Woody Weed
CONTROL GUIDE







Dow AgroSciences

Why control woody and environmental weeds?



Most producers would suggest that woody weed control is something akin to painting the Sydney Harbour Bridge – it's a never-ending job, you can't do it without help and it costs a lot of money.

In 1989 it was estimated that weeds cost Australian agriculture $3.3 billion per year in lost production and cost of control. Today, that figure, according to the Cooperative Research Centre for Australian Weed Management (Weeds CRC), exceeds $4 billion annually.

BENEFITS OF WOODY WEED CONTROL

Controlling woody weeds will provide the following benefits:

1. INCREASE THE CARRYING CAPACITY OF YOUR PROPERTY
   Controlling woody weeds means that there is more productive pasture available, which in turn allows you to carry more livestock.
2. INCREASE THE VALUE OF YOUR PROPERTY
   Properties that are free of woody weeds are of greater value than those that are infested.
3. MAKE MUSTERING EASIER
   Large infestations of woody weeds provide stock with a hiding place when being mustered.
4. REDUCE THE RISK OF FIRE
   Large infestations of woody weeds are a fire risk, particularly in periods of prolonged dry weather.
5. REDUCE THE INCIDENCE OF VERMIN
   Large infestations of woody weeds provide an ideal habitat for vermin to breed, e.g. rabbits.
6. COMPLY WITH GOVERNMENT LEGISLATION
   Controlling declared woody weeds is the legal responsibility of the landholder.
7. MINIMISE STOCK LOSSES
   Some woody weeds are poisonous to stock and by controlling woody weeds you can minimise stock losses.
8. PROVIDE STOCK WITH EASIER ACCESS TO WATERWAYS
   Because woody weeds flourish around water, stock have reduced access to waterways.
9. PROTECT THE ENVIRONMENT
   Woody weeds invade and dominate native vegetation if left unchecked.
10. CONTROL EROSION
    Replacing woody weeds with a dense competitive pasture stand (and correct grazing management) protects valuable topsoil.

Integrated options for weed control

While controlling woody weeds is difficult, it is not impossible. Their persistant nature means that total control is not often achievable with a single herbicide application. With the introduction of a three-cycle program, producers can ensure long-term and cost-effective woody weed control.

Combining the use of herbicide and other weed control options such as slashing, cultivation, burning and improving pasture, the Dow AgroSciences 3 Cycle Plan aims to help producers gain long-term control over their weed problems while obtaining the maximum benefit from the money they invest in herbicide.



MECHANICAL/CULTIVATION

Mechanical treatment on its own is inadequate to control most woody weeds. However, in conjunction with other methods, it can assist in control. Cutterbars, ploughing or discing are best as they damage the root systems of the plants. This process is best carried out in summer, as haphazard cultivation in winter may result in spreading the infestation. Mechanical movement can exacerbate weed burdens.



SLASHING/BURNING

Burning or slashing might be useful in the first year to reduce bush size to a more manageable level. To allow enough grass and debris to facilitate a burn it may be necessary to exclude stock. Time your slashing or burning (usually six months prior to spraying) to allow plants to regrow to at least one metre before starting a herbicide treatment. To ensure maximum efficacy of your herbicide, it is important that woody weeds are not cut or burnt for six months after application.



LIVESTOCK

Livestock can aid in reducing woody weed seedling establishment, suppress regrowth and keep pastures competitive. However, their access to seedlings can be limited by logs, rocks and established bushes. Stock can continue to graze in the paddock during treatment with Grazon* DS, Garlon* 600, Access*, Graslan*, Crossbow* and Tordon* DSH Herbicides as no withholding periods apply. When treating some noxious weeds, such as green cestrum, stock should be removed from the paddock.



HERBICIDES

Herbicides applied at the right time, using the right rate and technique, are often the most economical, effective and practical method for long-term woody weed control. Before treating, ensure woody weeds are actively growing and not showing signs of stress. As with most pests, prevention is better than cure. Treat the edges of large areas to prevent more weeds spreading. Clean up small scattered areas first and improve your fencing so that your livestock can graze on treated areas.



Strategic treatment program



Woody weeds are vigorous and hardy. Their persistant nature means it is essential to use a program-approach over three or more seasons to control them.

The Dow AgroSciences 3 Cycle Plan allows you to attack woody weeds in three cycles: Treat; Follow-up; and Check. Use the plan below to create your strategic program.

THE 3 CYCLE PLAN

CYCLE 1 TREAT

The aim is to reduce the weed infestation to more manageable levels.

It is critical that you allow funds for a follow-up treatment in the next cycle or you may find regrowth will return and if not treated your initial work could be wasted.

Make sure spraying conditions are right for treatment.

PADDOCK NAME	TREATMENT USED	DATE TREATED	FOLLOW-UP RECOMMENDATIONS

CYCLE 2 FOLLOW-UP

This is vital. The aim is to follow up what was treated in the previous cycle.

After your initial knockdown of large infestations, areas that you could not reach need follow-up. Make sure spraying conditions are right for treatment.

PADDOCK NAME	TREATMENT USED	DATE TREATED	FOLLOW-UP RECOMMENDATIONS

CYCLE 3 CHECK

Continue to check over time to ensure no seedlings get away.

Ensure pasture forms an effective competitor to regrowth or seedlings.

PADDOCK NAME	TREATMENT USED	DATE TREATED	FOLLOW-UP RECOMMENDATIONS

Different weed species often require different treatment solutions. Use this Woody Weed Control Guide or consult your Dow AgroSciences woody weed specialist. Call 1800 700 096.

THREE STEPS TO SUCCESS

1. DEFINE THE PROBLEM

   Draw a layout of your property and paddocks.

   Locate and shade areas of infestation.

2. DEVELOP A PROGRAM

   Begin with the end in mind.

   Identify the weed species in each paddock.

   Determine the infestation density (scattered, medium, dense).

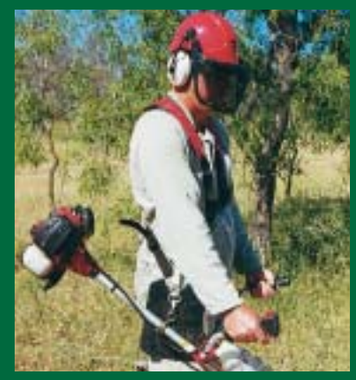
   Detail the size of the infestation (acres/hectares).

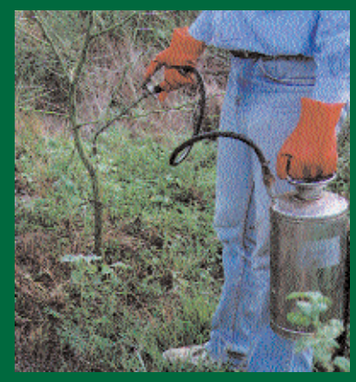
   Develop a financial plan to determine the resources you have to control the problem.

   Determine the priorities.

3. APPLY THE PROGRAM

   Use the 3 Cycle Plan to chart your success.





Which method of treatment should I use?

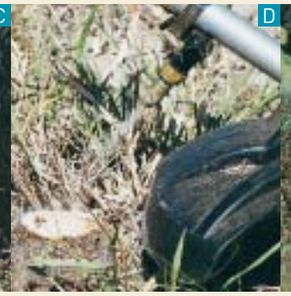
INTRODUCTION TO TREATMENT OPTIONS

There are a number of different methods you can use to treat woody weeds. The option you choose will be determined by the size of the problem, the resources you have available and time constraints you are working within. Refer to the ready reference table control guide and product labels for correct application rates.















AERIAL SPRAYING APPLICATION (A)

Apply herbicide in not less than 200 L/ha water volume. Spray with a calibrated aircraft using the full overlap opposite pass technique. Nozzle combination should not be less than D8/45°.

Spraying in wind exceeding 10 km/h, temperatures above 30 °C or relative humidity below 50% is not recommended.

BASAL BARK APPLICATION (B)

Use this method to treat saplings and regrowth less than 5 cm in basal diameter.

The herbicide is applied mixed with diesel to assist penetration through the bark. Weeds with thick corky bark cannot be treated successfully using this method.

Do not treat if the stems are wet or charred as this prevents the herbicide from penetrating through the bark.

Make sure you thoroughly treat the whole circumference of each stem from ground level to a height of 30 cm.

Some woody weeds can be treated when basal diameter is greater than 5 cm. Refer to the product label for details.

BRUSHCUTTER APPLICATION (C)

The brushcutter takes the back-breaking effort out of the cut stump application method. It uses a high-powered tungsten-tipped cutting blade to remove the top growth as close to ground level as possible. A sprayer attachment delivers a dose of herbicide almost immediately to the cut surface.

