

**Australia/New Zealand Weed Risk Assessment adapted for Florida.**

**Data used for analysis published in: Gordon, D.R., D.A. Onderdonk, A.M. Fox, R.K. Stocker, and C. Gantz. 2008. Predicting Invasive Plants in Florida using the Australian Weed Risk Assessment. Invasive Plant Science and Management 1: 178-195.**

<i>Euphorbia pulcherrima (poinsettia)</i>			
Question number	Question	Answer	Score
1.01	Is the species highly domesticated?	y	-3
1.02	Has the species become naturalised where grown?	n	-1
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	n	0
2.04	Native or naturalized in habitats with periodic inundation		
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	n	-2
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	0
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals		
4.05	Toxic to animals	y	1
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans	y	1
4.08	Creates a fire hazard in natural ecosystems	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	?	
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	n	0
5.01	Aquatic	n	0

5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat		
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative fragmentation		
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed	n	-1
7.06	Propagules bird dispersed		
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)		
8.01	Prolific seed production		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)		
8.03	Well controlled by herbicides		
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05	Effective natural enemies present in Florida, or east of the continental divide		
<b>Total Score</b>			<b>-3</b>

<b>Outcome</b>	<b>Accept*</b>
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\*Used secondary screen from: Daehler, C. C., J.L. Denslow, S. Ansari, and H. Kuo. 2004. A risk assessment system for screening out harmful invasive pest plants from Hawaii's and other Pacific islands. *Conserv. Biol.* 18: 360-368.

section	# questions answered	satisfy minimum?
A	8	yes
B	9	yes
C	11	yes
total	28	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		heavily cultivated for centuries - selection for bract color would not make it more weedy
1.02		no evidence
1.03		
2.01		
2.02		
2.03	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	native to western Mexico [and not naturalized elsewhere]
2.04		
2.05	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	"widely cultivated from the tropics to warm temperate regions"
3.01	New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List.	Listed as a "casual observation" in New Zealand (as opposed to fully naturalized). No evidence of naturalization elsewhere.
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	Holm (1979) A Geographical Atlas of World Weeds. John Wiley and Sons.	MANY congeneric species considered serious and principal weeds of agriculture.
4.01	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of these traits
4.02		no evidence
4.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of this
4.04		
4.05	Tokarnia, Armen, Peixoto, Barbosa, Brito, and Dobereiner (1996) Experiments on the toxicity of some ornamental plants in cattle. Pesquisa Veterinaria Brasileira 16: 5-20.	<i>E. pulcherrima</i> caused severe (but non-lethal) poisoning in cattle; caused severe weakness.
4.06		
4.07	1. Horticipia 4.0 2. Missouri Botanical Garden, Kemper Center for Home Gardening ( <a href="http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=B553">http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=B553</a> )	1. "not considered poisonous" 2. "Contrary to conventional wisdom, poinsettia plants are not a poisonous plant...However, the white sap can have allergic properties, especially for people

		who have latex allergies."
4.08		no evidence
4.09	1. Hortocopia 4.0. 2. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 3. Missouri Botanical Garden, Kemper Center for Home Gardening ( <a href="http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=B553">http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=B553</a> )	1. exposure: partial shade or partial sun to full sun 2. "full sun for best color" 3. part shade (only)
4.1	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. "various well-drained soils" 2. "suitable soil is sandy"
4.11	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	shrub
4.12		no evidence
5.01		terrestrial
5.02	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	Euphorbiaceae
5.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	Euphorbiaceae
5.04	Hortocopia 4.0	"This plant's roots are fibrous."
6.01		
6.02	Turner (1995) Euphorbias: a Gardener's Guide. Timber Press, Portland, Oregon.	"All euphorbia species can be grown easily from seed"
6.03		
6.04		
6.05	Wayne's Word ( <a href="http://waynesword.palomar.edu/trmar98.htm">http://waynesword.palomar.edu/trmar98.htm</a> )	"In poinsettia the ovary is hidden within the cyathium, but in other species the ovary protrudes out of the cyathium at maturity. The rim of the cyathium also bears one-several, greenish nectar glands that are attractive to insect pollinators."
6.06		
6.07	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. rapid growth 2. average growth rate
7.01		
7.02	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	"widely cultivated from the tropics to warm temperate regions"
7.03		no evidence; unlikely to come into contact with produce
7.04	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	"Fruit a subglobose, deeply three-lobed schizocarp 1.3-2 cm long."
7.05		no evidence
7.06		
7.07		no evidence of any means of attachment
7.08		
8.01	Wagner, Herbst, and Sohmer (1999) Manual of the flowering plants of Hawai'i. University of Hawai'i Press/Bishop Museum Press, Honolulu.	3 seeds per fruit

8.02		
8.03		
8.04		
8.05		