POISON

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



Herbicide

ACTIVE CONSTITUENT:

720 g/L 2,4-D

present as ISOPROPYLAMINE and DIMETHYLAMINE SALTS

Also contains: 20 g/L POLYETHANOXY (15) TALLOW AMINE



Crops: Bananas, Cereal crops, Fallow, Lawns, Non-agricultural, Commercial and industrial areas, Oil tea tree, Pastures, Peanuts, Softwood and hardwood plantations, Sugarcane

Controls: Broadleaf Weeds as specified in the Directions for Use Table

ZULU[®] XT is a PHENOXY HERBICIDE that can cause severe damage to native vegetation and susceptible crops such as Cotton, Grapes, Tomatoes, Oilseed Crops and Ornamentals

Formulation type Soluble Concentrate



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DIRECTIONS FOR USE RESTRAINTS

DO NOT exceed maximum application rate of 6.3 L/ha.

DO NOT exceed the maximum daily application rate by backpack spraying of 5.6 L/day.

DO NOT apply if heavy rains or storms are forecast within 3 days or if any rain is likely within 6 hours.

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

DO NOT apply if crop or weeds are stressed due to dry or excessively moist conditions.

Additional USAGE restrictions apply in peanut, pasture and sugarcane situations; see restriction tables below.



Table 1. Timing restrictions for spraying peanuts

			Timing Restriction
Situation	Rate (L/ha)	Region	DO NOT APPLY DURING THE MONTHS
Broadcast	Up to 1.2	Cape York	October & November
spraying,	L/ha	Northern Gulf	October & November
prior to		Northern Territory	October & November
sowing (peanuts)		Wet Tropics	No timing restrictions
(peanuts)		Burdekin	October
		Mackay/ Whitsunday	September to December
		Mary/Burnett	October to November
		SE Queensland	August to May
	Up to 1.5	Cape York	October & November
	L/ha	Northern Gulf	October & November
		Northern Territory	October & November
		Wet Tropics	No timing restrictions
		Burdekin	October
		Mackay/ Whitsunday	August to December
		Mary/Burnett	September to November
		SE Queensland	Use not supported

			Timing Restriction
Situation	Rate (L/ha)	Region	DO NOT APPLY DURING THE MONTHS
Band spraying,	Up to 1.5 L/ha	Queensland dryland	No timing restrictions
post-sowing		Cape York	No timing restrictions
pre-		Northern Gulf	October and November
emergence (peanuts)		Northern Territory	October and November
(peanuts)		Wet Tropics	No timing restrictions
		Burdekin	No timing restrictions
		Mackay/ Whitsunday	No timing restrictions
		Mary/Burnett	No timing restrictions
		SE Queensland	October to January
Broadcast spray, post-	Up to 3.1 L/ha	Queensland dryland	June to August
sowing		Cape York	October and November
pre-		Northern Gulf	October and November
emergence (peanuts)		Northern Territory	October and November
(peanuts)		Wet Tropics	October to December
		Burdekin	September and October
		Mackay/ Whitsunday	August to December
		Mary/Burnett	April to January
		SE Queensland	Use not supported

 $\label{eq:construction} \textbf{Table 2. Application and timing restrictions for application to pastures}$

DO NOT apply above maximum rate (L/ha) below OR label rate, whichever

	is	LOWEST			
Pastures	State	Summer	Autumn	Winter	Spring
(prior to sowing,	Queensland & NT	4.4	4.4	4.4	4.4
conservation tillage)	New South Wales & ACT	4.4	4.4	4.4	4.4
	Victoria	0.5	1.4	4.4	1.4
	Tasmania	0.5	1.1	3.1	1.4
	South Australia	1.0	1.4	4.4	3.1
	Western Australia	1.4	3.1	4.4	3.1

Pastures	State	Summer	Autumn	Winter	Spring
(established)	(established) Queensland & NT		6.8	6.8	6.8
	New South Wales	6.8	6.8	6.8	6.8
	Victoria & ACT	0.8	1.7	6.8	3.1
	Tasmania	0.6	1.5	4.4	2.8
	South Australia	1.3	2.8	6.8	4.4
	Western Australia	3.1	4.4	6.8	4.4

Table 3. Timing restrictions for spraying sugarcane

Situation	Design	Timing Restriction (DO NOT APPLY DURING THE MONTHS)						
Situation	Region	Up to 1.1 L/ha	Up to 1.6 L/ha	Up to 2.3 L/ha	Up to 3 L/ha			
No trash blanket	Wet tropics & Baron (upper)	No timing restriction	No timing restriction	No timing restriction	October to December			
present during	Burdekin & Baron (lower)	No timing restriction	No timing restriction	October	September to October			
application	Mackay/Whitsunday	No timing restriction	October to November	September to December	August to December			
	Mary/Burnett	No timing restriction	October to November	April to May & August to December	April to January			
	Northern NSW & Rocky Point	No timing restriction	No timing restriction	No timing restriction	October to November			
Trash blanket is present during	Wet tropics & Baron (upper)	No timing restriction	No timing restriction	No timing restriction	November			
application	Burdekin & Baron (lower)	No timing restriction	No timing restriction	October	October			
	Mackay/Whitsunday	No timing restriction	October	October to November	September to December			
	Mary/Burnett	No timing restriction	October	May & October to November	April to May & July to December			
	Northern NSW & Rocky Point	No timing restriction	No timing restriction	No timing restriction	October to November			

Table 4. Application restrictions for lawn

DO NOT apply above maximum rate (L/ha) below OR label rate, whichever

IS LUWEST		
	State	Rate (L/ha)
Lawn	Queensland	2.8
	Western Australia	3.5

Table 5. Risk mitigation measures for dryland cropping, pre-emergent uses

Situation	Risk mitigation measures
Dryland cropping,	Only apply in no-till farming systems (Tasmania,
Preparatory spray	South Australia)
Winter cereals, pre-	Only apply in no-till farming systems (Tasmania,
emergence uses	South Australia, Western Australia)
Summer cereals, pre-	Only apply in no-till farming systems (Tasmania,
emergent uses	South Australia)

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at www.apvma.gov.au/spraydrift

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

Buffer zones for boom sprayers

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 in the relevant buffer zone table/s 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.

Boom sprayers

- D0 NOT apply by a boom sprayer unless the following requirements are met:
 Spray droplets are not smaller than a VERY COARSE spray droplet size category.
 - Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

	Beem beight above the	Mandatory buffer zones (distance given in metres)						
Application rate	Boom height above the target canopy	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas		
lin to 250 ml /ho	0.5 m or lower		0		0			
Up to 250 mL/ha	1.0 m or lower		15]	15			
lla to E00 ml /bo	0.5 m or lower		0	1	0			
Up to 500 mL/ha	1.0 m or lower		30		30			
Up to 1 L/ha	0.5 m or lower		20]	15			
Up to T L/IIa	1.0 m or lower	0	45	0	45	- 0		
Up to 1.5 L/ha	0.5 m or lower	U	25		25			
Op to 1.5 L/11a	1.0 m or lower		60		60			
Up to 3 L/ha	0.5 m or lower		35	1	35			
0p to 5 L/11a	1.0 m or lower		110]	100]		
Up to 4.6 L/ha	0.5 m or lower		55]	50			
	1.0 m or lower		160	1	160			

Aircraft

DO NOT apply by aircraft unless the following requirements are met:

Spray droplets are no smaller than a VERY COARSE spray droplet size category.

