



Lantana Integrated Trials

Dr Daniel Stock

*Lantana Best Practice Management Officer
Queensland Natural Resources, Mines & Water*



Background

- 2003 ~ Landholder Survey (>1000 responses)

The majority of landholders either “*do not control*” or only use “*single control*” methods

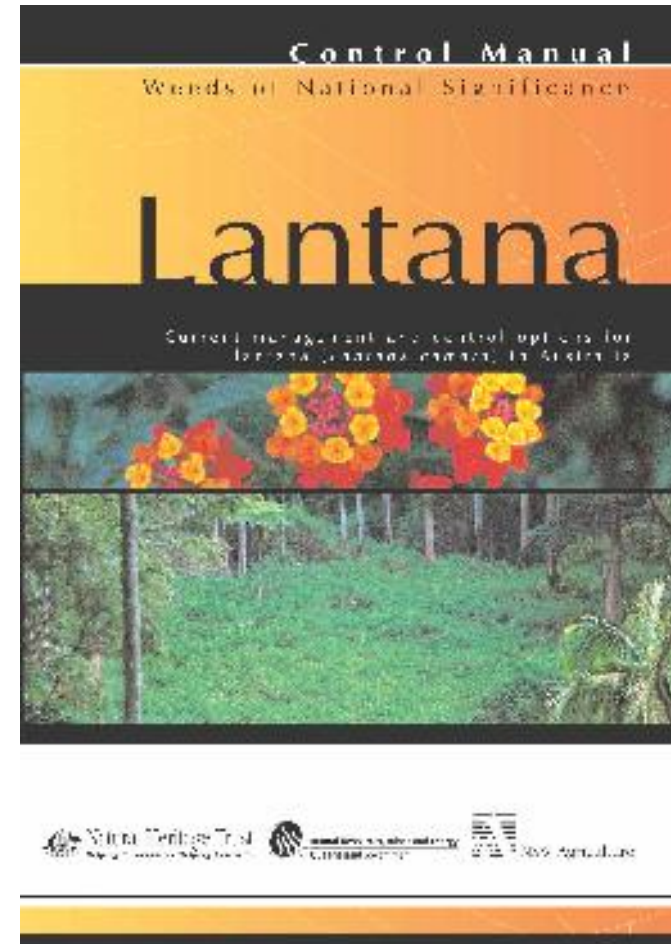
- 2004 ~ Developed current practices manual

Details control options but no detail of costs etc

- 2005 ~ Integrated Trials Project

Influence best management practices through integrated control options

Measuring → effectiveness versus cost





Project Aims

- Develop best practice guidelines
- Investigate alternative control methods
- Develop decision support guide for landholders
- Develop best practices manual



General Methods

- Choose sites
- Choose control methods
- Layout quadrats to use as overall assessment
- Take strategic photos for before and after
- Calculate time and efforts including \$
- Re-assess sites for follow-up control