CUT STUMP APPLICATION (D)

Cut stump application is the preferred method for saplings that are too small to be stem injected.

Cut stems as close to the ground as practical, no higher than 10–15 cm from ground level. Thoroughly spray the herbicide mixture immediately after the cut is made. This is necessary because the plant can seal the cut quickly, thus barring the chemical from penetrating into the sapstream.

FOLIAR SPRAY APPLICATION (E)

This method normally refers to high volume application using a hand gun to treat the foliage of the plant. It is recommended to use a No. 5–8 tip on your gun and calibrate your pump pressure to 700–1500 kPa.

Ensure you treat the entire leaf area of the plant to the point of run-off, with thorough coverage of the crown, runners and tips. A knapsack can be used to ensure that the full volume is delivered to the target plant.

GRASLAN AERIAL APPLICATION

Graslan is applied to areas greater than 100 ha during winter and spring, prior to the summer storms. A fixed-wing aircraft is used to apply product in Queensland and a helicopter is used in the Northern Territory.

Before Graslan can be applied, a Dow AgroSciences representative will conduct a paddock inspection to ensure suitable application rates are recommended for the weeds and soil type present. This will ensure Dow AgroSciences and government environmental guidelines are followed, as well as recording all details of the job. The area is recorded using GPS equipment. A contract is written and our application co-ordinator will arrange for Graslan to be applied at a time when the plane is next in the area. As this process can take some time to complete, it is essential to plan and organise an inspection early in the year.

GROUND BOOM SPRAY APPLICATION (F)

For pasture weeds, sprayers should be calibrated to deliver a minimum of 100 L/ha of water with a droplet size of 150–350 microns. Use higher volumes of water in dense pastures to achieve better penetration and coverage. It is recommended that you use flat fan nozzles and spray pressures of 200–300 kPa with boom height set to ensure double overlap of nozzle pattern at the top of the weed canopy.

HAND APPLICATION (G)

Apply granules/pellets to the soil prior to spring or summer rains. It is essential that the root area of the woody weed is evenly treated with the pellets or granules. Estimate the surface area (m^2) covered by the bush to a distance of 30 cm out from the dripline (see illustration G) then apply granules or pellets evenly over the whole area. With Tordon Granules for example, if the bush covers 5 m^2 then apply five heaped metric tablespoons of the product over the area. (N.B. one heaped metric tablespoon weighs 45 g).

STEM INJECTION APPLICATION (H)

Make horizontal cuts with a narrow-bladed axe (5–7 cm wide) through the bark of the woody weed into the sapstream at waist height. Space these at 10–13 cm centres. Leave the axe in the cut and immediately (within three seconds) apply the herbicide down the axe blade, to ensure the full dose enters the sapstream. This is necessary because the plant can seal the cut quickly, thus barring the chemical penetrating into the sapstream.

Do not treat trees with poor sap flow, which occurs when plants are stressed. Where low branches are encountered place a cut immediately below the branch.

NOTE: SPRAY DRIFT

Spray only when there is no movement of air towards non-target, susceptible vegetation or waterways. Drift can be greatly reduced by using nozzles and spray pressures that produce a minimum proportion of small, drift-prone droplets – e.g. lower pressure, larger droplets and higher spray volume. Under ideal conditions, spraying can be carried out near susceptible non-target plants and waterways by separating them with a suitable size buffer area.

TORDON DSH
HOW MANY CUTS PER STEM?

BASAL DIAMETER / CLOSE SPACE TREATMENT	
10 cm	3 cuts
20 cm	5 cuts
30 cm	7 cuts
40 cm	10 cuts
50 cm	12 cuts
60 cm	14 cuts

RATE: MIX ONE PART TORDON DSH WITH FOUR PARTS WATER

STEM INJECTION AT OR NEAR GROUND LEVEL IS RECOMMENDED IN THE FOLLOWING AREAS:



1. Where soil types and substrata structure prevent vigorous root growth – e.g. 'Traprock' country in SE Queensland and Tablelands of New England, NSW.
2. So called 'hard country' (general poor growing conditions).
3. Western poplar box areas.
4. Areas where rainfall is less than 500 mm per year.
5. Difficult to control species of Wattles and Eucalypts – e.g. Stringy Bark and sap bleeding types.

When should I treat?

ACCESS HERBICIDE

Weed	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Deciduous plants	◔	✔	✔	✔	✔	✔	✔	✔	◔	✘	✘	✘
Non-deciduous plants	✔	✔	✔	✔	✔	✔	✔	✔	✔	◔	◔	◔

CROSSBOW HERBICIDE

Weed	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Blackberry	✘	✘	◔	✔	✔	✔	◔	◔	✘	✘	✘	✘
Common bracken	✘	✘	✘	◔	◔	◔	✔	✔	✔	✘	✘	✘
Sweet briar	✘	◔	✔	✔	◔	✘	✘	✘	✘	✘	✘	✘
Gorse	◔	◔	✔	✔	✔	✔	◔	◔	◔	◔	◔	◔

GRASLAN HERBICIDE (REFER TO GRASLAN LABEL FOR WEEDS)

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Aerial Graslan	✔	✔	◔	◔	✘	✘	✘	✔	✔	✔	✔	✔
Hand Graslan	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

GRAZON DS HERBICIDE

Weed	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Blackberry	✘	✘	◔	◔	✔	✔	✔	◔	◔	✘	✘	✘
St John's wort	✘	◔	✔	✔	◔	✘	✘	✘	✘	✘	✘	✘
Sweet briar	✘	◔	✔	✔	◔	✘	✘	✘	✘	✘	✘	✘
Gorse	◔	◔	✔	✔	✔	✔	◔	◔	◔	◔	◔	◔
Lantana/Associated weeds	✘	✘	✘	◔	◔	✔	✔	✔	◔	✘	✘	✘
Rubber vine	✘	✘	✘	✘	◔	✔	✔	✔	◔	✘	✘	✘
Eucalypt regrowth/Wattle	✘	✘	◔	◔	✔	✔	✔	✔	◔	✘	✘	✘

STARANE* 200 HERBICIDE

Weed	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Lantana	✘	✘	◔	✔	✔	✔	✔	✔	◔	✘	✘	✘
Prickly acacia	✘	✘	✘	✘	✔	✔	✔	✔	◔	✘	✘	✘
Wattle regrowth	✘	✘	✘	◔	✔	✔	✔	✔	◔	✘	✘	✘

TORDON* GRANULES

Weed	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Sweet briar	✔	✔	✔	✔	✔	✘	✘	✘	✘	✘	✘	✘
Blackberry	✔	✔	✔	✔	✔	✔	✘	✘	✘	✘	✘	✘
African boxthorn	✔	✔	✔	✔	✔	✔	✘	✘	✘	✘	✘	✔
Limebush	✔	✔	✔	✔	✔	✔	✘	✘	✘	✘	✘	✘
Eucalypt regrowth	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Ragwort	✔	✔	✔	✔	✔	✔	✘	✘	✘	✘	✘	✔

CRITICAL COMMENTS

Spraying must only be carried out when plants are in full leaf and flowering, which should begin 6–8 weeks after substantial rainfall.

KEY

- ✔ Best time to spray/treat
- ◔ Can spray/treat if conditions are suitable
- ✘ Do not spray/treat

What spray volume should I use?

USING THE RIGHT SPRAY VOLUME IS VITAL

Using the right spray volume is essential to ensure acceptable control. Applying too much is wasteful, and applying too little can mean having to go back to re-treat large amounts of regrowth. Always read the label for the application rate and critical comments.

Use the calibration charts below as a guide to the correct foliar spray volume you should be applying to a woody weed.

CALIBRATION CHART FOR HIGH VOLUME FOLIAR SPRAY TREATMENT OF WOODY WEEDS WITH A HAND GUN

Recommended volume for dome-shaped weeds such as blackberry, gorse and lantana.

	HEIGHT OF BUSH (metres)		
	1 m	2 m	3 m
BUSH DIAMETER (metres)	SPRAY VOLUME PER BUSH (litres)		
3.0	1.8	2.8	4.2
4.0	3.2	5.0	7.5
5.0	4.9	7.9	11.8
6.0	7.1	11.3	17.0
7.0	9.7	15.4	23.1
8.0	12.6	20.1	30.1
EQUIVALENT WATER RATE (litres/infested hectare)	2500	4000	6000

CALIBRATION CHART FOR CYLINDRICAL/CONE-SHAPED WEEDS

Recommended volume for cylindrical/cone-shaped weeds such as sweet briar.

