

POISON

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



Grazon™ Extra

Herbicide

ACTIVE CONSTITUENT: 300 g/L TRICLOPYR present as butoxyethyl ester
100 g/L PICLORAM present as hexyloxypropylamine salt
8 g/L AMINOPYRALID present as hexyloxypropylamine salt

GROUP I HERBICIDE

For control of a range of environmental and noxious woody and herbaceous weeds as specified in the Directions For Use table.

SHAKE WELL BEFORE USE.

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DIRECTIONS FOR USE

RESTRAINTS

- **DO NOT** apply to weeds which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected), poor nutrition, presence of disease, damage or previous herbicide treatment, as reduced levels of control may result.
- **DO NOT** spray if rain is likely within 1 hour or if foliage is wet from rain or dew.
- **DO NOT** burn off, cut or clear blackberry or other woody weeds for at least 6 months after spraying.
- **DO NOT** apply by aerial application in wind in excess of 15 km/hr and/or air temperatures above 35°C.
- In areas prone to flooding treatment should commence after any annual flooding as such areas flooded within 9 months following application may have reduced results.
- **DO NOT** make hay or silage, from pastures treated with Grazon Extra, for 6 months after application.

1. WOODY WEED SITUATIONS

Table A: High Volume Spraying

See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
African boxthorn	Less than 2 m tall	All States	500 mL	Apply when bushes have good leaf cover, growth and no leaf fall .
<i>Angophora</i> spp.	1 to 3 m tall		350 mL	
Australian blackthorn	Less than 2 m tall		500 mL	Apply from late spring to early autumn.
<i>Banksia</i> spp.	1 to 3 m tall		350 mL	
Biddy bush (Chinese shrub) (Sifton bush)	Autumn when actively growing	ACT, NSW only	500 mL	Add BS-1000 or an alternative (see compatibility section) at 125 mL/100 L of water for best results.
Blackberry in association with: Docks Ragwort Smartweed Thistles	Late spring to autumn	All States	350 mL or 500 mL	Use the higher rate on plants that have been damaged by grazing stock or insects and on known difficult to kill blackberry. Where herbicides other than Group I herbicides have been used, allow 2 seasons regrowth to occur before respraying with Grazon™ Extra.
Blue heliotrope	Flowering	ACT, NSW, NT, Qld only	500 mL	Apply in a minimum spray volume of 1250 L/ha.
Brooms: Cape English Flax leaf Montpellier	Spring to mid-summer prior to pod formation	All States	250 mL	Apply as a thorough foliage spray.
	Autumn to winter		350 mL	
Camphor Laurel	Less than 2 m tall	All States		
	Above 2 m tall		500 mL	
Capeweed	Flowering		150 mL	
<i>Casuarina</i> spp.	1 to 3 m tall		350 mL	

Table A: High Volume Spraying *continued*

See GENERAL INSTRUCTIONS - APPLICATION section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
Chinee apple	Less than 2 m tall	NT, Qld, WA only	350 mL	Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
Cockspur thorn	Spring to autumn	ACT, NSW, NT, Qld only		Apply as a thorough foliage spray.
Common sensitive plant	Any time when actively growing	NT, Qld, WA only	200 mL	To avoid leaves closing during application, spray plants while moving forward. Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
Crofton weed	Spring to autumn	ACT, NSW, NT, Qld only	350 mL	Apply as a thorough foliage spray.
Eastern cotton bush (<i>Maireana microphylla</i>)	Spring to autumn	ACT, NSW NT, Qld only	500 mL	Add Uptake™ Spraying Oil at 500 mL/100 L of water. Some bushes may require a follow-up spray to control regrowth.
<i>Eucalyptus</i> spp.	Seedling and regrowth from small lignotubers, 1 to 3 m tall	All States	350 mL or 500 mL	Apply the high rate where difficult to control species of <i>Eucalyptus</i> regrowth is present. Addition of an adjuvant may improve results. Contact Dow AgroSciences for details.
Fireweed	Flowering		350 mL	Apply as a thorough foliage spray.
Galenia	Fresh growth in spring to summer		500 mL	Use 2000 L of spray mixture/ha.
Giant bramble	Spring to autumn	NT, Qld, WA only		Penetration of thick clumps may be difficult and respraying may be necessary. Add BS-1000 or an alternative (see compatibility section) of water for best results.
Gorse	1 to 1.5 m tall	All States	250 mL	Spring and summer treatment only. Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
	Over 1.5 m tall or autumn treatment		350 mL	Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
	Winter treatment		500 mL	Brownout may not be complete until summer. Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
Groundsel bush (<i>Baccharis halimifolia</i>)	1 to 1.5 m tall in spring to summer	All States	250 mL	Apply as a thorough foliar spray.
	Over 1.5 m tall or autumn treatment		350 mL	
Green cestrum	Late spring to early autumn	ACT, NSW, NT, Qld only	500 mL	One application may give satisfactory control. Any subsequent regrowth and seedlings must be resprayed at approximately 1 metre high.
Hawthorn	Less than 2 m tall	All States		Apply from late spring to early autumn.

