

**REVIEW OF PROGRESS TOWARDS THE
NATIONAL SERRATED TUSSOCK
STRATEGIC PLAN**

(2008 - 2009)



Prepared by:

*Bronwen Wicks
National Serrated Tussock Coordinator*

*For the National Serrated Tussock Management Group
and Industry and Investment NSW
(formerly NSW Dept of Primary Industries)*

September 2009

Contents

Executive summary	3
Best management practices.	3
Managing the impact.	3
Community benefits and commitment.	3
Introduction	4
Background.....	4
Review of Goals and Achievements	4
Indicators for reporting on serrated tussock targets.....	4
Future priorities.....	4
GOAL 1 Best management practices	5
Development of a Serrated Tussock Best Practice Manual and Workshops.....	5
Launch and Distribution of Best Practice Manual	5
Findings from serrated tussock workshops	6
Research Projects and Other Studies	6
Herbicide Resistance to Flupropanate.....	7
Effects of flupropanate on non-target species – glasshouse trial	7
Biological Control Program	8
Evergraze Research Site – grazing management	8
GOAL 2 Managing the impact	9
Setting Priorities – National Mapping of Serrated Tussock & Priority Framework .	9
Serrated Tussock and management in native grasslands.	9
Serrated Tussock and Box Grassy Woodland Biodiversity, NSW.	9
Management of serrated tussock in Tasmania	10
Management of serrated tussock in the ACT	10
Management of serrated tussock in New South Wales.	11
New England region, NSW	12
Riverina region, NSW	12
South East region, NSW	12
Compliance Program in Victoria	13
‘Intensifying the Attack on Isolated Serrated Tussock Populations’, Victoria.....	13
Integrated Land Management & Serrated Tussock (Grow West), Victoria.	13
Biodiversity and Management of Serrated Tussock, Victoria	13
Rate rebates scheme encourages the control of serrated tussock, Victoria.....	14
Building capacity of local government to manage roadside weeds, Victoria.	14
GOAL 3 Community benefits and commitment	15
Serrated Tussock Working Party for NSW and ACT Inc. (STWP NSW/ACT)	16
Tasmanian Management Group	16
The Victorian Serrated Tussock Working Party (VSTWP).....	16
Community Benefits & Commitment, ACT	16
Meetings in core infestation areas, Victoria	17
NASTI Group, Victoria	17
Supporting community led action to encourage voluntary compliance, Vic.	17
Appendix 1 – National Serrated Tussock Management Group	18
Appendix 2 – Publications	19
Appendix 3 – Financial Contributions to serrated tussock management	21
Appendix 4 – Map showing location of major projects and activities	24

Executive summary

This report outlines progress made in 2008/09 towards the National Serrated Tussock Strategic Plan, which forms part of the broader Weeds of National Significance (WoNS) program. The outcomes achieved to date are the result of a range of actions undertaken over many years and have only been made possible through substantial support from the Australian Government, state and territory governments, regional natural resource management (NRM) bodies, local government, community groups, industry and research institutions and work of individual land-owners.

While it is not possible to fully quantify the financial investment in serrated tussock management, national coordination has ensured that investment has been towards strategic national goals, and encouraged collaboration and action from partners and stakeholders, enabling the achievement of significant outcomes over the past year.

Best management practices

- The Serrated Tussock Best Practise Manual, eight page brochure and Resource CD were developed and produced, providing land managers and community groups with easy to use best practice information. Active distribution of the manual has occurred in all states, and feedback has been very positive.
- The Manual was launched nationally in Nov. 2009, with significant media coverage, helping raise the profile of serrated tussock. Both Victoria and Tasmania launched the Manual at state supported events to promote serrated tussock management.
- New herbicide resistant serrated tussock populations have been reported quickly and acted on – land manager's awareness of resistance is increasing.

Managing the impact

- Serrated tussock remains unreported in SA and Qld, and all states with infestations have active management programs for outlying serrated tussock populations. Awareness and identification programs have increased in priority areas.
- New unexpected infestations have been found in Tasmania and the ACT as a result of dedicated serrated tussock programs, are now under active best practice management.
- A nationally agreed distribution map has assisted identification of containment lines and core infestations, aiding stakeholders to strategically target grant applications and community programs.
- Two projects funded specifically to develop a strategic regional approach to managing serrated tussock, based on partnerships with all stakeholders, and supported with targeted on-ground activities.

Community benefits and commitment

- State working groups are now active in NSW/ACT, Tasmania and Victoria, and are actively coordinated and collaborating with the National Serrated Tussock Management Group (NSTMG) towards achieving outcomes under the national strategy.
- A series of community initiated regional meetings in NSW has laid further groundwork for collaborative serrated tussock programs.
- Significant ground work in developing partnerships and future collaborative projects.
- Increase promotion and raising profile of serrated tussock with coordination and leverage of WoNS at conferences, profiles in weed brochures and field days.

Substantial contributions from all partners have made these and a range of other activities possible. However commitment must continue to maintain momentum and capitalise on the investment to date. Future priorities for the program include: promoting the need for integrated weed management for long-term management and to avoid resistance, management of herbicide resistant populations, replacement grass species in low productive environments, support broader landscape scale management, tools to help identification in-situ with native grasses, promote farm hygiene and incursion pathways to prevent further spread.

Introduction

This report outlines progress towards the vision of the Serrated Tussock National Strategy: "The impact of serrated tussock is reduced and its spread and establishment across Australia is prevented."

Background

Serrated tussock is a perennial grass that has readily invaded temperate south east Australia, particularly agricultural and native grasslands. Serrated tussock is not readily eaten by animals and reduces productivity of what is generally already low productive land. It is difficult to manage and requires a long-term commitment and on-going vigilant activities. It is particularly difficult to manage the 'seed-rain' from neighbouring areas within a catchment. Successful management requires good on ground property management combined with a coordinated strategic planning at the catchment or regional level. One without the other cannot succeed over the long-term.

The Weeds of National Significance Serrated Tussock Strategic Plan was agreed and published in September 2000.

A list of current National Serrated Tussock Management Group (NSTMG) members is found at Appendix 1, with a short table of abbreviations used in this report. Publications produced during 2007/08 are noted in Appendix 2 and an estimate of financial investment in serrated tussock management is at Appendix 3. A map showing location of major projects and activities is at Appendix 4.

Review of Goals and Achievements

Information was collected on recent achievements, current activities, and plans from all regions affected by serrated tussock for each of the three main goals of the National Strategy, though also making use of the recently developed Priority Management Framework. Information has been summarised to show highlights.

