group 14 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 VALOR 500WG Herbicide or other Group 14 Herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Sumitomo Chemical Australia Pty Ltd accepts no liability for any losses that may result from the failure of VALOR 500WG Herbicide to control resistant weeds. Strategies to minimize the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant or local Department of Agriculture.</p>
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Precautions:	<p>RE-ENTRY</p> <p>DO NOT enter treated areas until the spray has dried unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.</p> <p>TEXT ON SACHET (if containing single water soluble bag)</p> <p>DO NOT touch or wet the content of this sachet.</p> <p>Tear one end open and empty the contained water soluble bag directly into the spray tank without touching the bag. Add individual water soluble bags slowly.</p> <p>Read the Safety Directions on the product label prior to opening.</p> <p>Not to be sold separately.</p> <p>Before use read all directions on the outer pack.</p> <p>TEXT ON SACHET (if containing multiple water soluble bags)</p> <p>DO NOT touch or wet the content of this sachet.</p> <p>Tear the bag open and empty the contained water soluble bags directly into the spray tank without touching the bags. USE ALL BAGS.</p> <p>NOTE: Add water soluble bags one at a time under full agitation to avoid blocking filters. Allow each bag to dissolve before the next addition.</p> <p>Read the Safety Directions on the product label prior to opening.</p> <p>Not to be sold separately.</p> <p>Before use read all directions on the outer pack.</p>
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Protections:	<p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</p> <p>Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.</p>
Storage and Disposal:	<p>STORAGE AND DISPOSAL</p> <p>Store in a locked room or place away from children, animals, food, feedstuffs and fertilizers. Store in the closed, original container in a dry, cool well-ventilated area out of direct sunlight.</p> <p>DO NOT store in or expose product to wet conditions. Rough handling of product may cause breakage of water soluble bags, especially at low temperatures. DO NOT dispose of undiluted chemicals on-site. Break, crush or puncture sachets and containers 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>
Safety Directions:	<p>SAFETY DIRECTIONS</p> <p>Poisonous if absorbed by skin contact or swallowed. May irritate the eyes, nose and throat, and skin. Avoid contact with eyes and skin. Open sachets only as needed. When opening the container, preparing spray and using the prepared spray, wear cotton overalls over normal clothing, buttoned to the neck and wrist, a washable hat, elbow-length chemical resistant gloves and face shield. 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 and contaminated clothing.</p> <p>SAFETY DATA SHEET</p> <p>For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or from Sumitomo Chemical Australia Pty Ltd, see sumitomo-chem.com.au.</p>
First Aid Instructions:	<p>FIRST AID</p> <p>If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia Tel. 131126; New Zealand 0800 764 766.</p>
First Aid Warnings:	<p>WARNING: CONTAINS FLUMIOXAZIN WHICH CAUSES BIRTH DEFECTS IN LABORATORY ANIMALS. WOMEN OF CHILD BEARING AGE SHOULD AVOID CONTACT WITH FLUMIOXAZIN</p>

RESTRAINTS (apply to all use patterns)

DO NOT apply by aircraft.

DO NOT apply by a vertical sprayer.

DO NOT apply by misting machines.

DO NOT treat weeds for knockdown control under poor growing or dormant conditions (such as occur in drought, waterlogging, disease, insect damage or following frosts) as reduced control may result. Weeds should be actively growing at time of treatment.

DO NOT apply in high pH water (pH >7).

DO NOT allow the spray mix to stand overnight.

DO NOT irrigate up to the point of runoff for at least 3 days after application.

DO NOT use on crops intended for human consumption unless prior to planting or being applied for Post Sow Pre-emergence (PSPE) application to Soybeans or Peanuts.

SPRAY DRIFT RESTRAINTS

Spray shields should always be used when using handheld spray equipment.

DO NOT allow bystanders to come into contact with the spray cloud.

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. The buffer zones below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

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.

DO NOT apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a COARSE spray droplet size category
- mandatory no-spray zones between the application site and downwind sensitive areas are observed.

Buffer zones for boom sprayers

Use situation	Mandatory downwind buffer zone	
	Natural aquatic areas	Vegetation Areas
30 g/ha + Knockdown Herbicide Prior to sowing, pre plant knockdown	0 metres	0 metres
120 g/ha IBS (tank mixed) Pre-emergent Incorporation by Sowing (IBS) Wheat (except Durum varieties), when tank-mixed with TriflurX and Avadex Xtra	120 metres	10 metres
Up to 180 g/ha IBS Pre-emergent Incorporation by Sowing (IBS) when used alone	5 metres	10 metres
Up to 280 g/ha Fallow commencement, cotton and established Lucerne that is at least 12 months old (since planting).	5 metres	50 metres
Up to 700 g/ha Sugarcane, irrigation channel banks or drainage ditches and tea tree inter-rows	5 metres	120 metres
700 g/ha Fencelines, non-crop boundary areas	0 metres	0 metres

DIRECTIONS FOR USE

1. CEREALS, PULSES, OILSEEDS, LUCERNE AND COTTON

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

Table A. VALOR 500 WG Herbicide applied as a pre-plant burndown “spike” with glyphosate OR with either paraquat or a diquat/paraquat mixture.				
CROP / SITUATION	WEEDS CONTROLLED	RATE	STATE	CRITICAL COMMENTS
PRIOR TO SOWING Barley, Chick peas, Cotton, Faba beans, Field peas, Lentils, Lupins, Maize, Mungbeans, Navy beans, Oats, Peanuts, Pigeon peas, Sorghum, Soybeans, Sunflowers, Wheat	Follow the Directions For Use of the glyphosate or Paraquat/Diquat knockdown herbicides, and the addition of VALOR 500 WG Herbicide will increase the speed of brownout and may improve final control of the following weeds: Annual polymeria (<i>Polymeria pusilla</i>) Bellvine (<i>Ipomoea plebeia</i>) Black bindweed (<i>Fallopia convolvulus</i>) Black pigweed (<i>Trianthema portulacastrum</i>) Bladder ketmia (<i>Hibiscus trionum</i>) Caltrop/Peach vine (<i>Tribulus terrestris</i>) Capeweed (<i>Arctotheca calendula</i>) Cow vine (<i>Ipomoea lonchophylla</i>) Dead nettle (<i>Lamium amplexicaule</i>) Double gee (<i>Emex australis</i>) Erodium False castor oil (<i>Datura stramonium</i>) Liverseed grass (<i>Urochloa panicoides</i>) Marshmallow (<i>Malva parviflora</i>) <i>Medicago</i> spp. Noogoora burr (<i>Xanthium occidentale</i>) Paterson’s curse (<i>Echium plantagineum</i>) Red pigweed (<i>Portulaca oleracea</i>) Redroot amaranth (<i>Amaranthus retroflexus</i>) Seedling Lucerne (<i>Medicago sativa</i>) Shepherd’s purse (<i>Capsella bursa-pastoris</i>) Sowthistle (<i>Sonchus oleraceus</i>) Spurred vetch (<i>Vicia monantha</i>) Sunflower (<i>Helianthus annuus</i>) Subterranean clover * (<i>Trifolium subterraneum</i>) Tarvine (<i>Boerhavia dominii</i>) Turnip weed (<i>Rapistrum rugosum</i>) Volunteer canola (<i>Brassica napus</i>) Wild radish (<i>Raphanus raphanistrum</i>) Wireweed (<i>Polygonum aviculare</i>) If one of the above weeds is the dominant weed, and there is no specific rate for it on the glyphosate product label, consult the label’s generic annual-weed rate range. Select from within this range to suit the weed-stage, weed density, conditions etc of your situation. * Suppression only	30 g/ha plus the label rate of tank mix partner plus an adjuvant [®]	All States	Observe the restraints, rates, mixing and general instructions on the knockdown herbicide product labels. Best results are obtained when applied to young weeds between the 2- and 6-leaf stage. Addition of VALOR 500 WG Herbicide to knockdown products will increase the speed at which treated weeds develop visible symptoms of phytotoxicity (compared to the results achieved with tank mix partner products alone) and may improve the final control of certain broadleaved weeds. To ensure uptake of VALOR 500 WG Herbicide DO NOT sow crops for at least one hour after application. Always refer to the tank-mix partner product label in case a longer sowing interval is required. [®] Always apply with Hasten Spray Adjuvant or Kwickin Spray Adjuvant at 0.5 - 1L/100L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100L.

