

Increasing cooperative management of serrated tussock

The way forward for NSW and
the ACT

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Aim of the report

- Snap-shot in time of current serrated tussock achievements and activities
- Recommendations on the way forward
- Focus for discussion, negotiation and future decision making

How was the report compiled?

- Site visits
- Literature reviews
- Conversations with:
 - Land managers
 - Researchers
 - Agronomists
 - Landcare and Catchment Management people
 - Weeds Officers
 - Local and State government officers
 - Contractors
 - People interested or involved in the management of serrated tussock.

Context of the report

- *New South Wales Invasive species Plan 2008 – 2015*
- NSW DPI and OEH (2011) *Biodiversity priorities for widespread weeds*
- *ACT Weeds Strategy 2009 – 2019*
- *Draft - Weeds of National Significance Serrated Tussock (Nassella trichotoma) Strategic Plan (Revision) 2011*

The usual disclaimer



- It is not possible to talk to all involved or include the views of everyone.
- There may be some generalisations and some issues or insights may have been missed.
- As part of the broader funded project, further reports will be produced and will be subject to continual improvement.
- Feedback on this and subsequent reports is welcomed.

The impact of serrated tussock

- Biodiversity
 - In NSW weeds pose the second greatest threat to biodiversity after land clearing and habitat loss. NSW DPI and OEH (2011).
 - Serrated tussock is identified as a threatening process under the NSW Threatened Species Act.
 - In the ACT serrated tussock is recognised as one of the highest weed priorities.
- Agricultural land
 - In 2008 serrated tussock was costing NSW alone in excess of \$40 million per year in control and lost production
 - The ACT Weeds Strategy 2009 – 19 states that “Weeds have major negative economic, environmental and social impacts in the ACT.

Three Priorities for Action

1. Engage all land managers
2. Build ecosystem resilience
3. Get measurable results

Principles underlying the recommendations

- Effective control must be aimed at the landscape scale and across public and private land tenures.
- Building resilience recognises the link between ecological and productive systems
- Effective control benefits all Australians through healthy ecosystems and productive landscapes; all Australians should contribute to its control.

Principles underlying the recommendations

- Current serrated tussock control and management systems have a finite capacity to manage the current level of infestation and rate of spread.
- Adaptive management approaches using new science and practical experience are critical in the current environment of limited knowledge and resources.

Leadership

- Legally landowners are responsible for managing weeds
- Management of noxious weeds is complex
- Serrated tussock is widespread and impacts on environmental and productivity assets
- Must be looked at as a shared responsibility

Government response is often to invest resources into those areas where there is the greatest return on investment.

If a land manager was to follow this same principle, areas defined as a mother lode would not and in fact are not being dealt with - and that can be argued is a sound managed decision.

Local Control Authorities

- 42 LCA are reported to have serrated tussock
- 54 local government areas
- Local Government Area *verses* County Council
- Structure is not important
- Observed key ingredients to success