Indicators for reporting on serrated tussock targets

The National Strategy outlines performance indicators. The NSTMG will be reviewing these indicators in 2008/09 and ensure that indicators are aligned with overall objectives. A key challenge in setting performance indicators for a weed like serrated tussock is to make them appropriate and meaningful for different contexts and time-frames. Commitment is long-term and constructive change is incremental. Much positive work and goodwill can be lost quickly with short-term changes to funding, policy and programs.

Future priorities

The direction and objectives of the National Strategy will be reviewed in 2009/10, as part of the broader review of the Weeds of National Significance program and the commitment to review WoNS strategies every five years. Future priorities under a national strategy have been identified at the end of each section of this report.

REVIEW OF PROGRESS TOWARDS THE SERRATED TUSSOCK STRATEGIC PLAN 2008/09

In 2008/09, the National Coordinator worked together with and supported the National Serrated Tussock Management Group (NSTMG) and a range of stakeholders across Australia to achieve significant progress under the National Serrated Tussock Plan.

While it's not possible to fully quantify the level of investment in serrated tussock management, the total investment by the Australian Government over 2008/09 was \$476,000. State governments have also made significant financial contributions, with at least \$361,500 for dedicated serrated tussock programs. In addition, over \$8,300,000 is provided under the NSW Noxious Weeds Grant directly to councils for general weed management activities. Management of serrated tussock would be included in infested areas but it is not possible to obtain financial expenses on a single weed species basis. Additional investment and in-kind contributions from other state bodies, regional NRM bodies, industry, agronomists, Landcare and community groups cannot be quantified, but occurs for either serrated tussock only projects or integrated projects which include serrated tussock (e.g. sustainable grazing, native grassland management). Private land-managers invest significant and on-going money into direct serrated tussock control activities.

A short summary of significant achievements in 2008/09 is provided below.

GOAL 1 Best management practices

Desired Outcome: Best management practices to reduce serrated tussock are available and adopted.

Development of a Serrated Tussock Best Practice Manual and Workshops

The Victorian Department of Primary Industries (Vic DPI) obtained funding in 2007/08 from the Defeating the Weed Menace Program to produce a Serrated Tussock Best Practice Manual (BPM). This project was to produce a BPM based on best practice research and technical information together with the personal experience of farmers, weeds officers, scientists and local government officers.

The project was designed to enable farmers to relate and share their experiences with scientists and natural resource managers while also hearing about the latest research discoveries. Eight workshops were conducted, involving over 200 participants, in Victoria, New South Wales, the ACT and Tasmania.

A technical reference group with representatives from all States oversaw the development of the BPM. The key messages of the BPM are that successful serrated tussock management requires a long-term commitment and an integrated weed plan, together with persistence and vigilance. We also cannot depend solely on chemical herbicides. The need to cooperate within communities and catchments is emphasised, as is the need for good catchment and/or regional planning. The BPM includes a number of case studies to illustrate different experiences with serrated tussock. Each copy of the BPM includes a copy of the Resources CD.

The Resource CD has brought together for the first time most of the scientific, research and technical reference material concerning serrated tussock. The CD is a simple stand-alone website and features a search function. It also contains a searchable copy of the BPM, and is a valuable, low cost information resource. The NSTMG and Coordinator has been actively involved in the development of the BPM, brochure and the resource CD.

Launch and Distribution of Best Practice Manual

The BPM was successfully launched nationally in November 2008, with over 70 people attending a field day event at the native grasslands in Mulligan's flat, ACT. The launch

had significant media coverage, including newspaper articles, interviews by the NSTMG and Coordinator and radio coverage, all helping raise the profile of serrated tussock. Both Victoria (November 08) and Tasmania (February 2009) have also launched the BPM at state supported events to promote serrated tussock management, and to show-case best practice management.

The manual, brochure and Resource CD have been actively distributed to management agencies and land-managers. Over 9000 copies of the manual have either been distributed, or are currently in the distribution network, with copies centrally available from the Victorian and NSW DPI bookshops.

Findings from BPM serrated tussock workshops

Several issues came out strongly through the workshops, the greatest being the challenges that relate to changes in land use. Absentee landholders and untreated serrated tussock on public land were identified as providing a major source of airborne seed, while many farmers were now cropping, at least rotationally, where they had previously only grazed stock. Participants in the workshops highlighted that there is no excuse for having serrated tussock on arable land and emphasised the importance of continued monitoring and follow-up control measures. The real challenges for serrated tussock are in the non arable and steep escarpment country where the only incentives to control it are the threat of legislative prosecutions and peer pressure.

Across all workshops there were comments on the importance of pasture management using a range of grazing techniques. Prominent in the Victorian workshops was the use of trees as windbreaks to reduce serrated tussock seed spread. Whatever successful technique was being proposed, participants were unanimous on the idea that you must 'follow-up, follow-up, follow-up' on your tussock management and attack it when the infestation is small and manageable so that you have a better chance of controlling it.

Research Projects and Other Studies

Annie Schneider continued her PhD at the University of New England, on "*The fate of serrated tussock seeds on the Northern tablelands of New South Wales.*" It examines the extent to which land managers are heeding the message of sound weed hygiene and other procedures to prevent the establishment of serrated tussock is unclear. As part of her PhD, Ms Schneider has designed a survey to examine the use of prevention measures in the Northern Tablelands of NSW a part of Australia where the weed is present but not yet widely established. Surveys have been sent to approximately 2000 land-owners in the region, including managers of farm businesses and people who do not rely on their land for an income. It is anticipated that this survey will reveal the ways in which serrated tussock is spreading within the region, and is expected to highlight aspects of prevention that can be emphasised in extension and awareness raising activities. The outcomes of this survey will be actively communicated to land managers to support action to prevent the spread of serrated tussock.

Sonia Graham has completed two years of study towards a PhD at Charles Sturt University titled "*Collective action in community-based natural resource management: the role of good working relationships and trust.*" The aim of the research is to investigate, using serrated tussock as an example, how working relations between landholders and government agencies can be fostered in natural resource management in rural Australia. In particular, the PhD is focussed on trusting relationships around the issue of serrated tussock. The study primarily involves: 1) interviewing landholders and staff of government agencies; and 2) attending meetings of communities and government agencies involved in NRM. Ms Graham has chosen to study areas to concentrate on – Bacchus Marsh in Victoria, and the Cooma/southern NSW region.

Dr Aaron Simmons, Prof. David Kemp, Dr Warwick Badgery and Dr David Michalk at Charles Sturt University and NSW DPI have recently completed a research project funded by Meat and Livestock Australia, Australia Wool Innovations and Land and Water Australia. Research focussed on control in native pastures and combined on-ground work combined with interviews and questionnaires with land managers. Results reinforce the

fact that disturbance is a key requirement for serrated tussock invasion in native pastures. Results also indicate that rather than being a problem that cannot be managed, a large proportion of managers with a serrated tussock infested property are able to manage the weed and keep its levels to a minimum.