Table A: High Volume Spraying *continued*

See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
Horehound	Pre-flowering	All States	350 mL	Apply as a thorough foliar spray.
Japanese sunflower		ACT, NSW, NT, Qld only		
Lantana (<i>Lantana camara</i>) (<i>Lantana montevidensis</i>)	Up to 1 m tall in summer to autumn	All States	500 or 750 mL	Add one of the following adjuvants, when using 350 mL rate: Uptake Spraying Oil @ 0.5% v/v. Pulse® Penetrant @ 0.1% v/v.
	1 to 2 m tall in summer to autumn			Thoroughly wet foliage stems and soil around the base of the plants. Use higher rate on known harder to kill varieties.
Lion's tail (<i>Leonatis nepetifolia</i>)	Pre-flowering	NT, Qld only	200 mL	Apply as a thorough foliar spray. Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
Limebush	Any time of year with good leaf cover and soil moisture	NT, Qld only	350 mL	Penetration of thick clumps may be difficult and respraying may be required. Addition of an adjuvant may improve results. Contact Dow AgroSciences for details.
Manuka	At flowering	Vic only	500 mL	For optimum results, add Pulse Penetrant at 200 mL/100 L of spray. Thoroughly wet foliage, stems and soil around the base of the plants.
Mesquite (<i>Prosopis</i> spp.)	Seedling, full leaf and flowering before podding	ACT, NSW, NT, Qld, WA only	350 mL	DO NOT spray plants bearing pods. Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
<i>Prosopis velutina</i>		NT, Qld only	670 mL	
Milfoil (Yarrow)	Flowering	ACT, NSW only	350-500 mL	Use low rate when in close proximity to highly sensitive vegetation.
Mistflower	Spring to Autumn	ACT, NSW, NT, Qld only	350 mL	Apply as a thorough foliar spray.
Mother-of-millions	Flowering	ACT, NSW, NT, Qld only	500 mL	Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water.
Paddy's lucerne	Active growth	ACT, NSW only		Plants that have been continually slashed or grazed over many seasons may be difficult to control and regrowth may occur.
Parkinsonia	Under 2 m tall	NT, Qld, WA only	350 mL	Add Uptake Spraying Oil at 500 mL/100 L water. Avoid spraying under dry conditions when plants are stressed or bearing pods. Thoroughly wet foliage.

Table A: High Volume Spraying *continued*

See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
Paterson's curse	Flowering	All States	250 mL	
Prickly pear (common) Smooth tree pear	Active phyllode growth		500 mL	Apply as a thorough foliage spray. Regrowth may occur, so a follow-up application may be necessary.
Rubber vine (Not infected with rust)	Up to 1.5 m tall at flowering	NT, Qld, WA only	350 mL	Spray all leaves and stems just to the point of runoff and thoroughly spray the base of the plant. With larger, more dense stands, regrowth may occur. Subsequent control of any regrowth should be done by basal bark spraying.
	Dense stands greater than 1.5 m tall at flowering		500 mL	
Siam weed	Active growth	NT, Qld, WA only	350 mL	Add BS-1000 or an alternative (see compatibility section) at the rate of 100 mL/100 L water for best results.
Sicklepod	Up to flowering	NT, Qld, WA only	200 mL	DO NOT apply to podding plants. Add BS-1000 or an alternative (see compatibility section) at the rate of 100 mL/100 L water for best results.
Spear thistle	Rosette to flowering	All States	150 mL	
St John's wort	From flowering to early seed set		500 mL	Late spring to early summer.
Sweet briar	Up to 1.5 m tall		350 mL	Add metsulfuron-methyl at 10g/100 L water to obtain more reliable results with the lower rate of Grazon Extra. Full leaf to ripe fruit prior to leaf fall. Thorough wetting including the crown is recommended.
		500 mL		
Tobacco weed	Actively growing plants	NT, Qld, WA only	300 mL	Add BS-1000 or an alternative (see compatibility section) at 100 mL/100 L of water for best results.
Wattle (<i>Acacia</i> spp.) (except corkwood wattle)	1 to 3 m tall	All States	350 mL	
Wild Rosemary (<i>Cassinia laevis</i>)	Active growth 0.5 to 1.0 m tall	NT, Qld only	350 to 500 mL	Use lower rate on seedlings 0.5 m tall. Apply as a thorough foliar spray.
Wild tobacco tree	Spring to autumn up to 2 m tall	ACT, NSW, NT, Qld only	350 mL	