Note:

The addition of VALOR 500 WG Herbicide to glyphosate, paraquat or diquat will not help to control large weeds or weeds that have hardened up from stress or established big tap roots.

Glyphosate resistant weeds may not be controlled by addition of VALOR 500WG Herbicide.

See application section for recommendations to get the best results.

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

RESTRAINTS (additional)

DO NOT use in wheat if intending to undersow with legumes.

Table B. VALOR 500 WG Herbicide applied for pre-emergent weed control in wheat.				
CROP SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE	CRITICAL COMMENTS
Pre-emergent Incorporation by Sowing (IBS) Wheat (except Durum varieties)	For suppression of: Black bindweed <i>(Fallopia convolvulus)</i> , Canola, volunteer <i>(Brassica napus)</i> , Capeweed <i>(Arctotheca calendula)</i> , Common chickweed <i>(Stellaria media)</i> , Crassula <i>(Crassula sieberiana)</i> , Indian Hedge mustard (<i>Sisymbrium orientale</i>), New Zealand spinach <i>(Tetragonia tetragonioides)</i> , Prickly lettuce <i>(Lactuca serriola)</i> , Sowthistle <i>(Sonchus oleraceus)</i> , Three-horn Bedstraw <i>(Galium tricornutum)</i> , Toad rush <i>(Juncus bufonius)</i> , Wild radish <i>(Raphanus raphanistrum)</i> , Wireweed <i>(Polygonum aviculare)</i>	Pre-emergence	120 g/ha	Control emerged weeds with a knockdown herbicide before applying VALOR 500 WG Herbicide. Sowing (incorporation by sowing (IBS)) should occur within 7 days of application. For use in no-till/min-till Cropping Systems, Pre-Sowing or Incorporated by Sowing (IBS). Use only with knife/blade points and presswheels. Sow at speeds slow enough to ensure treated soil is not thrown into adjacent furrows excessively. Use high seed sowing rates and good fertilizer levels to encourage vigorous crops and thereby assist with weed control. Sow seed below the treated soil band; in wheat crops 3 cm. Dry weather following application may reduce effectiveness. Crop damage can occur when heavy rainfall occurs soon after application. Residual control may be reduced unless at least 25 mm rainfall occurs in the three weeks following sowing, including at least a single day of over 5 mm, to maximise activity. The period of residual activity depends on soil type, weed species and weed density. DO NOT use on lighter soil types (sand) as shorter periods of residual control and unacceptable crop safety may occur. Avoid soils which are non-wetting or are likely to become clumpy or cloddy during sowing as they will reduce activity. Stubble coverage greater than 40 percent ground cover can reduce activity.
	For suppression of the above, and for improved and prolonged activity on: Black bindweed <i>(Fallopia convolvulus)</i> , Three-horn bedstraw <i>(Galium tricornutum)</i> For suppression of Soil Surface - Barleygrass <i>(Hordeum leporinum)</i> , Bromegrass <i>(Bromus diandrus)</i> , Caltrop (Yellowvine & Bullhead) <i>(Tribulus terrestris)</i> , Deadnettle <i>(Lamium amplexicaule)</i> , Speedwell <i>(Veronica spp)</i> Three-cornered Jack (Doublegee) (<i>Emex australis</i>), Yellow burr weed <i>(Amsinckia spp)</i> , For control of: Annual ryegrass <i>(Lolium rigidum)</i> (including Group D resistant biotypes) Cereal oats <i>(Avena sativa)</i> , Corn gromwell (Sheepweed) <i>(Buglossoides anvensis)</i> Fumitory <i>(Fumaria spp.)</i> , Paradoxa grass (Canary grass) <i>(Phalaris paradoxa)</i> <i>Phalaris spp.</i> Rough poppy <i>(Papaver hybridum)</i> Sand fescue <i>(Vulpia fasciculata)</i> Silvergrass <i>(Vulpia bromoides)</i> Wild oats <i>(Avena spp.)</i> (including Group A resistant biotypes) Wintergrass <i>(Poa annua)</i> Wireweed <i>(Polygonum aviculare)</i>		120 g/ha, plus TriflurX at 2 L/ha plus Avadex Xtra at 3.2 L/ha	Control emerged weeds with a knockdown herbicide before applying VALOR 500 WG Herbicide. Sowing (incorporation by sowing (IBS)) should occur within 24 hours of application. For use in no-till/min-till Cropping Systems, Pre-Sowing or Incorporated by Sowing (IBS). Use only with knife/blade points and press wheels. Sow at speeds slow enough to ensure treated soil is not thrown into adjacent furrows excessively. Use high seed sowing rates and good fertilizer levels to encourage vigorous crops and thereby assist with weed control. Sow seed below the treated soil band; in wheat crops 3 cm. Dry weather following application may reduce effectiveness. Crop damage can occur when heavy rainfall occurs soon after application. Residual control may be reduced unless at least 25 mm rainfall occurs in the three weeks following sowing, including at least a single day of over 5 mm, to maximise activity. The period of residual activity depends on soil type, weed species and weed density. DO NOT use on lighter soil types (sand) as shorter periods of residual control and continued unacceptable crop safety may occur. Avoid soils which are non-wetting or are likely to become clumpy or cloddy during sowing as they will reduce activity. Stubble coverage greater than 40 percent ground cover can reduce activity. Refer to WHP statement for information regarding clean feed requirement prior to slaughter.

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

RESTRAINTS (additional)

DO NOT apply to lucerne with more than 15 cm of growth as application may result in unacceptable crop injury.

DO NOT apply to lucerne with any adjuvant or tank mix with any products formulated as an emulsifiable concentrate (EC).

DO NOT use on mixed lucerne-grass or other lucerne-pasture stands.

DO NOT use VALOR 500 WG Herbicide when oversowing lucerne stands.

DO NOT use on crops intended for human consumption. Use only on lucerne intended for grazing, hay or lucerne seed production.

Table C. VALOR 500 WG Herbicide applied for control and suppression of weeds in established lucerne.