Key issues to consider in making decisions regarding management of serrated tussock are:

- Use the mode of herbicide application that creates least disturbance.
- Manage pastures to ensure there is adequate ground-cover competition and minimal disturbance.
- Have a diligent approach to serrated tussock control (that is: be pro-active rather than reactive, follow-up each year, and always actively manage if you have had serrated tussock).

The project has developed two products to help manage serrated tussock. One is a decision support tool, '*Serrated Tussock – getting the basics right*', which leads land managers through a series of key decisions to help determine the most appropriate serrated tussock activities for their particular situation. The other is an economic tool ('*Serrated tussock: Estimating benefits of control in native and natural pastures*') that helps show managers the economic impact over ten years of different serrated tussock control and management scenarios. Both tools when finalised should be available from the WoNS website.

Herbicide Resistance to Flupropanate

Flupropanate has been widely regarded as the best chemical control option for serrated tussock due to its selectivity and its residual action on emerging plants. However herbicide resistance has been known for several years now and has been studied in glasshouse trials and in the field. A critical emerging concern is the development of appropriate responses when herbicide resistant serrated tussock is discovered. To date, three separate resistant infestations have been found in NSW (one in Armidale, and two near Goulburn) and at least two populations in Victoria (Diggers Rest and Rowsley Valley).

Unfortunately it now appears that herbicide resistant populations are proving harder to control in the field than originally hoped and anticipated. David McLaren from Vic DPI Frankston (coordinating research into resistance in *Nassella* spp.) has been invited by NEWA to visit the resistant serrated tussock population in the region. It is hoped that by studying the resistant plants and seeds, together with the land-use history, that some further insights on resistance can be found and identify alternative control measures.

A new population of potentially herbicide resistant serrated tussock has been found near Goulburn. The population is quite large and poses a threat to the grazing lands in the Southern Highlands of NSW. Seed and plants from the area are currently being studied and grown on by Vic DPI.

Herbicide resistance has been confirmed in the Rowsley Valley, Victoria. A joint project with funding and resourcing from the Australian Government, Vic DPI and the Victorian Serrated Tussock Working Party (VSTWP) has confirmed that resistance to the herbicide flupropanate is far more widespread than previously thought in the region. Recommendations are included in the project report as to how to live with herbicide resistance while maintain serrated tussock control, and how to preventing herbicide resistance in the first place. The final report '*An assessment of the extent of serrated tussock resistance in the Rowsley Valley, Victoria*' by Dr David McLaren is available at www.serratedtussock.com.

Effects of flupropanate on non-target species – glasshouse trial

Flupropanate is a selective herbicide used in the control of serrated tussock (*Nassella trichotoma*) and Chilean needle grass (*Nassella nessiana*). However the extent of off-target affects on non target species such as pasture grasses, legumes and native grasses

is anecdotal and has not been scientifically assessed. A glasshouse experiment was funded by the VSTWP with the support of the Vic DPI to assess off-target effects. Results indicated that serrated tussock was killed by rates of 2 L/ha flupropanate, while Chilean needle grass was less susceptible. Only one of the non target species, subterranean clover appeared to be significantly affected by flupropanate. All other non-target species in the experiment were found, under glasshouse conditions, to not be significantly affected by flupropanate application. The VSTWP will be funding a similar research project in 2009/10 that will determine the effects of flupropanate on non-target species in the field.

Biological Control Program

Three South American pathogens have been studied for potential biological control of serrated tussock. None have proved promising due to various technical difficulties. If resources can be found, this project will shift its focus to soil pathogens affecting the serrated tussock seed bank in Argentina.

Evergraze Research Site – reducing the germination of serrated tussock through grazing management

EverGraze is a Future Farm Industries CRC, Meat & Livestock Australia and Australian Wool Innovation research and delivery partnership developing and testing new farming systems based on perennial species and groundcovers in southern Australia.

In 2008 an EverGraze support site was established in a steep gorge near Ballan, Victoria which was previously heavily infested with serrated tussock. The aim of the support site is to develop a grazing program for steep escarpment country that maximises native grass competition. (See www.evergraze.com.au/SouthernVIC/ss-Young.htm for current results of this trial). The VSTWP is a sponsor of the Ballan EverGraze support site.

Key challenges and future priorities, include:

- More populations of herbicide (flupropanate) resistant serrated tussock populations have been found. This highlights a need to promote the issue of herbicide resistance in serrated tussock and the need for integrated weed management.
- Developing and implementing a long-term integrated weed plan for management for serrated tussock to suit individual properties can be a complex activity for the average land-holder.
- Lack of replacement pasture/grass species (both productive and native) for serrated tussock in low productive areas, especially in tablelands of NSW.
- Identification of serrated tussock relative to native grasses remains a challenge for many land-managers, as is knowing how to identify it as it changes through the seasons.
- The cost of control, especially on low productive land (combined with effects of drought and over-grazing) can be uneconomic for individual land-holders, but uncontrolled serrated tussock populations are detrimental to the whole community and neighbouring land-holders.
- Long-term management of serrated tussock requires co-operative regional and community programs, and support for targeted control programs.
- Highlight good farm hygiene practices, and awareness of likely incursion pathways, to prevent initial entry to clean farms, and prevent further spread.

GOAL 2 *Managing the impact*

Desired Outcome: The impact of serrated tussock is minimised

Across Australia regions with serrated tussock either have specific tussock strategies or general weed strategies that provide the framework for serrated tussock management. Programs include a mix of planning, extension, facilitation, and regulation. National coordination has facilitated alignment of strategies and framework towards national goals, and encouraged collaboration and action from partners and stakeholders, enabling the significant achievements over the past year.

In line with the National Priority Action Framework the two themes reported on here are: 'early detection and reducing spread', and 'managing the impact'.

Setting Priorities – National Mapping of Serrated Tussock & Priority Framework

The national distribution map of serrated tussock was used as a base map to identify agreed national containment lines, core infestations and outlying populations. State weed management projects and activities are aligned with these priorities, within the constraints of current resourcing.

The priority management map, along with other similar WoNS maps, was a key supporting document in the recent Caring for our Country business plan. It is available on the www.weeds.org.au website and was used by organisations to identify priority weed areas and develop better targeted grant applications. A Priority Action Framework was also developed to provide a summary of current priority actions under the National Serrated Tussock Strategy. The framework is also available on the www.weeds.org.au website.

The baseline national map has also been used in the BPM and other promotional WoNS information.

Serrated Tussock and management in native grasslands.

