

QUESTION	COMMENTS	REFERENCE	RANKING
Social			
1. Restrict human access?	“A perennial tussock-forming grass to 50cm high and 25 cm diameter at the base.” Leaf spread is about 50 cm. Would not hinder human access.	P & C (2001) Groves <i>et al</i> (1995)	L
2. Reduce tourism?	Tussocks are noticeable, but would not restrict recreational activities.		L
3. Injurious to people?	Not toxic to humans		L
4. Damage to cultural sites?	Dense patches of tussocks likely to create a negative visual impact on cultural sites.		M/L
Abiotic			
5. Impact flow?	Terrestrial species.	P & C (2001)	L
6. Impact water quality?	Terrestrial species	P & C (2001)	L
7. Increase soil erosion?	“Tussocks persist for many years. Roots are diffuse and fibrous, mostly in top 20 cm of soil, and even seedlings are difficult to pull from the soil.” Not likely to contribute to soil erosion.	P & C (2001)	L
8. Reduce biomass?	“It dominates pastures and invades natural areas forming dense swards.” Replaces biomass.	Blood (2001)	ML
9. Change fire regime?	“ <i>N. trichotoma</i> burns readily in winter. A dense mature infestation of <i>N. trichotoma</i> generally has 5–20 tussocks per square metre.” “Dense stands produce a serious fire hazard.” Dense infestations would moderately change the frequency and intensity of fire risk. CFA trials (at Melton 1998) have indicated serrated tussock burns with an intensity up to seven times greater than grasslands. Seed heads create additional hazards where they build up against housing, sheds, roadsides, fencelines etc. This is a particularly hazard in the rural/urban interface areas of outer west Melbourne	Groves <i>et al</i> (1995) Eurobodalla Shire ¹	H
Community Habitat			
10. Impact on composition (a) high value EVC	EVC=Plains grassland (E); CMA=Corangamite; Bioreg=Victorian Volcanic Plain; VH CLIMATE potential. Prolific seeder. Each plant can cover a a large area leading to almost complete cover in dense infestations and eliminating most other species. Serious impact on grasses/forbs. 3 fold effect, competitiveness, water usage high, allelopathy Monoculture – if up to 20% or greater ST infestation – cannot save grassland	P & C (2001) Colin Hocking – pers comm	H
(b) medium value EVC	EVC=Grassy dry forest (E); CMA=Port Phillip; Bioreg=Central Victorian Uplands; VH CLIMATE potential. Also grows in lightly timbered areas. Impact as in 10(a) above.	P & C (2001)	H
(c) low value EVC	EVC=Heathy dry forest (E); CMA=Glenelg Hopkins; Bioreg=Goldfields; VH CLIMATE potential. Impact as in 10(b) above.	P & C (2001)	H

Scientific Name: *Nassella trichotoma*

Common name: Serrated tussock

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Fauna			
11. Impact on structure?	“In dense stands foliage of <i>N. trichotoma</i> completely covers the soil surface, thereby suppressing competitors.” “Mature plants develop a drooping, smothering form eventually excluding other ground-flora.” <i>N. trichotoma</i> is most commonly found in grassland/pasture situations, where it would compete strongly with and possibly replace other grasses, and forbs. “...establishing dense tree and shrub cover will, after a number of years, significantly impede Serrated Tussock invasion.” Affects the lower stratum only.	Groves <i>et al</i> (1995) Muyt (2001)	ML
12. Effect on threatened flora?	From serrated tussock establishment it takes only seven years to dominate a pasture or native grassland Effects on Danthonia Threatens ANZECC rated rare or threatened native plant species	Groves et al (2003) ²	H
13. Effect on threatened fauna?	Hotter burns impact on striped legless lizard, and other ground dwelling species. Loss of flora biodiversity as serrated tussock displaces desired species impacts on adequate food supply. Golden sun moth, needs Danthonia – displaced by ST – only occurs basalt plains – Golden sun moth management plan ACT.	G Clarke F Spier (2004) ³	H
14. Effect on non-threatened fauna?	“Plants are unpalatable and infestations commonly expand as other species are selectively grazed out. The smothering form eventually excludes other ground-flora.” Reduction in habitat for native fauna. Or habitat changed dramatically ? Possible local extinction Wombats foraging in Monaro plains – foraging limited by ST infestations – forced to raid rubbish bins	Muyt (2001)	H
15. Benefits fauna?	No documented benefits for fauna.		H
16. Injurious to fauna?	“Sheep will not graze it unless forced to and they lose weight and die due to a rumen full of undigested leaves.” May have similar impact on fauna.	Blood (2001)	ML
Pest Animal			
17. Food source to pests?	Not known as a food source to pests.		L
18. Provides harbor?	Across the basalt plains rabbits are the greatest vertebrate environmental pest and serrated tussock provides harbour ..permanent harbour – Rowsley Valley		H

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Agriculture			
19. Impact yield?	“Even moderate infestations reduce carrying capacity by about 40% and up to 100%.” Serious impact on quantity of produce.	P & C (2001)	H
20. Impact quality?	Animals forced to eat the plant lose condition. “Even a moderate loss of condition results in lowered wool quality because of loss of crimp and breaks in the fleece. Seeds also contribute to vegetable fault in wool.” Major impact on quality. Canola crop contaminated by seed contaminant by wind, civil court case - \$60,000 damage.	P & C (2001)	H
21. Affect land value?	As a serious weed of pasture with significant impact on carrying capacity and reduction in agricultural return, its presence would seriously affect land value. Seven (7) Local Govt councils have introduced rebate schemes to arrest the decline in land value	P & C (2001)	H
22. Change land use?	In New Zealand, “considerable effort to control [<i>N. trichotoma</i>], involving government purchase of heavily infested farms, clearing the weed at government expense, and reselling the land for farming, has been expended over many years.” Without government intervention, the land would have had no use for pastoral activities. Significant change in land use.	P & C (2001)	H
23. Increase harvest costs?	Not a weed of cropping in Australia. In uncultivated areas serrated tussock dominates but can be controlled with cropping regimes. In very heavy infestation areas continuous cropping is the only control option and creates another set of problems with soil health. However the impact of seeding tussock blown onto preharvested crops have resulted in downgraded quality of produce and has seen one civil case against neighbouring polluters. More seed testing carried out. Time taking in harvest and post harvest testing. Also need to continually cultivate each year to prevent re-establishment.		H
24. Disease host/vector?	None evident. Unknown		M

¹ Eurobodalla Shire Council., nd., *Serrated Tussock* (*Nassella trichotoma*), <http://www.eurocoast.nsw.gov.au/Weeds/Sheets/grasses/G%20Serrated%20tussock.htm>, viewed 28/4/03

² Groves, Rh (Convener), Hoskings, JR, Batianoff, GN, Cooke, DA, Cowie, ID, Johnson, RW, Keighery, GJ, Lepschi, BJ, Mitchell, AA, Moerkerk, M, Randall, RP, Razefelds, AC, Walsh, NG, and Waterhouse B., 2003, Weed categories for natural and agricultural ecosystems management. Bureau of Rural Sciences, Canberra

³ Clarke, G. and Spier, F., 2004, A review of the conservation status of selected Australian non-marine invertebrates, Department of Environment and Heritage, Canberra.