Table B: Aerial ApplicationSee **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /ha	CRITICAL COMMENTS
Blackberry	Summer to autumn	ACT, NSW, NT, Qld, SA, Vic, WA only	10 L	Where herbicides other than Group I herbicides have been used, allow two seasons regrowth to occur before respraying with Grazon Extra. WARNING: <i>Eucalyptus</i> species up to 4 m may be killed if sprayed during this treatment. Mature trees which are 15 to 20 m tall may be partially defoliated but are likely to recover.
Gorse		Tas only		Helicopter application only.
Cockspur thorn Crofton weed Lantana Mistflower	Late autumn	ACT, NSW, NT, Qld only (helicopter only)	1.5 L + 6.L 2,4-D 625 amine (625 g/L formulation)	Spray with calibrated equipment using the half overlap opposite pass technique applying a minimum spray volume of 150 L/ha. Follow-up respraying will be required.
Lantana			10 L	Helicopter application only.
Rubber vine (Not infected with rust)	When flowering	NT, Qld only (helicopter only)	3 L to 5 L	Use rates will depend upon the density and height of the rubber vine stand. The higher rate should be used on dense stands, however, complete coverage and penetration may be difficult. Follow-up respraying will be required. Any regrowth should be sprayed with a suitable basal bark herbicide.
St John's wort	Flowering to early seed set (Nov-Jan)	ACT, NSW only	4 L	Helicopter application only. Follow-up spraying will be required in the following season.
AGRICULTURAL NON-CROP AREAS ON FLOOD PLAINS.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /ha	CRITICAL COMMENTS
Parkinsonia	Seedlings 1-2 m tall, or 12-24 months old	Qld and NT only (helicopter only)	3 L	Add Uptake Spraying Oil at 1 L/ha.

Table C: Controlled Droplet Application (C.D.A.)See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE	CRITICAL COMMENTS
Blackberry in association with: Docks Ragwort St John's wort Thistles	Summer to autumn	All States	Apply undiluted	One application may give satisfactory control but subsequent regrowth and seedlings should be resprayed after hardening off. Where herbicides other than Group I herbicides have been used, allow 2 seasons regrowth to occur before respraying with Grazon Extra.

Table D: Low Volume High Concentrate Application Techniques (Gas Powered Gun, Sprinkler Sprayer)
See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /10 L Water	CRITICAL COMMENTS
Blackberry	Late spring to autumn	All States	335 mL	Apply to actively growing bushes which are able to be sprayed on all sides. For larger bushes, the high volume application technique is recommended.
Camphor Laurel Cockspur thorn Crofton weed	Less than 1.5 m high	ACT, NSW, NT, Qld only	500 mL	
<i>Eucalyptus</i> species	Seedlings up to 2 m tall	All States	335 mL	
Mistflower	Less than 1.5 m high	ACT, NSW, NT, Qld only	500 mL	Gas Powered Gun only: Apply to actively growing bushes not more than 1.5 m tall that have not more than 5 stems from the crown.
Sweet briar	1.5 m tall, full leaf to ripe fruit	ACT, NSW only		
St John's wort	During flowering to early seed set	ACT, NSW, Tas, Vic only		
Wild tobacco tree	Less than 1.5 m high	ACT, NSW, NT, Qld only		Gas Powered Gun only: One application should provide control. Minor regrowth and seedlings may be retreated the following summer.
				Apply to actively growing bushes which are able to be sprayed on all sides. For larger bushes, the high volume application technique is recommended.

