

## Stemming the spread – the lantana containment zone project

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**Summary** Early identification and management of weed infestations is vital to ensure a cost effective and successful outcome in weed eradication programs. Unfortunately, competing priorities frequently mean management of new infestations is postponed until there is an obvious environmental or economic impact.

The Lantana Containment Zone Project aims to break this pattern – providing the funding and support to allow effective control of *Lantana camara* (lantana) in areas where it is predicted to have future detrimental effects.

Isolated lantana infestations in the Northern Territory, Western Australia, South Australia, Cape York and Central Western Queensland have been targeted for control through the Lantana Containment Zone Project. This poster outlines the program's successes to date and highlights the benefits of national coordination to help drive proactive weed management around Australia.

**Keywords** Lantana, containment, WoNS, Weeds of National Significance.

### INTRODUCTION

*Lantana camara* L. (lantana) currently infests more than four million hectares of Queensland and New South Wales, where it causes serious environmental and economic damage. Recent reports indicate lantana negatively impacts on more than 1300 native species (P. Turner pers. comm.) and costs the Australian grazing sector in excess of \$104 million annually in lost production (AEC Group 2007).

According to CLIMATE modelling, undertaken by Tony Pople, lantana has a potential distribution of more than 35 million hectares (Figure 1), with the potential to cause significant environmental and economic damage in most states of Australia. For instance, if allowed to spread to its full extent, lantana could cost the grazing sector between \$1.2 and \$2.4 billion each year (AEC Group 2007).

To forestall these impacts, the Lantana Containment Zone Project has established a range of cooperative management programs with community and government groups across Australia with the aim of removing all isolated lantana infestations.

### METHODS

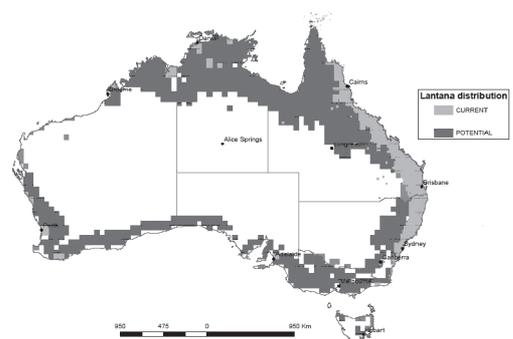
Funding for a three year Lantana Containment Zone Project was provided by the federal Defeating the Weed Menace Program in 2006. Under the funding agreement, projects require a 50 percent in-kind contribution from applicants.

Sites of lantana infestation were identified from herbarium records and through personal communication with local and state government officers and community groups.

General public awareness for the program was raised through publicity activities and direct contact with community and government representatives in the lantana infested areas.

### RESULTS

To date, the Lantana WoNS (Weeds of National Significance) program has initiated projects to control isolated infestations of lantana in Cape York, Central-Western Queensland, the Northern Territory, Western Australia and South Australia. In most instances, very little emphasis had previously been placed on lantana management in these areas due to the sporadic nature of infestations. However, indications were that these lantana infestations were increasing in size and impact, and in some situations had already caused localised environmental damage.



**Figure 1.** Current and potential distribution of *Lantana camara* in Australia. Potential distribution based on CLIMATE modeling (2007).

Complementary projects are being undertaken independently by local governments in New South Wales (in support of the southern lantana containment line), LandCare groups in the Torres Strait and by many other groups and individuals around the country.

**Central-Western Queensland** Isolated infestations on a private property near Alpha and at the Gemfields near Emerald have been targeted for control under this program. These infestations are significant because they occur in low rainfall areas outside the previously known climatic tolerances of the weed in Australia.

The Alpha project has set a benchmark for future activities through the successful cooperation from local government, NRM groups and property managers, all of whom have provided in-kind support for the project.

Depending on rainfall, season, ground water and climatic variation such as wind speed and direction, the method to control lantana can vary. Basal stem application, and overall spray with and without residual components have been successful. Also high intensity burning and mechanical removal have proven worthwhile. This project will run through to early 2009 as follow up is essential for success.