Native grasslands and some grass woodland communities in south-east NSW, Victoria and Tasmania are listed as endangered ecological communities under the Commonwealth's Environment Protection and Biodiversity Conservation Act (EPBC Act). Serrated tussock (and other exotic perennial grasses) are an acknowledged threat to these communities. The listing under the EPBC Act places restrictions on the management of serrated tussock in identified native grassland communities, in order to minimise impact on the native grassland species.

The EPBC Unit in the Department of Environment, Water, Heritage and the Arts was consulted during preparation of the BPM and provided material for the manual and the CD that sought to clarify the management of serrated tussock in native grasslands. There have been concerns among land managers, especially in Victoria, as to what the implications of the listing will have on managing serrated tussock, especially in core infestations. Further liaison needs to occur on this matter.

Communities listed under the EPBC Act are a biodiversity priority under the CfoC program and are an important point of engagement for potential funding.

Serrated Tussock and Box Grassy Woodland Biodiversity, NSW.

Invasion of the critically endangered Box Gum Woodland community by exotic perennial grasses, including serrated tussock and Chilean needle grass, has the potential to greatly reduce groundcover species, biodiversity and is a key threatening process. A

collaborative forum/field trip coordinated by the Grassy Box Woodland Conservation Management Network in June brought together State and Commonwealth agencies, CMAs, local government and research institutions to learn more about exotic grasses and their impact on this ecological community. The forum discussed weed threats and control in the context of landscape scale management.

Key issues identified included:

- Perennial grass weeds, such as serrated tussock, pose the biggest threat to endangered grassy ecosystems, invading and forming monocultures.
- Land managers need to be better coordinated by a landscape scale in order to ensure that individual weed management activities are consistent with neighbour's efforts.
- Better coordination could make more effective use of limited resources.
- Grassy weeds are a 'sleeping' issue – managers don't realise the full extent of the threat, and raising awareness with general public is also needed.
- There is a need for a better system for sharing information.
- Good hygiene practices need to be promoted and used throughout the landscape.

Management of serrated tussock in Tasmania.

Several new infestations of serrated tussock have been discovered in Tasmania as a result of CFoC funded project, entitled "*Protecting Tasmania's sustainable farming and biodiversity assets from serrated tussock invasion*". The project has found that the serrated tussock population is much larger (in excess of 3000 ha) and more dispersed than previously mapped. The most significant new infestation is over 150 ha of mature plants in the Midlands area, a prime grazing region with significant native grasslands. Significant State resources have been dedicated to this area and the NSTMG is keeping a watching brief.

The project is based on developing and building on existing partnerships (from previous serrated tussock projects) to develop a strategic plan for serrated tussock with on-ground benefits for land-holders and areas with high biodiversity values. Updating mapping, raising awareness of serrated tussock, addressing outlying populations and developing farm plans are key components of the project. Over 700 ha (90% approx.) have had some form of control activity (primarily herbicide application) and 80% of landholders with outlying populations have a control plan.

Best practice management has been actively promoted and a farm control template for individual properties has been developed. Developing on-ground management skills posed a challenge in Tasmania with few people with practical control experience. To help build Tasmania's serrated tussock capacity I&I NSW (formerly NSW DPI) provided the services of Cooma agronomist, Luke Pope, who has much practical experience in this matter. Luke presented several field days and assisted in developing farm plans – his contribution was extremely valuable and well received, as indicated by local participants.

Management of serrated tussock in the ACT

Over \$180,000 of the 2008-09 ACT Parks, Conservation & Lands (ACT PCL) weed budget (about 8% of total weed budget) was spent on on-ground control works, mainly follow-up control of known infestations on public land. It is a considerable expenditure considering the total area of land managed by ACT PCL is 175,668 ha (72% of the ACT) and only a very small proportion of this area is infested with serrated tussock. This priority shows the importance the ACT PCL places on actively managing serrated tussock on public and private lands. The control work is primarily spot spraying with Round-up Bioactive, especially in native grassland areas.

On-going follow-up is paying dividends with examples of successful management of serrated tussock in native grasslands – an example is the conversion of a serrated

tussock dominant grassland to native Tall Speargrass dominant, via on-going spot spraying with glyphosate and supporting regrowth.

A large infestation has been confirmed in the Clear Range, south-east of ACT. It is mainly on private land (ACT leasehold), with some NSW private property and National Parks. Priority is for containment and to stop spread to inaccessible highland areas. Two infestations are beyond the financial ability of land-holders to control – given the high priority of this infestation, ACT PCL is providing access to machinery to assist control in these cases. A regional plan has been prepared to reduce further spread and coordinate control actions prior to seed set this summer. Monitoring of remote locations in the ACT remains a high priority, as does coordinating cross-border activities with NSW to minimise spread and maintain active management.

Management of serrated tussock in New South Wales.

Priority activities in NSW are to maintain containment lines to contain and reduce the spread of serrated tussock, and to reduce the impact of serrated tussock within its distribution. Key containment areas are the New England region in northern NSW (the northern most infestation in Australia), the western NSW containment line (especially containing westerly spread into the Riverina and managing spread in south-east NSW, and into Victoria. NSW contains the major core infestations in inaccessible areas and on low productive soils, and reducing the impact of serrated tussock in these regions is also important.

Coordination of weed management in NSW is especially difficult given the number of different organisations, jurisdictions and associated boundaries that aren't aligned with each other. For example, CMAs, local government, regional weed committees, Livestock Health and Pest Authority and I&I NSW districts all have some responsibility for weed management, yet their boundaries are not aligned. Nor is there a formal mechanism for coordinating the various weed roles and responsibilities.

The NSTMG and National Coordinator provide an important function in this context in assisting different agencies and groups to link up and develop partnerships and in making connections across different land tenures and land uses.

Serrated tussock is a declared noxious weed in NSW. Funding for its management, along with all other noxious weeds, is included in the NSW Noxious Weeds Grant, which totalled \$8,363,000 in 2008/09. Over \$5,000,000 of this grant is provided to local control authorities (LCAs) (mainly local government councils) for inspection, extension and coordination of weed management activities. While management of serrated tussock would be included by LCAs where it occurs within their jurisdiction, it is not possible at this stage to separate out money spent on individual weed species and activities. The remaining Noxious Weeds Grant budget is dedicated to applications addressing specific serious weeds and group projects. These grants are matched dollar for dollar by the recipients. In 2008/09 the following projects were funded for serrated tussock:

South Coast Serrated Tussock Management Project 2008-2009	\$12,000
Northern Inland Serrated Tussock 2006-2011	\$4,000
Macquarie Valley Grasses 2008-2013	\$23,000
Eastern & Western Riverina Serrated Tussock 2006-2011	\$5,000

Current changes to the NSW Noxious Weeds Grant process will require Councils to be more transparent and accountable in their weed funding, and in future to have plans with clear reporting mechanisms and are clearly aligned under the NSW Invasive Species plan.