	HEIGHT OF BUSH (metres)		
	1 m	2 m	3 m
BUSH DIAMETER (metres)	SPRAY VOLUME PER BUSH (litres or mL*)		
1.0	240	470	710
2.0	940	1.9	2.8
3.0	2.1	4.2	6.4
4.0	3.8	7.5	11.3
EQUIVALENT WATER RATE (litres/infested hectare)	3000	6000	9000

* Spray volumes less than one litre are shown in mL.

ADJUVANTS

Grazon DS, Garlon 600 and Starane 200 formulations already contain surfactants. The use of additional surfactants is not recommended except in specific situations as detailed on the label.

RAINFASTNESS

Grazon DS, Garlon 600 and Starane 200 are rainfast. Foliar application should be stopped if rain is likely within one hour or if foliage is wet. Crossbow is relatively rainfast, foliar application should be stopped if rain is likely within four hours.

GUIDELINE TO CALIBRATION

Use the right spray nozzle (see chart)

NOZZLES AND PRESSURES FOR DIFFERENT SPRAY VOLUMES

Spray volume (L/ha)	Nozzle	Diameter (mm)	Output (L/min)	Pressure (kPa)
1000–2000	D4	1.6	2.5	400
1500–3000	D5	2.0	3.8	500
2000–4000	D6	2.4	5.5	600
3000–6000	D7	2.8	7.8	700
4000–8000	D8	3.2	8.6	800





To check you are spraying at the right application rate, mark out an area of dense weeds five metres by two metres (10 m^2). A spray volume of 1 L over 10 m^2 corresponds to 1000 L/ha. If you applied 2.3 L that would be equivalent to 2300 L/ha.

Then use a flow meter or time how long it takes you to spray the area. Then with the gun on the same setting spay into a 20 L container for the same time and measure the amount of spray liquid. Do this several times until you get a feel for the correct application rate.

Woody weed identification and growth habit

CORRECT IDENTIFICATION

Correct identification of the woody weeds needs to be made **before** consulting recommendations for control. Contact your local Dow AgroSciences representative or government authority for assistance.

GROWTH HABIT

In addition to identification of the weed species, the growth habit of the weed is paramount to the application technique and product chosen for its control. The growth habit will limit the choices of product and the application techniques applicable.

For example...

A eucalypt stem one metre tall could be:

- A seedling in its first year of growth. Such a plant when actively growing has few reserves and can be readily controlled by foliage spraying.
- A tree 10 years old – grazed-off, dozed-off, slashed, fired, sprayed-off or in some way defoliated two or three times in that decade, since germination.

Though it may only have sparse foliage, it could well have a large lignotuber below the ground, full of food reserves and buds capable of regrowth when the top is again removed. If this is the growth form you confront, then foliage spraying will usually be unsatisfactory. In essence, you need to treat to prevent the secondary buds in the lignotuber from regrowing. Cut stump treatment or stem injection around the base of the original tree are the preferred application techniques.

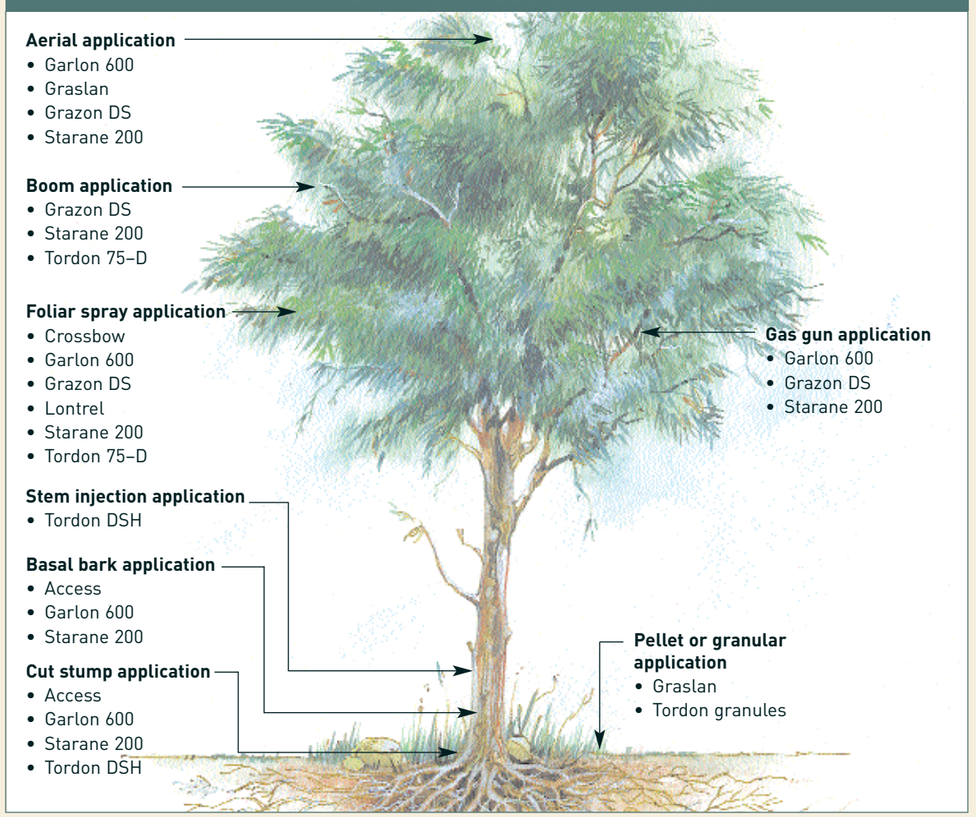
This example should illustrate that woody weed control is not a straightforward matter.

Sometimes it is desirable to allow the woody weed to grow larger to enable better and more cost-effective control.

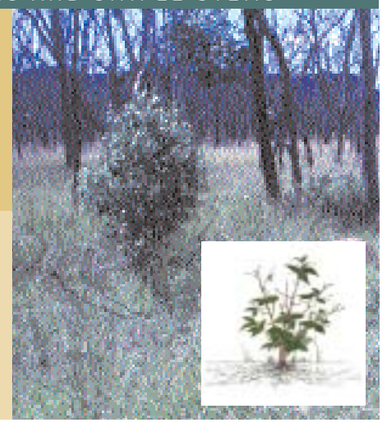
The following diagrams illustrate some of the most common situations that will be encountered and explain the problems and solutions for each.

Refer to product label to ensure the species identified is registered and the correct rate, timing and critical comments are followed.

TYPICAL WOODY WEED (DIAGRAMMATIC ONLY)



SEEDLING WOODY OR PERENNIAL WEED WITH SMALL ROOT SYSTEMS AND SIMPLE STEMS



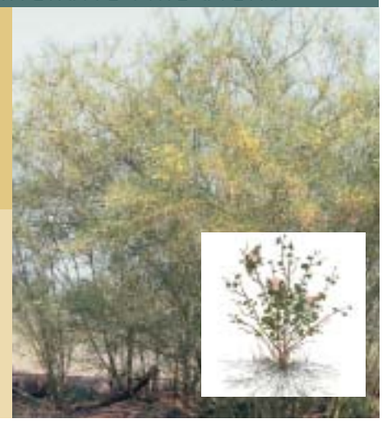
USE

Foliar spray:
- Crossbow
- Garlon 600
- Grazon DS
- Lontrel
- Starane 200
- Tordon 75-D

AVOID

- **Stem injection**
  Stem too small to inject
- **Cut stump**
  Too laborious
- **Basal bark spray**
  Too laborious
- **Granular application**
  Too expensive

WOODY WEED WITH EXTENSIVE FINE STEMS



USE

Basal bark spray:
- Access
- Garlon 600
- Starane 200

Pellet/granular application:
- Graslan
- Tordon granules

AVOID

- **Foliar spray**
  Insufficient leaf area to spray
- **Cut stump**
  Stems too thin and too many
- **Stem injection**
  Stems too small to inject

ADVANCED GROWTH (>2 M TALL) FROM SEED



USE

Stem injection:
- Tordon DSH

Cut stump application:
- Access
- Garlon 600
- Starane 200
- Tordon DSH

Granular application:
- Graslan

AVOID

- **Basal bark spray**
  Bark and stem too thick to allow penetration of chemical
- **Foliar spray**
  Plant too big

NOXIOUS WOODY WEEDS


BLACKBERRY


RAGWORT


MESQUITE


MOTHER-OF-MILLIONS


ST. JOHN'S WORT


GORSE


GREEN CESTRUM

Woody weed identification and growth habit

EUCALYPT OR PAPER BARK TEA-TREE REGROWTH FROM LIGNOTUBER

USE

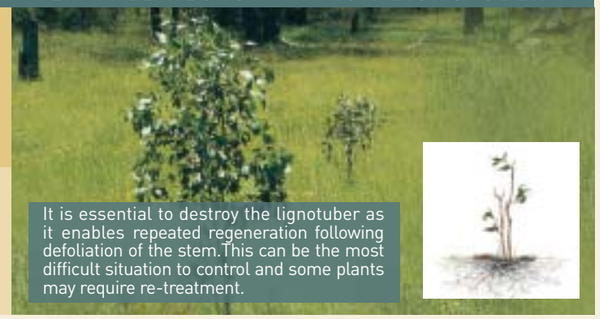
Cut stump application:
- Access
- Garlon 600
- Tordon DSH

Basal bark spray:
- Access
- Garlon 600

Granular application with Graslan

AVOID

- **Stem injection**
  Stem too thin to inject
- **Foliar spray**
  Insufficient leaf cover



It is essential to destroy the lignotuber as it enables repeated regeneration following defoliation of the stem.This can be the most difficult situation to control and some plants may require re-treatment.

