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National Lantana Management Group

Lantana Lowdown

Spring 2007

Sadly the season of renewal and the flush of fresh lantana blossoms it brings, can remind us just how much lantana infests our rural, urban and natural areas. Overwhelming as this may seem, these flowers herald the beginning of the peak lantana control season as lantana is best managed when actively growing and in full flower.

In light of this, our spring issue includes information for all landholders faced with the lantana dilemma.

There are articles covering replacement plants, various control methods and important lantana-related dates to be added to the calendar.

Reader feedback from the debut issue was much appreciated, and we hope to include more of the suggested topics over the future issues. This publication is designed to assist you, so please keep your feedback coming—and happy weeding!

Inside this issue:

The Coordinator's Desk

Welcome to the spring edition of Lantana Lowdown.

Lantana management is an ongoing battle for many landholders and we from the Lantana WoNS team recognise with gratitude the enormous effort many of you make.

To give you an idea of the importance of the ongoing battle from an economic perspective: results from a recent report conducted by AEC Group indicate lantana costs the Australian grazing sector in excess of $104 million per annum (2005/06 values) in lost production.

This equates to production losses of $70.8 million in Queensland and $33.4 million in New South Wales.

Added to this are control costs of $17 million and flow on costs to the Australian economy of:

- $82.8 million in gross output
- $42.0 million in GDP
- $16.1 million in wages
- 744 full time equivalent jobs.

These losses put a significant burden on an already stressed pastoral industry and reinforce the need for effective lantana management.

If allowed to reach the full extent of it's potential distribution, the report suggests lantana could cost the Australian economy between $1.2 and $2.4 billion annually.

This paints a grim picture but I hope, through the work of the Lantana WoNS group and the determination of those on the ground, we can win the battles, and maybe one day, win the war.

Replacement plants for lantana

Stephanie Lymburner ~ *Bush Regenerator, Northern NSW*

When removing large areas of lantana – or the buffer plants that encircle remnant vegetation the question often arises; What do I plant now? In the ideal situation the lantana should be removed slowly to allow for easier maintenance – and the chance for native species to germinate, maintaining the genetic integrity and diversity of the area.

However, we tend to want to see something immediately after an area has been cleared, so planting is often seen as the most attractive option.

Each region has its own pioneer species (plants that occur naturally in the area and germinate readily after disturbance), which thrive in the leaf litter left after the removal of lantana.

When planting is to be undertaken species that replicate the habitat values of lantana should be given the highest priority.

On the north coast of NSW these include native raspberry (*Rubrus rosifolius*), molucca bramble *(Rubrus hillii*)– that form dense prickly thickets and produce prolific fruit, also blue tongue or native tibochina (*Melastoma affine*) that prefers creek lines. All of these species layer readily, form dense thickets and can easily be grown from cuttings.

Low growing plants such as *Lomandra sp*. and *Dianella sp*. and locally indigenous grass species help erosion and provide habitat for birds and other small animals.

From the editor's desk: For more information on bush regeneration and the species relevant to your local area, contact the Australian Association of Bush Regenerators (www.aabr.org.au or call 0407 002 921); or contact Greening Australia (www.greeningaustralia.org.au or (02) 6281 8585).

A fact sheet on the selection of replacement plants for frugivorous birds is also available

Lantana for sale...?

The Journey back to Nature

Ben Risby-Jones ~ landholder, Cedar Creek ~ *first published in* The CODLine, *May 2007*

Back in 1999, my wife and I moved to our beautiful property here on the Sunshine Coast, full of great ideas, high ideals, fuelled with a healthy dose of naivety.

When I say naivety, I didn't even know the five to six acres of lantana we had was a problem. Our property is 127 acres, surrounded on three sides by Mapleton Forest Reserve – now national park. There is about five acres of cleared grassy valley flats with the rest forested with pristine eucalypt open bushland and some with good quality rainforest. Between these two there was a great swathe of lantana.

I liked the feeling that people hadn't tamed this property. When we arrived, a colony of micro-bats was living in the house (there were no flyscreens) along with, it seemed, everything else that crawls, flies, slides, climbs and bites. There was little to give us the illusion of being separated from nature. I loved it. It challenged my comfort zone.

Then in early 2000 fate took a hand. An unimposing advertisement for a workshop on healthy creeks appeared in the *Mary Valley Voice*. The Department of Main Roads had put a new bridge over one of the Belli Creek crossings and as a part of this they had done an environmental impact study. They had found two endangered frogs—the cascade tree frog and the giant barred-frog. When they put in the new bridge they damaged these frogs' habitat, and to make amends they were putting funds towards rehabilitating habitat for these frogs elsewhere. Through the workshop, Queensland Parks and Wildlife Service (QPWS) was looking for landholders who were interested in rehabilitating the frogs' habitat on their property.