New England region, NSW

From a national perspective the New England infestation is the most northern incursion of serrated tussock and it is critical that there is no further spread northwards. The New England Weeds Authority (NEWA) is the weed control authority and includes four local councils in its 18 000 km² management area.

Serrated tussock is seen as the key threat in the region to the grazing industry and NEWA has taken a very pro-active stance towards its management and in assisting land-holders. NEWA's approach to regional planning and supporting land managers with serrated tussock is different to most other LCA's in NSW, and serves as an active demonstration of the success of regional planning and building cooperative partnerships.

Serrated tussock is lightly scattered through the region, with three to four hotspots of dense infestation. All core areas are under active management, though at different stages with one still requiring active regulation. New infestations have been found within the known distribution area near Armidale. Hobby farmers, absentee and new landholders remain a stakeholder group that is difficult to deliver extension information to, and who often don't manage weeds responsibly.

One property in the region has confirmed herbicide resistance in serrated tussock. Containment and management of these infestations has been prioritised. However, the management and spread of resistant seed may be a bigger issue than originally thought. David McLaren, a research scientist from Vic DPI, visited the property to assess the situation and take sample of seed and plant material for further study.

In a region with light infestation over a large area, promotion, extension and identification skills are very important. Five identification sites in the region have been maintained, and best practice materials have been actively distributed at local shows, field days and Landcare events.

Riverina region, NSW

The Riverina region contains the most westerly infestation of serrated tussock in NSW and is a critical containment area to prevent further westerly spread. A large area of serrated tussock is in the Reno area of Gundagai. Small infestations also exist at Albury, Wagga, Hume, and Corowa shires. All known infestations are being actively managed by landholders and weeds officers, with existing infestations being reduced by about 43% (07/08 Riverina Noxious Weeds report). Occasional plants have been found along highways and roadside reserves. Developing and maintaining ground skills in identification remain a key issue – new infestations are usually found after a field day or information session.

South East region, NSW

South-east NSW is seen as the heartlands of serrated tussock with large areas of intractable infestations, as well as an important containment region to prevent spread further south and towards the coast.

Towards the south coast serrated tussock remains relatively manageable. The Bega area, however, has some very difficult infestations. The Towamba/Perico Serrated Tussock Group is very active in the region. This group is community based with strong partnerships with Council weed officers, I&I NSW, retail agronomists and landholders. Landholders provide individual property updates that enable a community-based approach to managing serrated tussock. A local 'best management guide' is being developed as part of a collaborative '*Farming for Weed Suppression Project*' project between Southern Rivers Catchment Management Authority (CMA), local Councils and farmers.

A south-east NSW project, entitled "*Strategic management of Serrated Tussock – Reducing the threats to sustainable farming*" was successful in gaining \$150 000 of funding under 2008/09 Caring for our Country program. The project is managed by the

Snowy River Interstate Landcare Committee (SRILC) and is a collaborative project with Councils, CMAs, I&I NSW, the NSTMG, Landcare groups and land managers to develop an overall strategic regional plan, to be translated into Landcare group plans and further implemented in on-ground farm plans. Some funding is available for regionally identified high priority serrated tussock control works. The project is progressing well, though it has been hindered by lack of access to Council weeds information due to a ruling under the Privacy Act, land holder serrated tussock fatigue and the on-going drought. The project is complimenting Meat & Livestock Australia courses being run in the region.

Compliance Program in Victoria

The Victorian DPI delivers the serrated tussock extension and compliance program in Victoria. The Victorian extension and compliance program is directed by the Victorian Serrated Tussock Strategy *'Intensifying the attack on serrated tussock'* and other strategies. Resources are limited, so areas are prioritised based on: reducing pathways of spread, managing outlier infestations and containing serrated tussock to the core infestation. The Vic DPI Mobile Compliance Taskforce continues to provide support to community groups strategically managing pests and weeds.

'Intensifying the Attack on Isolated Serrated Tussock Populations', Victoria

The VSTWP and the Victorian DPI have continued to deliver the project *'Intensifying the attack on serrated tussock: targeting isolated infestations for eradication'* under the Defeating the Weed Menace Program. The Australian Government granted funding of \$365,000 until 2009 for the employment of a project officer and to provide incentives to landholders and community groups to control isolated infestations of serrated tussock. The aim of the project is to achieve long-term control of isolated serrated tussock infestations through rapid control and replacement with appropriate vegetation.

The project has delivered more than \$195,000 in grants to community groups, such as Landcare, and private landholders to support long-term control programs to prevent further spread, and extensive education and mapping programs in areas of isolated infestations. Grants were available to private landholders for control works including fencing, establishments of pastures, management of native grasslands and establishment of wind breaks and herbicide costs for chemical control. The project concluded in June 2009.

Integrated Land Management & Serrated Tussock (Grow West), Victoria.

Grow West is a large scale landscape protection program targeting the Upper Werribee Catchment in Victoria which is densely populated with serrated tussock and has recently had herbicide resistance confirmed in the area. The program aims to revegetate 10,000ha of land by 2010 through working with the community, government and industry to address major land management issues (including the control of serrated tussock) through integrated land management. The Grow West plantings are a part of a long-term integrated control solution for serrated tussock.

Biodiversity and Management of Serrated Tussock, Victoria

The Moorabool Gorge Recovery Program is a community driven project which aims to protect and improve the biodiversity values and water quality of the Moorabool River Catchment. The gorge and escarpment country is also densely covered in serrated tussock. The project is a partnership including the Vic DPI, Moorabool Shire, Corangamite CMA, Barwon Water and the East Moorabool Landcare Group. The program aims to transform the Moorabool River Valley into a diverse and robust wildlife corridor which will protect existing native vegetation along the river and and revegetate degraded and weedy non-arable escarpments. Over the past five years the project has had a significant impact on serrated tussock through its control and replacement on steep slopes with native vegetation. The VSTWP supports the project by directing its extension and compliance resources to the area.

Rate rebates scheme encourages the control of serrated tussock, Victoria.

In the Port Phillip and Westernport Catchment, three municipalities offer a voluntary rate rebate program to encourage the control of invasive plants. Hume, Melton and Wyndham municipalities offer rate rebates which have contributed to private landholders achieving significant results in managing serrated tussock. The rate rebate offered is approx. 20% and program adoption by landholders remains high. The programs have been running for approximately 10 years and council revised the scheme in 2007 to incorporate three year management plans to allow for more long-term control measures. This program has proved to be very successful mechanism in encouraging the control of serrated tussock in a core infestation.

Building capacity of local government to manage roadside weeds, Victoria.