STANDING TIMBER SINGLE OR MULTI-STEMMED

USE

Stem injection:
- Tordon DSH

Cut stump application:
- Access
- Garlon 600
- Tordon DSH

AVOID

- **Foliar spray.** Not cost effective
- **Granular application**
  Ineffective, plant too big
- **Basal bark spray**. Bark and stem, too thick to allow chemical penetration



REGROWTH FOLLOWING MECHANICAL CLEARING OR POOR CUT STUMP TREATMENT

USE

Stem injection:
- Tordon DSH

Basal bark spray:
- Access
- Garlon 600

AVOID

- **Cut stump**
  Stems too small
- **Foliar spray**
  Insufficient leaf area to control root system



BRIGALOW REGROWTH OR ROOT SUCKERING PLANT UP TO 3 M TALL

USE

Granular application:
- Graslan

AVOID

- **Cut stump**,
  Too laborious
- **Basal bark spray**,
  Too laborious
- **Foliar spray**,
  Too laborious



Ready reference table control guide

Woody weed	State	Method of application	**Product** – Note: Preferred option in bold letters.	**Rate** – Consult label for details of growth stage and use, especially where range of rates are given.
AFRICAN BOXTHORN *Lycium ferocissimum*	All	Basal bark and Cut stump	GARLON 600	1:30 with diesel distillate
		Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Tas	Foliar spray	GARLON 600	170 mL/100 L of water
	All	Foliar spray	GRAZON DS	500 mL/100 L of water
	Qld, NSW, Vic, WA	Foliar spray	TORDON 75-D	1300 mL/100 L of water
	Qld, NSW, NT	Granule application – Hand	GRASLAN	2.0 g/m^2 (20 kg/ha)
	Vic, Qld, SA, WA	Granule application – Hand	TORDON GRANULES	35 to 45 g/m^2
ANGOPHORA REGROWTH *Angophora* spp.	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Cut stump	TORDON DSH	1:20 with water + surfactant
		Foliar spray	GARLON 600	400 or 560 mL/100 L of water
		Foliar spray	GRAZON DS	350 mL/100 L of water
		Stem injection	**TORDON DSH**	1:4 with water
AUSTRALIAN BLACKTHORN *Bursaria spinosa*	All	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
		Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Foliar spray	GRAZON DS	500 mL/100 L of water
BANKSIA *Banksia* spp.	All	Foliar spray	GARLON 600	400 or 560 mL/100 L of water
		Foliar spray	**GRAZON DS**	350 mL/100 L of water
BATHURST BURR *Xanthium spinosum*	Qld, NT, NSW, WA	Foliar spray	**STARANE 200**	75 mL/100 L of water
	Qld, NSW	Boom application	TORDON 75-D	1 L/ha
BELAH *Casuarina pauper*	Qld	Granule application – Hand	**GRASLAN**	1.5 g/m^2 (15 kg/ha)
BELLYACHE BUSH *Jatropha gossypiifolia*	Qld, NSW, WA	Foliar spray	**STARANE 200**	500 mL/100 L of water
BIDDY BUSH *Cassinia arcuata*	ACT, NSW	Foliar spray	**GRAZON DS**	500 mL/100 L of water
	Vic	Foliar spray	TORDON 75-D	650 mL/100 L of water
BITTER BARK *Alstonia constricta*	Qld, NSW	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Qld	Blanket wiper	GRAZON DS	1:4 with water
BLACKBERRY *Rubus fruticosus*	All except NT	Foliar spray	**GRAZON DS**	350 or 500 mL/100 L of water
	All	Foliar spray	CROSSBOW	30 g Part A + 150 mL Part B + surfactant
	All	Foliar spray	GARLON 600	170 mL/100 L of water
	Vic	Foliar spray	TORDON 75-D	1300 mL/100 L of water
	All except NT	Foliar spray	TORDON DSH	500 mL/100 L of water + adjuvant
	NSW, Qld, SA, Vic, WA	Aerial spray	GRAZON DS	10 L/ha (apply in 200 L water/ha)
	NSW, SA, Tas, Vic, WA	Aerial (helicopter only)	GARLON 600	4.8 L/ha (apply in 200 L water/ha)
	Qld	Aerial (helicopter or fixed)	GARLON 600	4.8 L/ha (apply in 200 L water/ha)
	All	Controlled droplet application	GARLON 600	170 mL/1 L of water
	All except NT	Controlled droplet application	GRAZON DS	Apply undiluted
	Vic, Qld, NSW, SA, WA	Granule application – Hand	TORDON GRANULES	35 to 45 g/m^2
	All	Gas gun application	GARLON 600	280 mL/10 L of water
	ACT, NSW, Qld, SA, Tas, WA	Gas gun application	GRAZON DS	335 mL/10 L of water
BLUE BILLYGOAT WEED (Blue top) *Ageratum houstonianum*	Qld, WA	Boom application	**STARANE 200**	1.5 L/ha + 1 L/ha Uptake
BLUE HELIOTROPE *Heliotropium amplexicaule*	Qld, NSW	Foliar spray	TORDON 75-D	1000 mL/100 L of water
		Foliar spray	**GRAZON DS**	500 mL/100 L of water
		Foliar spray	STARANE 200	1000 mL/100 L of water
	NSW	Granule application – Hand	GRASLAN	0.5 g/m^2 (5 kg/ha)
BONESEED (Bitou Bush) *Chrysanthemoides monilifera* ssp. *monilifera*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	650 mL/100 L of water
BRACKEN FERN *Pteridium esculentum*	All	Foliar spray	**CROSSBOW**	30 g Part A + 150 mL Part B + surfactant
BRIGALOW REGROWTH *Acacia harpophylla* (over 100 ha)	Qld	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection

Ready reference table control guide

Woody weed	State	Method of application	**Product** – Note: Preferred option in bold letters.	**Rate** – Consult label for details of growth stage and use, especially where range of rates are given.
BRIGALOW REGROWTH *Acacia harpophylla* (under 100 ha)	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld, NSW	Granule application – Hand	**GRASLAN**	1.5 g/m² (15 kg/ha)
		Foliar spray	GARLON 600	170 mL/100 L of water
		Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
		Foliar spray	STARANE 200	500 or 1000 mL/100 L of water
BROADLEAF HOPBUSH *Dodonaea viscosa* ssp. *angustifolia*	NSW	Basal bark and Cut stump	**GARLON 600**	1:60 with diesel distillate
BROADLEAF PEPPER TREE *Schinus terebinthifolius*	Qld	Foliar spray	**STARANE 200**	500 mL/100 L of water
BROOMS *Genista* spp. Cape, English, Flax leaf, Montpellier	Tas,	Basal bark and Cut stump	GARLON 600	1:48 with diesel distillate
	All	Foliar spray	GARLON 600	170 mL/100 L of water
	SA, Vic	Foliar spray	TORDON 75-D	300 mL/100 L of water
	All except NT	Foliar spray	**GRAZON DS**	250 or 350 mL/100 L of water
BROWN SALWOOD (Hickory Wattle) *Acacia aulacocarpa*	All	Basal bark and Cut stump	GARLON 600	1:120 with diesel distillate
		Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
BRUSH and **SWAMP BOX** *Lophostemon confertus* & *L. suaveolens*	All	Basal bark and Cut stump	**ACCESS**	1:30 with diesel distillate
		Cut stump	TORDON DSH	1:20 with water + surfactant
	Qld, NT, WA	Granule application – Hand	GRASLAN	2.0 g/m² (20 kg/ha)
	All	Stem injection	TORDON DSH	1:4 with water – variable results
CAMPHOR LAUREL *Cinnamomum camphora*	All	Foliar spray	**GRAZON DS**	350 or 500 mL/100 L of water
	Qld, NSW	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld, NSW	Stem injection	**TORDON DSH**	1:4 with water
	All (seedlings only)	Foliar spray	GARLON 600	170 mL/100 L of water
	Qld, NSW, ACT	Gas gun application	GRAZON DS	500 mL/10 L of water
CAPE HONEYFLOWER *Melianthus major*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	650 mL/100 L of water
CAPE IVY *Senecio angulatus*	Vic, Tas	Foliar spray	**LONTREL**	3.3 L/ha
CASTOR OIL PLANT *Ricinus communis*	All	Basal bark and Cut stump	**GARLON 600**	1:60 with diesel distillate
CASUARINA REGROWTH *Casuarina* spp.	All	Foliar spray	GRAZON DS	350 mL/100 L of water
		Cut stump	**TORDON DSH**	1:20 with water + surfactant
		Stem injection	TORDON DSH	1:4 with water
CELTIS *Celtis sinensis*	Qld	Basal bark	**STARANE 200**	3.5 L/100 L of diesel distillate
CHINEE APPLE *Ziziphus mauritiana*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	Qld	Basal bark and Cut stump	STARANE 200	1:33 with diesel distillate
	Qld, WA	Foliar spray	GRAZON DS	350 mL/100 L of water + surfactant
	Qld	Granule application – Hand	TORDON GRANULES	35 to 45 g/m²
COCKSPUR THORN *Maclura cochinchinensis*	Qld, NSW, ACT	Aerial (helicopter only)	GRAZON DS	1.5 L plus 7.5 L 2,4-D amine (500 g/L)
	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld	Basal bark	STARANE 200	1:50 with diesel distillate
	Qld, NSW, ACT	Foliar spray	**GRAZON DS**	350 mL/100 L of water
	Qld, NSW	Foliar spray	STARANE 200	500 mL/100 L of water
	Qld, NSW, ACT	Gas gun application	GRAZON DS	500 mL/10 L of water
COCKY APPLE *Planchonia careya*	Qld, WA, NT	Granule application – Hand	**GRASLAN**	2.0 g/m² (20 kg/ha) – suppression
COMMON BRACKEN *Pteridium esculentum*	All	Foliar spray	**CROSSBOW**	30 g Part A + 150 mL Part B + surfactant
COMMON SENSITIVE PLANT *Mimosa pudica*	Qld, WA	Boom application	STARANE 200	1.5 L/ha + 1 L/ha Uptake
	Qld, WA, NT	Foliar spray	GRAZON DS	200 mL/100 L of water + surfactant
	Qld, WA	Foliar spray	**STARANE 200**	500 mL/100 L of water + Uptake
CORKWOOD WATTLE *Acacia bidwillii*	All	Basal bark	**ACCESS**	1:60 with diesel distillate
CORYMBIA *Corymbia* spp.	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Cut stump	TORDON DSH	1:20 with water + surfactant
		Stem injection	**TORDON DSH**	1:4 with water
CREEPING LANTANA *Lantana montevidensis*	All	Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
	Qld, NSW	Foliar spray	**STARANE 200**	500 mL/100 L of water
CROFTON WEED *Ageratina adenophora*	Qld, NSW, NT	Aerial (helicopter only)	GRAZON DS	1.5 L + 7.5 L 2,4-D amine (500 g/L)
	Qld, NSW, ACT	Foliar spray	**GRAZON DS**	350 mL/100 L of water
	Qld, NSW	Foliar spray	STARANE 200	500 mL/100 L of water
	Qld, NSW, Vic. SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	Qld, NSW, ACT	Gas gun application	GRAZON DS	500 mL/10 L of water
CURRANT BUSH *Carissa ovata*	Qld, NSW	Granule application – Hand	**GRASLAN**	1.5 g/m² (15 kg/ha)
DAWSON GUM (Blackbutt) *Eucalyptus cambageana*	Qld	Basal bark and Cut stump	GARLON 600	1:30 with diesel distillate
		Granule application – Hand	**GRASLAN**	1 g/m² (10 kg/ha)
DEVIL'S FIG *Solanum torvum*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	650 mL/100 L of water
DOCKS *Rumex* spp.	All except NT	Controlled droplet application	GRAZON DS	Apply undiluted
		Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
	Qld, NSW	Foliar spray	**STARANE 200**	500 mL/100 L of water
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	75 or 150 mL/100 L of water
EASTERN COTTON BUSH *Maireana Microphylla*	NSW, Qld	Foliar spray	**GRAZON DS**	500 mL/100 L of water + Uptake
ELLANGOWAN POISON BUSH *Eremophila deserti*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
ENGLISH IVY *Hedera helix*	Vic	Foliar spray	**GARLON 600**	1 L+1 L glyphosate (360 g/L)/100 L of water
EUCALYPT REGROWTH *Eucalyptus* spp.	SNSW, Vic, Tas	Foliar spray	**GRAZON DS**	500 mL/100 L of water + surfactant
	NNSW, Qld, NT	Foliar spray	GRAZON DS	350 mL/100 L of water + surfactant
	Qld, SA, WA, NT	Foliar spray	GARLON 600	400 mL/100 L of water
	NSW, Tas, Vic	Foliar spray	GARLON 600	560 mL/100 L of water
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	All	Basal bark and Cut stump	GARLON 600	1:60 or 1:30 with diesel distillate
		Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Cut stump	TORDON DSH	1:20 in water + surfactant
	Qld, NSW, Vic, SA, WA	Cut stump	TORDON 75-D	500 mL/10 L of water
	All	Gas gun application	GARLON 600	400 mL/10 L of water
		Gas gun application	GRAZON DS	335 mL/10 L of water
	Qld, NT	Granule application – Hand	GRASLAN	Check label for species controlled
	Qld, NSW, Vic, SA, WA	Granule application – Hand	TORDON GRANULES	35 to 45 g/m²
	All	Stem injection	**TORDON DSH**	1:4 in water
FALSE SANDALWOOD *Eremophila mitchellii*	Qld, NSW	Granule application – Hand	GRASLAN	2.0 g/m² (20 kg/ha) – suppression
	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
FENNEL *Foeniculum vulgare*	Tas	Foliar spray	**GARLON 600**	170 mL/100 L of water

Ready reference table control guide

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FLANNEL WEED *Sida cordifolia*	Qld	Foliar spray	**STARANE 200**	500 mL/100 L of water
GALENIA *Galenia pubescens*	NSW	Foliar spray	**GRAZON DS**	500 mL/100 L of water
		Boom application	GRAZON DS	5 L/ha (apply in 200 L water/ha)
GIANT BRAMBLE *Rubus alceifolius*	Qld, NT, WA	Foliar spray	**GRAZON DS**	500 mL/100 L of water + surfactant
GIANT SENSITIVE PLANT *Mimosa invisa*	Qld, WA	Boom application	**STARANE 200**	1.5 L/ha + Uptake 1 L/ha
GIDGEE (over 100 ha) *Acacia cambagei*	Qld	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection
GIDGEE	Qld	Granule application – Hand	**GRASLAN**	1.0 g/m^2 (10 kg/ha)
GORSE (Furze) *Ulex europaeus*	All	Foliar spray	CROSSBOW	30 g Part A + 150 mL Part B + Pulse
	All except NT	Foliar spray	**GRAZON DS**	250, 350 or 500 mL/100 L of water
	All	Foliar spray	GARLON 600	170 or 340 mL/100 L of water
	Vic	Foliar spray	TORDON 75-D	500 mL/100 L of water
	NSW, Vic, Tas, SA	Foliar spray	TORDON DSH	375 mL/100 L of water
	Tas	Aerial (helicopter only)	GRAZON DS	10 L/ha
GREEN CESTRUM *Cestrum parqui*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	Qld, NSW, Vic	Foliar spray	GARLON 600	170 mL/100 L of water
	ACT, NSW, Qld	Foliar spray	GRAZON DS	500 mL/100 L of water
GREEN WATTLE *Acacia decurrens*	All	Basal bark and Cut stump	**GARLON 600**	1:60 with diesel distillate
GREVILLEA *Grevillea* spp.	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
GROUNDSEL BUSH *Baccharis halimifolia*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:120 with diesel distillate
	Qld, NSW	Granule application – Hand	GRASLAN	1.0 g/m^2 (10 kg/ha)
	All except NT	Foliar spray	GRAZON DS	250 or 350 mL/100 L of water
	All	Foliar spray	GARLON 600	160 or 320 mL/100 L of water
	Qld, NSW	Foliar spray	LONTREL	330 or 500 mL/100 L of water
		Foliar spray	**TORDON 75-D**	650 mL/100 L of water
GUAVA *Psidium guajava*	All	Basal bark and Cut stump	**ACCESS**	1:30 with diesel distillate
HARD MILKWOOD *Alstonia muelleriana*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
HARRISIA CACTUS *Harrisia martinii*	All	Foliar spray	ACCESS	1:60 with diesel distillate
	Qld	Foliar spray	**TORDON DSH**	1:40 with water
HAWTHORN *Crataegus monogyna*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Vic	Cut stump	TORDON 75-D	Apply undiluted
	All	Foliar spray	GRAZON DS	500 mL/100 L of water
HEARTLEAF POISON BUSH *Gastrolobium grandiflorum*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
HEXHAM SCENT *Melilotus indicus*	Qld, NSW	Foliar spray	**STARANE 200**	500 mL/100 L of water
HOLLY BUSH *Alectryon diversifolius*	Qld, NSW	Granule application – Hand	**GRASLAN**	1.5 g/m^2 (15 kg/ha)
HONEY LOCUST *Gleditsia triacanthos*	Qld, NSW	Basal bark and Cut stump	**STARANE 200**	1:20 with diesel distillate
	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld, NSW	Foliar spray	STARANE 200	500 mL/100 L of water
HOREHOUND *Marrubium vulgare*	Tas	Foliar spray	GARLON 600	170 mL/100 L of water
	All	Foliar spray	**GRAZON DS**	350 mL/100 L of water
INKWEED *Phytolacca octandra*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	500 mL/100 L of water

