

# War on WEEDS

CASE STUDY:

## Sonoma

One of six Producer  
Demonstration Sites in the BBB



NQ Dry Tropics partnered with Meat and Livestock Australia to develop a Producer Demonstration Site to accelerate the adoption of cooperative, integrated weed management in the BBB catchment.

## Cooperative, integrated weed management in the BBB

Project timeframe: May 2020 — February 2023

This Producer Demonstration Site aimed to showcase a cooperative and integrated approach to identify best-practice management of the highest economic priority weeds in the Bowen, Broken and Bogie River catchments (BBB).

The integrated priority weed management group, centred around Collinsville and Bowen, conducted weed management trials on six grazing properties.

The group implemented a suite of options, including best-practice application of biological, mechanical, and chemical controls.

Priority weeds included lantana (*Lantana camara*), rubbervine (*Cryptostegia grandiflora*), prickly acacia (*Vachellia nilotica*), belly ache bush (*Jatropha gossypifolia*), and chinee apple (*Ziziphus mauritiana*).

The properties measured and compared relative costs of previous control and maintenance measures with the new practices; the areas of weeds treated and the comparative success rates for the new practices; and the number of new cooperative actions with neighbours and other land managers.



A bulldozer was used with some success to clear regrowth of mimosa on Sonoma Station.

A series of field events and extension activities were held throughout the three-year project to showcase results.

The events attracted participants from grazing properties, local government, National Resource Management (NRM) groups, industry and the general community.



Grazier Shane Watts at an MLA Producer Demonstration Field Day.

Sonoma grazier,  
**SHANE WATTS:**

☛ *Weed control is one of the most pressing management issues for landowners and public land managers.*

*Management requires integrated control approaches and everyone needs to be involved — government at all levels, NRM groups, and landholders across all agricultural industries.* ☛

## THE PROJECT TRIALS

A number of techniques and pieces of equipment were trialed. These included:

- Mechanical removal of mimosa bush (*Vachellia farnesiana*) using the corner tip on the blade of a dozer across a 40ha trial area.
- Mechanical removal (mulching) using a 125EZ hydraulic drive Flail Mulcher head on an excavator to mulch dense chinee apple and rubbervine infestations across 5ha of riparian area.
- Splatter gun treatment of chinee apple, rubber vine and grewia across a 2ha trial area.
- Basal bark treatment of mimosa with Access and diesel across 20ha.
- Aerial application of Tebuthiron to treat mature and regrowth mimosa across 160ha with pellets applied at 0.9kg/ha.

## CORNER TIP OF DOZER BLADE

The trial involved removing regrowth mimosa using a D6K 13 tonne dozer. The removal was successful, with works carried out with a good soil moisture profile in early autumn.



# Trials, results, knowledge gained

## FLAIL MULCHER

The mulcher was slow and cost-prohibitive for the area covered.

It is recommended that a mulcher should only be considered for targeted sensitive creek banks or eroded areas, largely due to the cost and the need to undertake follow-up chemical treatment of regrowth.

## SPLATTER GUN

Chinee apple, rubbervine and grewia were targeted over summer, with Metsulfuron used when the plants were actively growing.

A 99 per cent kill was achieved on rubber vine and about 80 per cent on chinee apple.

However, the grewia dropped leaves where contact with chemical was made but continued to grow, with no kill achieved.

## BASAL BARK

Basal barking with Access and diesel is commonly used for woody weeds and again proved a successful treatment.

## AERIAL APPLICATION OF TEBUTHIRON

This was highly successful on mature and regrowth mimosa.

Aerial application was carried out in spring to take advantage of spring storms to help activate the Tebuthiron. A 98 per cent kill was achieved on all treated mimosa.

Vegetation and reef regulatory requirements need to be considered with this method and may not be suitable in certain situations.

Prior planning is required, including checking all relevant departmental mapping, and to GPS the proposed treatment area and keep application records.

## KEY LESSONS LEARNED

- Always check legislative obligations to see if the planned technique is authorised.
- Splatter gun treatment works well on rubber vine and chinee apple when actively growing and under two metres tall.
- The Flail Mulcher is an expensive option for weed management, however, it does have uses for sensitive areas which are difficult to access and can reach into intact vegetation.
- The corner tip on the blade of a dozer works well with removing mimosa when the soil moisture profile is good.
- An increase in chinee apple seedlings occurs if using a dozer to manage.



# LDC helps communities to tackle landscape problems

Empowering communities in the Bowen and Collinsville region to manage healthy and productive landscapes has been a cornerstone of the Landholders Driving Change (LDC) project.

A grassroots design developed by locals, for local needs, provides the overarching framework and has been supported by a community-led co-governance model.

From the outset, landholders identified weed management as a barrier and challenge to improving land condition on their properties.

In the LDC landholder baseline survey, 47 per cent of landholders identified weeds as a barrier to improving land condition. One year later in June 2019, this increased to 67 per cent.

LDC submitted an application to Meat and Livestock Australia (MLA) in November 2019 to form an integrated catchment priority weed management cluster group.

This was approved and the group started a three-year project through the LDC's BBB Grazier Support activity area.

LDC hosted nationally-accredited weed training workshops to:

- increase awareness of biosecurity and build capacity in the BBB catchment to effectively manage weeds;
- learn how to clean and inspect vehicles and machinery for plant materials;
- understand government legislation and requirements; and
- increase awareness of biosecurity threats and impacts on businesses.

Land managers, non-grazing land managers, local contractors and council representatives attended the workshops.

The Queensland Government funded the first phase of the LDC project, 2017-2021.



The vision of the Sustainable Agriculture Program is resilient landscapes and productive enterprises, agricultural producers maximising outputs while minimising environmental impacts.

The Sustainable Agriculture Program aims to support and empower producers in the use of best management practices for natural resource management within the agricultural industries of the Burdekin Dry Tropics NRM Region.



## FOR MORE INFORMATION

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