• For maximum release heights above the target canopy of 3 m or 25% of wingspan or 25% of rotor diameter whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for aircraft') are observed.

Buffer zones for aircraft

		Mandatory buffer zones (distance given in metres)						
Application rate	Aircraft type	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas		
lin to 250 ml /ho	Fixed Wing		50		50			
Up to 250 mL/ha	Helicopter		45		40			
Up to 500 mL/ha	Fixed Wing		90		85			
Op to 500 mL/na	Helicopter		65		65			
Up to 1 L/ha	Fixed Wing		140		140			
0p t0 T L/IIa	Helicopter	0	100	0	95	0		
Up to 1.5 L/ha	Fixed Wing	0	180	U	180			
0p t0 1.5 L/lia	Helicopter		130		120			
lln to 21/ho	Fixed Wing		300		300			
Up to 3 L/ha	Helicopter		200		190			
Up to 4.6 L/ha	Fixed Wing	7	475		450			
	Helicopter		275		275			

Optical spot spraying technology

DO NOT apply with optical spot spraying technology unless the following requirements are met:

• Spray droplets are not smaller than a COARSE spray droplet size category.

 Minimum distances between the application site and downwind sensitive areas are observed (see the following table titled 'Buffer zones for optical spot spraying technology').

• Equipment is calibrated to deliver the equivalent of 100 L/ha.

• Boom height above the target canopy is 1.0 m or lower.



Buffer zones for optical spraying technology

	Minimum		Mandatory buffer zones (distance given in metres)				
Application rate	droplet size	Minimum water volume	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
	Coarse	10 L/ha (equivalent to 470 mL Zulu XT /ha) to treat up to 10% weed cover	0	35	0	35	0
Up to 4.7 L/100 L	Very	15 L/ha (equivalent to 705 mL Zulu XT /ha) to treat up to 15% weed cover	0	35	0	35	0
	Coarse	30 L/ha (equivalent to 1.41 L Zulu XT /ha) to treat up to 30% weed cover	0	55	0	55	0

1. Field crops Refer to sections "Spray Drift Restraints" and "Spray applications and drift risk assessment" before application

SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Barley, Cereal rye, Triticale, Wheat	Refer to weed table	All States	485 mL - 1.46 L/ha	Lower rate (485 mL/ha): Apply from mid-tillering (Z15/Z22 crop growth stage).
Oats	-		485 mL - 1.2 L/ha	Higher rates (above 485 mL/ha): Apply from first node (Z31) to booting (Z43) crop growth stage. DO NOT spray if lucerne is present. DO NOT apply to undersown medics. The wheat varieties Wyalkatchem and Ellison as well as the oat varieties Yallara, Brusher, and Mitika have shown increased sensitivity (potential grain yield loss) to high use rates.
Barley, Cereal rye, Triticale, Wheat	Flaxleaf fleabane (<i>Conyza</i> bonariensis)		1.46 L/ha	Apply up to 6 leaf rosette stage. Apply in 70-100 L water/ha.
Cereals: - Barley	Volunteer canola (<i>Brassica</i> <i>napus</i>) including Roundup Ready [†]		875 mL/ha	WEED STAGE: Up to 4 leaf. CROP STAGE: 5 leaf to fully tillered.
- Cereal rye - Oats - Triticale - Wheat	varieties		1.22 L/ha (except oats) 1.12 L/ha (oats only)	WEED STAGE: Up to 6 leaf. CROP STAGE: 5 leaf to fully tillered.
Harvest aid or salvage spray - Winter cereals - Maize - Sorghum	Desiccate broadleaf weeds	All States	1 - 1.5 L/ha	Apply after firm dough stage.
Peanuts	Broadleaf weeds except Noogoora Burr, Grasses except Mossman Burr	Qld only	1.4 or 3.1 L/ha	LOWER RATE: Apply as BAND SPRAY as soon as possible after planting in a 55 cm band. HIGHER RATE: Apply as OVERALL SPRAY after planting and before crop emergence. Some crop damage may occur if heavy rain falls between application and crop emergence
Sugarcane	Bellvine*	Qld, NSW	245 mL /100 L water	Apply in Spring, using directed spray.
	Morning glory^	only	490 - 955 mL/ha	Apply in Summer using high clearance tractor.
	Pink Convolvulus, Star of Bethlehem#		955 mL/ha	Apply in Autumn by aircraft.
	Bindi-eye (Star burr), Blue top, Cobbler's pegs, Fleabanes, Jute, Leucas, Needle burr, Spear thistle, Water primrose, Ipomea vines, Convolvulus vines		1.5 - 3 L/ha	Unless otherwise indicated below, ZULU XT can be applied as a directed spray or over-the-top by boom sprayer or aircraft. When applied as a directed spray, the buffer zones for boom sprayers listed in the RESTRAINTS section of the label do not apply if the spraying equipment is set up so the nozzles are
Bananas including	Chinese mint, Blue snakeweed To destroy banana suckers	NSW, Qid	3 L/ha 139 mL / 10 L/ha	 orientated below the horizontal of the top of the crop canopy and spray is released at a height below the top of the crop canopy (excluding sprayers that are air assisted). Note that the timing restrictions found on other products containing 2,4-D do not apply to ZULU XT when used in accordance with label directions. Add 100 mL BS1000* per 100 L and agitate well. D0 NOT use on Q63 or Q67 varieties (at any rate). D0 NOT use above 980 mL/ha on Q80, Q96 or H56 varieties. Refer to local Sugar Research Australia (SRA) representative for further information on local variety susceptibility. * For optimal control of bellvine, apply in spring, using directed spray. ^ For optimal control of morning glory, apply over the top or using directed spray in summer using high clearance tractor. # For optimal control of pink convolvulus or star of Bethlehem, apply in autumn by aircraft. Apply by stem injection only. Inject at the rate of
Cavendish		only	water	15 mL per fully grown plant, 10 mL per medium sized plant and 5 mL for small suckers.
		Qld only	278 mL / 100 L/ha water	Allow suckers from corms of treated plants to form broad adult leaves, then spray. Isolated spots may require a second spray.

