Scientific Name: *Prosopis* spp. Common name: Mesquite

QUESTION	COMMENTS	REFERENCE	RANKING
Social			
1. Restrict human access?	In Western Australia, "because of their thicket-forming characteristics, they…limit ingress to watering points." Dense patches would create an impediment to accessing waterways.	P & C (2001)	**ML**
2. Reduce tourism?	Dense patches limiting access to waterways may affect some recreational activities.		**ML**
3. Injurious to people?	No toxic principles, however, the stems are "armed with paired stipular spines just above each leaf axil." A deciduous shrub, the spines are present all year.	P & C (2001)	**H**
4. Damage to cultural sites?	Root system not documented as being vigorous; not known to cause structural damage. The plant can grow as a many stemmed shrub 1 to 3 metres high, large single-stemmed tree 6 to 15 metres high, or branching almost from the base and forming dense thickets 5 to 8 metres high. Dense patches would be obvious and create a moderate negative visual effect.	P & C (2001)	**ML**
Abiotic			
5. Impact flow?	Terrestrial species.	P & C (2001)	**L**
6. Impact water quality?	Terrestrial species	P & C (2001)	**L**
7. Increase soil erosion?	The plant was grown in, "Pakistan and India…to combat erosion." However, due to the plant removing all grass cover under the canopy, "…erosion problems are exacerbated." Moderate probability of large scale soil movement.	P & C (2001)	**ML**
8. Reduce biomass?	"In Australia, all forms of mesquite tend to grow on heavier soils which support open-woodland or grassland. They spread rapidly [which] usually results in the complete loss of grass cover." Would increase biomass.	P & C (2001)	**L**
9. Change fire regime?	With increased biomass in grassland situations, dense infestations may result in a moderate change to both the frequency and intensity of fire risk.		**MH**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC=Plains grassy woodland (E); CMA=North Central; Bioreg=Victorian Riverina; VH CLIMATE potential. Mesquites tend to grow in open-woodland or grassland situations where they spread rapidly. The mass of surface roots usually results in the complete loss of grass cover. Major impact on grasses and displacement of mid storey species.	P & C (2001)	**MH**
(b) medium value EVC	EVC=Box Ironbark forest (D); CMA=North Central; Bioreg=Goldfields; M CLIMATE potential. Impact similar to above, however, medium CLIMATE potential only, limiting population size.		**ML**
(c) low value EVC	Appears unlikely to occur in any low value EVC in Victoria.		**L**
11. Impact on structure?	In open-woodland or grassland situations, "competition from the mass of their surface roots usually results in the complete loss of grass cover. The allelopathic effects from ground litter (mesquite pods and leaves) extracts, prevents the seeds of other species germinating." Major effect on the lower and mid strata.	P & C (2001)	**MH**
12. Effect on threatened flora?			

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QUESTION	COMMENTS	REFERENCE	RANKING
Fauna			
13. Effect on threatened fauna?			
14. Effect on non-threatened fauna?	"*Prosopis* spp. are aggressive invaders and competitors. Because of their thicket-forming characteristics, they reduce available grazing area and limit ingress to watering points." Dense infestations would reduce habitat of native fauna.	P & C (2001)	**MH**
15. Benefits fauna?	"Pods are sweet, fairly nutritious, and relished by livestock, but heavy consumption can cause digestive problems." Possible limited food source for native fauna.	Steinberg (2001)[i]	**MH**
16. Injurious to fauna?	Although the stems are armed with spines, there is no evidence to indicate they injure animals. Potential exists.	P & C (2001)	**M**
Pest Animal			
17. Food source to pests?	"Pods are eaten and then dispersed by domestic and wild animals." Potential food source to pest animals such as rabbits.	USDA[ii]	**MH**
18. Provides harbor?	Where plant grows as a thicket, it may provide harbor for pest bird species.		**ML**
Agriculture			
19. Impact yield?	"*Prosopis* spp. are aggressive invaders and competitors. Because of their thicket-forming characteristics, they reduce available grazing area and limit ingress to watering points. In some situations competition from the roots results in the complete loss of grass cover." Reduces carrying capacity.	P & C (2001)	**MH**
20. Impact quality?	Not a weed of cropping. Not known to affect quality of yield.		**L**
21. Affect land value?	Reproduces sexually and vegetatively. Dense infestations can be difficult to eliminate due to the longevity of the seed. In southwestern United States, "Many species of mesquite respond positively to overgrazing and grasslands are subsequently converted to mesquite brushlands. Conversion back is very difficult and temporary with reduced grazing pressure." Dense infestation likely to have a major impact on land value.	Steinberg (2001)	**H**
22. Change land use?	As above. "American experience convincingly demonstrates that the best means of obtaining control of larger colonies is by integrating available techniques, including mechanical, cultural, chemical and biological." This may lead to extended non-availability of grazing land.	P & C (2001)	**H**
23. Increase harvest costs?	In Western Australia infestations, "hinder mustering." Increased time to harvest animals.	P & C (2001)	**M**
24. Disease host/vector?	None evident.		**L**

[i] California Department of Forestry and Agriculture. *Prosopis genus.* Available: http://pi.cdfa.ca.gov/weedinfo/PROSOPIS2.html Accessed 10/04/03

[ii] Steinberg, P. 2001. Prosopis glandulosa. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2003, June). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/plants/tree/progla/all.html Accessed 10/04/03