


# Lantana... the horror story



Lantana - the perfumed and colourful garden plant - has a leading role in an environmental horror story with a plot unfolding quietly around us.

With the success of the Australian film Lantana bringing new fame to this familiar cultivar, a scientist from the Cooperative Research Centre for Australian Weed Management, has issued his list of all time plant villains that make up a mean cast.

"Lantana is up there with my Ten Top Terrors for the natural environment," says Dr Tony Grice, based at CSIRO Sustainable Ecosystems in Townsville, "It's a landscape and pasture weed of the worst order. We refer to it as the 'blackberry of northern and eastern Australia'.

"Lantana infests millions of hectares globally, including key economic crops such as cotton, sugarcane and rice. In Australia alone it occupies 4 million hectares. We now have 29 naturalised varieties of lantana in Australia, and it's listed as one of our 'Weeds of National Significance'.

"As we saw in the film, it forms dense thickets that smother native vegetation - it's a Biodiversity Bully'. Lantana is already present in 165 reserves in Queensland, and in all remnant rainforest areas down the NSW north coast. It's the region's most widespread rainforest weed, and has the potential to spread through all but the driest of the nation's coastal lands. A single square metre of lantana can produce several thousand berries, and the birds do the rest.

Dr Grice says that the invasion of environmentally valuable areas by lantana, and the loss of native species and public amenity that it caused, is only part of the real lantana story. Losses in Queensland pastures alone are estimated at

\$7.7m per year, with lantana toxicity killing 1500 animals annually. It is also a major weed of hoop pine and eucalypt plantations.

"We estimate that weeds cost Australia at least \$3.5 billion each year in direct costs and lost production. Weeds are actually a bigger dollar problem than salinity, and directly affect many more rural landowners.

"That figure doesn't include biodiversity loss and other types of environmental degradation, which are hard to put dollar figures on. But we feel that loss intensely," says Dr Grice. Dr Grice says that the tragedy is that most of these villains were deliberately introduced.

"We urgently need to do better at the entry and assessment stage when new plants are imported," he says. "We can't go on allowing 20 new invasive species a year to make themselves at home here."

Dr Tony Grice can be contacted on (07) 4753 8543.

For more information about Lantana chemical control options, see Nufarm Spectrum Note AG-07 on the following pages, or

- On our web site at [www.nufarm.com.au](http://www.nufarm.com.au) (go to Nufarm News), or
- From your nearest Nufarm representative

Photo's courtesy of Queensland Government, Department of Natural Resources and Mines





## Lantana control in Queensland and NSW

Lantana (*Lantana camara*) is a native to the tropical and sub-tropical regions of Central and South America. It occurs throughout most coastal and sub-coastal areas of Queensland and New South Wales. Lantana grows on dry exposed hillsides and in wet heavily shaded gullies.

### **GROWTH HABIT**

Lantana is a heavily branched shrub varying in growth habit from compact clumps to rambling shrubs or climbers. The stems are square in cross-section with backwardly curved prickles along the angles. Flowers may vary in colour from pale cream to yellow, white, pink, orange, red, lilac, and purple. Flowers differ in colour even on the same plant and may change colour with age, therefore it may be difficult to identify Lantana correctly.

### **TOXICITY**

Most types of Lantana are poisonous to stock. Poisoning usually occurs in stock newly introduced to areas where toxic forms grow. Avoid placing animals in these areas during periods of drought. Young animals appear to be most susceptible. The degree of poisoning depends on plant variety, amount eaten and availability of other feed, but deaths have been known to occur 1 to 4 weeks after the appearance of symptoms.

### **BIOLOGICAL CONTROL**

Since 1914 more than 23 insects have been introduced to control Lantana. These include sap-sucking bugs, beetles, and leaf-mining flies. There is also a Lantana mealybug in the Gatton/Lockyer Valley. Unfortunately this insect poses a hazard to other forms of agriculture because it



also affects siratro, potatoes, tomatoes, peppers, chicory and amaranth.

### MECHANICAL CONTROL

Top growth can be removed by stickraking or ploughing. Regrowth from stumps and/or seedlings is usually profuse and requires chemical treatment or further ploughing. Mechanical removal of Lantana may cause unacceptable soil loss due to erosion, and may allow other weeds to invade. Seeds will continue to germinate on the site for many years, so soil disturbance should be kept to a minimum.

### CONTROL BY FIRE

Fire is often used before chemical control. Burning will reduce the number of plants in a dense stand and reduce follow up spraying costs. Establishment of pasture into burnt or sprayed areas can provide competition for Lantana regrowth.

### CHEMICAL CONTROL

Lantana DP-600 herbicide is the most cost effective method of control. Lantana DP-600 was developed specifically for Lantana control at the Alan Fletcher Research Station by the Queensland Department of Lands.

