Impact Assessment Record

Scientific name: *Solanum mauritianum* Scop. Common name: Wild tobacco tree

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	Can form thickets, reaching over 6m (Walsh 1956). From an image in Walsh (1956) access for people or machinery would be with difficulty.	**MH**	**MH**
2. Reduce tourism?	There is no evidence that this species impacts upon recreational areas. It has however been grown as an ornamental but is often dumped as it can become shabby and unappealing, therefore it may alter the aesthetics of such areas (Blood 2001).	**ML**	**M**
3. Injurious to people?	The immature (green) fruit and leaves are poisonous (Blood 2001; Shepherd 2004). There have been fatal cases of poisoning after ingestion of the fruit (Van Dyck 1979). The plant can also produce fruit all year (Drew & Hooper 1983). Hairs can also be an irritant (Dept. of Conservation 2005)..	**H**	**H**
4. Damage to cultural sites?	It has been grown as an ornamental but is often dumped as it can become shabby and unappealing, therefore it may alter the aesthetics of such areas (Blood 2001).	**ML**	**M**
Abiotic			
5. Impact flow?	Terrestrial species, there is no evidence to suggest that it impacts on water flow.	**L**	**M**
6. Impact water quality?	Terrestrial species, there is no evidence to suggest that it impacts on water quality.	**L**	**M**
7. Increase soil erosion?	It is reported as a fast growing pioneer species, therefore it could quickly invade bare ground and therefore reduce the probability of erosion occurring (Blood 2001).	**ML**	**MH**
8. Reduce biomass?	Short lived pioneer species (Blood 2001). Where it invades open areas this would be an increase in biomass and it does allow shade tolerant species to establish and succession to occur (Harden, Fox & Fox 2004).	**ML**	**MH**
9. Change fire regime?	Unknown relationship with fire regime. Fast growing species which is killed by fire but germination is stimulated. Can alter biomass and therefore elevated fuels, unknown flammability.	**M**	**L**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Coastal Tussock Grassland (V); CMA= Corangamite; Bioreg= Warrnambool Plain; VH CLIMATE potential. Fast growing pioneer species (Blood 2001). Becomes most dominant after a disturbance (Olckers & Zimmermann 1991). Dominance by this species could impact the mid to lower strata and potentially the reestablishment of the higher strata as it has been reported to out compete seedlings in a plantation situation (Jarvel & Pallett 2002; Olckers & Zimmermann 1991). In rainforest it has allowed for succession, as it does allow shade tolerant species to establish while preventing the	**ML**	**MH**

Impact Assessment Record

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QUESTION	COMMENTS	RATING	CONFIDENCE
	establishment of other weed species including lantana (Harden, Fox & Fox 2004; Van Dyck 1979). Overall This species itself causes minor displacement.		
(b) medium value EVC	EVC= Grassy Dry Forest (D); CMA= Corangamite; Bioreg= Central Victorian Uplands; VH CLIMATE potential. Fast growing pioneer species (Blood 2001). Becomes most dominant after a disturbance (Olckers & Zimmermann 1991). Dominance by this species could impact the mid to lower strata and potentially the reestablishment of the higher strata as it has been reported to out compete seedlings in a plantation situation (Jarvel & Pallett 2002; Olckers & Zimmermann 1991). In rainforest it has allowed for succession, as it does allow shade tolerant species to establish while preventing the establishment of other weed species including lantana (Harden, Fox & Fox 2004; Van Dyck 1979). Overall This species itself causes minor displacement.	**ML**	**MH**
(c) low value EVC	EVC= Wet Forest (LC); CMA= Corangamite; Bioreg= Otway Plain; VH CLIMATE potential. Fast growing pioneer species (Blood 2001). Becomes most dominant after a disturbance (Olckers & Zimmermann 1991). Dominance by this species could impact the mid to lower strata and potentially the reestablishment of the higher strata as it has been reported to out compete seedlings in a plantation situation (Jarvel & Pallett 2002; Olckers & Zimmermann 1991). In rainforest it has allowed for succession, as it does allow shade tolerant species to establish while preventing the establishment of other weed species including lantana (Harden, Fox & Fox 2004; Van Dyck 1979). Overall This species itself causes minor displacement.	**ML**	**MH**
11. Impact on structure?	Fast growing pioneer species (Blood 2001). Becomes most dominant after a disturbance (Olckers & Zimmermann 1991). Dominance by this species could impact the mid to lower strata and potentially the reestablishment of the higher strata as it has been reported to out compete seedlings in a plantation situation (Jarvel & Pallett 2002; Olckers & Zimmermann 1991). In rainforest it has allowed for succession, as it does allow shade tolerant species to establish while preventing the establishment of other weed species including lantana (Harden, Fox & Fox 2004; Van Dyck 1979). Overall This species itself would have a minor impact however depending on the vegetation invaded this could be on greater than 60% of the layers.	**MH**	**MH**
12. Effect on threatened flora?	There is no evidence of this.	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	There is no evidence of this. It is used as a food source especially in winter by Grey-headed Flying-fox (*Pteropus poliocephalus*) which is listed as a vulnerable species under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Parry-Jones & Augee 2001).	**MH**	**L**