Table E: Boom Application
See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY.				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /ha	CRITICAL COMMENTS
Galenia	Fresh growth during spring to summer	All States	5 L	Rough mine sites will require adequate spray equipment such as boomless nozzles for effective coverage.
Sicklepod	Up to flowering	NT, Qld only	3 L	DO NOT apply to podding plants. Add BS-1000 or an alternative (see compatibility section) at the rate of 100 mL/100 L water.
St John's wort	Flowering to early seed set (Nov-Jan)	ACT, NSW only	2 to 4 L	Use the higher rate on dense infestations and when longer residual control is required. Follow-up respraying will be required in the following season.

2. FALLOW SITUATIONS

Table A: Boom Application

See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

FALLOW				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /ha	CRITICAL COMMENTS
Blackberry nightshade - suppression only	10 to 25 cm tall, prior to flowering	ACT, NSW, NT, Qld only	200 to 400 mL 1.125 L + Ripper™ 480 (glyphosate) + adjuvant	<p>For use by ground equipment only.</p> <p>Plants must be actively growing.</p> <p>Use the lower rate on the smaller weeds, as specified in the weed growth stage (or up to 5 cm diameter for <i>Polymeria pusilla</i>).</p> <p>Refer to Ripper 480 label for use of adjuvant.</p> <p>For Northern New South Wales and Queensland, DO NOT plant susceptible crops for up to 9 months after application, as specified in GENERAL INSTRUCTIONS - MINIMUM RECROPPING PERIODS – Table A.</p> <p>Dry conditions after application will increase the re-cropping interval.</p> <p>For Southern New South Wales, please refer to MINIMUM RECROPPING PERIODS – Table C.</p>
Camel melon Prickly paddy melon Cucumber melon (<i>Cucumis melo</i>)	From 2 leaf to 50 cm diameter			
Common sowthistle	From 8 leaf to flowering			
Cow vine	From 2 to 5 leaf up to 15 cm diameter, prior to flowering			
Lucerne (established)	Active growth, 15 to 25 cm high, during spring		300 to 500 mL + 1.125 L Ripper™ 480 (glyphosate) + adjuvant	
<i>Polymeria pusilla</i>	2 to 12 leaf up to 20 cm diameter, prior to flowering		200 to 400 mL + 1.125 L Ripper™ 480 (glyphosate) + adjuvant	

Table B: Blanket Wiper Application

See **GENERAL INSTRUCTIONS - APPLICATION** section for application method details.

FALLOW				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE	CRITICAL COMMENTS
Bitterbark (<i>Alstonia constricta</i>)	From summer to end of autumn	NT, Qld only	<p>1:4 (1 part Grazon Extra to 4 parts water)</p> <p>2 % solution for spot spray (eg. 100 mL Grazon Extra in 5 L water)</p>	<p>For use with blanket wipers only.</p> <p>For best results apply in autumn to tall (> 60 cm) plants using two opposite directional passes (up and back).</p> <p>Follow up “missed” plants with a spot spray application. These will be obvious after 6 weeks.</p> <p>Blanket wiper applications can be made in summer when plants are smaller but follow up spot spraying may be necessary.</p> <p>Do not disturb (cultivate) the treated patches for at least 3 months. Best long term control is achieved when patches are left undisturbed for as long as possible after treatment (at least 6 months).</p> <p>Spot spraying “missed” plants: thoroughly wet all stems and leaves without producing any solution run-off. Avoid any spray reaching the soil surface.</p>

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

IN TASMANIA FOR BLACKBERRY

- **DO NOT** treat bushes carrying mature or near mature fruit.

FOR NATIVE VEGETATION

- Use of Grazon Extra on native vegetation must be done in accordance with STATE and/or LOCAL legislation.

WITHHOLDING PERIOD

Pasture:

Cutting or Grazing Pastures for Stock Food: **NOT REQUIRED WHEN USED AS DIRECTED.**

LIVESTOCK DESTINED FOR EXPORT MARKETS

The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, the Export Slaughter Interval is observed before stock are sold or slaughtered.

EXPORT SLAUGHTER INTERVAL (ESI) – 3 days:

Livestock that has been grazed on or fed treated crops within 42 days of application should be placed on clean feed for 3 days prior to slaughter.