CROP SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE	CRITICAL COMMENTS
Established Lucerne that is at least 12 months old (since planting)	For the control of: Annual ryegrass (<i>Lolium rigidum</i>), Carrot weed (<i>Cotula australis</i>), Common sowthistle (<i>Sonchus oleraceus</i>), Dead nettle (<i>Lamium applexicaule</i>), Flaxleaf fleabane (<i>Conyzabonariensis</i>), Shepherd's purse (<i>Capsella bursa-pastoris</i>), Silver grass (<i>Vulpia spp.</i>), Winter grass (<i>Poa annua</i>) For the suppression of: Awnless barnyard grass (<i>Echinochloa colona</i>), Capeweed (<i>Arctotheca calendula</i>), Clammy goosefoot (<i>Chenopodium pumilio</i>), Fat hen (<i>Chenopodium album</i>), Feathertop Rhodes grass (<i>Chloris virgata</i>), Heliotrope (<i>Heliotropium europaeum</i>), Small flowered mallow (<i>Malva parviflora</i>), Stinging nettle (<i>Urtica urens</i>), Subterranean clover (<i>Trifolium subterraneum</i>)	Pre-emergence	280g/ha	DO NOT use on mixed Lucerne-grass or other lucerne-pasture stands. Only use on pure Lucerne stands. DO NOT use on crops intended for human consumption. Use only on Lucerne intended for grazing, hay or lucerne seed production. DO NOT use VALOR 500 WG Herbicide when oversowing Lucerne stands. DO NOT apply with any adjuvant or tank mix with any products formulated as an emulsifiable concentrate (EC). TIMING: USE AFTER HEAVY GRAZING, CUTTING OR FOLLOWING KNOCKDOWN WITH PARAQUAT OR PARAQUAT + DIQUAT HERBICIDE TO REDUCE GROUND SHADING IN AUTUMN OR LATE WINTER/SPRING AND CONTROL EMERGED WEEDS. DO NOT apply to lucerne with more than 15 cm of growth as application will result in burning of treated leaves and stems and may result in unacceptable crop damage. DO NOT apply for residual weed control until the start of the main rain season when significant soil wetting rain has occurred and more rain (at least 15 mm) is likely within 3 weeks, or the soil can be irrigated with sprinklers. Dry weather following application may reduce effectiveness. The period of residual weed control will depend on soil type, rainfall and weed species/density. Lighter soil types (sand) may experience shorter periods of residual weed control.

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

Table D. VALOR 500 WG Herbicide applied pre-emergent with incorporation by sowing to provide residual weed control in selected pulse crops.				
CROP SITUATION	WEEDS SUPPRESSED	WEED STAGE	RATE	CRITICAL COMMENTS
Pre-sowing Incorporation by Sowing (IBS) Lentils	For suppression of: Black bindweed (<i>Fallopia convolvulus</i>) Canola, volunteer (<i>Brassica napus</i>) Capeweed (<i>Arctotheca calendula</i>), Common chickweed (<i>Stellaria media</i>) Crassula (<i>Crassula sieberiana</i>), Indian Hedge mustard (<i>Sisymbrium orientale</i>) New Zealand spinach (<i>Tetragonia tetragoniodides</i>) Prickly lettuce (<i>Lactuca serriola</i>), Sowthistle (<i>Sonchus oleraceus</i>) Three-horn bedstraw (<i>Galium tricornutum</i>) Toad rush (<i>Juncus bufonius</i>) Wild radish (<i>Raphanus raphanistrum</i>) Wireweed (<i>Polygonum aviculare</i>)	Pre-emergence	120 g/ha	Control emerged weeds with a knockdown herbicide before applying VALOR 500 WG Herbicide. Sowing (incorporation by sowing (IBS)) should occur within 7 days of application. Use only in minimum till operations using narrowpoint tynes with presswheels. Sow at speeds slow enough to ensure treated soil is not thrown into adjacent furrows excessively. Use high seed sowing rates and good fertilizer levels to encourage vigorous crops and thereby assist with weed control. Sow seed below the treated soil band; in pulse crops 5 cm. Dry weather following application may reduce effectiveness. Crop damage can occur when heavy rainfall occurs soon after application. Residual control may be reduced unless at least 25 mm rainfall occurs in the three weeks following sowing, including at least a single day of over 5 mm, to maximise activity. The period of residual activity depends on soil type, weed species and weed density. DO NOT use on lighter soil types (sand) as shorter periods of residual control and unacceptable crop safety may occur. Avoid soils which are non-wetting or are likely to become clumpy or cloddy during sowing as they will reduce activity. Stubble coverage greater than 40 percent ground cover can reduce activity.
Pre-emergent Incorporation by Sowing (IBS) Faba bean, Chickpea, Field pea	For the suppression of above, and also: Bifora (<i>Bifora testiculata</i>), Denseflower fumitory (<i>Fumaria densiflora</i>), Flaxleaf fleabane (<i>Conyza bonariensis</i>), Rough poppy (<i>Papaver hybridum</i>), Slender celery (<i>Ciclospermum leptophyllum</i>)	Pre-emergence	180 g/ha	For Lentils, avoid rolling the paddock prior to crop emergence. This may result in pushing an excessive amount of treated soil into the furrow and reducing crop emergence.

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

Table E. VALOR 500WG Herbicide applied as a burndown for control of volunteer cotton.					
CROP / SITUATION	WEEDS CONTROLLED	Weed growth stage	RATE	STATE	CRITICAL COMMENTS
PRIOR TO SOWING Maize Mungbeans Sorghum Soybeans and Sunflowers	Volunteer Cotton including volunteer Roundup Ready Cotton	Up to 4 leaf	45 g/ha plus an adjuvant [®]	NSW and QLD only	<p>DO NOT apply post-sowing pre-emergent.</p> <p>DO NOT sow crops for at least one hour after application.</p> <p>VALOR 500 WG Herbicide can be tank mixed with glyphosate to control other weeds that are present. Refer to the glyphosate label for the appropriate label rate according to the weeds present.</p> <p>Heavy, intense rainfall following application and sowing may cause some crop damage. If other residual herbicides are also applied prior to, or after planting, or the seed bed is not well drained this can make the damage worse.</p> <p>[®]Always apply with Hasten Spray Adjuvant or Kwickin Spray Adjuvant at 0.5 - 1L/100L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100L.</p>
PRE or POST SOWING pre emergence Cotton					<p>Apply not later than 1 hour prior to sowing or post sowing up to 2 days before first crop emergence</p> <p>VALOR 500 WG Herbicide can be tank mixed with glyphosate to control other weeds that are present. Refer to the glyphosate label for the appropriate label rate according to the weeds present.</p> <p>Heavy, intense rainfall following application and sowing may cause some crop damage. If other residual herbicides are also applied prior to, or after planting, or the seed bed is not well drained this can make the damage worse.</p> <p>[®]Always apply with Hasten Spray Adjuvant or Kwickin Spray Adjuvant at 0.5 – 1 L/100 L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100 L.</p>