2. Conservation tillage



Refer to sections "Spray Drift Restraints" and "Spray applications and drift risk assessment" before application

SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Preparatory spray for fallows and seedbeds or prior to	Fumitory (white), Ball mustard, Indian hedge mustard, Common	All States	275 - 795 mL/ha plus Wipe-Out® 450 or other	Rate selection Use the lower rate for seedling broadleaf
sowing the following crops:	sowthistle, Turnip weed, Wild turnip,		compatible glyphosate	weeds and increase to the higher rate
- Balansa clover	Wild radish		formulations at	for broadleaf weeds more than 10 cm
- Barley	Seedlings of:	NSW, ACT,	recommended label rates	diameter/high. Always add glyphosate
- Chickpeas	Australian bindweed, Bellvine,	Qld only		at recommended label rates. At the
- Cotton	Caltrop, New Zealand spinach,			time of application, all weeds must be
- Faba beans - Field peas	Raspweed			actively growing and not under stress from low moisture, frost, cold, disease or
- Lentils	Ageratum (Blue top), Dock, Volunteer	All States	380 - 500 mL/ha plus	waterlogging. If grazing has occurred allow
- Linseed	lupins, Volunteer peas, Volunteer Sunflowers, Charlock, Fumitory (Red),		Wipe-Out [®] 450 or other compatible glyphosate	re-growth to 6-8 cm before spraying and use
- Lucerne	Medic, Paterson's curse, Prickly		formulations at	higher rate.
- Lupins	lettuce (Wild lettuce), Saffron thistle,		recommended label rates	Always add either a non-ionic surfactant (e.g
- Narbon beans	Spear thistle, Variegated thistle			Wetspray [®] 1000) or the acidifying surfactant
- Navy beans - Oats	Bathurst burr, Blackberry nightshade,]	500 - 725 mL/ha plus	Raizer® 700 in accordance with the label directions on the glyphosate product.
- Perennial ryegrass	Californian burr, Horehound		Wipe-Out [®] 450 or other	Use Raizer [®] 700 with glyphosate if
- Persian clover	seedlings, Lincoln weed seedlings,		compatible glyphosate	insecticides will be included in the tank
- Phalaris	Marshmallow seedlings, Sorrel seedlings, Thornapple,		formulations at recommended label rates	mixture or if faster brownout of weeds is
- Rice	Volunteer vetch, Volunteer			required.
- Safflower	safflower, Common ice-plant,			
- Sorghum - Soybean	Storksbill/Erodium seedlings, Ivyleaf			
- Subterranean clover	speedwell, Melilotus, Shepherd's			
- Sunflower	purse, Skeleton weed (Suppression			
- Triticale	only), Ward's weed, Wireweed			
- Vetch	seedlings (Hogweed), White clover, Subterranean clover			
- Wheat	Amaranth, Apple of Peru, Mexican	NSW, ACT,	730 mL - 1.1 L/ha plus	
- White clover	poppy, Annual ground cherry,	Qld only	Wipe-Out [®] 450 or other	
	Bladder ketmia, Fat hen, Melons,		compatible glyphosate	
	Native Rosella, Noogoora burr,		formulations at	
	Potato weed, Cow vine, Yellow vine		recommended label rates	
	Volunteer canola (<i>Brassica napus</i>)	All States	855 mL/ha or	Use lower rate up to the 4 leaf weed stage.
	including Roundup Ready [†] varieties		1.2 L/ha plus Wipe-Out®	Use higher rate up to the 6 leaf weed stage.
			450 or other compatible glyphosate formulations	For adequate coverage use a minimum application water volume of 70 L/ha.
			at recommended label	In situations where the PRAMOG model
			rates	recommends no use of glyphosate in the
				year following Roundup Ready* canola,
				alternative mode of action herbicides should
				be selected.
	Flaxleaf fleabane (<i>Conyza</i>		630 mL - 1.1 L/ha plus a	Apply to cotyledon to 12 leaf rosette prior to
	bonariensis)		minimum of 1.5 L/ha	stem elongation. Use the low rate in Autumn/
			Wipe-Out® 450 or other compatible glyphosate	Winter. Use the highest rate for Spring/ Summer applications.
			formulations at	For adequate coverage use a minimum
			recommended label rates	application water volume of 70 L/ha.
				A sequential application of Spraytop [®] 250
				(refer below) is also recommended for
				situations where incomplete control is
				achieved with the first application, or where
				there are spray misses/shadowing, failures due to resistance, or under periods of
				temperature and/or moisture stress. In these
				situations, the sequential application is to be
				applied 7-14 days after the first application.
			As above followed by	Apply at stem elongation to flowering plants.
			1.6 - 2 L/ha Spraytop [®] 250	Apply the sequential application 7-14 days
			or 1.2 – 1.5 L/ha Spraytop®	after the first application.
			330	Use the low rate in Autumn/Winter.
				Use the highest rate for Spring/Summer
				applications. For adequate coverage use a minimum
		1		
				application water volume of 70L/ha.
				The sequential application of Spraytop®
				The sequential application of Spraytop® is recommended for situations where
				The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the
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				The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or
PASTURES:	Charlock, Mustards, Shepherd's		460 mL - 1.4 L/ha	The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or moisture stress. In these situations, the sequential application is to be applied 7-14 days after the first application. Apply to actively growing young weeds
Conservation tillage - direct	purse, Saffron, Slender, Spear &		460 mL - 1.4 L/ha	The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or moisture stress. In these situations, the sequential application is to be applied 7-14 days after the first application. Apply to actively growing young weeds before sowing. Observe plant back periods
Conservation tillage - direct drilling, surface sowing or	purse, Saffron, Slender, Spear & Variegated thistles, Turnip weed,		460 mL - 1.4 L/ha	The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or moisture stress. In these situations, the sequential application is to be applied 7-14 days after the first application. Apply to actively growing young weeds
Conservation tillage - direct	purse, Saffron, Slender, Spear & Variegated thistles, Turnip weed, Wild radish, Wild turnip			The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or moisture stress. In these situations, the sequential application is to be applied 7-14 days after the first application. Apply to actively growing young weeds before sowing. Observe plant back periods given in the table on this leaflet.
Conservation tillage - direct drilling, surface sowing or	purse, Saffron, Slender, Spear & Variegated thistles, Turnip weed,		460 mL - 1.4 L/ha 960 mL/ha plus 280 - 400 mL/ha	The sequential application of Spraytop® is recommended for situations where incomplete control is achieved with the first application, or where there are spray misses/shadowing, failures due to resistance or under periods of temperature and/or moisture stress. In these situations, the sequential application is to be applied 7-14 days after the first application. Apply to actively growing young weeds before sowing. Observe plant back periods



SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Fallow: stubble spray prior to direct drilling or sowing - Winter Cereals - Grain legumes (Peanuts: Old only) - Canola	Refer to weed table	All States	200 mL - 1.5 L/ha	Observe the plant back periods given in the table on this leaflet. Can be mixed with Tackle®, Spraytop® 250, Spraytop® 330 or paraquat + diquat where grasses are present. Select appropriate rate from the weed table. For skeleton weed, spraying should only be done 6-8 weeks before anticipated sowing date and subsequent cultivation limited to a minimum.
	Volunteer canola (<i>Brassica napus</i>)		875 mL/ha	Apply at this rate up to 4 leaf canola stage.
	including Roundup Ready [†] varieties		1.22 L/ha	Apply at this rate up to 6 leaf canola stage.