EXPORT GRAZING INTERVAL (EGI) – 42 days.

Livestock that has been grazing on treated crops or pasture should not be sold for export slaughter for 42 days (6 weeks) after application of the chemical product, unless the export slaughter interval has been observed. When Grazon Extra is used as directed and the above withholding periods and/or export intervals are observed, treated grain and livestock commodities are considered acceptable for export. However, export requirements are subject to change. Consult your exporter for updated information about specific market requirements.

IMPORTANT: Read the *MANAGEMENT OF RESIDUES IN COMPOST, MULCHES AND ANIMAL WASTE* in the **PROTECTION OF CROPS, NATIVES AND OTHER NON-TARGET PLANTS** section of this label.

GENERAL INSTRUCTIONS

MINIMUM RECROPPING PERIODS

Aminopyralid and picloram remain active in the soil for extended periods depending on the rate of application, soil type (clay content), rainfall, temperature, humidity, soil moisture and soil organic matter. The following tables show plant-back periods to particular crops following application of Grazon Extra in different areas/situations of Australia.

Table A: Northern New South Wales & Queensland

Plant-back periods for rotational crops following application of Grazon Extra for rates up to 600 mL/ha on black cracking clay soils. These plant-back periods are based on a normal rainfall pattern. During drought conditions (or when the rainfall is less than 100 mm for a period of 4 months or greater) the plant-back period may be significantly longer.

Plant-back periods for crops following the application of Grazon Extra for rates up to 600 mL/ha.				
RATE mL/ha	200	300	400	600
CROP	Months			
Wheat	2	2	4	4
Barley	2	2	4	4
Canola	2	4	4	4
Faba bean	4	4	6	6
Chickpea	4	6	6	6
Lucerne	6	9	9	9

Table B: Blanket Wiper Application

Plant-back periods for crops following blanket wiper application.	
CROP	Months
Broadleaf crops	18
Lucerne	6 This will allow any potential soil residues to dissipate, if any, and allow effective control.

Table C: Southern New South Wales

Plant-back periods for rotational crops following application of Grazon Extra for rates up to 500 mL/ha.

CROP	Plant-back Period (months)
Barley, Canola, Wheat	9
Chickpea, Faba bean, Field pea, Lucerne, Lupin, Medic, Subclover	24

Note: Before using Grazon Extra in tank mixes with other herbicides, check the plant-back information on all product labels. The most residual product, i.e. the product with the longest plant-back period, will determine the time between spraying and planting.

COMPATIBILITY

- Follow any regional restrictions, and all directions and restrictions on the label, of any chemical mixed with Grazon Extra (e.g. 2,4-D amine).
- Grazon Extra is compatible with the following **herbicides**:
Dow AgroSciences 2,4-D Amine 625, Abound™ 300, Abound™ 400, Lantana 600, Ripper™ 480, glyphosate, metsulfuron-methyl, Roundup® CT, Starane™ Advanced.
- Grazon Extra is compatible with the following adjuvants, as per Directions for Use on this label; Uptake™ Spraying Oil, BS-1000 Biodegradable Surfactant, (alternatives are Chemwet 1000, and Spreadwet 1000 Wetting Agent), or Pulse® Penetrant. Not all surfactants or crop oils are of equal quality, consult Dow AgroSciences before selecting any other alternatives.

MIXING

- Mix only with water.**
- Half fill the spray unit with water, and add the required amount of Grazon Extra. Add the remaining water with the agitator running. If required, then add spray oils or wetters (surfactants). Maintain mechanical or by-pass agitation in the spray tank during spraying. Only mix sufficient solution for immediate daily use and avoid storing.

APPLICATION

Only apply Grazon Extra under atmospheric conditions that do not allow drift onto sensitive crops to occur.

1. WOODY WEED SITUATIONS

Weeds need to be actively growing for herbicides to have optimum effect. Delay treatment until all regrowth has had time to grow to approximately 1 metre in situations which have been bulldozed, slashed, burnt, ploughed or areas having a previous chemical treatment.

A. High Volume Spraying

- Thorough coverage of foliage to the point of run-off is essential; however, avoid excess spraying which is wasteful of chemical.

