Serrated Tussock Working Party for NSW and ACT

Edition 2
September 2010

Dealing with serrated tussock in spring.

Is it too late … or is late better than next year?

There are two features of serrated tussock that enable us to take advantage of its biology. The first is that seedlings are weak and not very competitive under good pasture conditions. The second is that control actions can be implemented throughout most of the year. Spring is no exception, although management actions in spring need to be thought out carefully and implemented as quickly as possibly.

Serrated tussock begins to flower in mid to late spring. Early spring is the last opportunity to spray, dig or take any other action before they begin to flower. *Don't put it off!*

By mid August, in most areas, it is too late to use flupropanate alone as serrated tussock may still flower and set seed before the flupropanate takes effect and kills the plant.

Did you know:

- Serrated tussock seeds can be spread large distances by wind, vehicles, animals, people and water.
- Serrated tussock (*Nassella trichotoma*) seed banks can decline quickly if land managers stop serrated tussock seeding.
- Serrated tussock has already invaded many of temperate south-eastern Australia's most endangered grassland remnants and its presence is a serious threat to the native flora and fauna of these grasslands.
- 65% of our environmental weeds originated in parks and home gardens.

But there are a couple of alternative options that will allow you to reduce seeding this year:

- ✓ From mid August, use glyphosate to spray serrated tussock to prevent seeding. Check the label for appropriate rates as there are a number of different glyphosate products produced with different concentrations of active ingredient.
- ✓ Roundup bioactive is suitable for situations where tussock plants are close to water or in waterways. Always check the label for the appropriate rates.
- ✓ Add glyphosate to flupropanate to prevent flowering and seed set. Refer to the flupropanate label for directions.
- ✓ Prevent paddocks with isolated plants becoming paddocks with heavy infestations by prioritising them.
- ✓ Check areas treated in 2007, 2008 and 2009 for new seedlings. Young seedlings are difficult to see but much easier to control than older plants.
- ✓ Serrated tussock is much easier to identify when it has seed heads. If you've missed one during the year, treat it now, don't leave it until next year.
- ✓ Strive for maximum groundcover, particularly over summer and autumn to minimise reinfestation by new seedlings.

No, it is not too late …

and yes, late is better than next year!

This information is intended as a guide only. Any works that are carried out should be researched for your area and individual circumstances. For further advice please contact your district agronomist or weed officer.

Many thanks to Jenene Kidson, District Agronomist, Industry & Investment NSW for her contribution.

How does serrated tussock spread?

The primary natural method of dispersal of serrated tussock is by wind, however human activity now plays a significant role in its spread.

Serrated tussock seeds are well adapted to wind dispersal. Once mature the entire seed head breaks away from the base of the tussock and blows along the ground with surface winds and sometimes much higher with thermals.

While most of the seed remains relatively close to the adult plant (within 0.5km), seed heads are light and able to travel great distances (perhaps up to 20km). Masses of seed heads can be captured by fences, trees, logs and other obstructions allowing the seeds to germinate forming new colonies of serrated tussock.

Across the State it is now obvious that human activities have also been responsible for the introduction and spread of the weed.

Vehicles and machinery

Serrated tussock seed heads can be caught in vehicles, machinery, tractors, implements, spray units, mowers and slashers. Machinery and vehicle tyres will also pick up mud contaminated with seed. Activities such as slashing during the flowering period is a major method of seed spread and contamination. It is essential you inspect and clean machinery to reduce weed movement both within your property boundaries and when moving between locations.

Prevention of spread

Learn to identify serrated tussock, regularly check for it and act immediately to remove it.

Buy certified seed and avoid purchasing hay or stock from contaminated areas.

Stock grazed on seeding serrated tussock should be placed in a holding paddock for 10 days before moving them into a clean paddock.

Desirable vegetation can be used as a barrier to effectively reduce wind dispersal of the seed. Rabbit proof fencing can also help to catch tumbling serrated tussock seed heads.

This information is taken from "Weed Management Guide—serrated tussock" published by the CRC for Australian Weed Management.

Adapted from: Serrated Tussock National Best Practice Management Manual

Animals

Serrated tussock seed attaches to the fleece and fur of livestock and other animals, and may also be picked up in mud on the animals' hooves.
Livestock will generally avoid eating serrated tussock, however if they do graze it while in seed, the animals can spread the seed through their droppings. The seed can survive in the gut of ruminant animals for up to 10 days making it possible for serrated tussock to be spread long distances by livestock.
If introducing livestock to your property from a known area of serrated tussock infestation ensure you quarantine animals to allow any ingested seed to pass through their system. Also be aware of the possibility of seed contamination on fur and wool and take appropriate action.

Stock feed and produce

Serrated tussock seed can contaminate crops, hay, silage, grain and seed. Movement and use of contaminated produce can lead to the development of new infestations. This risk increases during drought when lower quality hay, seed and grain is sold, bought and transported extensively across the country.
Weeds often accumulate in areas where things are stockpiled. Be vigilant about the quality and source of produce you bring onto your property. It is also wise to regularly inspect areas where hay, seed and grain has been introduced for new weed outbreaks.

Soil

As serrated tussock develops a substantial seed bank, any movement of soil from an infested area is likely to transport seed and create new infestations. Potential movement of seed can occur via activities such as road works, landscaping or building activities. Be aware of the source of any soil movement on your property and the potential it has to cause significant problems.

