

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>Arachis glabrata (perennial peanut)</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)		
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	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	n	-1
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	?	
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	n	-1
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators		
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	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	n	-1
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			-11

Outcome	Accept*
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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		
1.02	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"The peanut grows on its original planting site unless physically moved to other sites." [and no evidence of naturalization]
1.03		
2.01	1. Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdf/files/EP/EP13500.pdf). 2. FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	1. "The perennial peanut...is adapted to subtropical and warm temperate climates." 2. "It grows best when mean monthly temperatures are above about 20°C."
2.02		
2.03		
2.04		
2.05	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	"Native to Brazil, Argentina and Paraguay between 13° S and 28° S. Introduced to Australia, the United States, India, Thailand, Malaysia and Indonesia."
3.01	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"The peanut grows on its original planting site unless physically moved to other sites." [and no evidence of naturalization]
3.02	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"The peanut grows on its original planting site unless

		physically moved to other sites." [and no evidence of weediness]
3.03	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"The peanut grows on its original planting site unless physically moved to other sites." [and no evidence of weediness]
3.04	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"The peanut grows on its original planting site unless physically moved to other sites." [and no evidence of weediness]
3.05		no evidence
4.01	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	no description of these traits
4.02		no evidence
4.03	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	no description of this
4.04	French, Prine, and Blount (2006) Perennial peanut: an alternative forage of growing importance. University of Florida, IFAS Extension, SS-AGR-39 (http://edis.ifas.ufl.edu/pdffiles/AA/AA14800.pdf).	"Perennial peanut is highly palatable to most livestock"
4.05	1. French, Prine, and Blount (2006) Perennial peanut: an alternative forage of growing importance. University of Florida, IFAS Extension, SS-AGR-39 (http://edis.ifas.ufl.edu/pdffiles/AA/AA14800.pdf). 2. FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	1. Perennial peanut is used as a forage, as hay, and as silage for horses, cattle, sheep, and goats. 2. No toxicity recorded.
4.06	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"no insect, disease, or nematode pests have been identified that cause economic loss"
4.07	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	No toxicity recorded.
4.08		no evidence
4.09	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"Perennial peanut grows best in full sun" but "will persist in partial shade"
4.1	Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	"This rhizomatous legume is adapted to well-drained soils, particularly deep sands"
4.11	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	"Herbaceous perennial with erect to decumbent

		unbranched stems"
4.12		no evidence
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.	Fabaceae
5.03	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"The peanut legume, in association with Rhizobium, fixes atmospheric N." [but is herbaceous]
5.04	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	"with a deep, woody taproot"
6.01		
6.02	1. Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf). 2. Prine, Dunavin, Moore, and Roush (1981) 'Florigraze' Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-275. 3. FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	1. "Rhizomal perennial peanut does not reproduce by seed" 2. "Seeds develop very rarely on these three [cultivars of] rhizoma peanuts." 3. fruit set scarce
6.03		
6.04		
6.05		
6.06	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"Perennial peanut is propagated vegetatively using rhizomes"
6.07		
7.01		
7.02	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"In Guanacaste Province, Costa Rica, medians, lawns, hotel entryways, and roadsides are planted with perennial peanut."
7.03		no evidence
7.04		fruit is a peanut (and fruit set scarce)
7.05		fruit is a peanut (and fruit set scarce)
7.06	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"Rhizomal perennial peanut does not reproduce by seed; therefore, it can't be carried

		by birds or wildlife or transported in plant material to unintended areas."
7.07	FAO, Grassland Index (http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000007.HTM).	fruit set scarce [and no evidence of any means of attachment]
7.08	Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf).	"Rhizomal perennial peanut does not reproduce by seed; therefore, it can't be carried by birds or wildlife or transported in plant material to unintended areas."
8.01	1. Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf). 2. Prine, Dunavin, Moore, and Roush (1981) 'Florigraze' Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-275.	1. "Rhizomal perennial peanut does not reproduce by seed" 2. "Seeds develop very rarely on these three [cultivars of] rhizoma peanuts."
8.02		
8.03		
8.04	1. Rouse, Miavitz, and Roka (2004) Guide to using rhizomal perennial peanut in the urban landscape. University of Florida, IFAS Extension, HS960 (http://edis.ifas.ufl.edu/pdffiles/EP/EP13500.pdf). 2. Prine, Dunavin, Glennon, and Roush (1986) Arbrook Rhizoma Peanut: A Perennial Forage Legume. University of Florida, IFAS, Agricultural Experiment Stations, Circular S-332.	1. Perennial peanut tolerates mowing and grazing. BUT 2. "The rhizoma peanut is easily killed by plowing the soil with a moldboard plow and harrowing several times at intervals to kill sprouting shoots."
8.05		