3. Pastures, fallow, non-agricultural, commercial and industrial areas, rights of way and lawns Refer to sections "Spray Drift Restraints" and "Spray applications and drift risk assessment" before application

SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Fallow or pastoral land	Lippia (<i>Phyla anescens</i>)	All States	1.75 - 3.5 L/ha plus 1% crop oil	Apply when Lippia is in fresh conditions, mid-flower and has good soil moisture. A sequential application (applied twice over Summer; 2-3 months apart) will provide the highest level of control. D0 NOT apply in dry conditions. D0 NOT apply more than two applications.
Fallow	Lucerne		2.1 L/ha	Spray in spring when lucerne is actively growing using a minimum spray volume of 50 L/ha. Heavily graze lucerne during winter and early spring to reduce crown and root reserves. Allow lucerne to regrow to 15-30 cm tall before spraying. Successful lucerne stand reduction is more likely if >70 mm of rain falls in the 6-8 weeks prior to application. Add either 0.5% Uptake [†] Spraying Oil or a non-ionic surfactant e.g. Wetspray [®] 1000. Maximum air temperature should not exceed 30°C.
Agricultural non-crop areas, commercial and industrial areas, pastures and rights-of-way	Pimelea spp.	-	800 mL/ha plus wetter	Apply by boom spray equipment calibrated to deliver a spray volume of 1500 L/ha. To be applied when plant is green. D0 NOT apply more than 2 applications per year with a minimum re- treatment interval of 21 days between consecutive applications. This product can be used to create and maintain hospital areas for livestock suffering from Pimelea poisoning. Pimelea may become more palatable after herbicide application; stock should be excluded from herbicide-treated areas until sprayed Pimelea plants are leafless, seedless and obviously dead.
			55 mL / 100 L water + wetter	Spot spray. Thoroughly wet all foliage to the point of runoff (approximate spray volume 1500 L/ha).
Pastures and non-agricultural areas	Refer to weed table		485 mL - 1.5 L/ha	Pasture legumes including lucerne, clovers and medics may be damaged unless well protected by grasses. Spot spraying is preferred.
	Galvanised burr		280 mL / 100 L water	Apply to young actively growing weeds. Ensure thorough and even coverage of plants. Note: Treated plants need to be burnt to destroy seeds.
	Amsinckia, Docks, Bindweed, Caltrop, Flatweed, Spear thistle, Capeweed, Saffron thistle, Mustard, Wild radish, Wild turnip, Annual thistles, Paterson's curse, Heliotrope, Ragwort, Three cornered Jack, (Double gee, Spiny emex)	-	960 mL - 2.1 L/ha	For pastures not containing legumes. Only seedling docks, spear thistle and saffron thistle will be controlled. Summer weeds: Use low rate for seedlings, 1.4 - 2.1 L/ha for larger plants. Stock poisoning may occur when grazed after spraying if large amounts present, particularly heliotrope. Winter weeds: Use low rate for seedlings, 1.4 - 2.1 L/ha for larger plants. If stock present, use spray/grazing rates.
	Afghan (camel) melons, Paddy melons		1.4 L/ha plus 1% crop oil	Spray when plants are young and actively growing. Larger and older plants will need the addition of Safari® for adequate control.
	Prickly saltwort (Roly poly) Stinkwort	-	1.4 L/ha 1.4 - 2.8 L/ha plus surfactant	Spray when plants are small. Best results are obtained when plants are small. Use high rate on larger plants.
	Dove weed	1	2.8 L/ha	Spray after good emergence of seedlings.
	Capeweed	1	1.5 - 2.45 L/ha	Spray seedlings to rosette stage.
	Horehound	1	2 - 2.8 L/ha	Spray seedlings. Suppression only. Good coverage required.
	Paterson's curse		1.5 - 1.95 L/ha	Spray rosettes or before plants have 10 leaves. Later stages harder to kill.
	Storkbill/Erodium	1	1.45 - 2.8 L/ha	Spray seedlings to young rosettes.
	Thornapple	1	1.45 - 2.1 L/ha	Spray seedlings only.
Pastures, rights of way and	Boxthorn, Boneseed, Hawthorn	All States	68 mL / 10 L water	Spot Spraying: For Boneseed only, thoroughly wet plants or seedlings.
industrial uses			Undiluted	Cut stump: Apply or paint undiluted ZULU® XT to freshly cut stumps
	Groundsel	1	830 mL / 15 L water	Misting: Lightly wet plants.
			210 mL / 15 L water	Cut stump: Swab the cut stump immediately. Apply by a pouring can or Knapsack spray.
		1	2.5 - 3.8 L/ha	Aerial application: Spray when Groundsel is actively growing.



SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Pastures, rights of way and industrial uses <i>Cont</i> .	Lantana	All States	280 mL / 100 L water	Use a very coarse spray with sufficient pressure to penetrate canopy and wet stems as well as foliage. Spray at the end of a wet Summer (March to May). Defoliation should occur but respraying of new growth will be necessary in following Autumn. Broadcast grass seed and keep stock off following Summer to allow the pasture to establish. Damage may result to pasture legumes.
	Mother of millions		350 mL / 100 L water	Hand gun and knapsack only. A thorough coverage of leaves and plantlets is necessary. Use Wetspray® 1000 at the rate of 1 mL of surfactant per 1 L of mixture.
	Noogoora burr, Weir vine (Ipomea), Scarlet pimpernel (seedlings only), White eye (Mexican clover)		140 mL / 100 L water	In all cases apply to young, actively growing weeds, ensuring thorough coverage.
	Annual and Perennial Pigweed, Artichoke thistle, Bathurst burr, Billygoat weed, Blue snakeweed, Burr medic, Clockweed^, Fleabanes, Galvanised burr, Hemlock, Hoary cress+, Kyalinga weed (Whisker grass), Knobweed, Milky cotton bushes, Parthenium weed, Paterson's curse, Saffron thistle, Star burr, Thornapple, Variegated thistle^		280 mL / 100 L water	In all cases apply to young, actively growing weeds, ensuring thorough coverage. ^ Spray rosette stage. + Repeat spraying necessary.
	Rubber vine]	140 mL / 10 L water	Apply to freshly cut stump.
	Sesbania pea		485 - 780 mL / ha	
	Water Hyacinth		3.0 - 4.6 L/ha	Apply to 2200 – 3300 L water/ha
	Wild tobacco tree		210 mL / 15 L water	Cut stump treatment: Swab cut stump within 1 hour of cutting. Apply by pouring can or knapsack sprayer.
Techniques				Avoid grazing with young or breeding stock.
Techniques	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish	n Paterson'	s curse. y be damaged at the highe 245 mL - 955 mL/ha	Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from
Techniques	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha	Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer " PRECAUTION " above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures.
Techniques	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle,	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil	Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer " PRECAUTION " above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control.
	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle, Saffron thistle Melons Docks	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil 960 mL/ha	 Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer "PRECAUTION" above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control. Apply in September only and follow other recommendations above.
Hardwood and softwood	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle, Saffron thistle Melons	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil	Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer " PRECAUTION " above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control.
Hardwood and softwood plantations	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle, Saffron thistle Melons Docks Broadleaf and woody weeds as per product labels including Groundsel and <i>Pinus</i>	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil 960 mL/ha Maximum rate	 Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer "PRECAUTION" above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control. Apply in September only and follow other recommendations above. Apply a single pre-plant application and/or a maximum of 2 postplant applications using shielded sprayers within the first 2 years following planting. Apply using aircraft (rotary wing only) or ground based equipment. DO NOT spray over or into watercourses. Products may be mixed with Wipe-Out® 450 or other compatible
Techniques Hardwood and softwood plantations Oil tea tree	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle, Saffron thistle Melons Docks Broadleaf and woody weeds as per product labels including Groundsel and <i>Pinus</i> spp. Wildlings	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil 960 mL/ha Maximum rate 1.6 L/ha Apply at a maximum of 960 mL/ha as per weed	 Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times normal rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer "PRECAUTION" above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control. Apply in September only and follow other recommendations above. Apply a single pre-plant application and/or a maximum of 2 postplant applications using shielded sprayers within the first 2 years following planting. Apply using aircraft (rotary wing only) or ground based equipment. D0 NOT spray over or into watercourses. Products may be mixed with Wipe-Out® 450 or other compatible glyphosate formulations for pre-plant spray operations. Apply as a shielded spray. Avoid contact with foliage, green stems, exposed non-woody roots, desirable plants and trees as severe injury or destruction may result. Apply following harvest as a blanket spray only after: All residual tea tree foliage has been removed by mechanical shaving, or by using a burner, No swollen buds are present on stumps. NOTE that buds can burst 8 days after harvest in summer and
Hardwood and softwood plantations	DO NOT graze horses or pigs or Legume species (sub clovers, n information. Amsinckia, Annual Thistles, Caltrop, Capeweed, Charlock, Double gee, Erodium, Geranium, Mustards, Paterson's curse, Shepherd's purse, Slender thistle, Turnip weed, Wild turnip, Wild radish Spear or Variegated thistle, Saffron thistle Melons Docks Broadleaf and woody weeds as per product labels including Groundsel and <i>Pinus</i> spp. Wildlings Refer to weed table	n Paterson' nedics) may All	s curse. y be damaged at the highe 245 mL - 955 mL/ha 520 mL - 1 L/ha 1.45 L/ha plus 1% crop oil 960 mL/ha Maximum rate 1.6 L/ha Apply at a maximum of 960 mL/ha as per weed table Apply at 960 mL/ha in a tank mix with 1.6 L/ha Wipe-Out® 450 or other compatible glyphosate	 Apply from 6 weeks after opening rains in Autumn until the end of August. Seven days after spraying stock paddock at 4-5 times norma rate, preferably with sheep (cattle are less effective). Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing, but before survival of desirable pasture species is threatened. Then return to normal stocking levels. Use high stocking rates in following Spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control. Refer "PRECAUTION" above. Apply to Saffron thistle at the end of September when plants are running up to flower. Sub. clovers may be damaged at this rate and use is not recommended for all Medic pastures. Heavy stocking on young plants sprayed with 1 L/ha provides effective control. Apply a single pre-plant application and/or a maximum of 2 post-plant applications using shielded sprayers within the first 2 years following planting. Apply using aircraft (rotary wing only) or ground based equipment. D0 NOT spray over or into watercourses. Products may be mixed with Wipe-Out[®] 450 or other compatible glyphosate formulations for pre-plant spray operations. Apply as a shielded spray. Avoid contact with foliage, green stems, exposed non-woody roots, desirable plants and trees as severe injury or destruction may result. Apply following harvest as a blanket spray only after: All residual tea tree foliage has been removed by mechanical shaving, or by using a burner, No swollen buds are present on stumps. NOTE that buds can burst 8 days after harvest in summer and Surface of cut stumps are dry before spraying commences.

4. Spot spraying Refer to sections "Spray Drift Restraints" and "Spray applications and drift risk assessment" before application

SITUATION & CROP	WEEDS	STATE	MIXING RATES / COMMENTS
High volume spraying	Refer to weed table	All States	485 mL / 100 L
			Apply 1000 L spray volume/ha.
Knapsack application			4.8 mL/L

5. Optical spot spray technologies Refer to sections "Spray Drift Restraints" and "Spray applications and drift risk assessment" before application

Note: Calibrate the sprayer to spray the equivalent of 100 L/ha. For weed cover between 0% and 30% only. If percentage weed cover

exceeds 30	exceeds 30% use approved boom spray rates.					
SITUATION & Crop	WEEDS	RATE	CRITICAL COMMENTS			
Fallow	Fleabane, Sowthistle, Yellow vine (Caltrop)	4.7 L/ 100 L	Apply to rosette to flowering plants. Use higher rate on late flowering/mature plants or plants under moisture stress.			

WEEDS TABLE

NOTE: Listing of weeds and rates where weeds are to be sprayed in a crop or pasture. Refer to the spot spraying section for rates where weeds only are present, or when spot-spraying in a crop or pasture.

Weeds	Application Rate	Critical Comments
Amaranthus spp.	485 - 955 mL/ha	Spray young plants.
Amsinckia	955 mL/ha	
Apple of Peru	485 mL - 955 mL/ha	Spray young plants. Susceptible when young.
Bathurst burr	695 mL - 1.45 L/ha	Spray seedlings only.
Bellvine	1.45 L/ha	Spray before seeding. Advanced stages susceptible.
Bindweed	955 mL/ha	opray before security. Advanced stages susceptible.
Blackberry nightshade	485 - 955 mL/ha	
Blackeyed Susan	1.45 L/ha	Apply at pre-flowering, preferably young stages.
Blackeyed Susan Blue snakeweed		
	1.45 L/ha	Spray seedlings at young stages only.
California burr	695 - 955 mL/ha	Spray seedlings only.
Cape tulip	560 mL - 1.1 L/ha	Low rate for cormils only.
Capeweed	955 mL - 1.45 L/ha#	Spray seedlings to rosette stage. #Rate for use in crop only.
		Refer to pastures section for pasture use rate.
Caltrop	695 mL - 1.45 L/ha	Moderately susceptible.
Charlock	485 mL - 1.2 L/ha	Spray at rosette stage.
Clover	1.1 L/ha	
Cobbler's pegs	1.45 L/ha	Apply at pre-flowering, preferably young stages.
Common ice plant	955 mL/ha	
Common sida	1.45 L/ha	Spray seedling or young stages only.
Common sowthistle	1.2 - 1.45 L/ha	Apply at pre-flowering, preferably young stages.
Docks	955 mL - 1.2 L/ha	Spray at multiple leaf stage. Effective only on seedlings.
Doveweed	955 mL/ha	
Fat hen	485 mL - 1.45 L/ha	Spray pre-flowering.
Flannel weed	1.45 L/ha	Spray seedling or young stages only.
Flat weed	955 mL/ha	
Fumitory - red	1.45 L/ha	
Fumitory - white	485 - 695 mL/ha	Spray at multiple leaf stage.
Heliotrope	955 mL/ha	
Hexham scent or Melilotus	955 mL - 1.45 L/ha	Spray multiple leaf stage before seeding.
Hoary cress	780 mL - 1.45 L/ha	Spray rosettes and pre-flowering.
Hogweed/Wireweed	1.2 L/ha	Spray at multiple leaf stage (Vic). Spray at seedling and young plant stage (Qld).
Horehound	1.2 - 1.45 L/ha*	Spray seedlings. Suppression only. Good coverage required.
norenound	1.2 - 1. 4 5 L/11a	opray seedings. Suppression only. Good coverage required.
		*Rate for use in crop only.
		Refer to pastures section for pasture use rate.
Indian hedge mustard	955 mL - 1.2 L/ha	
Khaki weed	955 mL- 1.45 L/ha	Spray seedlings only.
Lincoln weed	1.45 L/ha	Spray early rosettes.
London rocket	955 mL/ha	
Lupins	695 mL - 1.45 L/ha	
Matricaria	695 mL/ha	
Melons – Camel (Afghan),	485 mL - 1.45 L/ha	Add 1% crop oil. Seedlings only - add Invader in fallow situations only for reliable results on larger
paddy		weeds.
Mexican poppy	1.2 L/ha	Spray seedlings – plants become more resistant with age.
Mintweed	780 - 955 mL/ha	Spray seedlings – resistant in later stages.
Morning glory	1.45 L/ha	Spray at seedling to flowering stage.
Mustards	195 mL - 1.2 L/ha	Spray at 2-4 leaf up to rosette stage.
Needle burr	1.45 L/ha	Apply at pre-flowering, preferably young stages.
New Zealand spinach	4	ראָרָאָי אָר אָרָט אָראָר אָר אָר אָר אָראָר אָראָאָר אָראָאָר אָראָאָר אָראָאָראָ אָראָאָראָ אָראָאָראָ אָראָא
	955 mL - 1.45 L/ha	Spray seedlings only.
Noogoora burr	695 mL - 955 mL/ha	
Paterson's curse	955 mL - 1.45 L/ha#	Spray rosettes or before plants have10 leaves. Later stages harder to kill. #Rate for use in crop only.
		Refer to pastures section for pasture use rate.