Hand Gun

- Apply the recommended mix to give full coverage of leaves and stems through a No. 6 to 8 tip at 700 to 1500 kPa (400 to 500 kPa for St John's wort).
- A spray volume of 3000 to 4000 L per infested hectare of 1 to 2 metre high blackberry (30 to 40 L/100 m²) should be used.
- Use 2000 L of spray mixture/ha of galenia infestation (i.e. 20 L/100 m² infested area).

Knapsack & 12 volt Sprayer Packs

- Apply the recommended spray mix to give full coverage of leaves and stems. Only recommended for the control of herbaceous weeds, such as capeweed, fireweed and spear thistle. Do not use knapsacks or 12 volt spray packs to treat woody weeds.

B. Aerial Application

- Apply in 200 L of water/ha using an aircraft to apply 100 L per pass on a double overlap pattern using nozzle configurations to produce coarse to very coarse droplets as defined by ASABE S572.

C. Controlled Droplet Application (C.D.A.)

- Results similar to high volume spraying can be obtained using Micron Herbi® or similar equipment. Select a nozzle to give a flow rate of 2 mL/sec and sweeping action of approximately 1 m/sec to ensure a droplet density of 20/cm². Use a marking agent, as recommended by the equipment manufacturers, to check spray coverage. Also, consult directions provided with C.D.A. unit.

D. Low Volume High Concentrate Application Techniques

- Good control will be achieved, similar to high volume application, where bush size enables good coverage of entire bush. Use a marking agent, as recommended by the equipment manufacturers, to check spray coverage.
- **Gas powered gun:** Apply 50 mL shots to obtain uniform coverage of 4 to 5 m² of surface area of bush. This relates to 20 droplets/cm² of leaf surface.
- **Sprinkler sprayer:** This technique involves using a micro sprinkler that is connected to a hollow fibre glass rod attached to a pneumatic knapsack sprayer. Use at low pressures (50 to 200 kPa) and apply with a slow sweeping action over the top of the plants ensuring even coverage on the leaves.

E. Boom Application

- Application in a minimum spray volume of 200 L/ha for galenia and St. John's wort and 600 L of water/ha for sickle pod. Use nozzle configurations to produce medium droplets as defined by ASABE S572. Boom height must be set to ensure double overlap of nozzle patterns.

2. FALLOW SITUATIONS

A. Boom Application

- Application of Grazon Extra in a minimum spray volume of 50 L/ha is recommended using nozzle configurations to produce medium droplets as defined by ASABE S572. Boom height must be set to ensure double overlap of nozzle patterns.

B. Blanket Wiper Application

- Blanket needs to be made from durable and wettable material with a rigid backing.
- Blanket should be rigidly mounted behind motorised vehicle (eg. tractor, 4-wheel drive vehicle) and set low but never touching the ground. The chemical solution should be fed to the blanket at a flow rate sufficient to keep the blanket wet but not dripping. In thick patches the blanket may require more frequent solution recharge (rewetting).
- Ideally, a scraper bar should be mounted in front of the blanket in order to scrape or damage the bark

(but not sever the stems) prior to the blanket wiping the stems. This scraper may be mounted at the front of the vehicle.

- Two passes (in opposite direction) with the blanket increases the contact with the plant. Ground speeds of 10-15 kph are ideal for blanket wiping application.

CLEANING SPRAY EQUIPMENT

Rinsing

- After using Grazon Extra, empty the spray unit completely and drain the whole system. Thoroughly wash inside the unit using a pressure hose. Drain the spray unit, and clean any filters in the tank, pump, lines, hoses and nozzles.
- After cleaning the spray unit as above, quarter fill with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

Decontamination

Before spraying cotton and other sensitive crops with equipment that has been used to apply Grazon Extra (see PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS section).

Wash the tank and rinse the system as above. Then quarter fill the tank and add a standard alkali based laundry detergent at 500 g (or mL)/100 L water and circulate throughout the system for at least 15 minutes. If using a concentrated laundry detergent use 250 g (or mL)/100 L water. Do not use chlorine based cleaners.

Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain.

Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto unused land away from desirable plants and watercourses.

RESISTANT WEEDS WARNING

GROUP I HERBICIDE

Grazon Extra Herbicide is a member of the pyridines group of herbicides. The product has the disrupters of plant cell growth mode of action. For weed resistance management, the product is a Group I herbicide. Some naturally-occurring weed biotypes resistant to the product and other Group I 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 the product or other Group I herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of the product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or local Dow AgroSciences representative.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Crops susceptible to Grazon Extra include, but are not limited to: peas, lupins, lucerne, navy beans, peanuts, soybeans and other legumes, cotton, flowers, fruit, hops, ornamentals, shade trees and *Pinus* spp., potatoes, safflower, sugar beet, sunflowers, tobacco, tomatoes, vegetables and vines.