A four year project funded by the Future Farming Initiative was launched in April 2008 with the aim to build the capacity of municipal councils to manage roadside weeds, including serrated tussock. The Municipal Association of Victoria and Vic DPI are negotiating as to who should be responsible for the treatment of roadside weeds in the future.

Key challenges and future priorities, include:

- Serrated tussock remains one of the most significant threats to grazing landscapes and their communities.
- Strategic direction for management of intractable core infestations, where cost of control activities outweighs return from the land.
- Surveying for new infestations of serrated tussock, and engaging best practice.
- More active engagement with managing serrated tussock in non-agricultural land uses – e.g. forestry, after fire (e.g. in plantations), National Parks, native grasslands.
- Maintaining active management of serrated tussock while environmental influences – such as drought, climate change, over-grazing by native animals (e.g. kangaroos), fire – support its spread.
- Support alignment and integration of weed management reporting mechanisms, including monitoring of previous activities.
- Support alignment and integration of weed mapping and identification of regional priorities, and supporting partnerships.
- Increasing engagement of CMAs, and landscape scale management across all tenures.
- Need to highlight how to report an unusual species for identification, to help ensure serrated tussock does not spread into clear areas.

GOAL 3 Community benefits and commitment

Desired Outcome: Communities will embrace their own integrated serrated tussock management plans

Regional management plans for serrated tussock specifically, or general weed plans including serrated tussock, have been developed and are in force in infested regions. Key actions under these plans include planning for establishing priority areas, general extension, and property visits for personal extension, whole farm planning and regulation. Where funds are available, enhanced programs include assistance for direct control and to help develop regional or catchment based programs.

Most jurisdictions report some mechanisms to monitor implementation of their weed plans. The VSTWP, for example meets quarterly to discuss serrated tussock specifically, while the Southern Tablelands and South Coast Noxious Plants Committee meets three times a year to discuss their general weed programs, including serrated tussock.

In many regions community groups are also operating either dedicated serrated tussock programs or incorporating serrated tussock into their broader agenda. And all states currently have an active state-oriented serrated tussock working party.

There has been an overall increase in awareness of the need to create linkages between serrated tussock, its impact on biodiversity values, sustainable grazing, maintaining ground-cover and more integrated landscape management.

During 2008/09 the Australian Government Caring for our Country (C4oC) program had two funding rounds for grant applications. The C4oC program integrates WoNS weed management into NRM and CMA programs, and emphasises partnership and collaborative projects across regions. All National Coordinators spent a considerable amount of time facilitating and coordinating project applications under C4oC. A feature of this approach, regardless of whether applications were successful, has been the large number of partnerships initiated and level of increased awareness about serrated tussock and weed management issues with NRM bodies.

The two successful C4oC serrated tussock projects involved setting regional priorities, and developing partnerships with a community engagement model.

In accordance with the NSTMG priority to seek ways to more effectively engage and assist with serrated tussock in NSW, the NSTMG chair and Coordinator met with I&I NSW weed managers. CMAs were identified as a government body that could be more effectively engaged with serrated tussock and weed management in general. The National Coordinator organised a meeting on behalf of the WoNS program for three WoNS chairs to give a presentation on the benefits of the WoNS program to all NSW CMA Regional-Managers in February 2009.

All regions reported information was published and/or distributed to increase general awareness of serrated tussock. The newly released BPM, brochure and Resource CD has been actively distributed through all states with over 9000 copies either distributed or in the distribution network.

All relevant resources to the National Serrated Tussock Program have been uploaded to the Weeds Australia serrated tussock webpage: www.weeds.org.au/WoNS/serratedtussock

Serrated tussock and the WoNS program were promoted through display and dissemination of brochures, resource kits, fact sheets and banners at field days in all States, and via the following major events:

- Tasmanian Weeds Conference, October 2008.
- Presentation to the VSTWP.
- Five regional community meetings in NSW.
- National and state launches of the Best Practice Manual and info products.
- State Landcare events.

The NSTMG has met twice in 2008/9 – 14 & 15 July 2008 in Hobart and 25 & 26 June 2009 in Goulburn – and two teleconferences have been held.

Serrated Tussock Working Party for NSW and ACT Inc. (STWP NSW/ACT)

The STWP NSW/ACT is a working party comprised mostly of rural landholders across NSW affected by serrated tussock, with representation also from I&I NSW and ACT PCL. The group has been gradually building momentum, holding several meetings in 2008/09. A discussion paper has been released to stimulate discussion on serrated tussock management and is available on the WoNS website.

The STWP NSW/ACT, supported by the NSTMG and coordinator, organised 5 successful regional meetings throughout NSW with the purpose of raising awareness of serrated tussock, promoting best practice and mobilising the initiation and coordination of local community groups. Meetings were held in Armidale, Euchareena, Trunkie Creek, Goulburn and Nimmitabel with a total of over 200 landholders attending.

The group continues to lobby for funding for a NSW Executive Serrated Tussock Officer to coordinate NSW serrated tussock, with the support of the NSW Farmer's Association. I&I NSW and the national coordinator submitted an application for funding for such a position with the NSW Weeds Advisory Committee, on behalf of the STWP NSW/ACT.

Tasmanian Management Group

This group has been reinitiated as part of the 2008/09 Tasmanian C4oC project. It is providing direction and oversight for the current project and will hopefully continue to meet once the current project is completed, and provide continuity and momentum for serrated tussock management into the future.

The Victorian Serrated Tussock Working Party (VSTWP)

The VSTWP in various forms has focused on directing and leading serrated tussock management within Victoria since 1995. In 2008/09 a new Chair (Jim Seager, also on the NSTMG) and committee (8 community and 5 government representatives) were elected. Linkages between the NSTMG and VSTWP have always been constructive and collaborative, with the National Strategy providing a broader framework for Victorian projects and the VSTWP having many years of experience of community based programs prior to the WoNS program.

In 2008/09 the national coordinator attended a meeting of the VSTWP and gave a presentation on the national serrated tussock program and the major achievements to date. Achievements of the VSTWP included a new identification brochure, bumper stickers, funding two research projects, funding a serrated tussock partnerships officer, sponsoring an EverGraze program and funding two Rural Extension Officers in the Port Phillip and Corangamite catchments.

Community Benefits & Commitment, ACT

Private landholders in the ACT have continued with their serrated tussock control. Graziers are well aware of the damage serrated tussock invasion does to pasture and profits. A number of joint projects are in place where neighbouring landholders or other land managers are encouraged to control their serrated tussock.

Meetings in core infestation areas, Victoria

In February 2009 the first of what will become regular meetings were held in the two catchments where serrated tussock is considered to be a core infestation. The meetings invited representatives from the respective CMAs, Local Governments, Vic DPI and the VSTWP and aim to develop partnerships between these stakeholder groups and work together to benefit one another's programs.