Red flowered Lantanas are the most difficult to control and pink flowered varieties are the easiest. Due to the plants multi-stemmed nature, basal bark spraying has not been successful. The preferred method of application is overall spraying provided that complete coverage of the foliage is achieved to the point of run-off. Foliar applications result in the herbicide moving throughout branches, stems and roots for a complete kill. The best results are obtained with Lantana DP-600 in autumn after good summer rains. Lantana DP-600 has no effect on grasses therefore grasses can compete and reduce the level of subsequent Lantana germinations.

### OTHER CHEMICAL OPTIONS

Weedmaster Duo applied as an overall spray has good activity however it will kill grasses around the plant due to the non-selective nature of this herbicide. This means there will be less competition for any Lantana regrowth or seedling germinations following the Weedmaster Duo application. Brushkiller 600 is also applied as an overall spray to bushes up to 2 metres high, and like Lantana DP-600, it has no effect on grasses.

### MANAGING DENSE INFESTATIONS

A combination of fire and follow-up spraying can reduce dense infestations of Lantana.

The following management program is recommended:

1. Burn bushes in the dry months, or spray with Lantana DP-600 in the wet months to reduce density of stand
2. Sow improved pasture, or aggressive grasses to compete with any Lantana regrowth or seedling germinations
3. Exclude stock from the treated area to allow sown pasture to flourish and establish.
4. Spot spray regrowth with Lantana DP-600 only when it is vigorously growing.

Seeds will continue to germinate over subsequent years, therefore it is essential to continue a timely program of spray applications to seedlings until the Lantana problem is under control.

## LANTANA<sup>1</sup> CHEMICAL CONTROL - SUMMARY OF OPTIONS (QLD & NSW ONLY)

NUFARM HERBICIDE	RATE				COMMENTS
	Boom vol/ha	Handgun vol/100 L	Knapsack vol/15 L	Gas Gun vol/L	
<b>Lantana DP-600</b> (600 g/L Dichlorprop)	6 - 8 L	500 mL	75 mL	-	Completely wet all leaves and stems. Spraymate Activator <sup>3</sup> surfactant at a rate of 150 mL/100 L water is recommended. When boomspraying use higher rate for mature plants. A follow up spray may be necessary.
<b>Weedmaster Duo</b> (360 g/L Glyphosate)	-	1 L plus Freeway Gold <sup>4</sup> Penetrant	150 mL plus Freeway Gold <sup>4</sup> Penetrant	100 mL	Apply to actively growing plants with full foliage. Addition of Freeway Gold <sup>4</sup> penetrant at 200 mL/100 L water may improve control. With Gas Gun apply 2 x 2 mL dose of the 100 mL/1 L solution per 0.5 metre of bush height and ensure spray contacts all foliage.
<b>Brushkiller 600</b> (600 g/kg Metsulfuron Methyl)	-	10 g	1.5 g	2 g plus Freeway Gold <sup>4</sup> Penetrant	Use Freeway Gold <sup>4</sup> penetrant at 10 mL/5 L for Gas Gun applications. Apply to bushes up to 2 metre tall. Spray to thoroughly wet all foliage and stems. Spray should penetrate through the bush. Re-treatment may be necessary if regrowth occurs.
<b>Credit+Bonus</b> (see note 2)	-	670 mL Credit + 670 mL Bonus plus Freeway Gold <sup>4</sup> Penetrant	100 mL Credit + 100 mL Bonus plus Freeway Gold <sup>4</sup> Penetrant	70 mL Credit + 70 mL Bonus	Apply to actively growing plants with full foliage. Addition of Freeway Gold <sup>4</sup> penetrant at 200 mL/100 L water may improve control. With Gas Gun apply 2 x 2 mL dose of the 70 mL + 70mL/1 L solution per 0.5 metre of bush height and ensure spray contacts all foliage.

### ALWAYS READ PRODUCT LABELS FOR ALL INSTRUCTIONS, DIRECTIONS FOR USE AND CRITICAL COMMENTS

1. Lantana species including creeping lantana for Lantana DP-600 herbicide & *Lantana camara* for Weedmaster Duo or Brushkiller 600.
2. Credit contains 540 g/L glyphosate present as the isopropylamine and mono-ammonium salts. Bonus contains 250 g/L ammonium sulphate, 188.5 g/L alkylethoxyphosphate, monammonium salt, 19 g/L ammonium propionate, 15 g/L soya phospholipids
3. Spraymate Activator is a non-ionic general purpose spreading agent which assists entry of herbicides into plants.
4. Freeway Gold is a special purpose organosilicone penetrant which maximises entry of herbicides into plants.



Acknowledgement: Lantana photos courtesy of Queensland Government, Department of Natural Resources and Mines

For more information contact your nearest Nufarm State Office. QLD (07) 3893 8777. NSW (02) 6884 8180.