Weeds	Application Rate	Critical Comments
Pinkburr	1.45 L/ha	Spray seedling or young stages only.
(Pink flowered burr)		
Potato weed	485 - 955 mL/ha	
Radish	955 mL/ha	
Ragwort	955 mL - 1.45 L/ha	Spray up to early rosette stage.
Rapistrum	955 mL/ha	
Rough poppy	955 mL/ha	
Safflower	485 - 955 mL/ha	
Shepherd's purse	955 mL - 1.45 L/ha	Spray young rosettes.
Siratro (Purple bean)	1.45 L/ha	Spray seedling or young stages only.
Skeleton weed	955 mL - 1.45 L/ha	Spray rosettes before aerial growth commences.
Sorrel	1.2 - 1.45 L/ha	Only moderately susceptible.
Speedwell - Ivy leaf	955 mL/ha	
Spinyhead sida	1.45 L/ha	Spray seeding or young stages only.
Starburr	1.45 L/ha	Spray before seeding, advanced stages susceptible.
Spiny emex	1.2 L/ha	Only young plants are susceptible.
Star of Bethlehem (Cupid's flower)	1.45 L/ha	Spray before seeding, advanced stages susceptible.
Stinkwort	695 mL - 1.2 L/ha	
Storkbill/Erodium	1.2 L/ha#	Spray seedlings to young rosettes. #Rate for use in crop only.
		Refer to pastures section for pasture use rate.
Sunflower (seedlings)	485 mL- 1.2 L/ha	
Thistles: -Annual	955 mL/ha	
- Californian-spot spray only	-	Repeated applications may be necessary. Refer to spot spray section for rate.
- Saffron	485 mL - 1.45 L/ha	Low rate only sufficient to control weeds in crops at rosette stage when sprayed early.
- Slender/Shore	695 mL - 1.45 L/ha	Suppression only.
- Soldier	1.4 L/ha	Spray young rosette.
		opray young rootati
- Spear	485 mL - 1.4 L/ha	Spray young rosettes.
- Star-spot spray only	-	
		Spray young rosettes.
- Star-spot spray only	-	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only.
- Star-spot spray only - Variegated Thornapple	- 485 mL - 1.45 L/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy)	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha 495 - 955 mL/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum Vetches/Tares	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha 495 - 955 mL/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate. Spray seedling or young stages only.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum Vetches/Tares	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha 495 - 955 mL/ha 955 mL - 1.2 L/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate. Spray seedling or young stages only. Spray at multiple stage. Spray multiple leaves.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum Vetches/Tares Ward's weed	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha 495 - 955 mL/ha 955 mL - 1.2 L/ha 955 mL/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate. Spray seedling or young stages only. Spray at multiple stage.
- Star-spot spray only - Variegated Thornapple Tridax (Tridax daisy) Turnip Weed/Rapistrum Vetches/Tares Ward's weed Wild cabbage	- 485 mL - 1.45 L/ha 695 mL - 1.45 L/ha# 1.45 L/ha 495 - 955 mL/ha 955 mL - 1.2 L/ha 955 mL/ha 1.2 L/ha	Spray young rosettes. Refer to spot spray section for rate. Spray at rosette stage. Spray seedlings only. #Rate for use in crop only. Refer to pastures section for pasture use rate. Spray seedling or young stages only. Spray at multiple stage. Spray multiple leaves.

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

IN TASMANIA, THIS PRODUCT MAY ONLY BE USED FROM 15 APRIL TO 15 SEPTEMBER UNLESS OTHERWISE PERMITTED BY THE REGISTRAR OF PESTICIDES.

WITHHOLDING PERIODS

Harvest: NOT REQUIRED WHEN USED AS DIRECTED Grazing

Pasture, Cereal crops, Agricultural non-crop areas, commercial and industrial areas, and rights of-way: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION

Fallow- control of Lucerne: DO NOT GRAZE, CUT OR CULTIVATE FOR AT LEAST 21 DAYS AFTER SPRAYING



GENERAL INSTRUCTIONS

Before opening, carefully read Directions for Use, Precautionary Statements, Safety Directions and First Aid Instructions. ZULU® XT is a water soluble liquid product with non-selective herbicidal activity against broadleaf weeds. ZULU® XT will control emerged weeds only, and provides no residual control although certain plant back periods should be observed. ZULU® XT is absorbed by plant foliage and accumulates to toxic levels in the regions of growth and reproduction, upsetting the ability of plants to balance the synthesis and use of nutrients. Visible effects are a gradual yellowing and wilting of the plants which advances to complete browning of above ground growth and deterioration of root systems. Effects may not be apparent for 7-10 days or even up to 21 days under cold or cloudy conditions.

DO NOT treat weeds under poor growing or dormant conditions such as occur in drought, water-logging, disease, insect damage, following frost, weeds heavily covered with dust or silt. Reduced results may also occur if weeds are under stress from previous herbicide application. Rainfall occurring up to 6 hours after application may reduce effectiveness.