Key ingredients to success

- Leadership
- Strategic Planning
- Resources
- Communications

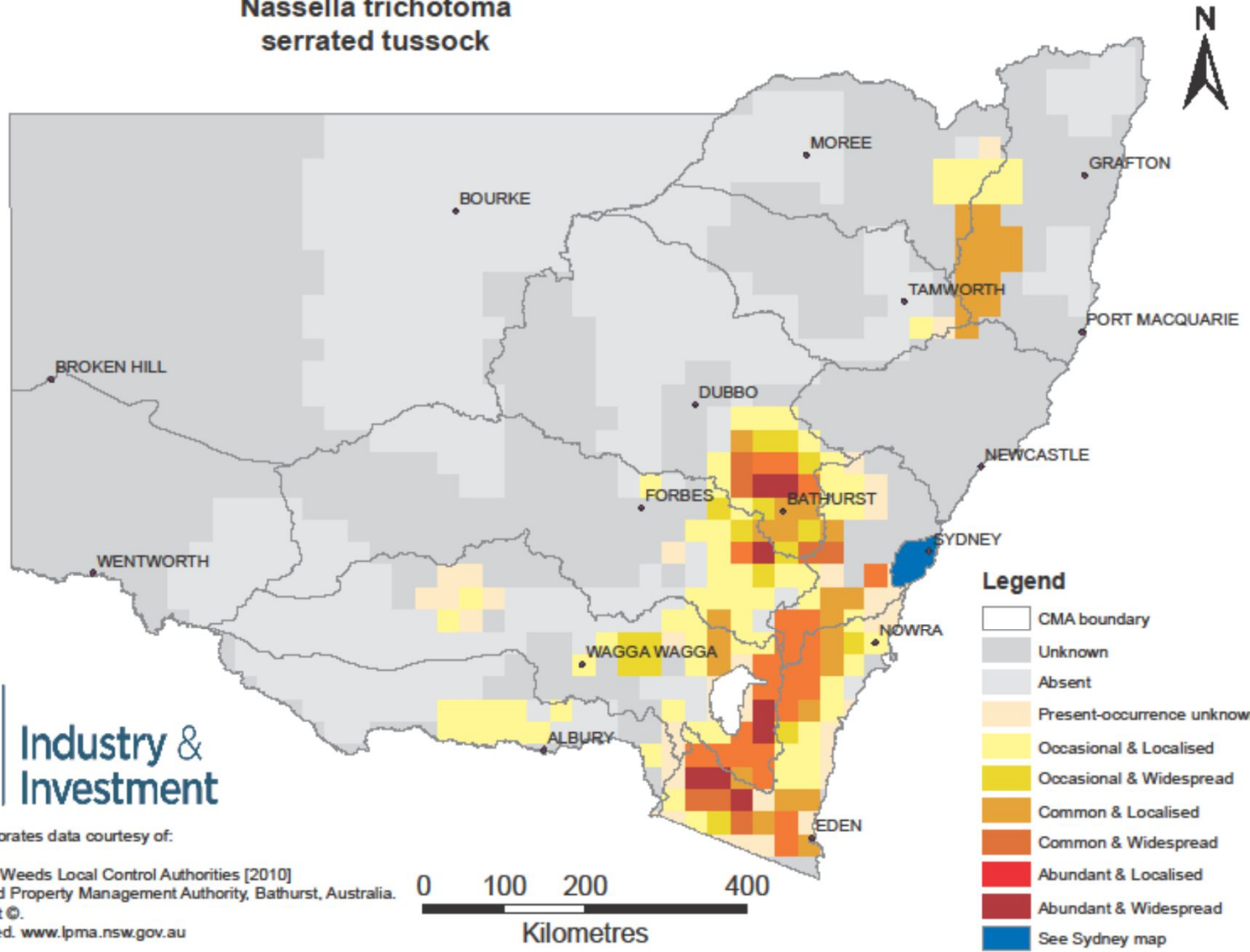
WAP – Weed Action Program

- WAP is a major funding source for weed management in NSW
- Implementation of Year 1 has created some angst at the regional level
- Weeds Officers reported positively on
 - The way it has lead them to deal with new weed incursions
 - High risk pathways
- Criticisms include a lack of support and leadership in:
 - developing strategic plans and documents such as communications strategies
 - capacity building for the administration of regional programs of this size.

Mapping

- Some individual LCAs - mapping programs
- ‘Off the shelf’ programs designed for use in mapping and monitoring weeds
- State and national level maps - general distribution but are not useful for on-ground planning or management
- *Invasive Species Plan* - goal is to address new incursions current mapping is not contributing to this.

Nassella trichotoma serrated tussock



**Industry &
Investment**

This map incorporates data courtesy of:

- 1.NSW Noxious Weeds Local Control Authorities [2010]
 - 2.NSW Land and Property Management Authority, Bathurst, Australia.
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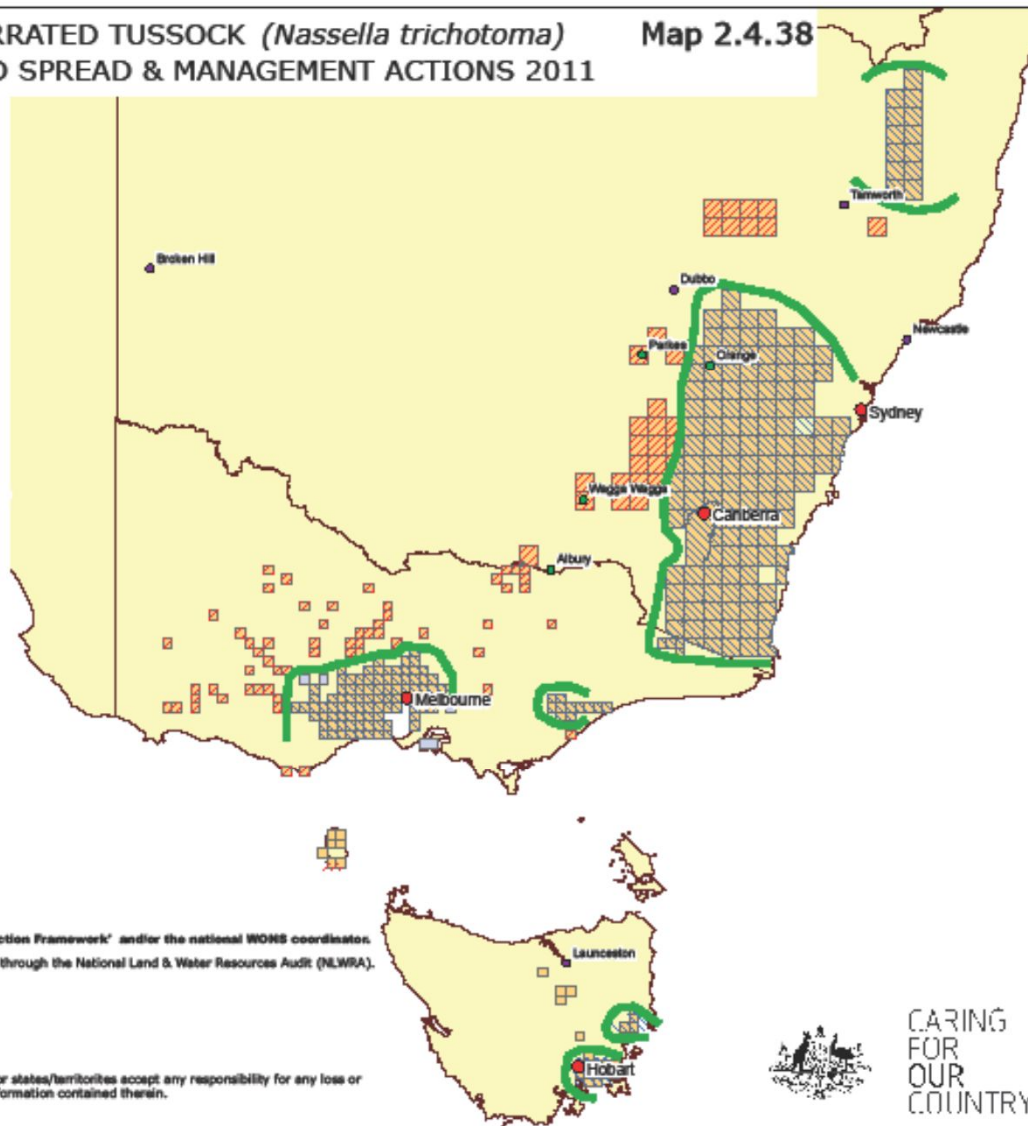
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**SERRATED TUSSOCK (*Nassella trichotoma*)
WEED SPREAD & MANAGEMENT ACTIONS 2011**

Map 2.4.38

SERRATED TUSSOCK MANAGEMENT ACTIONS

- Containment Line
- Outlier Control Target
- Eradication Target
- Core Infestation: Asset Protection. Contain/Reduce Impacts
- Weed Present
- No Reported Occurrence



For detailed information on management actions refer to species 'National Priority Action Framework' and/or the national WONS coordinator.
Original digital occurrence data supplied by the states and territories with national collation through the National Land & Water Resources Audit (NLWRA).
Subsequent updates by the National WONS Management Groups 2008-2011.

Management action data provided by the respective National WONS Management Group.

Projection and datum: Geographics, GDA94
Map production date: 10 February 2011

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What is working?

- Good systems and processes
- Leaders & individuals
- High focus on extension over compliance
- Victoria – containment approach
- Individual land managers

Some interesting comments & observations from around the traps

- Gunning CRT reported an 18% reduction in flupropanate sales over last 12 months
- People switching to cheaper alternatives and not understanding their modes of action
- RCS quote a high % of unviable farmers
- Sleeping giant is mining in many areas not serrated tussock
- In times of drought and low commodity price, serrated tussock is not the first priority
- Need a better understanding of the timeframes needed to turn people around in terms of understanding and action
- Low return on investment from a research point of view
- Serrated tussock burn-out, need greater motivation
 - Dedicated contractors?

Where are we now?