I didn't know much about **how to revegetate**, or even where to start. So I put my hand up and said I was interested.

Since then we've received a **steady stream of support** from local, state and federal government for ongoing environmental works on this property. Many experts have come to identify animal species and tree species throughout the property, and to advise on best practices for revegetation works.

Initially, I was planting the trees by myself; putting in a few hundred felt like a big achievement! Now, six years down the track, the project has gained momentum. We have put in around 12,000 trees, mostly on very steep slopes previously covered by thick lantana, with another 2000 going in this season. Some of the first plantings are nearly maintenance free and I am happy to say the end is nearly in sight.

My main motivation is to recreate, as best as possible, the whole ecosystem, undoing the damage of the past, and allow the restructuring of a delicate balanced network of flora and fauna to occupy the space it once did. It is one of my life-long goals to **extend the remnant** that exists next door in the national park all the way to our front gate, and then to preserve this as best as possible with a perpetually binding covenant as a gift to future generations.

As far as strategies go, I always go for minimal impact and, if I can, I always turn a negative into a positive!

For lantana, I crush it down in winter to ground level using a brush hook and as many people as I can find. Then, after it has regrown in spring (to about 1-2 feet), I spray it with 1/100 glyphosphate (without surfactant). This creates a beautiful blanket mulch to plant into. Through the lantana mulch, the light and warmth of the sun gets in to activate the seed bank in the soil.

We have a great seed source all around us so we plant predominantly pioneers: the secondary, tertiary and climax phase plants will come naturally from the wonderful seed bank all around our property. I like to plant (as opposed to only waiting for volunteers/natural regrowth) to get a canopy up as quickly as possible. This reduces maintenance and reinfestation by weed species.

My **planting formula** is like this:

- 70% pioneer trees that will live for only 5 to 20 years
- 15 % secondary phase tree species that may last for 50 to 60 years
- 10% tertiary phase tree species that could last 100 to 120+ years
- 5% climax phase tree species that could last for more than 150 years.

I plant at about 1-metre spacings and pay particular attention to the spacing of the tertiary and climax phase species.

In our more mature plantings where the lantana has completely gone, the vines need to be removed gently. I've tried to avoid approaching this as a battle – I see it more as changing the direction of the environment.

(Continued on page 3)

"So I put my hand up... Since then we've received a steady stream of support"

"I've tried to avoid approaching this as a battle—I see it more as changing the direction of the environment""

(Continued from page 2)

My property was moving steadily towards a monoculture of lantana; now it is moving towards an incredibly intricate network of diversification. This is the influence I have chosen to support. My intention is that this diverse network will be self-supportive in the years to come.

Identifying endangered species on our property has opened many doors to environmentally supportive funding, as have the remnant rainforest and also the creek.

The most valuable thing I have learnt is this: if you want to revegetate your property and you don't know how or where to start – **ASK an expert or someone who has done it before**. My experience is that there is an enormous amount of support available, be it for funding, labour, trees, information, whatever. It is all out there waiting for you to access it.

Best Practice Integrated Management Trials

The Lantana Integrated Control Project has just finalized the first season of control trials at 11 sites throughout Queensland and New South Wales.

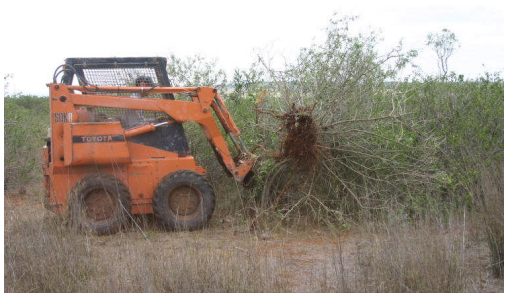
The project will eventually provide information on effective long-term sequences of integrated control but this year's trials compared typical control methods used by landholders in the initial stages of a control plan.

While the following are only preliminary results, but we hope to provide you with ongoing updates of the research findings as they unfold.

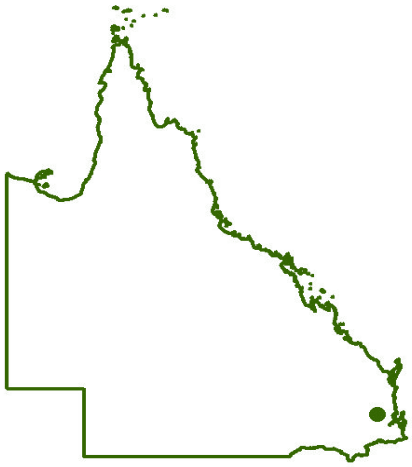
The following findings are based on the trials conducted at the field site in Yarraman in southeast Queensland. This grazing property is located 10km west of Yarraman, a timber town 150km north-west of Brisbane. Initial trials have compared a variety of mechanical and chemical methods.