DO NOT spray if strong winds prevail.

Crop Establishment

ZULU® XT is recommended as a herbicide additive to Wipe-Out® 450 or other compatible glyphosate formulations (##refer also to compatibility section for all compatible glyphosate formulations) for control of emerged weeds prior to crop establishment. When ZULU® XT is applied prior to crop establishment, certain Plant Back Periods should be observed to ensure that the herbicide has degraded sufficiently to allow safe sowing of the intended crop. This process is largely influenced by moisture, temperature and certain soil characteristics and may be delayed particularly when conditions are cold and dry. Refer to the Plant-Back Period table for specific information. In seasons of heavy weed growth, or where the following conditions apply, it may be necessary to further delay sowing until a suitable seedbed can be formed. Conditions which can delay crop germination and seedling development include;

- Heavy green or decaying weed growth incorporated into the soil;
- Soil compaction or crusting;
- Cold and wet soils;
- Deep seeding;
- Prior use of residual or pre-emergent herbicides.
- To minimise these effects it is suggested that:
- Weed bulk be reduced by grazing and cultivating to leave trash on the surface to dry out;
- A friable seedbed be produced by cultivation, where necessary;
- The use of pre-emergent herbicides to be avoided if they might contribute to reduced germination;
- A correct seeding depth be used.

The preferred alternative is to spray early to control any weeds in their less advanced stages and ensure the seedbed is in a suitable condition for early sowing when soil temperatures are not excessively cold.

[®] XT

CDOD	RATES					
CROP	Up to 485 mL/ha	485 - 955 mL/ha	955 mL - 1.45L/ha			
Balansa clover	7	7	10			
Barley %	1	1	3			
Canola #	14	21	28			
Chickpeas #	7	14	21			
Cotton	10	14	21			
Faba beans	7	7	10			
Field peas	7	14	14			
Lentils	7	7	10			
Linseed	7	7	14			
Lucerne	7	7	10			
Lupins *	7	14	21			
Medics	7	7	10			
Narbon beans	7	7	10			
Navy bean	10	10	14			
Oats	3	3	7			

CROP	RATES					
CRUP	Up to 485 mL/ha	485 - 955 mL/ha	955 mL - 1.45L/ha			
Perennial	7	7	10			
ryegrass						
Persian clover	7	7	10			
Phalaris	7	7	10			
Rice	7	7	14			
Safflower #	7	14	21			
Sorghum @	3	7	10			
Soybean	14	14	21			
Sub. clover	7	7	10			
Sunflower @	7	10	14			
Triticale %	1	3	7			
Vetch	7	7	10			
Wheat %	1	3	7			
White clover	7	7	10			

IMPORTANT: WHEN APPLIED TO DRY SOILS AT LEAST 15mm (1/2 inch) OF RAIN MUST FALL PRIOR TO THE COMMENCEMENT OF THE PLANT BACK PERIOD.

NOTES:

- % In Queensland, no rainfall is required to fall prior to commencement of Plant Back Period for wheat, barley and triticale.
- # In Queensland, planting of canola/rapeseed, chickpeas and safflower must be delayed for at least 14 days following rainfall of at least 15mm.
- @In Central Queensland, when using 695 mL/ha or less of ZULU® XT, the Plant Back Period for sorghum and sunflower is 1 day irrespective of rainfall.
- In WA the Plant Back Period for lupins at all rates is 28 days. Spray applications and drift risk assessment

For aerial application it is recommended where possible for this product to be applied by an aerial applicator business that holds current accreditation for the Aerial Improvement Management System (AIMS), issued by the Aerial Application Association of Australia Ltd.

Checklist:

- Have you cleaned/decontaminated your boom sprayer?
- Have you contacted your neighbour prior to spraying?
- Is your sprayer set-up correctly for the particular application?
- Check boom calibration
 - at nozzle nozzle choice
 - low drift/what spray quality
 - very coarse or larger spray quality?
 - boom height speed of intended application
 - water volume
- You must check, determine and record the weather conditions immediately prior to, and immediately after the spray application is made.
- Record Temperatures
 - Relative Humidity
 - Delta T
 - Wind speed
 - Is there a temperature inversion?
- Night Spraying Extra care is required to ensure that inversion conditions are not present. Use smoke generator to determine wind direction and presence of inversion conditions.

When spraying in or near a cotton area, check online at crop. satamap.com.au for the proximity of cotton fields.

Application information

In crop use

GROUND SPRAYER APPLICATION - Use 50-250 L/ha of water. AERIAL APPLICATION - Use 20-90 L/ha of water. Use the higher spray volume when targeting dense stands of larger weeds. Fallow use

GROUND SPRAYER APPLICATION – Application of ZULU® XT plus Wipe-Out[®] 450 or other compatible glyphosate formulations (## refer also to compatibility section for all compatible glyphosate formulations) in a minimum spray volume of 50 L/ha is recommended. Water rate will vary according to product rate. Refer to Compatibility section for recommended water rates. When simazine and/or atrazine is included in the mixture a minimum spray volume of 100L/ha is recommended.



Plant	back	perio	ds (a	lays)	for	ZUL	U®

AERIAL EQUIPMENT – Application of ZULU® XT and glyphosate mixtures using boom equipment should occur in a minimum spray volume of 20 L/ha. Water rate will vary according to product rate. Refer to Compatibility section for recommended water rates. D0 NOT apply by aircraft when temperature is above 35°C. D0 NOT use in intensive horticultural cropping areas. Thoroughly wash aircraft, especially landing gear after each day of spraying to remove herbicide residues.

Equipment maintenance and usage

Equipment that has been used for this chemical should not be used for the application of other materials to sensitive plants, unless it has been well washed out with hot soapy water or 1% solution of ammonia, followed by several clear water rinses or use Tank & Equipment Cleaner. If using a Sulfonylurea herbicides (chlorsulfuron or metsulfuron), follow decontamination procedures detailed on those product labels. A 50 mesh primary filter and 80 mesh secondary filter(s) are recommended.

The use of in-line nozzle filters is not recommended. *Mixtures with Wipe-Out*[®] 450 or other compatible glyphosate formulations

Spray solutions of ZULU® XT and Wipe-Out® 450 should be mixed, stored and applied only in stainless steel, aluminium, brass, copper, fibreglass or plastic lined containers. DO NOT mix, store or apply spray solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks. ZULU® XT/ Wipe-Out® 450 spray solutions may react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture that can flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Surfactant addition – conservation tillage

DO NOT add surfactant except for conservation tillage where the product is to be tank-mixed with a glyphosate product. In this situation always add BS1000* in accordance with label directions on the glyphosate product. Use Li700* if insecticides will be included in the tank mixture or if faster brownout of weeds is required or for assistance in droplet size management to partially reduce the number of fine droplets produced from hydraulic nozzles by air and ground.

To improve performance under adverse environmental conditions or when dealing with large weeds, the addition of liquid ammonium sulphate at 834 g/100 L is recommended. Addition of crystalline ammonium sulphate may take a significantly longer time to dissolve. D0 NOT mix with spraying oils, or any other materials or agricultural chemicals except as directed on this label.

