Scientific Name: *Cirsium arvense* Common name: Californian/perennial thistle

QUESTION	COMMENTS	REFERENCE	RANKING
Social			
1. Restrict human access?	An erect perennial herb commonly 60 to 90 cm high. Growth is prolific and patches with 130 shoots per square metre are not uncommon, but not all shoots produce flower stems. The leaf margins bear spines. Densely infested areas would be an annoyance humans requiring access.	P & C (2001)	**MH**
2. Reduce tourism?	In addition to agricultural situations, the plant occurs on neglected sites and roadsides. Recreational activities in these areas would be affected, with a major impact on aesthetics during growth and flowering.	P & C (2001)	**MH**
3. Injurious to people?	Spines are present for most of the year. "The fine pappus bristles are claimed to irritate the skin and eyes of some people."	P & C (2001)	**MH**
4. Damage to cultural sites?	Its presence would create a moderate visual effect. The root system is extensive and aggressive, however, there is no evidence to suggest roots or growth habit would affect physical structures. It grows poorly in shaded conditions.	P & C (2001) WSNWCB[1]	**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?	Aerial parts of the plant die off in late summer and with its strongly competitive nature it is likely to leave infested areas exposed to wind erosion. The extensive perennial root system provides soil stability against erosion by water.	P & C (2001)	**ML**
8. Reduce biomass?	Occurs mostly in open situations such as pastures and neglected sites. Direct replacement of biomass or slightly increase.	P & C (2001)	**ML**
9. Change fire regime?	In dense infestations, the dry matter left when the plant dies off in late summer may result in a slight increase in fire frequency risk.	P & C (2001)	**ML**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Plains grassy woodland (E); CMA=West Gippsland; Bioreg=Gipplsand Plain; VH CLIMATE potential "[It] is a successful weed in grassland…[and] is strongly competitive in pasture." However it does not, "…establish where there is existing ground cover." Displace grasses/forbs in disturbed areas.	P & C (2001)	**MH**
(b) medium value EVC	EVC=n/a; CMA=n/a; Bioreg=n/a Does not appear likely to occur in any medium value EVCs in Victoria.		**L**
(c) low value EVC	EVC=Heathy woodland (LC); CMA=Wimmera; Bioreg=Glenelg Plain; VH CLIMATE potential "[It] is a successful weed in grassland…[and] is strongly competitive in pasture." However it does not, "…establish where there is existing ground cover." Displace grasses/forbs in disturbed areas.	P & C (2001)	**MH**
11. Impact on structure?	The plant has prolific growth, competes strongly for soil resources and produces allelopathic compounds inhibiting the growth of other plants. In non-agricultural areas it is generally confined to roadsides and neglected sites and its presence in these areas would dominate the floral structure. In the USA it is reported to occur in forest margins, however, it grows poorly in shaded areas and is unlikely to affect overstorey layers in these areas.	P & C (2001) WSNWCB	**ML**
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?	It has not occurred as a significant weed in natural ecosystems in Victoria (it is not recorded in Carr *et al* (1992)). In the United States it is recorded as occurring in natural communities, reducing plant and animal diversity. It is highly invasive and, as its prickly nature deters grazing, dense infestations would affect habitat.	Thunhorst & Swearingen (1997)[2]	**ML**
15. Benefits fauna?	No known benefits.		**H**
16. Injurious to fauna?	If forced to eat the weed, young sheep can injure their mouths, possibly leading to infection. Potential for native fauna to suffer similarly.	P & C (2001)	**MH**
Pest Animal			
17. Food source to pests?	Not known as a food source to pest animals. In Germany, rats are known to use plant parts for food	P & C (2001)	**L**
18. Provides harbor?	Not known as a harbor for pests. May provide limited harbor for minor pest such as rodents.		**ML**
Agriculture			
19. Impact yield?	"It is strongly competitive in pastures (reducing forage) and crops such as potatoes, asparagus and peas. In the United States heavy infestations reduce yields of spring cereals by between 40% and 70%."	WSNWCB P & C (2001)	**H**
20. Impact quality?	Its dispersal throughout the world has been attributed to contaminated agricultural seeds. Thus its presence would affect the quality of seed harvests. It is also a problem in pea crops, "…the flower buds are similar in size, shape and texture to shelled peas and are difficult to grade out of the final product."	P & C (2001)	**H**
21. Affect land value?	The plant is difficult to control particularly in cropping situations where cultivation can spread the weed and herbicides tolerated by crops have little or no effect. Its presence would affect the value of land.	P & C (2001) Dept of Ag, WA[3]	**M**
22. Change land use?	The presence of the weed in cropping situations may dictate a change to grazing until it is controlled.		**M**
23. Increase harvest costs?	Apart from the problem in pea crops, *C. arvense* is not known to have an appreciable impact on harvesting costs.	P & C (2001)	**M**
24. Disease host/vector?	"It harbors insects that attack some commercial crops and it is an alternate host for certain plant pathogens."	P & C (2001)	**H**

[1] Washington State Noxious Weed Control Board. *Canada Thistle (*Cirsium arvense). Available: http://www.nwcb.wa.gov/weed_info/canadathistle.html Accessed 08/07/03
[2] Thunhorst, G., Swearingen, J. *Canada Thistle (*Cirsium arvense *(L.) Scop.).* 1997. United States National Park Service. Available: http://www.nps.gov/plants/alien/fact/ciar1.htm Accessed 26/03/03
[3] Department of Agriculture, Western Australia. *Perennial Thistle* (Cirsium arvense *(L.) Scop.)* Available: http://www.agric.wa.gov.au/programs/app/Weeds/perennialthistle.htm Accessed 26/03/03