High density lantana
(>2500 plants/Ha)

Results so far show that combining stick rake and slashing resulted in approximately 85% reduction in lantana density compared to a 60% reduction from stick raking alone. It also required a third less chemical and time taken to spray the regrowth; and resulted in a moderate increase in grass production.



Yarraman — *the bobcat in action*



Yarraman — *the southeast Queensland site*

Medium density lantana
(1500 plants/Ha)

Results so far show that mechanically grubbing with a bobcat with a fork attachment resulted in a much greater reduction in lantana density than stick raking (75% compared to 65%) and required 10% less chemical and time to spray the regrowth. Significantly, the bobcat grubbing resulted in less soil disturbance reducing lantana seedling germination and increasing grass production.

All herbicide treatments on this property were conducted on medium density infestations. Comparisons of hand gun and reel foliar spray showed picloram/triclopyr mix (e.g. Grazon DS) delivered at the higher rate (750mL to 100L) gave a better kill than spraying with dichlorprop (e.g. Lantana 600) at 500mL to 100L, (85% compared to 50%). Spray techniques may still require physical removal of the dead plants to eliminate obstructions from the paddock.

Further results on follow-up treatments will be included in subsequent newsletters and in the new Lantana Best Practice Control Manual due out in 2009.

Did you know:

- Lantana was first recorded as naturalized in Australia in 1841 in the old Botanic Gardens site in Adelaide, South Australia
- Lantana was well established along the Brisbane River by 1850, and was considered a major weed in the Brisbane and Port Jackson areas
- In total, 30 biocontrols (29 insects and one rust) have been introduced to Australia since 1914. Seventeen have become established, and four of these, all insects, are effectively reducing the vigour and competitiveness of lantana in certain areas.

Control Options *- adapted from the CRC Weed Management Guide* — lantana

Type of infestation	Physical	Mechanical	Chemical	Fire	Biological
Small (few plants, small area)	Hand grubbing only suitable for seedlings. Forks or specially designed levers may be used to remove larger bushes . Wear gloves and long sleeves for protection from thorns.	Not suitable.	Spot spray plants less than 2m in height between summer and autumn (when the plants are actively growing) with a registered herbicide. Helicopter spraying is used when there is no access for mechanical control, eg very steep slopes.	Suitability dependant on land use and vegetation types.	There are 17 biological control agents established in Australia. They are already distributed throughout their potential range, but research work is ongoing to identify further potential agents.
Medium (medium density, medium total area)		Bulldoze, plough, stick-rake or slash infestations. Soil disturbance will lead to mass seed germination & regrowth of broken stems is likely, so follow up with further controls is critical. Do not use mechanical control in areas susceptible to erosion. A clearing permit may be required.	For large infestation it may be most economical to remove the bulk of biomass through the use of fire or mechanical means before undertake follow-up chemical control.	Under permit, burn in summer with good fuel load of grass and/or mechanically cleared lantana. Do not burn in rainforests.	
Large (many plants, many ha)					

Lantana Lineup

October 2007

Lockyer Valley Landcare Weeds and Trees Field Day	6 October ~ *9:00am—2:00pm*	Greg Grimes ~ Lockyer Valley Landcare gandpgrimes@bigpond.com
Weedbuster Week	6—13th October ~ *Australia-wide*	www.weedbusters.info
Lantana DVD launch	Weedbuster Week ~ date TBA Launch @ Brisbane Forest Park.	Kym Johnson ~ *Lantana WoNS Coordinator* kym.johnson@dpi.qld.gov.au
Green & Healthy Schools Teachers Forum *Education resource information day*	15 October *@ Hillstone St Lucia, Brisbane*	Clare Raven ~ *Lantana WoNS Project Officer* clare.raven@dpi.qld
WA Lantana Workshop and field trip *Canning City Environmental Centre*	23rd October ~ *9:00am—3:30pm*	Kym Johnson ~ *Lantana WoNS Coordinator* kym.johnson@dpi.qld.gov.au
November 2007		
Lantana Education Resource	Early November ~ date TBA	Kym Johnson ~ *Lantana WoNS Coordinator* kym.johnson@dpi.qld.gov.au
North Queensland Lantana Field Days	Mid November ~ dates TBA	Clare Raven ~ *Lantana WoNS Project Officer* clare.raven@dpi.qld

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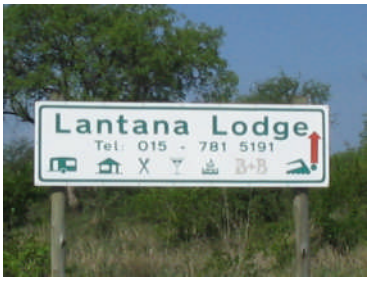

Sights from the field...