Grazon Extra is damaging to susceptible crops during both growing and dormant periods. Grasses are normally unaffected and establish quickly after treatment.

Picloram and aminopyralid, two of the active constituents in this product can remain active in the soil for extended periods depending on soil type and application rate, rainfall, temperature, humidity, soil moisture and soil organic matter.

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

DO NOT allow physical spray drift onto waterways, native vegetation and susceptible crops.

DO NOT apply close to, or in areas, containing roots of desirable vegetation, where treated soil may be washed onto areas growing (or areas to be planted with) desirable plants.

DO NOT apply on sites where surface water from heavy rain can be expected to run off to areas containing, or to be planted with susceptible crops or plants.

DO NOT move soil, which may have been treated to areas where desirable plants are to be grown.

MANAGEMENT OF RESIDUES IN COMPOST, MULCHES AND ANIMAL WASTE

DO NOT use treated plant material to make compost or mulch for susceptible crops or plants; or mushroom substrate.

DO NOT send straw from treated crops off-farm for these purposes or for animal bedding.

DO NOT send animal manure, dairy shed and feed pad effluent (or compost made from these materials) that

has been collected from animals grazing crops treated within the previous 6 months away from the farm. Spreading/irrigating this manure/effluent may cause damage to clover and other sensitive crops.

DO NOT apply animal waste (e.g. manure, slurry) to susceptible crops, or to land used for growing susceptible crops when collected from animals that have grazed areas treated with Grazon Extra within the previous 6 months.

DO NOT grow susceptible plants in fields treated within the relevant plantback period with manure from farms where animals have grazed Grazon Extra treated pasture until a field bioassay shows there are no residues in the soil at levels injurious to the susceptible plants (see the crop rotation section).

To promote herbicide decomposition, manure should be evenly incorporated in the surface soil. Breakdown of residues in decomposing plants or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

SOIL BIOASSAY

A simple bioassay can be conducted by collecting at least 10 spade spits of soil to a depth of 200 mm from around the paddock and thoroughly mixing the soil together. Place some of this soil in a shallow container to a depth of 3-5 cm and sow 100 seeds of the susceptible plant to be grown (subterranean or white clover is a good indicator plant where it is not practical to use the susceptible crop) into the soil. Keep in a warm and well light location and ensure the soil does not dry out. After crop emergence, check the number of plants that have germinated and seedling vigour. Symptoms of Grazon Extra residues include non-germination or low plant emergence, leaf cupping, leaf whitening, stem elongation and twisting. If these symptoms occur – do not grow the susceptible plants. Repeat the bioassay again after a further time interval.

PROTECTION OF LIVESTOCK

Poisonous plants may become more palatable after spraying and stock should be kept away from these plants until they have died down.

Many plants remain poisonous after death, and stock should not be allowed access, as there is a likelihood that they may graze the dead material. Such material should be burnt if possible.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

DO NOT store near food, feedstuffs, fertilisers or seed. The method of disposal of the container depends on the container type. Read the STORAGE AND DISPOSAL instructions on the label that is attached to the container.

SPILL MANAGEMENT

DO NOT touch or walk through spilled material. Wear a face-shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and footwear. Stop leak when safe to do so. Dam the area and prevent entry into waterways, and drains. **Small spills/leaks:** Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dam the area of **large spills/leaks** and report them to Dow AgroSciences Emergency Services at 1800-033-882.

SAFETY DIRECTIONS

- Harmful if swallowed.
- Will irritate the eyes and skin. Avoid contact with eyes and skin.
- When preparing the spray, wear cotton overalls buttoned to the neck and wrists, a washable hat, elbow-length PVC gloves and a face shield or goggles.
- If the product is in eyes, wash it out immediately with water.
- Wash hands after use.
- After each day's use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone: *Australia* 13 11 26. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet for **GRAZON™ EXTRA HERBICIDE** which is available from Dow AgroSciences on request. Call Customer Service Toll Free on 1-800 700 096 or visit www.dowagrosciences.com.au

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