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

Table F. VALOR 500WG Herbicide applied as a layby application for weed control in COTTON.				
CROP / SITUATION	WEEDS CONTROLLED	Weed growth stage	RATE	CRITICAL COMMENTS
Cotton	Knockdown - lay-by application Caltrop (<i>Tribulus terrestris</i>) Noogoora burr (<i>Xanthium strumarium</i>) Yellowvine (<i>Tribulus terrestris</i> & <i>T. micrococcus</i>)	<10 cm Ø <4 leaf <10 cm Ø	60 g/ha plus an adjuvant ^Ø	Apply as a shielded spray underneath cotton foliage and to inter rows at 60 – 90 g/ha to control late germinating weeds, or weeds that have escaped previous herbicide operations. Best results are obtained when applied to young weeds between the 2 and 6 leaf stage.
	Annual polymeric (<i>Polymerica pusilla</i>) Bellvine (<i>Ipomea plebeian</i>) Black pigweed (<i>Trianthema portulacastrum</i>) Bladder ketmia (<i>Hibiscus trionum</i>) Cow/Peach vine (<i>Ipomoea lonchophylla</i>) Dwarf amaranth (<i>Amaranthus macrocarpus</i>) Red pigweed (<i>Portulaca oleracea</i>) Sow thistle (<i>Sonchus oleraceous</i>) Spiked malvastrum (<i>Malvastrum americanum</i>)	<6 leaf <12 leaf <12 leaf <6 leaf <12 leaf <4 branch <15 cm Ø <4 leaf <10 cm Ø	90 g/ha plus an adjuvant ^Ø	Vines that have commenced climbing may not be controlled. For residual control use the 280 g/ha rate. CAUTION: VALOR 500 WG Herbicide will defoliate any cotton foliage that is contacted by the spray. Shielded sprayers must be carefully operated to ensure that spray does not make contact with cotton foliage. DO NOT apply in conditions conducive to drift. DO NOT apply until cotton plants are at least 40 cm tall. Later application may be required to ensure spray reaches the middle of the cotton row. DO NOT allow contact with leaves or green bark on stems or trunks. ^Ø For knockdown use always apply with Hasten Spray Adjuvant or Kwickin Spray Adjuvant at 0.5 – 1 L/100 L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100 L.
Cotton	Knockdown and residual layby application Amaranthus spp Barnyard grass (<i>Echinochloa colona</i>) Bladder ketmia (<i>Hibiscus trionum</i>) Bluetop/Billygoat weed (<i>Ageratum houstonianum</i>) Calopo (<i>Calopogonium mucunoides</i>) Caltrop/yellow vine (<i>Tribulus terrestris</i>) Cow/Peach vine (<i>Ipomea lonchophylla</i>) Ipomoea spp (Bell vine, Morning glory, Pink convolvulus, Star of Bethlehem) Crowsfoot (<i>Eleusine indica</i>) Feathertop Rhodes grass (<i>Chloris virgata</i>) Fleabane (<i>Conyza bonariensis</i>) Milk/Sow thistle (<i>Sonchus oleraceous</i>) Milkweed (<i>Euphorbia heterophylla</i>) Phyllanthus spp. Red pigweed (<i>Portulaca oleracea</i>) Sicklepod (<i>Cassia obtusifolia</i>) Summer grass (<i>Digitaria ciliaris</i>) Square weed (<i>Spemacoe latifolia</i>) Wild rose (<i>Cleome aculeata</i>)	Pre-emergence except for species and weed sizes mentioned with the 60 – 90 g/ha rate - where knockdown application will also work	280 g/ha ^Ø	Apply in the same way and with the same precautions as for the knockdown application. For residual control VALOR 500 WG Herbicide needs at least 15 mm of irrigation or rain to incorporate and activate within 3 weeks Flood irrigation may lead to incomplete incorporation and activation in the row on top of the mound. Residual efficacy may be reduced by: - soil movement following application - shadowing caused by trash, heavy stubble, large clods or heavy weed coverage - long dry conditions following application - incomplete wetting up and activation of the herbicide from rainfall or irrigation - high pressure from large seeded weeds that can germinate from moisture at depth through dry surface soil. In these conditions reliability may be improved by the addition of a suitable herbicide with a different mode of action and more solubility.

DIRECTIONS FOR USE (continued)

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

RESTRAINTS (additional)

DO NOT disturb treated soil surface after application as this may remove VALOR 500WG Herbicide.

DO NOT use flood irrigation as a means of incorporation on planting mounds/beds. This has often been shown to be inadequate as VALOR 500WG Herbicide may be left on the soil surface at the top of the mound and if followed by heavy rain at emergence it may lead to crop damage.

Table G. VALOR 500 WG Herbicide applied at fallow commencement to provide enhanced knockdown and residual weed control and prior to planting a range of crops as detailed in Crop rotation recommendations, and pre-sowing or post sowing pre-emergent to provide enhanced knockdown and residual weed control in Summer crops			
CROP SITUATION	WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
Fallow commencement Residual and burndown weed control	<i>Amaranthus</i> spp Barnyard grass (<i>Echinochloa colona</i>) Bladder ketmia (<i>Hibiscus trionum</i>) Bluetop/Billygoat weed (<i>Ageratum houstonianum</i>) Calopo (<i>Calopogonium mucunoides</i>) Caltrop/yellow vine (<i>Tribulus terrestris</i>) Crowsfoot (<i>Eleusine indica</i>) Feathertop Rhodes grass (<i>Chloris virgata</i>) Fleabane (<i>Conyza bonariensis</i>)	210 – 280 g/ha	VALOR 500 WG Herbicide may be applied following crop harvest at fallow commencement but not less than the period specified under Crop rotation recommendations. Minimum recropping intervals apply for most crops following application of VALOR 500 WG Herbicide (Faba beans, Soybeans and Peanuts excepted). Best results are obtained where a complete and even application of VALOR 500 WG Herbicide is applied to weed-and trash free soil prior to weed germination, and 15 mm of rainfall occurs after application and prior to weed emergence to allow herbicide uptake by germinating weeds. Cultivation or livestock grazing following application may reduce pre-emergence weed control provided by VALOR 500 WG Herbicide. VALOR 500 WG Herbicide may not control emerged weeds when applied alone. Emerged weeds must be controlled by application of a knockdown herbicide with VALOR 500 WG Herbicide. Weed control may be reduced by prolonged wet or dry soil conditions following application. Weed escapes may require follow up application of knockdown herbicides.
PRE- or POST SOWING pre emergence Peanuts Soybean Enhanced knockdown of vines and broadleaf weeds and residual control of vines, broadleaf and grasses.	<i>Ipomoea</i> spp (Bell vine, Morning glory, Pink convolvulus, Star of Bethlehem) Milk/sow thistle (<i>Sonchus oleraceus</i>) Milkweed (<i>Euphorbia heterophylla</i>) <i>Phyllanthus</i> spp. Red pigweed (<i>Portulaca oleracea</i>)	Presowing 210 – 280 g/ha Post sowing pre-emergent 210 g/ha	VALOR 500 WG Herbicide needs at least 15 mm of overhead irrigation or rain to incorporate/activate, and therefore should preferably be applied during the main rainfall period when at least 15 mm of rain or irrigation is expected within 3 weeks. This 15 mm is also necessary after application and before planting Pigeon pea, Maize, Sorghum, Navybean, Cotton, Sunflowers or Mungbeans to improve crop safety. If existing weeds are present at > 2 leaf stage then non-selective knockdown herbicides such as paraquat and glyphosate should be used at sufficient rates to control these in mixtures with VALOR 500 WG Herbicide.
Post fallow PRE-SOWING burndown with residual weed control Pigeon pea Maize Sorghum Navybean At least 1 month prior to sowing Cotton Sunflower Mungbeans At least 2 months prior to sowing	Sicklepod (<i>Cassia obtusifolia</i>) Summer grass (<i>Digitaria ciliaris</i>) Square weed (<i>Spemacoce latifolia</i>) Wild rose (<i>Cleome aculeata</i>)	210 – 280 g/ha	Heavy rainfall (>25 mm) and prolonged wet weather during emergence-may cause crop injury particularly where there has been insufficient previous rainfall to incorporate VALOR 500 WG Herbicide and the sub-soil has been saturated by flood irrigation. For post sowing applications this will be worse if application is delayed until seedlings are starting to crack through the soil. Application to Peanuts-or Soybeans should be made either prior to planting, or within 2 day of planting. If a field crop is under stress from poor nutrition, lack of moisture, waterlogging, insect or disease pressure, this weakens the crop and it is less able to metabolise flumioxazin. This makes it more susceptible to damage during germination and in early growth, so short term symptoms of phytotoxicity may occur particularly with heavy rainfall. This can also occur when mixing with another herbicide. If this is expected to be a concern, use a lower rate of VALOR 500 WG Herbicide (maximum of 210 g/ha). DO NOT use more than 210 g/ha in mixtures with any other herbicides. For Pigeon pea, Maize, Sorghum, Navybean, Cotton, Sunflowers and Mungbeans follow the recommended pre-plant interval and ensure at least 15 mm of rain has fallen or overhead irrigation has been applied prior to planting. For Winter crops follow the plant back intervals listed below (under “Crop rotation recommendations”). Planting any crop seed at a shallower depth than normal (<2.5cm) with poor soil coverage of the seed can also contribute to crop injury. A minimum of 80 L/ha of spray mixture is recommended. Use more water with heavy stubble or trash. Efficacy may be reduced by: - soil movement - shadowing caused by trash, heavy stubble or large clods - thick trash - long dry conditions after rain or irrigation - high pressure from large seeded weeds that can germinate from moisture at depth through dry surface soil. In these conditions reliability may be improved by the addition of a suitable herbicide for that crop, with stronger grass activity and more solubility. Note that heavy rain soon after sowing can also result in additional phytotoxicity from these other herbicides and so this should be tested before applying to large areas. Weed escapes may require follow-up application of knockdown herbicides. For improved burndown apply with Hasten or Kwickin Spray Adjuvant at 0.5 - 1 L/100 L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100 L