Water

Rivers, creeks and water channels can transport serrated tussock seed downstream from the original infestation. In particular flood waters are known to move seed downstream to new locations. Regularly inspect your creeks and waterways for newly established weed outbreaks and act to eradicate them as soon as possible.

What is the role of a Weeds Officer?

Weeds Officers are the frontline defence against weeds. They work with, and for, the local community to protect its valuable assets including agricultural land, bushland, recreational facilities, private property and waterways.

Weeds Officers are appointed by a Council to perform Council functions in enforcing the Noxious Weeds Act 1993.

These officers play a diverse role in the community and are responsible for:

- Management planning and keeping records
- Education and promotion of weed management to the community
- Education of other council staff
- Advising land managers on integrated weed management
- Local operational activities
- Enforcement of the Noxious Weed Act

Weeds Officers are a valuable point of contact for land managers. They can help with identification and management of noxious weeds, surveying and mapping of weed infestations and the provision of weed management advice to land managers and community groups.

Weeds Officers have an excellent local knowledge of the area in which they work, its landscape attributes, particularly in relation to weeds, the environment in which they thrive and first hand knowledge of both prior and major existing infestations.

Serrated tussock, like all invasive weeds can only be managed effectively if a community effort is in place. Work with your local Weeds Officer, district agronomist and other rural consultants to identify the problems and develop a realistic plan for your property that is consistent with the regional management plan.

Rural Assistance Authority Special Conservation Scheme

Did you know serrated tussock control is listed as one of the conservation works eligible for funding under the Rural Assistance Authority's Special Conservation Scheme?

Under the Scheme funding is provided by way of a loan to carry out works that will have a significant beneficial impact on the land, the local community and the environment and are not purely productivity based.

The Scheme allows loans of up to 90% of the net cost of control works to a maximum of $150,000. Interest on the loan is applied at the date on which the loan is approved and is fixed for the term of the loan. The current rate is 4.5%, but this rate varies from time to time. The term of the loan is dependent on the amount borrowed and the applicant's ability to repay, and is up to 15 years. Works, however must be complete within 12 months of the date of loan approval.

To be eligible for assistance you must:

- Be the registered owner of the property and be in working occupation of the farm
- Show the farm enterprise provides the majority of your total gross income under normal seasonal conditions
- Not have net assets exceeding $5,000,000
- Show that the works compliment or improve the natural resource base of your enterprise
- Provide a copy of the Local Control Authority's Management Plan for serrated tussock

This information is a guide only. Information sheet and application forms are available from the NSW Rural Assistance Authority on:

(02) 6391 3000
Toll Free 1800 678 593
Or visit the web site: www.raa.nsw.gov.au

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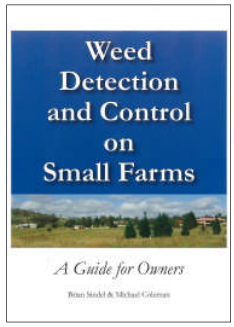
BOOK REVIEW .....recommended reading!

'Weed Detection and Control on Small Farms'.



This free booklet is a valuable resource that describes 'best practice' principles for detecting and controlling weeds on Australian farms, most appropriate to lifestyle or hobby farm owners.

The booklet discusses the importance of controlling weeds, the principles of weed detection (where and when to look for weeds on the farm, how to identify an unknown plant and what to do when a new weed outbreak is found), weed control responsibilities and methods appropriate to small farm owners, guidelines for responsible herbicide use and accreditation, and available weed control assistance.

It is now available for free download from:
http://www.ruralfutures.une.edu.au/downloads/SmallFarmWeeds_400.pdf

If you would like a printed copy please email:
mcolema8@une.edu.au or bsindel@une.edu.au, with your postal address. Alternatively, you can phone:
Michael Coleman (02 6773 3616) or Brian Sindel (02 6773 3747).

The Serrated Tussock Working Party for NSW and ACT, in partnership with Mid-Western Regional Council have been funded under the NSW Noxious Weeds Grant program for a project to support more effective coordination and strategic management of serrated tussock across NSW. Tussock Talk is one initiative of this project. It aims to share information and support land managers to continue the battle against serrated tussock. Tussock Talk is produced quarterly and we welcome your feedback. Please feel free to share this publication by distributing it widely.

Seeds are a distinctive purple colour.

Mature seed heads turn a golden brown/purple colour and can arch over touching the ground.

Young serrated tussock plants are bright green.

Identifying serrated tussock when in seed

Serrated tussock (*Nassella trichotoma*) is easily confused with a number of native tussock grasses as well as other introduced *Nassella* species. However, during spring and summer it can be identified by its seed head and seeds.

- Serrated tussock turns a lime green colour in warmer months where most other native tussock species yellow.
- Serrated tussock sets seed from October to March.
- The flowering stem of serrated tussock can be up to 95cm, twice as long as the leaves.
- Serrated tussock flower heads have a distinct purple colour as seeds ripen in late spring and summer, turning a golden brown when the seed has matured.
- The seed head is a multi-branched stem up to 35cm long. It has 2 or 3 branches at each junction and one seed at the end of each branch.
- Initially erect, the seed head will weep over the entire plant to touch the ground once the seed is ripe.
- Once the seed has ripened, the entire flowering stem will break off from the base of the plant.