Impact Assessment Record

Scientific Name:

Acacia nilotica ssp. indica

	QUESTION	COMMENTS	RATING	CONFIDENCE			
So	cial						
1.	Restrict human access?	Shrub or small tree from 7 to 9 m high. 'Because of its rapid growth in favourable seasons and the presence of long spines or prickles, dense thickets of prickly acacia, impenetrable to stock, develop. Thickets along thousands of kilometres of bore drains prevent access to water' (Parsons & Cuthbertson 2001). Major impediment to access waterways.	Н	МН			
2.	Reduce tourism?	Because of infestation by prickly acacia, "the Mitchell grass downs are being converted into a thorny scrubland similar to the African thornveld" (Mackey 1998). Weeds presence is obvious to visitors.	Н	МН			
3.	Injurious to people?	Young stems are armed with stout stipular spines 5 to 50 mm long, Spines may be absent on older stems. Dogs cannot be used for mustering purposes because of spines on the ground (Parsons & Cuthbertson 2001). Potential for injury throughout the year.	Н	МН			
4.	Damage to cultural sites?	Shrub or small tree from 7 to 9 m high (Parsons & Cuthbertson 2001). Moderate visual effect.	ML	МН			
Abiotic							
5.	Impact flow?	Terrestrial species (Parsons & Cuthbertson 2001).	L	МН			
6.	Impact water quality?	Terrestrial species (Parsons & Cuthbertson 2001).	L	МН			
7.	Increase soil erosion?	"a moderate canopy cover of prickly acacia reduces grass cover markedly and changes the relative abundance of native plant species in favour of forbs and annual grasses" (Mackey 1998). "Exacerbates and accelerates soil erosion" (ARMCANZ 2001).	MH	МН			
8.	Reduce biomass?	"In Australia, it occurs as a weed, principally along streams and bore drains, in the semi-arid tussock and hummock grasslands" (Parsons & Cuthbertson 2001). Biomass would increase in these situations.	L MH				
9.	Change fire regime?	"prickly acacia does not seem susceptible to fire" (Mackey 1998). Suppression of grass species also reduces fire risk. Minor change to frequency and intensity of fires.	ML	МН			
Community Habitat							
10	. Impact on composition (a) high value EVC	EVC= Plains Savannah (E); CMA=Mallee; Bioreg=Murray Mallee; Climate=VH. An infestation in Queensland has converted parts of the Mitchell grass downs into a thorny scrubland. "…a moderate canopy of prickly acacia reduces grass cover markedly" (Mackey 1998). Major displacement of some dominant species (grasses) within a strata (groundcover layer).	MH	МН			
(b) medium value EVC		EVC= grassy dry forest (D); CMA=Goulburn Broken; Bioreg=Central Victorian Uplantds; Climate=VH. An infestation in Queensland has converted parts of the Mitchell grass downs into a thorny scrubland. "a moderate canopy of prickly acacia reduces grass cover markedly" (Mackey 1998). Major displacement of some dominant species (grasses) within a strata (groundcover layer).		МН			
(c) low value EVC		EVC= Lowland Forest (LC); CMA=Goulburn Broken; Bioreg=Highlands-Northern Fall; Climate=VH. An infestation in Queensland has converted parts of the Mitchell grass downs into a thorny scrubland. "a moderate canopy of prickly acacia reduces grass cover markedly" (Mackey 1998). Major displacement of some dominant species (grasses) within a strata (groundcover layer).	MH	МН			

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Scientific Name: Acacia nilotica ssp. indica

Common name: prickly acacia

QUESTION	COMMENTS		CONFIDENCE			
11. Impact on structure?	An infestation in Queensland has converted parts of the Mitchell grass downs into a thorny scrubland. "a moderate canopy of prickly acacia reduces grass cover markedly" (Mackey 1998). Serious impact on grasses.	MH	MH			
12. Effect on threatened flora?	The potential for <i>A. nilotica</i> ssp. <i>indica</i> to establish and naturalise in Victoria is highly unlikely due to ecoclimatic limitations (Thorp & Lynch 2000). No impact on threatened flora in Victoria.	L	МН			
Fauna						
13. Effect on threatened fauna?	The potential for <i>A. nilotica</i> ssp. <i>indica</i> to establish and naturalise in Victoria is highly unlikely due to ecoclimatic limitations (Thorp & Lynch 2000). No impact on threatened fauna in Victoria.	L	MH			
14. Effect on non- threatened fauna?	"Since even a moderate canopy cover of prickly acacia reduces grass cover markedly and changes the relative abundance of native plant species in favour of forbs and annual grasses, this, and the shift in structure toward a shrub community, is producing a dramatic effect on native fauna habitat and the overall ecology of the system" (Mackey 1998). Major impact on habitat.	MH	МН			
15. Benefits fauna?	"Its leaf is very digestible and has a high protein content" (Mackey 1998). May provide alternative food source for larger native herbivores.	MH	MH			
16. Injurious to fauna?	"Dogs cannot be used because of the many thorns on the ground" (Parsons & Cuthbertson 2001). Potential for injury to non-ungulate species.	MH	МН			
Pest Animal						
17. Food source to pests?	"the Australian plague locust (<i>Chortoicetes terminifera</i> (Walker)) is reported to feed on it," though without any known flow-on to impact on agricultural activities (Mackey 1998). Provides food for an environmental insect pest.	ML	MH			
18. Provides harbor?	Not known to provide harbor for pest species.	L	МН			
Agriculture						
19. Impact yield?	"Dense infestations significantly reduce pasture productionand the access of stock to water. Under normal grazing pressure a 25–30% canopy cover of prickly acacia reduces pasture production by 50% compared with acacia-free pasture" (Mackey 1998). Significant reduction in carrying capacity leading to reduced yield.	Η	MH			
20. Impact quality?	Not known to affect the quality of produce	L	МН			
21. Affect land value?	"Heavily infested land is almost worthless since reclamation costs are often close to, or exceed, the value of uninfested land" (Mackey 1998). Serious impact on land value.	Н	МН			
22. Change land use?	See comment in 21 above. Land may be abandoned for agricultural use.	Н	MH			
23. Increase harvest costs?	"Dense infestations of prickly acaciaincrease mustering time and cost." An increase in cost of more than 10 times the usual cost is reported (Mackey 1998). Increase in both time and labour to harvest produce.	Н	MH			
24. Disease host/vector?	"Prickly acacia is a host for a variety of organisms which attack it, but it does not appear to be a primary host for any other pests in Australia, though the Australian plague locust (<i>Chortoicetes terminifera</i> (Walker)) is reported to feed on it" (Mackey 1998).	L	МН			

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References cited:

Agriculture and Resource Management Council of Australia & New Zealand, Australian & New Zealand Environment & Conservation Council and Forestry Ministers 2001, Weeds of National Significance Prickly Acacia (Acacia nilotica subsp. indica) Strategic Plan. National Weeds Strategy Executive Committee, Launceston

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Revisions Date	Revised by	Revision
11 Aug. 05	TDH	Comments and rating for threatened flora and fauna added.