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JAPANESE SUNFLOWER *Tithonia diversifolia*	Qld, NSW	Foliar spray	**GRAZON DS**	350 mL/100 L of water
KHAKI WEED *Alternanthera pungens*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	650 mL/100 L of water
KITELEAF POISON *Gastrolobium laytonii*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
LANTANA *Lantana camara*	All	Foliar spray	GRAZON DS	350 mL/100 L of water + adjuvant
		Foliar spray	GRAZON DS	500 to 750 mL/100 L of water
	Qld, NSW	Foliar spray	**STARANE 200**	500 or 1000 mL/100 L of water
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	Qld, NSW	Granule application – Hand	GRASLAN	2.0 g/m^2 (20 kg/ha) – suppression only
	NSW, NT, Qld	Aerial (helicopter only)	GRAZON DS	1.5 L + 7.5 L 2,4-D amine (500 g/L)
		Aerial (helicopter only)	GRAZON DS	10 L/ha
LEUCAENA *Leucaena leucocephala*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
LIMEBUSH *Eremocitrus glauca*	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld, NSW	Foliar spray	STARANE 200	1000 mL/100 L of water
	Qld, NT	Foliar spray	**GRAZON DS**	350 mL/100 L of water + surfactant
	Qld	Foliar spray	TORDON 75-D	1300 mL/100 L of water
	Qld, NSW	Gas gun application	STARANE 200	1000 mL/10 L of water
		Granule application – Hand	**GRASLAN**	1.0 g/m^2 (10 kg/ha)
	Qld	Granule application – Hand	TORDON GRANULES	35 to 45 g/m^2
LION'S TAIL *Leonotis nepetisolia*	Qld	Foliar spray	**GRAZON DS**	200 mL/100 L of water + surfactant
MADEIRA VINE *Anredera cordifolia*	Qld, NSW	Foliar spray	**STARANE 200**	500 mL/100 L of water
MANUKA *Leptospermum continentale*	Vic	Foliar spray	**GRAZON DS**	500 mL/100 L of water + Pulse
MARSHMALLOW *Malva pariflora*	Qld, NSW	Foliar spray	**STARANE 200**	500 mL/100 L of water
MAYNE'S PEST *Verbena aristigera*	Qld	Foliar spray	**TORDON 75-D**	600 mL/100 L of water
MESQUITE (Algaroba) *Prosopis* spp.	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Qld, NSW, NT, WA	Foliar spray	GRAZON DS	350 mL/100 L of water + surfactant
MILKWEED *Euphorbia heterophylla*	Qld	Foliar spray	**STARANE 200**	1000 mL/100 L of water
MIMOSA BUSH *Acacia farnesiana*	Qld, WA	Basal bark and Cut stump	STARANE 200	1:33 with diesel distillate
	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
MIMOSA PIGRA *Mimosa pigra*	NT	Aerial (dry season)	**GRASLAN**	10.0 kg/ha
	NT, WA	Aerial (wet season)	STARANE 200	3 L/ha + Uptake 1 L/100 L
		Foliar spray	STARANE 200	300 mL/100 L of water + Uptake
	NT	Granule application – Hand	GRASLAN	1.0 g/m^2 (10 kg/ha)
MISTFLOWER *Ageratina riparia*	NSW, NT, Qld	Aerial (helicopter only)	GRAZON DS	1.5 L + 7.5 L 2,4-D amine (500 g/L)
	Qld, NSW	Foliar spray	STARANE 200	500 mL/100 L (seedlings/young plants)
	Qld, NSW, ACT	Foliar spray	**GRAZON DS**	350 mL/100 L of water
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	Qld, NSW, ACT	Gas gun application	GRAZON DS	500 mL/10 L of water
MOTHER-OF-MILLIONS *Bryophyllum* spp.	Qld, NSW	Foliar spray	**GRAZON DS**	500 mL/100 L of water + surfactant
	Qld, NSW	Foliar spray	STARANE 200	600 mL/100 L of water + surfactant
NARROWLEAF HOPBUSH *Dodonaea viscosa* ssp. *angustissima*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	NSW	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate

Ready reference table control guide

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NEEDLEWOOD *Hakea leucoptera*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
NOOGOORA BURR *Xanthium pungens*	Qld, NSW	Boom application	TORDON 75-D	1 L/ha
	Qld, NT, NSW, WA	Foliar spray	**STARANE 200**	75 mL/100 L of water
OLEANDER *Nerium oleander*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
OLIVE *Olea europaea*	SA	Cut stump	GARLON 600	1:30 with diesel distillate
	NSW	Cut stump	**GARLON 600**	1:15 with diesel distillate
PADDY'S LUCERNE *Sida rhombifolia*	NSW	Foliar spray	**GRAZON DS**	500 mL/100 L of water
PARKINSONIA (over 100 ha) *Parkinsonia aculeata*	Qld, NT	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection
PARKINSONIA *Parkinsonia aculeata*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Qld, NT	Aerial spray	GRAZON DS	3 L/ha + 1 L/ha Uptake
	Qld, NT, WA	Foliar spray	GRAZON DS	350 mL/100 L of water + Uptake
	Qld, NT	Granule application – Hand	GRASLAN	1.5 g/m^2 (15 kg/ha)
PARTHENIUM WEED *Parthenium hysterophorus*	Qld, NSW	Foliar spray	**TORDON 75-D**	125 mL/100 L of water
PATERSON'S CURSE *Echium plantagineum*	Qld, NSW, Vic, WA	Foliar spray	**TORDON 75-D**	150 mL/100 L of water
PEPPERCORN TREE *Schinus molle*	All	Basal bark	**ACCESS**	1:60 with diesel distillate
POPLAR BOX (PMP Principles) *Eucalyptus populnea*	Qld	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection
POPLAR BOX *Eucalyptus populnea*	Qld	Granule application – Hand	GRASLAN	1.0 g/m^2 (10 kg/ha)
	All	Stem injection	**TORDON DSH**	1:4 with water
		Cut stump	TORDON DSH	1:20 with water + surfactant
POPLAR GUM *Eucalyptus platyphylla*	Qld, WA, NT	Granule application – Hand	**GRASLAN**	1.5 g/m^2 (15 kg/ha)
PRICKLY ACACIA *Acacia nilotica*	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld	Basal bark and Cut stump	**STARANE 200**	1:67 with diesel distillate
	All	Basal bark and Cut stump	GARLON 600	1:120 with diesel distillate
	Qld	Foliar spray	STARANE 200	750 mL/100 L of water + Uptake
	Qld, NT	Granule application – Hand	GRASLAN	1.5 g/m^2 (15 kg/ha)
PRICKLY PEAR (Common) *Opuntia stricta*	All	Foliar spray	GARLON 600	1:75 with diesel distillate
		Foliar spray	**ACCESS**	1:60 with diesel distillate
		Foliar spray	GARLON 600	3 L/100 L of water
		Foliar spray	GRAZON DS	500 mL/100 L of water
PRIVET (Broadleaf) *Ligustrum lucidum*	All	Basal bark and Cut stump	GARLON 600	1:12 with diesel distillate
		Basal bark and Cut stump	**ACCESS**	1:30 with diesel distillate
PUNTY BUSH *Senna artemisioides* ssp. *filifolia*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
QUENA *Solanum esuriale*	Qld, NSW, Vic, SA, WA	Foliar spray	**TORDON 75-D**	650 mL/100 L of water
RAGWORT *Senecio jacobaea*	Qld, NSW, WA	Boom application	TORDON 75-D	3.5 L/ha
	Vic, SA	Boom application	TORDON 75-D	4 L/ha
	All except NT	Controlled droplet application	GRAZON DS	Apply undiluted
		Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
	Qld, NSW, WA, Vic	Foliar spray	TORDON 75-D	300 mL/100 L of water
	SA	Foliar spray	TORDON 75-D	150 mL/100 L of water
	Vic, Tas	Granule application – Hand	**TORDON GRANULES**	2 g per plant – WEEDSTICK
RED ASH (White Myrtle) *Alphitonia excelsa*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate

Woody weed	State	Method of application	**Product** – Note: Preferred option in bold letters.	**Rate** – Consult label for details of growth stage and use, especially where range of rates are given.
RUBBERVINE (Open flats) *Cryptostegia grandiflora* (Not infected with rust)	Qld, NT	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection
		Granule application – Hand	GRASLAN	1.5 g/m^2 (15 kg/ha)
	Qld, NT, WA	Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
	Qld	Foliar spray	TORDON 75-D	1300 mL/100 L of water
	Qld, NT	Aerial (helicopter only)	GRAZON DS	3 to 5 L/ha (for further information contact Tropical Weeds Research Centre, Charters Towers)
RUBBERVINE (Isolated plants) *Cryptostegia grandiflora*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	All	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	Qld, NT	Granule application – Hand	GRASLAN	1.5 g/m^2 (15 kg/ha)
RUSSIAN KNAPWEED (creeping Knapweed) *Acroptilon repens*	Qld, Vic	Foliar spray	**LONTREL**	500 mL/100 L of water
	Qld, NT, WA	Foliar spray	TORDON 75-D	1.3 to 2 L/100 L of water
	Qld	Boom application	LONTREL	4 L/ha
SENSITIVE PLANT (Giant) *Mimosa invisa*	Qld, NT	Foliar spray	GRAZON DS	200 mL/100 L of water
	Qld, WA	Boom application	**STARANE 200**	1.5 L/ha + 1L/ha Uptake
SESBANIA PEA *Sesbania cannabina*	Qld, NSW	Boom application	**TORDON 75-D**	1 L/ha
SIAM WEED *Chromolaena odorata*	Qld, WA	Foliar spray	**GRAZON DS**	350 mL/100 L of water + surfactant
SICKLEPOD *Senna obtusifolia*	Qld	Boom application	TORDON 75-D	700 mL to 1.5 L/ha + 1 L/ha 2,4-D amine
	Qld, NT	Boom application	GRAZON DS	3 L/ha + surfactant
	Qld	Foliar spray	**TORDON 75-D**	300 mL/100 L of water
	Qld, NT, WA	Foliar spray	GRAZON DS	200 mL/100 L of water + surfactant
SIDA *Sida* spp.	Qld, NT, NSW, WA	Foliar spray	**STARANE 200**	1000 mL/100 L of water
SIFTON BUSH (Chinese Shrub) *Cassinia arcuata*	NSW, ACT	Foliar spray	**GRAZON DS**	500 mL/100 L of water + surfactant
	Vic	Foliar spray	TORDON 75-D	650 mL/100 L of water
SILVERLEAF NIGHTSHADE *Solanum elaeagnifolium*	NSW, Vic, SA	Foliar spray	TORDON 75-D	650 mL/100 L of water
		Boom application	TORDON 75-D	15 L/ha
	NSW	Boom application	**STARANE 200**	750 mL/ha + 1 L/ha Uptake
SILVER WATTLE *Acacia dealbata*	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	NSW, Vic, Tas	Boom application	LONTREL	5 to 8.5 L/ha+Ulvapron (200 L water/ha)
	All	Foliar spray	GARLON 600	160 or 320 mL/100 L of water
	NSW, Vic, Tas	Foliar spray	**LONTREL**	500 mL/100 L of water
SISAL HEMP *Agave* spp.	All	Basal bark	**ACCESS**	1:60 with diesel distillate
	Qld	Foliar spray	STARANE 200	1:33 with diesel distillate
		Stem injection	STARANE 200	10 mL undiluted / plant
SMARTWEED *Persicaria lapathifolia*	All except NT	Foliar spray	**GRAZON DS**	350 or 500 mL/100 L of water
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	150 mL/100 L of water
SMOOTH TREE PEAR *Opuntia monacantha*	All	Foliar spray	**GARLON 600**	1:75 with diesel distillate
		Foliar spray	GRAZON DS	500 mL/100 L of water
SNAKE CACTUS *Peniocereus serpentinus*	All	Foliar spray	**ACCESS**	1:60 with diesel distillate
SNAKEWEED *Stachytarpheta* spp.	Qld	Foliar spray	**STARANE 200**	750 mL/100 L water + Uptake
SPINY EMEX *Emex australis*	Qld, NSW	Foliar spray	**TORDON 75-D**	300 mL/100 L of water
SPINYHEAD SIDA *Sida acuta*	Qld, WA	Boom application	**STARANE 200**	1.5 L/ha + Uptake 1 L/ha
STINKING PASSION FLOWER *Passiflora foetida*	Qld, NT, WA	Foliar spray	**STARANE 200**	450 mL/100 L of water
STINKING ROGER *Tagetes minuta*	Qld, NSW	Boom application	**TORDON 75-D**	1 L/ha

Ready reference table control guide

Woody weed	State	Method of application	**Product** – Note: Preferred option in bold letters.	**Rate** – Consult label for details of growth stage and use, especially where range of rates are given.
ST. JOHN'S WORT *Hypericum perforatum*	All	Foliar spray	**GRAZON DS**	500 mL/100 L of water
	Qld, ACT, NSW, SA, Vic, WA	Foliar spray	TORDON 75-D	500 mL/100 L of water
	NSW	Boom application	GRAZON DS	2 to 4 L/ha
	ACT, NSW, Vic	Boom application	STARANE 200	3 L/ha (200 L of water/ha)
	All except NT	Controlled droplet application	GRAZON DS	Apply undiluted
	NSW, Tas, Vic	Gas gun application	GRAZON DS	500 mL/10 L of water
	NSW	Aerial (helicopter only)	GRAZON DS	4 L/ha
SWEET BRIAR *Rosa rubiginosa*	All except NT	Foliar spray	GRAZON DS	350 mL + 10 g metsulfuron/100 L of water
		Foliar spray	GRAZON DS	500 mL/100 L of water
	All	Foliar spray	**CROSSBOW**	30 g Part A + 150 mL Part B + surfactant
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:30 with diesel distillate
	NSW	Gas gun application	GRAZON DS	500 mL/10 L of water
	Vic, Qld, SA, WA	Granule application – Hand	TORDON granules	35 to 45 g/m^2
TEA-TREE *Melaleuca* spp.	Qld, NT	Aerial application	**GRASLAN**	Determined by Dow AgroSciences representative on inspection
	All	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
		Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Stem injection	TORDON DSH	1 to 4 with water
	Qld, NT, WA	Granule application – Hand	GRASLAN	1.5 g/m^2 along fence lines
THISTLES *Cirsium* spp., *Carthamus* spp.	NSW, Vic, Tas, SA, Qld	Boom application	**LONTREL**	50 or 70 mL/ha + 1 or 1.5 L/ha MCPA amine (500 g/L)
	All except NT	Controlled droplet application	GRAZON DS	Apply undiluted
	NSW, Vic, Tas, SA, Qld	Foliar spray	LONTREL	250 mL/100 L of water
	All except NT	Foliar spray	GRAZON DS	350 or 500 mL/100 L of water
THORNAPPLE *Datura* spp.	Qld, NSW	Foliar spray	**TORDON 75-D**	150 to 300 mL/100 L of water
		Boom application	TORDON 75-D	1 L/ha
TIGER PEAR *Opuntia aurantiaca*	All	Foliar spray	GARLON 600	3 L/100 L of water
		Foliar spray	**ACCESS**	1:60 with diesel distillate
		Foliar spray	GARLON 600	1:75 with diesel distillate
TOBACCO WEED *Elephantopus scaber*	Qld, NT, WA	Foliar spray	**GRAZON DS**	300 mL/100 L of water + surfactant
TREE-OF-HEAVEN *Ailanthus altissima*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
		Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	Qld, NSW, Vic, SA, WA	Foliar spray	TORDON 75-D	650 mL/100 L of water
TREE PEAR *Opuntia tomentosa*	All	Foliar spray	**ACCESS**	1:60 with diesel distillate
TREE VIOLET *Hymenanthera dentata*	NSW	Gas gun application	**STARANE 200**	1000 mL/10 L of water
TURPENTINE *Syncarpia glomulifera*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
TURPENTINE BUSH *Eremophila sturtii*	NSW	Basal bark and Cut stump	GARLON 600	1:60 with diesel distillate
	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
VELVET MESQUITE *Prosopis velutina*	Qld	Foliar spray	**GRAZON DS**	670 mL/100 L of water
VINES & LEGUMES	Qld	Foliar spray	**STARANE 200**	500 mL/100 L of water
WANDERING JEW *Tradescantia fluminensis*	All	Foliar spray	**STARANE 200**	1500 mL/100 L of water
WATTLES *Acacia* spp. (Consult label for species and growth stage)	All	Basal bark and Cut stump	**GARLON 600**	1:60 with diesel distillate
		Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
		Cut stump	TORDON DSH	1:20 with water + surfactant
		Foliar spray	**GRAZON DS**	350 mL/100 L of water
		Foliar spray	GARLON 600	160 or 320 mL/100 L of water
	Qld, NSW	Foliar spray	STARANE 200	500 or 1000 mL/100 L of water
	All except Qld	Stem injection	TORDON DSH	1:4 with water
	All	Stem injection	LONTREL	1:4 with water
WHITEWOOD *Atalaya hemiglauca*	All	Basal bark and Cut stump	ACCESS	1:60 with diesel distillate
	Qld, NSW, NT	Granule application – Hand	**GRASLAN**	1.0 g/m^2 (10 kg/ha)
WILD ORANGE *Capparis canescens*	All	Basal bark only	**ACCESS**	1:60 with diesel distillate
WILD PEACH *Prunus persica*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
WILD ROSEMARY *Cassinia laevis*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
	Qld, NSW	Granule application – Hand	GRASLAN	1.5 g/m^2 (15 kg/ha)
	Qld	Foliar spray	GRAZON DS	350 to 500 mL/100 L of water
WILD TOBACCO TREE *Solanum mauritianum*	All	Cut stump only	ACCESS	1:60 with diesel distillate
	Qld, NSW, ACT	Foliar spray	**GRAZON DS**	350 mL/100 L of water
	Qld	Foliar spray	TORDON 75-D	650 mL/100 L of water
	Qld, NSW, ACT	Gas gun application	GRAZON DS	500 mL/10 L of water
WILGA *Geijera parviflora*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
WILLOW *Salix* spp.	All	Cut stump only	**ACCESS**	1:15 with diesel distillate
YELLOW BELLS *Tecoma stans*	All	Basal bark and Cut stump	**ACCESS**	1:60 with diesel distillate
YELLOW WOOD *Terminalia oblongata*	Qld	Basal bark and Cut stump	GARLON 600	1:30 with diesel distillate
		Granule application – Hand	**GRASLAN**	1.0 g/m^2 (10 kg/ha)
ZAMIA PALM *Cycas* spp.	Qld	Stem injection	**TORDON 75-D**	1:3 with water; 1 mL/2.5 cm diameter