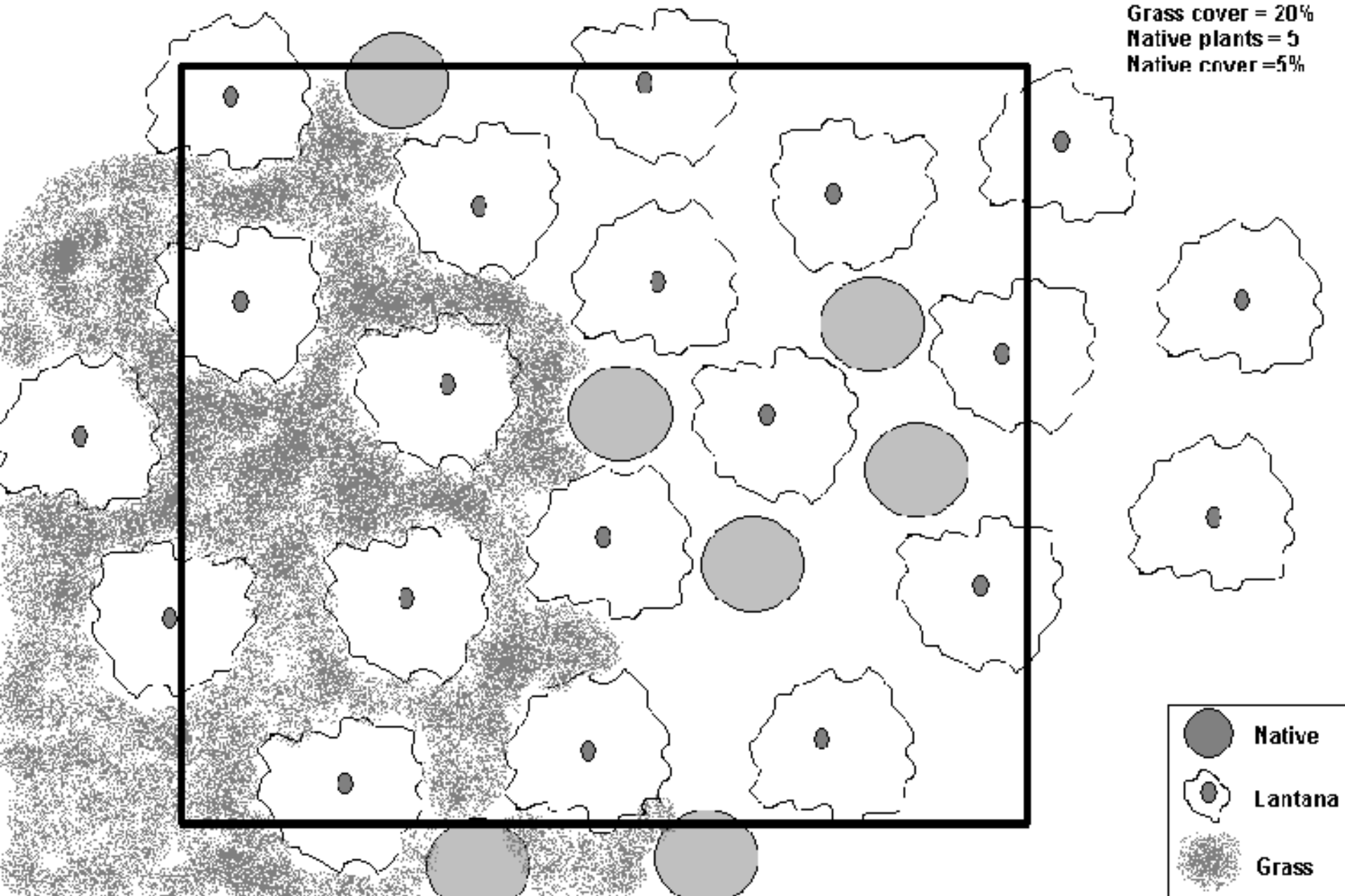


Quadrat Technique

- Quadrats
 - Used as a sub measure of whole area being trialed
 - Can be used to calculate lantana number & density per hectare
 - Number: 2 or 3
 - Size: 10m x 10m or 20m x 20m
 - Used for measuring lantana and other vegetation density before and after
 - Used for calculating kill rates
 - Used for photo points to visually show before and after

20m x 20m

Data collected ~
Lantana plants = 14
Lantana cover = 60%
Grass cover = 20%
Native plants = 5
Native cover = 5%





Quadrat Technique

- Quadrats
 - Used to extrapolate to whole area
 - e.g. if in 3 x 100m² quadrats there is an average of 15 lantana per quadrat then this equates to 1500 lantana per hectare (i.e. hectare = 10 000m²)



Before and After Photography

- Photo points
 - Used to show before and after
 - Better visual indicator than just using numbers
 - Photos mean more to landholders than scientific jargon

Stick raked



Bobcat grubbed



Hand pulled



Slashed



Foliar sprayed





Trial Locations

- Clairview, **central QLD** Grazing property/some sensitive area
- Glen Ruth Station, **north-west QLD** Grazing property
- Yarraman, **south-east QLD** Grazing property
- Elphinstone Creek, **northern QLD** Subtropical rainforest
- Sheepstation Creek, **northern NSW** Subtropical rainforest
- Berry-Nowra, **south-coast NSW** Grazing property/some sensitive area
- Grafton area, **north-coast NSW** Grazing property
- Boulders Beach, **far north-coast NSW** Littoral rainforest



Trial Control Methods

Stick raking

- Good to remove bulk of large infestation





Trial Control Methods

Slashing

- Good to remove bulk of large infestation
- Less soil disturbance than stick raking





Trial Control Methods

Bobcat grubbing

- Can remove individual plants
- less disturbance than larger machines





Trial Control Methods

Foliar spraying

- Good to minimise soil disturbance





Trial Control Methods

Splatter/gas gun spraying

- Low volume/high concentration
- Good for targeting lantana in sensitive areas





Trial Control Methods

Helicopter spraying

- Good for harder to reach slopes
- Good for when you are not sure what is under the lantana