DIRECTIONS FOR USE (continued)

2. SUGARCANE

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

RESTRAINTS (additional)

DO NOT apply for enhanced knockdown if weeds are stressed from drought, frost or waterlogging.

DO NOT apply for residual weed control until the start of summer rains when significant soil wetting rain has occurred or the soil has been irrigated and more rain or irrigation (> 15 mm) is expected within 3 weeks.

DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 3 days.

DO NOT apply on sandy soils in areas where the slope exceeds 4%.

DO NOT disturb treated soil surface after application as this may remove VALOR 500WG Herbicide.

DO NOT apply more than 700 g/ha per year.

Table H. VALOR 500 WG Herbicide applied to enhance knockdown in mixtures with non-selective herbicides, eg. paraquat, glufosinate and also atrazine			
CROP / SITUATION	WEEDS	RATE	CRITICAL COMMENTS
<p>Sugarcane Plant – after filling in Or Ratoons</p> <p>To enhance knockdown of vines and broadleaf</p>	<p>Broadleaf and vines < 9 leaf stage</p> <p>Including:</p> <p><i>Amaranthus</i> spp.</p> <p>Billygoat weed/Bluetop (<i>Ageratum houstonianum</i>)</p> <p>Calopo (<i>Calopogonium mucunoides</i>)</p> <p>Common sida (<i>Sida rhombifolia</i>)</p> <p><i>Ipomoea</i> spp. (Bell vine, Morning glory, Pink convolvulus, Red convolvulus, Star of Bethlehem)</p> <p>Pig weed (<i>Portulaca oleracea</i>)</p> <p>Sicklepod (<i>Senna obtusifolia</i>)</p> <p>Spider flower (<i>Cleome</i> spp.)</p> <p>Square weed/Borreria (<i>Spermacoce latifolia</i>)</p> <p>Wild rose (<i>Cleome aculeate</i>)</p>	<p>90 – 120 g/ha plus the label rate of tank mix partner plus an adjuvant</p>	<p>Apply VALOR 500 WG Herbicide as a directed spray to the base of the cane plants.</p> <p>If Calopo or Sicklepod are present then the addition of atrazine may improve knockdown.</p> <p>To ensure knockdown in vines the growing tip needs to be sprayed.</p> <p>VALOR 500 WG Herbicide also enhances the knockdown of glyphosate on broadleaved weeds and vines, but great care must be taken not to allow glyphosate to drift on to cane.</p> <p>Non ionic surfactants may be used but addition of a crop oil concentrate such as Hasten may give a better result.</p>