BLACKBERRY | CAMPHOR LAUREL | EUCALYPT REGROWTH | RAGWORT | LANTANA

WEED IDENTIFICATION

Following is a list of other weed identification resources that can help you to correctly identify the correct species of weed you are trying to treat.

Weed Identification References

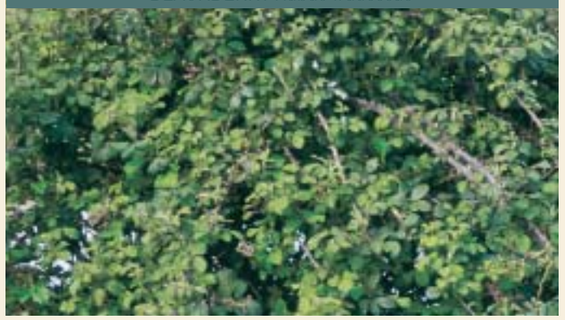
Noxious Weeds of Australia (Second Edition) – Parsons & Cuthbertson
Plants of Western NSW – Cunningham, Mulham, Milthorpe, Leigh
Weeds of Southern Queensland (2nd Edition) – Dight, Huggins, Lucy, Zerner
Plants of Central Queensland – Anderson QDPI
Poisonous Plants of Australia – Everist



Weed identification

Always read the label for correct rate and application method.

BLACKBERRY *Rubus fruticosus*



IDENTIFICATION

Erect woody shrub up to 5 m high, with scrambling prickly stems up to 6 m long, stems may root at tips. Compound leaves of three to five evenly or irregularly toothed leaflets with prickly petioles. Flowers white to pink. The berries ripen from green to red to black in late summer.

CONTROL WITH HERBICIDES

Grazon DS, Crossbow, Garlon 600, Tordon 75-D, Tordon DSH, Tordon Granules

CROFTON WEED *Ageratina adenophora*



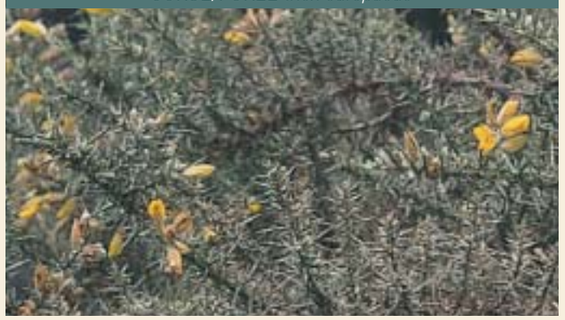
IDENTIFICATION

A shrubby perennial with numerous upright branching stems, usually grows 1–2 m high. Young stems are soft and establish roots where they touch the ground. The leaves are bright green, trowel-shaped, 50–75 mm long, with the edges toothed. It flowers in September with small white, dense heads. Seeds are black, with fine white hairs at the tip.

CONTROL WITH HERBICIDES

Grazon DS, Starane 200, Tordon 75-D

GORSE/FURZE *Ulex europaeus*



IDENTIFICATION

A densely-spiny perennial shrub up to 3 m high. Mature branches, leaves with rough brown covering but more recent growth is green. Branches produce numerous spines 2–3 cm long. Leaves narrow, spine-like in clusters. Flowers pea-like, fragrant, bright yellow.

CONTROL WITH HERBICIDES

Crossbow, Grazon DS, Garlon 600, Tordon 75-D, Tordon DSH

MIMOSA BUSH *Acacia famesiana*



IDENTIFICATION

A rounded shrub 3 m tall. Often forms thorny thickets, usually multi-stemmed. It has zig-zag shaped grey-brown branches with white spots. Yellow/green ferny leaves. Thorns grow in pairs at the base of leaf (10 cm). Orange ball-shaped flowers (1 cm across). Flowers develop in clusters of curved cigar-shaped pods (6 cm). Pods are dark brown/black, with seeds embedded in the pith.

CONTROL WITH HERBICIDES

Starane 200, Access

MOTHER-OF-MILLIONS *Bryophyllum* spp.

IDENTIFICATION

This perennial plant grows 30 to 60 cm tall and has mottled pale green stems. It has pencil-shaped leaves (3–10 cm long) that appear in pairs at intervals along the stem. Buds at the leaf tips produce other plantlets. It flowers late May to early October with orange-red bell- shaped flowers 2.5 cm long in a cluster at the top of each stem.

CONTROL WITH HERBICIDES

Grazon DS, Starane 200



ST. JOHN'S WORT *Hypericum perforatum*

IDENTIFICATION

A rhizomatous, perennial herb which can grow up to 1 m high. Stemless small leaves with hypericin containing oil glands that appear as perforations when held up against light. Stems reddish in colour. Flowers have five yellow petals, three bunches of many stamens. Plant can cause photosensi-tisation in stock.

CONTROL WITH HERBICIDES

Grazon DS, Tordon 75-D, Starane 200



SWEET BRIAR *Rosa rubiginosa*

IDENTIFICATION

Erect, perennial shrub that can reproduce from roots as well as from seed. Thorny stems up to 3 m high. Five-petalled pale pink and white flowers, in loose clusters at the ends of brambles.

CONTROL WITH HERBICIDES

Grazon DS, Tordon 75-D, Access, Crossbow, Tordon Granules, Garlon 600



VELVETY TREE PEAR *Opuntia tomentosa*

IDENTIFICATION

A large, tree-like cactus with a woody trunk; oblong segments 15–35 cm long, dull, dark green, covered with short hairs, which make them velvety to touch. Younger plants frequently bear several spines up to 3 cm long. It has deep orange flowers from October to mid-December and bears dull red egg-shaped fruit.

CONTROL WITH HERBICIDES

Access, Garlon 600, Grazon DS



The Woody Weed Specialists.



For more information call toll free

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