Trial Control Methods

Fire

- Good for controlling large areas
- need HOT fire to have great success





Trial Control Methods

Cut stump

- Good for low volume application where machines can't or are not wished to be used





Trial Control Methods

Hand removal

- Non herbicide, minimal soil disturbance option (compared to machine)





Project Relationships

- Shire Councils
 - e.g. Ballina Shire Council, Shoalhaven City Council, Clarence Valley Council
- Herbicide Companies
 - e.g. Dow Agrochemicals, Agricrop, Nufarm, Dupont
- Contractors
- Landholders/land managers
- Landcare groups
- Other Government Agencies
 - e.g. QLD and NSW Parks and Wildlife, EPA, DEC



Project Timeline

- Follow-up controls
 - Assessment made at sites in February-April 2006
 - Organise any follow-up works for March-May 2006
 - Re-assess areas in August-September 2006
 - 2nd and 3rd round follow-up trials Summer 2006-2007
- Project life
 - Depending on funding application ~ June 2009



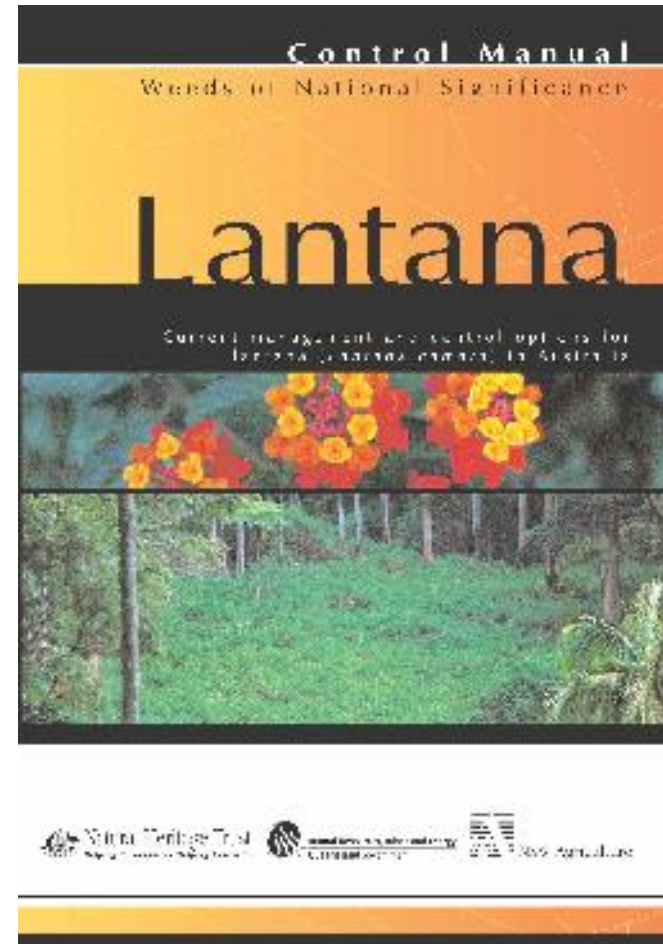
Project Outcomes

- Demonstration sites
 - Field days at key trial sites
 - Sheepstation Creek Feb-2006, Yarraman May-2006
- Reduce apathy
 - increasing awareness of economic benefits
- Implement behaviour change strategies
 - property registration/ incentives/ reminders
 - property pest management planning
- EMPHASIZE FOLLOW-UP



Lantana Aware Survey

- The aim of this survey is to
 - monitor impacts of control at property level over time
 - encourage continued management of lantana
- The survey will provide us with information about
 - current practices & how people achieve best practice
 - also allow us to develop better information & activities to assist landholders in their efforts.
- We will provide a free Lantana Control Manual for the first 1500 respondents (worth \$12.25).
- Contact **Clare Raven** to participate @
clare.raven@nrm.qld.gov.au





Yarraman Field Day ~ Tuesday May 23rd

Time: 10:00am-3:00pm Fully catered

Be there for the launch of and get a free copy of the latest & greatest ~ *Lantana Herbicide Brochure*

Hear from and speak to

- herbicide reps
- manufacturers
- experts in lantana control

See demonstrations of

- bob cat grubbing
- splatter gun
- helicopter equipment

See the results of control techniques including

- slashing, stick raking, mechanical grubbing
- foliar spraying, helicopter spraying

See me for more info on the **Lantana Aware Survey & Yarraman Field Day**