Table I. VALOR 500 WG Herbicide applied to provide enhanced knockdown and long term residual weed control			
CROP / SITUATION	WEEDS	RATE	CRITICAL COMMENTS
<p>Sugarcane</p> <p>Plant – after filling in Or Ratoon - no trash blanket.</p> <p>Bare soil situations in higher rainfall areas such as wet tropics or with supplementary irrigation</p> <p>Enhanced knockdown of vines and broadleaf and residual control of vines, broadleaf and grasses</p>	<p>Broadleaf and vines < 9 leaf stage</p> <p>Including:</p> <p><i>Amaranthus</i> spp.</p> <p>Balsam pear (<i>Momordica charantia</i>)</p> <p>Billygoat weed/Bluetop (<i>Ageratum houstonianum</i>)</p> <p>Blackberry nightshade (<i>Solanum nigrum</i>)</p> <p>Calopo (<i>Calopogonium mucunoides</i>)</p> <p>Common sida (<i>Sida rhombifolia</i>)</p> <p>Fleabane (<i>Conyza bonariensis</i>)</p> <p>Giant pigweed (<i>Trianthema portulacastrum</i>)</p> <p><i>Ipomoea</i> spp. (Morning glory, Pink convolvulus, Red convolvulus, Star of Bethlehem)</p> <p>Milkweed (<i>Euphorbia heterophylla</i>)</p> <p>Pig weed (<i>Portulaca oleracea</i>)</p> <p>Sicklepod (<i>Senna obtusifolia</i>)</p> <p>Spider flower (<i>Cleome</i> spp.)</p> <p>Square weed/Borreria (<i>Spermacoce latifolia</i>)</p> <p>Wild rose (<i>Cleome aculeate</i>)</p> <p>Grasses</p> <p>Barnyard grass (<i>Echinochloa crus-galli</i>)</p> <p>Crowsfoot</p>	<p>350 – 560 g/ha</p>	<p>Apply VALOR 500 WG Herbicide as a directed spray to the base of the cane plants.</p> <p>If existing weeds are present at the 2 – 8 leaf stage then non-selective herbicides eg. Paraquat should be added to ensure adequate knockdown. If grasses greater than 3 leaf are present the addition of a low rate of diuron to paraquat will improve knockdown.</p> <p>If Calopo or Sicklepod are present then the addition of atrazine may improve knockdown.</p> <p>VALOR 500WG Herbicide also enhances the knockdown of glyphosate on broadleaved weeds and vines and then provides on going residual control, but great care must be taken not to allow glyphosate to drift on to cane.</p> <p>A minimum of 200 L/ha of spray mixture is recommended.</p> <p>VALOR 500 WG Herbicide should be applied to moist soil and needs follow up rain or irrigation of at least 15 mm within 3 weeks to ensure continued good control particularly on trash.</p> <p>Efficacy may be reduced by:</p> <ul style="list-style-type: none"> - Soil movement - Very thick trash - Flood irrigation or flood water moving top soil or trash - Long dry conditions after rain or irrigation. <p>In these situations reliability may be improved by adding a lower rate of VALOR 500 WG Herbicide to other more water soluble herbicides that move further down in the soil profile such as: S-metolachlor, metolachlor or atrazine.</p> <p>Non ionic surfactants may be used but addition of a crop oil concentrate such as Hasten will generally give a better knockdown result.</p>
<p>Sugarcane</p> <p>Ratoon with trash blanket, or Plant and ratoon with bare soil with low rainfall and flood irrigation eg. Burdekin area</p> <p>Enhanced knockdown of vines and broadleaf and residual control of vines, broadleaf and grasses</p>	<p>Broadleaf and vines < 9 leaf stage</p> <p>Including:</p> <p><i>Amaranthus</i> spp.</p> <p>Balsam pear (<i>Momordica charantia</i>)</p> <p>Billygoat weed/Bluetop (<i>Ageratum houstonianum</i>)</p> <p>Blackberry nightshade (<i>Solanum nigrum</i>)</p> <p>Calopo (<i>Calopogonium mucunoides</i>)</p> <p>Common sida (<i>Sida rhombifolia</i>)</p> <p>Fleabane (<i>Conyza bonariensis</i>)</p> <p>Giant pigweed (<i>Trianthema portulacastrum</i>)</p> <p><i>Ipomoea</i> spp. (Morning glory, Pink convolvulus, Red convolvulus, Star of Bethlehem)</p> <p>Milkweed (<i>Euphorbia heterophylla</i>)</p> <p>Pig weed (<i>Portulaca oleracea</i>)</p> <p>Sicklepod (<i>Senna obtusifolia</i>)</p> <p>Spider flower (<i>Cleome</i> spp.)</p> <p>Square weed/Borreria (<i>Spermacoce latifolia</i>)</p> <p>Wild rose (<i>Cleome aculeate</i>)</p> <p>Grasses</p> <p>Barnyard grass (<i>Echinochloa crus-galli</i>)</p> <p>Crowsfoot</p>	<p>560 – 700 g/ha</p>	<p>Apply VALOR 500 WG Herbicide as a directed spray to the base of the cane plants.</p> <p>If existing weeds are present at the 2 – 8 leaf stage then non-selective herbicides eg. Paraquat should be added to ensure adequate knockdown. If grasses greater than 3 leaf are present the addition of a low rate of diuron to paraquat will improve knockdown.</p> <p>If Calopo or Sicklepod are present then the addition of atrazine may improve knockdown.</p> <p>VALOR 500WG Herbicide also enhances the knockdown of glyphosate on broadleaved weeds and vines and then provides on going residual control, but great care must be taken not to allow glyphosate to drift on to cane.</p> <p>A minimum of 200 L/ha of spray mixture is recommended.</p> <p>VALOR 500 WG Herbicide should be applied to moist soil and needs follow up rain or irrigation of at least 15 mm within 3 weeks to ensure continued good control particularly on trash.</p> <p>Efficacy may be reduced by:</p> <ul style="list-style-type: none"> - Soil movement - Very thick trash - Flood irrigation or flood water moving top soil or trash - Long dry conditions after rain or irrigation. <p>In these situations reliability may be improved by adding a lower rate of VALOR 500 WG Herbicide to other more water soluble herbicides that move further down in the soil profile such as: S-metolachlor, metolachlor or atrazine.</p> <p>Non ionic surfactants may be used but addition of a crop oil concentrate such as Hasten will generally give a better knockdown result.</p>

	<i>(Eleusine indica)</i> Feathertop Rhodes grass <i>(Chloris virgate)</i> Green summer grass <i>(Brachiaria milliformis)</i> Summer grass <i>(Digitaria ciliaris)</i>		
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DIRECTIONS FOR USE (continued)

3. TEA TREE

IMPORTANT– Refer to CROP ROTATION RECOMMENDATIONS prior to use

RESTRAINTS (additional)

DO NOT apply for enhanced knockdown if weeds are stressed from drought, frost or waterlogging.

DO NOT disturb treated soil surface after application as this may remove VALOR 500WG Herbicide.

Table J. VALOR 500 WG Herbicide applied to provide enhanced knockdown and long term residual weed control			
Crop/Situation	Weeds	Rate	Critical Comments
Tea tree (Shielded sprayer only) To enhance knockdown of vines and broadleaf	Broadleaf and vines < 9 leaf stage Including: Amaranthus Billygoat weed/Bluetop Calopo Pig weed Common sida, Spider flower <i>Ipomoea spp.</i> (Bell vine, Morning glory, Pink convulvulus, Red convulvulus, Star of Bethlehem) Pig weed Sicklepod Spider flower Square weed/Borreria Wild rose	90 – 120 g/ha Valor plus the label rate of tank mix partner plus an adjuvant	To enhance knockdown in mixtures with non-selective herbicides, eg. Paraquat or glufosinate Apply Valor herbicide with a shielded sprayer, to the interrow and base of the Tea tree plants Non-ionic surfactants may be used but addition of a crop oil concentrate such as Hasten may give a better result. If hard to kill legume plants such as Calopo or Sicklepod are present then the addition of atrazine may improve knockdown. To ensure knockdown in vines the growing tip needs to be sprayed. Valor herbicide also enhances the knockdown of glyphosate on broadleaved weeds and vines, but care must be taken not to allow glyphosate to drift on to the Tea tree.
Tea tree seedlings within 4 weeks of planting (Boom spray) Residual control of vines, broadleaf and grasses	Broadleaf and vines Including: Amaranthus Balsam pear Billygoat weed/Bluetop Blackberry nightshade Calopo Common sida	300 g/ha	For medium term residual weed control, Valor alone can be applied with a boom spray directly over newly planted healthy seedlings. This may cause some minor short- term phytotoxic symptoms but provided conditions are favourable the trees will continue growing. This will also have some knockdown effect on small (<4 leaf) broadleaf and vines.
Grown Tea trees (0.5 – 1.5m tall) Newly planted or coppiced growth. (Shielded sprayer only) Or Newly harvested stumps. Before any significant new shoots appear (Boom spray) Residual control of vines, broadleaf and grasses	Fleabane Giant pigweed <i>Ipomoea spp.</i> (Morning glory, Pink convulvulus, Red convulvulus, Star of Bethlehem) Milkweed Pig weed Sicklepod Spider flower Square weed/Borreria Wild rose Grasses Barnyard grass Crowsfoot Feather top - Rhodes grass Green summer grass Summer grass	560 – 700 g/ha	Grown Tea trees For long term residual control Valor at higher rates can be applied with a <u>shielded sprayer</u> alone or with mix partners to enhance knockdown and residual control. Sprays should be directed to the interrow and base of the Tea tree plants. Care must be taken not to allow Valor plus the mix partners to drift up on to the Tea tree. Newly harvested stumps For long term residual control Valor at higher rates can also be applied alone or with mix partners to enhance knockdown and residual control using a <u>boom spray over the top</u> of newly harvested stumps and in the interrow. This may cause some minor short- term phytotoxic symptoms but provided conditions are favourable the trees will continue growing. Non-ionic surfactants may be used but addition of a crop oil concentrate such as Hasten may give a better knockdown result. If hard to kill legume plants such as Calopo or Sicklepod are present then the addition of atrazine may improve knockdown. A minimum of 200 L/ha of spray mixture is recommended. Valor herbicide should preferably be applied to moist soil and needs follow up rain or irrigation of at least 15 mm within 3 weeks to ensure continued good control particularly on trash. Efficacy may be reduced by: <ul style="list-style-type: none"> • Soil movement • Very thick trash • Flood irrigation or flood water moving top soil or trash • Long dry conditions after rain or irrigation. In these situations, reliability may be improved by adding a lower rate of Valor to other more water soluble herbicides that move further down in the soil profile such as S-metolachlor, metolachlor or atrazine. However, care should be taken to ensure these DO NOT have additional phytotoxic effects.

