

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>Tetrapanax papyriferus (rice paper plant)</i>			
Question number	Question	Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
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	y	0
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	n	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	n	0
4.06	Host for recognised pests and pathogens	n	0
4.07	Causes allergies or is otherwise toxic to humans	n	0
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	y	1
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	y?	1
5.01	Aquatic	n	0

5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte		
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	n	-1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative fragmentation	y	1
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	y	1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	y	1
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	y	1
8.05	Effective natural enemies present in Florida, or east of the continental divide		
Total Score			6

Outcome	Evaluate*
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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	7	yes
B	11	yes
C	15	yes
total	33	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01		
2.02		
2.03	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List.	native to Taiwan or south China (1); naturalized in New Zealand (2)
2.04		
2.05	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	"It also has strong ornamental qualities, a shrub or small tree with umbrella-like form and huge, fan-like leaves it may be grown for exotic tropical effects in shrub borders and shelter belts"
3.01	New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List.	fully naturalized in New Zealand
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
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		no evidence
4.06	Gilman (1999) <i>Tetrapanax papyriferus</i> . FPS-576, University of Florida, IFAS Extension (http://hort.ufl.edu/shrubs/TETPAPA.PDF).	No serious pests or diseases of major concern.
4.07		no evidence
4.08		no evidence

4.09	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. full sun or partial shade 2. exposure: full shade; "thriving in full sun or shade"
4.1	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	"Grown...on a wide range of soils."
4.11	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	shrub or small tree
4.12	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	" <i>Tetrapanax</i> often creates running, suckering thickets of growth which may crowd its less rampant neighbours."
5.01		terrestrial
5.02	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Araliaceae
5.03	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Araliaceae
5.04		
6.01		
6.02	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	1. propagate by seed 2. "Propagate from seed in autumn"
6.03		
6.04	Machado, Giannotti, and de Oliveira (1988) Flowering entomofauna in <i>Tetrapanax papyriferus</i> Koch (Araliaceae). Revista Brasileira de Biologia 48: 537-544.	<i>T. papyriferus</i> was found to be obligately xenogamous - it was not exhibit agamospermy, and autogamous and geitonogamous pollination did not result in fruit production.
6.05	Machado, Giannotti, and de Oliveira (1988) Flowering entomofauna in <i>Tetrapanax papyriferus</i> Koch (Araliaceae). Revista Brasileira de Biologia 48: 537-544.	Wasps and bees were found to be important pollinators of <i>T. papyriferus</i> .
6.06	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	1. "Plants form from rhizomes, often at great distances from the trunk"; propagate by sucker division 2. "Propagate...by rooted sucker in spring and summer".
6.07		
7.01		
7.02	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	"It also has strong ornamental qualities, a shrub or small tree with umbrella-like form and huge, fan-like leaves it may be grown for exotic tropical effects in shrub borders and shelter belts"

7.03		no evidence
7.04	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruits are small globular drupes [no evidence of adaptations to wind dispersal]
7.05		no evidence
7.06		fleshy fruit
7.07	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruits are small globular drupes [no evidence of any means of attachment]
7.08		fleshy fruit
8.01		
8.02		
8.03		
8.04	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	"In colder areas the top growth may be cut back to ground level during the winter to shoot again in the spring."
8.05		