The first meeting was an opportunity for Vic DPI to present current and upcoming projects but future meetings will have local governments presenting their programs. The meetings have encouraged the distribution of 16,000 serrated tussock identification brochures, new media releases and opportunities for Vic DPI to assist local governments with displays at agricultural shows.

NASTI Group, Victoria

The Northern Alliance Serrated Tussock Initiative (NASTI) Group formed in April 2008 with the vision of managing outlier infestations of serrated tussock in Victoria. The group is made up of five municipalities (being Hume, Whittlesea, Nillumbik, Macedon and Mitchell), two CMAs, Vic DPI and the VSTWP and meets regularly to develop initiatives to raise awareness and encourage serrated tussock control. The NASTI group has built effective and long lasting partnerships with one another and worked on projects including the installation of 15 serrated tussock road signs.

Supporting community led action to encourage voluntary weed/pest compliance, Vic.

Funding of \$1.2 million, from the \$24 million announced for pest and weed management in the recent Victorian four year Future Farming Strategy, will be used for a project 'Supporting community led action on pests through voluntary compliance.' This project encourages community pest management groups – the VSTWP, the Victorian Blackberry Taskforce and the Victorian Gorse Taskforce – to take a lead role in the management of their species in target areas. The funding will be used to build the capacity of the three community pest management groups to encourage the adoption of voluntary compliance in target areas.

Key challenges and future priorities, include:

- Continue distribution of best practice materials, and support all opportunities to further engage serrated tussock land managers.
- Support the increase take-up of broader landscape change, to support serrated tussock management.
- Support community, regional and state serrated tussock working groups and help to align with national serrated tussock needs to be managed regionally, not property by property.
- Better engagement with CMAs regarding serrated tussock management as part of core regional strategies and priorities.
- Land management planning and practices.
- Need to constantly re-educate land-managers, especially where there are high levels of turn-over in land ownership.
- Improve engagement with utilities and industry bodies.

Appendix 1 – National Serrated Tussock Management Group

Members of the NSTMG during 2008/09 :

Chairman of NSTMG. Land manager, Inverleigh, Victoria	Scott Chirnside
National Coordinator Serrated Tussock, NSW Department of Industry and Investment – Primary Industries	Bronwen Wicks
Weeds Manager, New England Weeds Authority, Armidale NSW.	James Browning
Regional Weed Management Officer, DPIW, Hobart, TAS	Karen Stewart
Executive Officer, Victorian Serrated Tussock Working Party, DPI, Geelong, VIC	Chelsea Wardrope
State Weed Control Coordinator, NSW Department of Industry and Investment – Primary Industries, NSW.	Syd Lisle
Grazier, NSW. Member of STWP NSW/ACT.	Sue Haslingden
ACT Parks, Conservation & Lands – corresponding member.	Steve Taylor
Land manager, Mt Wallace, Victoria. Chair Victorian Serrated Tussock Working Party	Jim Seager
Dept Employment, Economic Development and Innovation, Qld. – corresponding member.	Jef Cummings

Abbreviations used in this report.

ACT PCL	ACT Parks, Conservation & Lands
BPM	Best Practice Manual
C4oC	Caring for our Country (Australian Government program)
CMA	Catchment management authorities
DPIW	Tasmanian Department of Primary Industry and Water
EWRNWAG	Eastern and Western Riverina Noxious Weeds Advisory Groups
EPBC Act	Environment Protection and Biodiversity Conservation Act
NEWA	New England Weed Authority
NSTMG	National Serrated Tussock Management Group
I&I NSW	Department of Industry and Investment NSW – formerly NSW Primary Industries
LCA	Local Control Authority (in NSW)
STWP NSW/ACT	Serrated Tussock Working Party for NSW and ACT Inc.
Vic DPI	Victorian Department of Primary Industries
VSTWG	Victorian Serrated Tussock Working Group
NRM	Natural resource management
WoNS	Weeds of National Significance

Appendix 2 – Publications

- Badgery W. B., D. R. Kemp, D. L. Michalk, and W. McG. King (2008) '*Studies of competition between Nassella trichotoma (Nees) Hack ex Arechav. (serrated tussock) and native pastures. 1. Adult plants.*' Australian Journal of Agricultural Research 59 (3): 226-236.
- Badgery W. B., D. R. Kemp, D. L. Michalk, and W. McG. King (2008) '*Studies of competition between Nassella trichotoma (Nees) Hack ex Arechav. (serrated tussock) and native pastures. 2. Seedling responses.*' Australian Journal of Agricultural Research, 59 (3): 237-246.
- David A. McLaren, Charles Grech, Julio Bonilla and Kym Butler (2008), '*An Assessment of the Extent of Serrated Tussock Resistance in the Rowsley Valley, Victoria.*'
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008acy). *Map of Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland.* [Online]. Department of the Environment, Water, Heritage and the Arts.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008acv). *Map of Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland.* [Online]. Department of the Environment, Water, Heritage and the Arts.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008add). *Map of Lowland Native Grasslands of Tasmania.* [Online]. Department of the Environment, Water, Heritage and the Arts.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008ade). *Map of Grassy Eucalypt Woodland of the Victorian Volcanic Plain.* [Online]. Department of the Environment, Water, Heritage and the Arts.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008act). *EPBC Act policy statement 3.8 - Natural Temperate Grassland of the Victorian Volcanic Plain.* [Online]. Department of the Environment, Water, Heritage and the Arts.
- Department of Primary Industries and Water, Tasmania (2008) Serrated Tussock (Nassella trichotoma) Control Guide. Department of Primary Industries and Water, TAS.
- Fullerton, P., McLaren, D.A., Moerkerk, M., Grech, C., and Wicks, B. (2008) '*Using land manager workshops to develop serrated tussock best management practices.*' Proc 16th Australian Weeds Conference, eds R.D. van Klinken, R.D., V.A. Osten, F.D. Panetta and J.C. Scanlan. (Queensland Weeds Society, Brisbane) pp. 464-466
- Klepeis, P, Gill, N, and Chisholm, L. (2008) Emerging amenity landscapes: Invasive weeds and land subdivision in rural Australia. Land Use Policy.
- McLaren, D.A. and Osmond, R. (2008) Serrated tussock - National best practice guide. Victorian Department of Primary Industries, pp. 1-8.
- McLaren, D.A., Snell, K. and Butler, K. (2008) '*An assessment of native tree susceptibility to the simulated aerial application of the herbicide flupropanate, for management of exotic unpalatable grasses.*' Proceedings of the 16th Australian Weeds Conference, eds R.D. van Klinken, R.D., V.A. Osten, F.D. Panetta and J.C. Scanlan. (Queensland Weeds Society, Brisbane) pp. 323-325.
- McLaren, D.A., Merton, E., Pritchard, G., Ramasamy, S., Grech, C. and Bonilla, J. (2008) '*Evaluating the extent of serrated tussock (Nassella trichotoma) resistance to the herbicide, Flupropanate in Australia.*' Proceedings of the 16th Australian Weeds Conference, eds R.D. van Klinken, R.D., V.A. Osten, F.D. Panetta and J.C. Scanlan. (Queensland Weeds Society, Brisbane) pp. 94-96