DIRECTIONS FOR USE (continued)

4. SELECTED NON-CROP USES

Table K. VALOR 500WG Herbicide applied for residual weed control of Fencelines and Non-crop boundary areas.				
USE SITUATION	WEEDS CONTROLLED	WEED STAGE	RATE	CRITICAL COMMENTS
Fencelines Non-crop boundary areas#	<p>For the control of:</p> <p>Annual ryegrass (<i>Lolium rigidum</i>),</p> <p>Awnless barnyard grass (<i>Echinochloa colona</i>),</p> <p>Caltrop (<i>Tribulus terrestris</i>),</p> <p>Capeweed (<i>Arctotheca calendula</i>), Clammy goosefoot (<i>Chenopodium pumilio</i>),</p> <p>Carrot Weed (<i>Cotula australis</i>),</p> <p>Common sowthistle (<i>Sonchus oleracious</i>),</p> <p>Dead Nettle (<i>Lamium applexicaule</i>),</p> <p>Erodium (<i>Erodium botrys</i>),</p> <p>Fat hen (<i>Chenopodium album</i>),</p> <p>Feathertop Rhodes grass (<i>Chloris virgata</i>),</p> <p>Flaxleaf fleabane (<i>Conyza bonariensis</i>),</p> <p>Heliotrope (<i>Heliotropium europaeum</i>),</p> <p>Lesser Loosestrife (<i>Lythrum hyssopifolia</i>),</p> <p>Prickly Lettuce (<i>Lactuca serriola</i>),</p> <p>Shepherd's purse (<i>Capsella bursa-pastoris</i>),</p> <p>Silver grass (<i>Vulpia spp.</i>),</p> <p>Toad rush (<i>Juncus bufonius</i>),</p> <p>Turnip weed (<i>Rapistrum rugosum</i>),</p> <p>Winter grass (<i>Poa annua</i>)</p> <p>For the suppression of:</p> <p>Small flowered mallow (<i>Malva parviflora</i>),</p> <p>Stinging nettle (<i>Urtica urens</i>)</p>	Pre-emergence	700 g/ha	<p>The period of residual weed control will depend on soil type, rainfall, and weed species/density.</p> <p>Lighter soil types (sand) may experience shorter periods of residual weed control.</p> <p>DO NOT apply for residual weed control until the start of the main rain season when significant soil wetting rain has occurred and more rain (at least 15 mm) is likely within 3 weeks. Dry weather following application may reduce effectiveness.</p> <p>Control emerged weeds with a knockdown herbicide before applying VALOR 500 WG Herbicide.</p> <p>To maximise residual weed control; apply to fencelines or non- crop boundary areas where weed and trash levels are low to maximise herbicide contact with the soil surface.</p> <p>Use of VALOR 500 WG Herbicide, or other residual herbicides, along fencelines or non-crop boundary areas may lead to soil erosion in sandy soils.</p> <p>DO NOT apply in areas prone to strong winds or to powdery soils or soils susceptible to wind displacement.</p> <p>DO NOT operate machinery such as mowers and sprayers that may blow treated dust onto crops or native vegetation.</p> <p>DO NOT apply to farm roads or tracks where vehicle traffic may result in dust settling onto crops or native vegetation.</p> <p>DO NOT disturb treated soil surface after application.</p> <p># Non-crop boundary areas are those around crops that are not currently in crop and will not be sown or planted in the future. Typically, these areas should be no wider than 2 metres.</p> <p>DO NOT use in industrial, commercial areas or rights of way.</p>

RESTRAINTS (additional)

DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 3 days.

DO NOT disturb treated soil surface after application as this may remove VALOR 500WG Herbicide.

DO NOT apply more than 700 g/ha per year.

Table L. VALOR 500 WG Herbicide applied for enhanced knockdown and residual weed control in irrigation channel banks and drainage ditches.			
USE SITUATION	WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
Irrigation channel banks and drainage ditches	<i>Amaranthus</i> spp Balsam pear (<i>Mormordica charantia</i>) Barnyard grass (<i>Echinochloa colona</i>) Bladder ketmia (<i>Hibiscus trionum</i>) Bluetop/Billygoat weed (<i>Ageratum houstonianum</i>) Calopo (<i>Calopogonium mucunoides</i>) Caltrop/yellow vine (<i>Tribulus terrestris</i>) Crowsfoot (<i>Eleusine indica</i>) Feathertop Rhodes grass (<i>Chloris virgata</i>) Fleabane (<i>Conyza bonariensis</i>) Green summer grass (<i>Brachiaria subquadriflora</i>) Ipomoea spp (Bell vine, Morning glory, Pink convolvulus, Star of Bethlehem) Milk/sow thistle (<i>Sonchus oleraceus</i>) Milkweed (<i>Euphorbia heterophylla</i>) Phyllanthus spp. Red pigweed (<i>Portulaca oleracea</i>) Sicklepod (<i>Cassia obtusifolia</i>) Summer grass (<i>Digitaria ciliaris</i>) Square weed (<i>Spemacoe latifolia</i>) Wild rose (<i>Cleome aculeata</i>)	560 – 700 g/ha	VALOR 500 WG Herbicide needs at least 15 mm of rain to incorporate/activate, and therefore should be applied during the main rainfall period when 15 mm of rain is expected within 3 weeks. Channels must be completely empty at the time of application. If the required rain has not fallen and it is necessary to use the irrigation channel, fill it with water and allow it to stand for 24 hours then drain off the water in the channel and run to waste. If existing weeds are present at > 2 leaf stage then non-selective knockdown herbicides such as paraquat or glyphosate should be used to control these in mixtures with VALOR 500WG Herbicide. For improved burndown apply with Hasten or Kwickin Spray Adjuvant at 0.5 – 1 L/100 L (use the lower rate on smaller, actively growing weeds), or Uptake Spraying Oil at 500 mL/100 L

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

GENERAL INSTRUCTIONS

MIXING

VALOR 500WG Herbicide is a water dispersible granule formulation and is contained within a water soluble bag. The water soluble bags dissolve readily in water. **DO NOT** handle water soluble bags or expose to moisture because this may cause breakages. **DO NOT** touch bags with wet hands or place on wet surfaces. **DO NOT** damage foil Sachets that contain the water soluble bags. Protect unused Sachets by keeping them in the original container. Open Sachets only as needed.