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QUESTION	COMMENTS	RATING	CONFIDENCE
14. Effect on non-threatened fauna?	It has been reported to have negative impacts on ground-dwelling invertebrates (Florentine & Westbrooke 2003).	**MH**	**MH**
15. Benefits fauna?	Fruits eaten by bird species It is used as a food source especially in winter by Grey-headed Flying-fox (*Pteropus poliocephalus*) which is listed as a vulnerable species under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Parry-Jones & Augee 2001). The major host for an endemic fruit fly	**ML**	**H**
16. Injurious to fauna?	Toxic to pigs and cattle (Blood 2001). Its leaves and fruits have however been reported to be eaten by a number of native species, including possums, pademelons and flying-foxes (Parry-Jones & Augee 2001; Van Dyck 1979; Wahingu, Catterall & Olsen 1999). Its not known if it toxic to native species and if it is if any consume it.	**M**	**M**
Pest Animal			
17. Food source to pests?	It is a host for a number of fruit fly species, but it is not reported as a significant host of those targeted for control (Copeland & Wharton 2006; Drew 1987; Drew & Hooper 1983; Raghu *et al* 2004).	**ML**	**MH**
18. Provides harbour?	It is a host for larvae of a number of fruit fly species and can also shelter adults over winter, but it is not reported as a significant host of those targeted for control (Copeland & Wharton 2006; Drew 1987; Drew & Hooper 1983; Raghu *et al* 2004).	**ML**	**MH**
Agriculture			
19. Impact yield?	Competes with young trees in forestry plantations and can reduce growth rate (Jarvel & Pallett 2002; Olckers & Zimmermann 1991). It has been linked to fatal cases of poisoning in pigs and cattle (Van Dyck 1979). Invasion by this species can also reduce the production area, reducing carrying capacity. Unknown to what extent this species impacts on the quantity of outputs.	**M**	**M**
20. Impact quality?	Competes with seedlings and can cause stem deformation (Olckers & Zimmermann 1991). It is unknown to what extent this impacts on the final output.	**M**	**M**
21. Affect land value?	Unknown.	**M**	**L**
22. Change land use?	It has been recommended to alter permanent grazing to more intense rotational management.	**ML**	**H**
23. Increase harvest costs?	Management time may be increased in both forestry and grazing systems.	**M**	**MH**
24. Disease host/vector?	It is a host to a number of fruit fly species but it is not reported as a host of any significance of the Queensland or Mediterranean Fruit flies which are the targeted species in Victoria (Copeland & Wharton 2006; Drew 1987; Drew & Hooper 1983; Raghu *et al* 2004).	**M**	**MH**

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QUESTION	COMMENTS	RATING	CONFIDENCE
	Host species for the ginger strain *Pseudomonas solanacerarum* biotype 4 (Pegg & Moffett 1971). As there are a number of solanum species as commercial crops as well as native solanum any bio-control agent would have to be shown not to become a pest of these plants.		