- Current methods haven't worked at State level:
 - More funding ... BUT
 - More weeds despite chemicals and new technologies
- Many weed officers acknowledge they are losing the battle.
- No serrated tussock research is being undertaken in NSW by DPI
- Hobbs and Humphries say “current research and management inadequate to tackle the problem.” (Must focus on invaded ecosystem rather than invader)
- Individual with definite ideas and solutions
- Perception that State lands are treated differently to private land

Recommendations

- Report recommendations
- Acknowledge sources
- Thinking 'outside the square'

- *Objective*
- *Rationale*
- *Change needed*

Accurate and verifiable mapping to support ongoing management and monitoring.

Rationale

- Ensure resources are invested in agreed priority areas at both a farm, regional and State level.
- Monitor the effectiveness of on ground actions/programs and allocation of resources.

Change needed

- Allocation of resources for mapping to the regional rather than State level.
- Development of the capacity for regional mapping programs to be collated into one set of State-wide data. (based on current mapping programs)

*Land purchasers are aware of their obligations
with regards to noxious weed legislation.*

Rationale

- Unknown legal requirements and commitment required on purchase of land

Change needed

- Changes to conveyance act
- On going communications

Align noxious weed management with natural resource (agricultural and environmental) management.

Rationale

- *NSW Invasive Species Plan* - linking State and Regional Weed Plans with Catchment Action Plans.
- Weed management needs to be undertaken in a holistic manner. Focus on the invaded ecosystem rather than the invader.
- Reduce the number of jurisdictions - less complex, easier coordination.
- Strategic approach to increasing resources to weed management.
- Build on existing extension expertise.
- Greater emphasis on integrated land management. NRM and outcome focused – ecological and productivity
- Current participation in weed programs; integrated weed management plans

Change needed

- Divest weed management to Catchment Management Authorities rather than in Local Government.
- Establish a business model for weed management.

Resolve community/individual benefit with regard to funding and resourcing

Rationale

- Noxious weed management is complex and often the community benefit is greater than the individual benefit.
- Where there is public investment should be able to prescribe treatment and land-use afterwards

Change needed

- Agreement on 'fairness' and implementation of public funding allocation. What and how?

State owned land to have same enforcement as private land

Rationale

- Is this a perception or reality?
- NPWS acknowledge they are currently underfunded

Change needed

- Determine reality of the issue
- Ensure/promote government responsibility with land management

Weed Officer training to focus more broadly on land management and extension

Rationale

- Effective noxious weed management requires equally, a knowledge of pesticide use and farming systems/nrm
- Weed Officers (greatest resource) are often under resourced with regards to extension techniques, landscape management and agricultural production.

Change needed

- Training to have a greater emphasis on extension and nrm/land management
- Skilled weeds officers – farming systems/nrm background needed at the planning level

Plan for intractable lands

Rationale

- Management of intractable lands are beyond the capability of individual land managers
- Grassland acquisitions in Victoria as offsets for urban development as precedent

Change needed

- Need to look for potential for offsets of intractable lands.
- Need systems level thinking from eradication to management on low fertility, inaccessible land

Shift focus from management plans to real on-ground land management changes

Rationale

- Current management plans are inadequate as a tool to induce long term land management change
- Management plans seldom take into account the long term aspirations for the farming enterprise

Change needed

- Management plans need to reflect the management of the whole farm
- Develop a different way of writing a management plan that works legally and also for the Weed Officer and land manager

Best practice review panel

– regular review of research

Rationale

- New technologies may be slow to be adopted
- Existing research outcomes are being lost
- Changing focus and programs – no continuity of research or carry through of corporate knowledge
- New trials being undertaken in the absence or ‘context’ of work that has happened before leads to conflict and not collaboration of a way forward.

Change needed

- Regular independent ‘expert’ panel to review existing and new technologies and research

Communications – keep issue continuously alive

Rationale

- Complacency and lost motivation in land managers
- Little support in the wider community for serrated tussock management

Change needed

- Focus communications on targeted messages relating to economic and environmental realities

Effective regulatory system

Rationale

- No real information on the success of implementation of the Act
- Perception that state owned land is given more leniency
- Fines often result in little or no change in real on ground management
- General public support for implementation/enforcement of weed laws is low as is the allocation of resources to public education/communication

Change needed

- Review effectiveness and consistency of current legislation
- Trial compulsory training rather than fines
- Undertake widespread awareness campaign of the impact of serrated tussock

Incentives – rewarding positive behaviour

Rationale

- Economics and short term financial decisions drive investment in noxious weeds at a farm level

Change needed

- Need to look at funding from a systems approach not single issue to attract resources

Continuing research and development

Rationale

- Research needed into winter active native grasses so we have a native competitor in non arable, poor fertility areas

Change needed

- Support and encourage appropriate research projects