To ensure even mixing, half-fill the spray tank with clean water. Tear open the necessary number of sachets and drop the water soluble bags contained in them into the spray tank **without touching the bags**. Keep the agitation system engaged. Mix thoroughly until fully dissolved. Add the knockdown herbicide and remaining water. Mix thoroughly. Add spray additive near the end of the filling process to minimize foaming. Always maintain adequate agitation during application and use the tank mix promptly.

APPLICATION

For application rates up to 90 g/ha apply in a minimum of 80 L spray solution per hectare.

For application rates above 280 g/ha apply in a minimum of 200 L spray solution per hectare.

If pH of spraying water is above 7.0 acidify with appropriate buffering agent prior to adding VALOR 500WG Herbicide.

1. CEREALS, PULSES, OILSEEDS, LUCERNE AND COTTON:

Refer to the Directions for Use and General Instructions of the knockdown herbicide label.

As VALOR 500WG Herbicide is a contact herbicide, coverage is important.

Performance of VALOR 500WG Herbicide as a knockdown or with a partner on weeds or on volunteer cotton may be reduced with large droplets and poor coverage.

Air induction nozzles that deliver coarse droplets at high travelling speeds, low pressure and low water rates may reduce coverage and herbicide performance.

Air induction nozzles can produce variable results when used with oil.

Do not use air induction nozzles with a spray oil such as Hasten.

Best results with VALOR 500WG Herbicide are achieved with coarse droplets produced by wide angle flat fan or twin jet nozzles.

If the partner herbicide requires very coarse or larger droplets, then ensure high water volumes >80 L/ha are used.

2. SUGARCANE:

Refer to the Directions for Use and General Instructions of the knockdown herbicide label.

3. SELECTED NON-CROP USES

Refer to the Directions for Use and General Instructions of the knockdown herbicide label.

As VALOR 500WG Herbicide is a contact herbicide, coverage is important.

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Air induction nozzles can produce variable results when used with oil.

Do not use air induction nozzles with a spray oil such as Hasten.

Best results with VALOR 500WG Herbicide are achieved with coarse droplets produced by wide angle flat fan or twin jet nozzles.

If the partner herbicide requires very coarse or larger droplets, then ensure high water volumes >200 L/ha are used.

CROP TOLERANCE

All crops

Crop safety may be compromised where compounding crop factors such as insect pressure, water logging and nutrient deficiency may occur.

Lucerne

Warning - Use only in established lucerne that is at least 12 months old since planting. VALOR 500 WG Herbicide should only be applied to established lucerne crops which have been heavily grazed, recently cut or desiccated following knockdown with paraquat or paraquat+ diquat.

The tolerance of lucerne varieties to VALOR 500 WG Herbicide can vary with soil type, crop health, stage of growth and degree of moisture and temperature stress. VALOR 500 WG Herbicide may result in transient crop yellowing and

suppression of growth with a resultant initial reduction in biomass. For this reason we recommend application to established, dormant lucerne during Autumn or Winter before lucerne shoot growth has started or between cuttings prior to 15 cm of regrowth. However, under normal growing conditions subsequent growth and seed yield should not be affected. Crop damage may be increased if rates higher than 280g/ha are used and in areas where spray overlapping has occurred. Consult your local Sumitomo Chemical Australia representative for advice on specific varieties.

Pre-emergent - Incorporation by Sowing (IBS) - Wheat, Chickpeas, Faba beans and Field peas

VALOR 500 WG Herbicide can be applied up to a week before sowing. For best results, apply to moist soil immediately before sowing and incorporate with a combine or air-seeder preferably fitted with knife points or blades less than 12 mm wide and generally placed on 20 cm tyne spacing. While this may impact weed control in the furrows it improves crop safety. Maintain slow to moderate speed during sowing to avoid leaving deep furrows and avoid throwing soil into adjacent furrows. Sowing with disc seeders may lead to unacceptable crop damage in crops. Sow seed below the treated soil band; in wheat crops 3 cm, in pulse crops 5 cm. In wheat and pulse crops avoid overlapping sprays and spraying out corners. Heavy rain after application onto ridged soil in particular may cause damage to crops from VALOR 500 WG Herbicide washing into the seed furrow. VALOR 500 WG Herbicide can cause leaf burn, vigour loss and stand and biomass reduction. These effects are minor and transient with no yield penalty.

CROP ROTATION RECOMMENDATIONS

The following rotational crops may be planted after applying VALOR 500 WG Herbicide at the registered label rates. Planting earlier than the recommended plant back or recropping interval may result in crop injury. For crops not specified below, plant back or recropping intervals are unknown. For advice on crops not listed and guidance prior to sowing contact the manufacturer Sumitomo Chemical Australia.

MINIMUM PLANTBACK OR RECROPPING INTERVAL (MONTHS)					
15-25mm of irrigation or rain is necessary, in addition to the plant back period, after application and before planting the following crop species (except faba beans) to improve crop safety.					
Crop species[#]	VALOR 500 WG Herbicide rate (g/ha)				
	30	120	180	280	700*
Faba beans	0	0	0	0	
Peanut, Soybean,				0	5
Chickpeas, Field pea	0	0	0	1	
Pigeon Pea				1	
Maize, Navy beans, Sorghum				1	
Wheat	0	0	1	2	
Vetch	0	1	1	2	
Cotton, Sunflower				2	
Mungbean				2	8
Durum wheat	0	1	1	3	
Barley, Lupins, Oats, Triticale	0	1	2	3	
Lentils	0	2	3	4	
Pumpkin Rice, Shallot, Sweet corn					5
Lucerne (Seedling), Medic, Sub clover	0	3	4	6	
Cabbage, Capsicum, Lettuce, Sweet potato, Tomato, Zucchini					8
Canola	5	9	9	9	12
Rockmelon					12

* These plant back or recropping intervals apply to crops that may be grown after sugarcane where VALOR 500 WG Herbicide has been applied at up to 700g/ha. These intervals are based on the assumption that the soil will be thoroughly cultivated after cane has been grown and before these other crops are planted. [#]For crops/rates other than specified allow 12 months.

EQUIPMENT MAINTENANCE AND USAGE

A 50 mesh primary filter and 80 mesh secondary filter(s) are recommended. The use of in-line nozzle filters is not recommended.

SPRAYER CLEANUP

When cleaning spraying equipment, wear cotton overalls buttoned to the neck and wrist and elbow-length chemical resistant gloves.

After VALOR 500WG Herbicide is applied the following steps must be taken to clean the spray equipment.

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Add 1 litre of 3% household ammonia or similar alkaline based tank cleaner for every 100litres of water, circulate through sprayer for five minutes, then flush all hoses, booms, screens and nozzles for a minimum of fifteen minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for two minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Equipment with VALOR 500WG Herbicide residue remaining in the system may result in crop injury to the subsequently treated crop.