**Cape York** Survey and control work in the northern peninsula area of Cape York is underway with the in-kind support of the Cape York Weeds and Feral Animal program. This work commenced in February 2007 with sites located on Injinoo Shire Land, Albany Island and in the Newcastle Bay area.

**South Australia** A single infestation in the City of Burnside, South Australia, was identified from herbarium records. The 100 m<sup>2</sup> infestation of pink flowering lantana was situated between the edge of Waterfall Gully road and a small stream on private property. With funding assistance from the Lantana Containment Zone Project, Burnside City Council took immediate action and removed the infestation in January 2007. The removal of this infestation has helped ensure lantana doesn't continue to find niche habitats within the Adelaide Hills.

**The Northern Territory** The Northern Territory Department of Natural Resources, Environment and The Arts (NRETA) have established community based programs to control identified sites in and around Darwin. Each community group was supplied with control kits which included educational materials and tools to undertake control work. Local groups dedicated time to work in their local area to control lantana as well as other environmental weeds.

NRETA have also reprinted their 'Garden Thugs' weed brochure, highlighting lantana's potential spread throughout Darwin and other areas. These projects have been assisted by funding through the Lantana Containment Zone Project.

**Western Australia** Funding agreements have been established with a number of state government agencies, local governments and community groups. The following highlights provide an overview of the range of programs currently running.

Agreements with the City of Albany have led to control work commencing on 10 sites within their local government area.

The Denmark Weed Acton Group (DWAG) have already undertaken control at one site on the Brazier St Recreation Reserve, and will soon be undertaking work at the only other known site on Poddyshot Rd, Denmark. To raise local public awareness of lantana's ability to invade environmentally sensitive areas, DWAG have undertaken a number of publicity activities including dedicating a window display to lantana and its impacts, at the local environmental centre.

An agreement has also been reached with Canning City Council to undertake lantana control at the Yagan Conservation Reserve. This site is one of the largest infestations so far identified in Western Australia.

To the east of the City of Canning is the City of Melville. There is a small pocket of lantana situated at this eastern end of the Yagan Conservation Reserve. A contractor was hired in November 2007 to remove these plants.

The Department of Main Roads WA has removed one infestation on Hamersley Highway and three other sites have been flagged for removal.

A very successful workshop (Lantana in WA 'Lets weed it out') and field trip was led by the Lantana WoNS team on 23rd October 2007 at the Piney Lakes Environmental Education Centre, with 40 people attending. The workshop highlighted the potential threat lantana poses to niche environments in WA. The field trip to Yagan Conservation Reserve illustrated to all just how lantana has established in areas around Perth and its sleeper weed status.

## DISCUSSION

Lantana is one of the 20 Weeds of National Significance identified following the development of the National Weeds Strategy in 1997. The containment of spread is a key target of the National Lantana Strategy and if successful, has the potential to save Australia from significant environmental and economic damage.

Lantana has been present in Australia for approximately 160 years, and has had a presence in most States and Territories for at least 100 years. This fact has led many to argue that lantana is unlikely to ever have a significant impact outside its current core east coast distribution. This argument has had particular strength for Western Australia where growth seems to be restricted by a combination of factors such as the Mediterranean climate and sandy soils with poor nutrient status.

However, observations collected from this project indicate that while lantana may never reach the same level of infestations in other states as is seen in Queensland and New South Wales, it will survive and thrive in niche environments.

This tendency to establish in niche environments (e.g. sensitive riparian environments) and to displace highly specialised native flora means lantana infestations in any state or territory should be considered a serious threat.

The proactive nature of the Lantana Containment Zone Project has ensured many of these environments will receive the attention required to protect them from serious long-term damage. However, follow-up control and continued vigilance will be required in years to come.

#### ACKNOWLEDGMENTS

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#### REFERENCES

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