- McLaren, D.A., Snell, K., and Butler, K. (2008) *'An assessment of native tree susceptibility to the simulated aerial application of the herbicide flupropanate, for management of exotic unpalatable grasses.'* Proc 16th Australian Weeds Conference, 18-22 May 2008, Cairns, Qld. pp 323-325.
- National Serrated Tussock Management Group (2008), Serrated Tussock National Best Practice Management Manual Resources CD. National Serrated Tussock Management Group (PO Box 389 Goulburn).
- Osmond, R., Verbeek, M., McLaren, D.A., Michelmore, M., Wicks, B., Grech, C.J., and Fullerton, P. (2008), Serrated tussock - National best practice management manual. Victorian Department of Primary Industries and the National Serrated Tussock Management Group, pp 1-125.
- Ramasamy, S., Pritchard, G., McLaren, D.A, Bonilla, J., Preston, C. and Lawrie, A.C. (2008) *'Field survey of flupropanate-resistant Nassella trichotoma in Victoria.'* Proceedings of the 16th Australian Weeds Conference, eds R.D. van Klinken, R.D., V.A. Osten, F.D. Panetta and J.C. Scanlan. (Queensland Weeds Society, Brisbane) pp. 98-100.
- Ramasamy, S. (2008) *'Investigations into Group J herbicide resistance in Nassella trichotoma and Sporobolus fertilis and biological control of S. fertilis using the pathogen Nigrospora oryzae'*. A dissertation submitted in fulfilment of the Degree of Doctor of Philosophy, Biotechnology & Environmental Biology, School of Applied Sciences, RMIT University, Melbourne.
- Schneider, A., Sindel, B.M., Backhouse, D., and King, K. (2008) *'Towards an understanding of interactions between serrated tussock (Nassella trichotoma) and soil fungal communities.'* Proc 16th Australian Weeds Conference, 18-22 May 2008, Cairns, Qld. pp 129.
- Simmons, A.T., Kemp, D.R., Badgery, W.B. and Michalk, D.L. (2009) Serrated tussock: Managing native pastures to prevent invasion. Land & Water Australia, Canberra.
- Tasmanian Caring for our Country, Serrated Tussock Farm Planning booklet.

Appendix 3 – Financial Contributions to serrated tussock management in Australia

The total investment in serrated tussock management by the Australian Government over 2008/09 was about \$476,000. These contributions have come from Defeating the Weed Menace and Caring for our Country programs.

State governments have also made significant financial contributions, with at least \$361,500 for dedicated serrated tussock programs. In addition, over \$8,300,000 is provided under the NSW Noxious Weeds Grant directly to councils for general weed management activities. Management of serrated tussock would be included in infested areas but it is not possible to obtain financial expenses on a single weed species.

Additional investment and in-kind contributions from other state bodies, regional NRM bodies, industry, agronomists, Landcare and community groups cannot be quantified, but occurs for either serrated tussock only projects or integrated projects which include serrated tussock (eg sustainable grazing, native grassland management). Private land-managers invest significant and on-going money into direct serrated tussock control activities.

TABLE 1: Dedicated serrated tussock program funding – 2008/09

Program	Project	Lead Organisation	Investment
Defeating the Weed Menace	'Intensifying the attack on isolated serrated tussock populations.'	Victorian DPI (administered VSTWP)	\$137,000
Caring for our Country	"Strategic management of Serrated Tussock – Reducing the threats to sustainable farming"	Snowy River Interstate Landcare Committee	\$143,460
Caring for our Country	"Protecting Tasmania's sustainable farming and biodiversity assets from serrated tussock invasion"	Tasmanian Land & Water Professionals	\$195,600
Victorian Government	Serrated Tussock Executive Officer	VSTWP	\$ 72,500
Victorian Government	Victorian Serrated Tussock Partnerships	VSTWP	\$ 65,000
NSW Noxious Weeds Grants	Serrated Tussock specific projects	Various NSW Local Control Authorities	\$ 44,000
ACT Parks Conservation & Lands	Serrated tussock management on public land	ACT PCL	\$180,000 (approx.)

TABLE 2: Funding for WoNS National Coordination of Serrated Tussock program – 2008/09

2008-2009 (\$ Exclusive GST)	Proposed Budget		Actual Expenditure	
	Recipient's and others Contributions (without GST)	Commonwealth Funds Budget (without GST)	Recipient's Contributions Expended (without GST)	Commonwealth Funds Expended (without GST)
Project Officer # Professional Officer 1-4 Grd2 Yr2 (1)		103,411		92,547
NSW DPI regional coordinators	29,265		29,265	
DPI agronomists, researchers and extension officers	95,152		95,152	
Overheads and management (2)	143,797		143,797	
Serrated Tussock Management Group contribution (5)	48,000		48,000	
Total employment costs	316,214	103,411	316,214	92,547
Operating cost items	Recipient's and others Contributions Expended (without GST)	Commonwealth Funds Expended (without GST)	Recipient's and others Contributions Expended (without GST)	Commonwealth Funds Expended (without GST)
Publications, communications: national and key products		9,550		9,203
Printing of Best Practice Manual & 8 page BPM brochure	22000	28,000	22000	29,135
Resource CD to support Best Practice Manual - development & production		17,500		16,790
National launch and support to State launches of BPM		11,000		8,406
National Serrated Tussock Working Group: up to 2 face-to-face & 2 teleconferences	16,000	10,000	16,000	4,788
Coordinators Travel, accommodation, QFleet, fares		11,000		8,754
Stores consultancy, library fees, computer, training, conference		8,500		5,514
National priority activities per NSTMG Communication Strategy		10,000		6,418

Assist NSTMG to strategically identify national priorities – Stage 1: national mapping.		17,000		17,000
Total operating costs	38000	122,550	38,000	\$106,008
Total excluding GST				
	354,214	225,961	354,214	198,555
GST included in totals	35,421	22,596	35,421	19,856
Total cost including GST (A+B+C)	389,635	248,557	389,635	218,411

Appendix 4 – Map showing location of major projects and activities (with national distribution of serrated tussock (2008))

(Routine weed management activities are not included, eg in NSW)