Tank mixtures – conservation tillage

A mixture of ZULU® XT and Wipe-Out® 450 or other compatible glyphosate formulations may be tank mixed with the following herbicides, insecticides and adjuvants where recommended in the Directions for Use tables. Read and follow all label directions, restraints and plant back periods, withholding periods and safety directions for the tank mix products.

 ${\rm Cutlass}^{\circledast}$ 500 - For improved control of Sowthistle. Observe any regional use restrictions.

Chlorsulfuron - Will provide control for a wide range of broadleaf weeds and grasses.

Metsulfuron - For improved knockdown control of yellow burr weed (Amsinckia), volunteer chickpeas, chickweed, common sowthistle, cutleaf mignonette, dead nettle, faba beans, Mallee catchfly, soursob, stagger weed, wild garlic. Metsulfuron DOES NOT provide residual in-crop weed control.

Insecticides

Strike-Out[®] 500 EC, ADAMA Dimethoate 400, Imidan[†], Alpha-Scud[®] and Orbit[®] can be introduced into the tank mix for specific control to prevent insect damage to emerging crops.

Mixing instructions

ZULU® XT mixes readily with water. Ensure the spray tank is free of any residue of previous spray materials. Flush chemical suction equipment with fresh water between products, and between fills, when adding to the spray solution.

1. Fill the spray tank with clean water to at least 70% of the required amount and start agitation. DO NOT use mechanical agitators as these may cause excessive foaming when herbicides are added.

- 2.Add recommended herbicide additive/insecticide to the spray tank and mix thoroughly (mixing order water dispersible granules, then suspension concentrates, then emulsifiable concentrates, then soluble liquids).
- 3.Add ZULU® XT and mix thoroughly.
- 4. Top up tank to 95% of desired capacity then add any glyphosate product and the remaining water.
- 5. When Activator $^{\rm t}$ or Wetspray $^{\rm \circledast}$ is used, add near the end of the filling process.
- 6.Always maintain adequate agitation during application and use the tank mix promptly.

COMPATIBILITY

ZULU® XT may be tank mixed with the following products. HERBICIDES: Artillery®, Cutlass® (dicamba), Cavalier®, Cavalier® 500, ADAMA Diuron 900 WDG, flowable diuron, Juggler®, Chlorsulfuron, Enforcer® 75-D, Farmozine®, Flagship® 200, Flagship® 400, Metsulfuron, Picoflex®, 2,2-DPA, Safari®, Safari® 750, Simanex® 600 SC, Simanex® 900 WG, paraquat + diquat, Spraytop® 250, Spraytop® 330, Trilogy®, Trilogy® 600, Victory®, Victory® 750 SG, Vortex®, Wipe-Out® 450 and Wipe-Out® Pro.

INSECTICIDES: Alpha-Scud[®] Elite, Alpha-Scud[®] 300, Aphidex[®] 800, ADAMA Dimethoate 400, phosmet, Orbit[®], Pyrinex[®] Super, Strike-Out[®] 500 EC and Venom[®] 240 SC.

FUNGICIDES: Bumper[®] 625, Opera[†], Orius[®], Radial[®], Soprano[®], Soprano[®] 500, Topnotch[®], Veritas[®] and Veritas[®] Opti. PGR: Cycocel[†] 750A.

TRACE ELEMENTS: Oxide formulations of foliar fertilisers are generally physically compatible with ZULU® XT but reductions in weed efficacy can occur. A minimum water volume of 70 L/ha is recommended.

RESISTANT WEEDS WARNING

ZULU® XT Herbicide contains 2,4-D, a member of the Phenoxys group of herbicides.



ZULU® XT has the Disruptors of plant cell growth mode of action. For weed resistance management ZULU® XT is a Group 4 herbicide. Some naturally occurring weed biotypes resistant to ZULU® XT and other Group 4 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 ZULU® XT or other Group 4 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Adama Australia Limited accepts no liability for any losses that may result from the failure of ZULU® XT to control resistant weeds.

Re-Entry Period

DO NOT hand harvest sugar cane for at least 1 day after application. If re-entering treated areas before the spray has dried, workers should wear overalls, elbow length gloves and water resistant footwear. Clothing must be laundered after each day's use.

PROTECTION OF CROPS, NATIVE AND OTHER NON TARGET PLANTS

DO NOT spray cereals if lucerne is present.

DO NOT spray crops or weeds outside the stages indicated in "Critical Comments" as damage, loss of yield or inadequate weed control may result.

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants, crops, cropping lands or pastures.

Avoid spray drift and vapour movement onto susceptible crops such as cotton, tobacco, tomatoes, vines, lupins, fruit trees, ornamentals, vegetables, legume crops and pastures, oilseed crops and susceptible trees (e.g. Kurrajongs, Belahs and Eucalypts).

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic life. Do not contaminate streams, rivers or watercourses with this product or used containers.



STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

drumMUSTER containers

Triple rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. This container can be recycled if it is clean, dry, free of visible residues and has the drumMUSTER logo visible. Triple rinse container for disposal. Dispose of rinsate by adding it to the spray tank. Do not dispose of undiluted chemical on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMUSTER collection or similar container management program site. The cap should not be replaced, but may be taken separately. 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 regulation. Do not burn empty containers or product.

Returnable containers with Micro Matic valve

Do not tamper with the Micro Matic valve or the security seal. Do not contaminate the container with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple-rinsed with clean water and drained accordingly. When the contents of the container have been used, please return the container to the point of purchase. The container remains the property of Adama Australia.

Refillable Containers

Storage must be secure so that contents cannot be tampered with. All locks and/ or seals must be in order. If locks or seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs Adama Australia should be advised immediately. This minibulk container is reusable and remains the property of Adama Australia. Do not rinse empty container. No other liquid, solid or pesticide product should be put into it. Empty contents fully into application equipment. Close all valves and return to the point of supply or Adama Australia for refill or storage.

SAFETY DIRECTIONS

Poisonous if inhaled or swallowed. Corrosive to the eyes and skin. Avoid contact with the eyes and skin. Will irritate the nose and throat. Do not inhale vapour or spray mist. When opening the container and preparing spray or using undiluted concentrate, wear protective waterproof clothing, elbow-length chemical resistant gloves, impervious footwear and goggles and half face piece respirator with organic vapour/gas cartridge or canister or full facepiece respirator. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves.

If applying by hand wear half facepiece respirator with organic vapour/gas cartridge or canister. If clothing becomes contaminated with product remove clothing immediately. If product on skin, immediately wash area with soap and water.

If product in eyes, wash it out immediately with water. 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, goggles, respirator (and if rubber wash with detergent and warm water) and contaminated clothing.

FIRST AID

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

SDS

Additional information is listed in the safety data sheet (SDS). A safety data sheet for ZULU® XT Herbicide is available from adama. com or call Customer Service on 1800 423 262.

CONDITIONS OF SALE: The use of ZULU® XT Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia, regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever from the use of this product.

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