

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>Albizia julibrissin (mimosa)</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)	y	1
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	y	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	y	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	y	1
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	n	0
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	y	1
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	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	y	1
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	y	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	y	1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	y	1
8.03	Well controlled by herbicides	y	-1
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			21

Outcome	Reject*
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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	19	yes
total	37	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		used horticulturally, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01		
2.02		
2.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	Native habitat: widespread, Iran to Japan.
2.04		
2.05	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	"Silk tree continues to be a popular ornamental because of its fragrant and showy flowers."
3.01	1. New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List. 2. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	1. fully naturalized in New Zealand 2. naturalized from New Jersey to Louisiana and in California
3.02	Global Invasive Species Database (http://www.issg.org/database/species/ecology.asp?si=364&fr=1&sts=sss).	"It has escaped from the urban landscape and competes with native plants in disturbed habitats"
3.03		no evidence
3.04	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	Considered an invader of natural areas in the eastern U.S. "It can...become a serious problem along riparian areas"
3.05	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	<i>A. lebbbeck</i> considered invasive in southern Africa and the southeastern US.
4.01	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of these traits
4.02	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.	not allelopathic
4.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of this
4.04		
4.05	1. Burrows and Tyrl (2001) Toxic Plants of North America. Iowa State University Press, Ames. 2. 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.	1. "neurotoxic effects have been produced experimentally in sheep fed the legumes" BUT 2. no toxicity
4.06	Horticopia 4.0	"Mimosa (vascular) wilt is becoming a very widespread problem in many areas of the country

		and has killed many trees."
4.07	1. 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. 2. Horticopia 4.0	1. no toxicity 2. "Pollen can cause significant allergy problems for some people."
4.08		no evidence
4.09	1. 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. 2. Horticopia 4.0	1. shade intolerant 2. exposure: full sun
4.1	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	1. "well adapted to poor soils" 2. "it is capable of growing in a wide range of soil conditions"
4.11	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.	growth habit: tree/shrub
4.12	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	"It forms dense stands that reduce light levels and nutrients and prevent the establishment of native plants."
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	1. 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. 2. Weber (2003) Invasive Plant Species of the World. CABI Publishing.	1. Nitrogen fixation: medium 2. "The tree is nitrogen-fixing, usually abundantly nodulated"
5.04	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.	not propagated by bulbs, corms, or tubers
6.01		
6.02	1. 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. 2. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	1. propagated by seed 2. "produces numerous seeds that germinate everywhere"
6.03		
6.04	Irwin, Hamrick, Godt, and Smouse (2003) A multiyear estimate of the effective pollen donor pool for <i>Albizia julibrissin</i> . Heredity 90: 187-194.	"mimosa appears to be self-incompatible"
6.05	Irwin, Hamrick, Godt, and Smouse (2003) A multiyear estimate of the effective pollen donor pool for <i>Albizia julibrissin</i> . Heredity 90: 187-194.	"they are visited by hummingbirds and a wide array of insects" [includes, but is not limited to, a specialist pollinator]
6.06	1. Remaley (2005) Silk tree. PCA Alien Plant Working Group	1. "Silk tree reproduces

	(http://www.nps.gov/plants/alien/fact/alju1.htm). 2. 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.	both vegetatively and by seed." BUT 2. vegetative spread rate: none
6.07	1. Irwin, Hamrick, Godt, and Smouse (2003) A multiyear estimate of the effective pollen donor pool for <i>Albizia julibrissin</i> . Heredity 90: 187-194. 2. Weber (2003) Invasive Plant Species of the World. CABI Publishing.	1. "In open habitats, trees initiate flowering at small sizes (<2.5m)." 2. fast growing [but time to vegetative reproduction unknown]
7.01		
7.02	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	"Silk tree continues to be a popular ornamental because of its fragrant and showy flowers."
7.03	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	"often spreading by seed from nearby ornamentals or from contaminated fill dirt"
7.04	1. Irwin, Hamrick, Godt, and Smouse (2003) A multiyear estimate of the effective pollen donor pool for <i>Albizia julibrissin</i> . Heredity 90: 187-194. 2. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	1. "Seeds are produced in thin, flat pods that are readily dispersed by wind." BUT 2. "Seeds are mostly dispersed below or around the parent plant"
7.05	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	"It can...become a serious problem along riparian areas...where its seeds are easily transported in water."
7.06	1. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm). 2. Gilman and Watson (1993) <i>Albizia julibrissin</i> : Mimosa. University of Florida, IFAS Extension (http://edis.ifas.ufl.edu/pdffiles/ST/ST06800.pdf).	1. "Seeds are mostly dispersed below or around the parent plant, but can be dispersed further by water." 2. fruit does not attract wildlife
7.07	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruits are papery legume pods - no evidence of any means of attachment
7.08	1. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm). 2. Gilman and Watson (1993) <i>Albizia julibrissin</i> : Mimosa. University of Florida, IFAS Extension (http://edis.ifas.ufl.edu/pdffiles/ST/ST06800.pdf).	1. "Seeds are mostly dispersed below or around the parent plant, but can be dispersed further by water." 2. fruit does not attract wildlife
8.01	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Irwin, Hamrick, Godt, and Smouse (2003) A multiyear estimate of the effective pollen donor pool for <i>Albizia julibrissin</i> . Heredity 90: 187-194.	1. "large seed production" 2. "Large, sunlit trees produce copious numbers of flowers and fruits annually."
8.02	Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	"Silk tree seeds have impermeable seed coats that allow them to remain dormant for many years."

		One study showed that 90% of the seeds were viable after five years" [unclear whether or not in soil, but it is a hard-seeded legume]
8.03	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	"Effective herbicides for treating cut stumps or seedlings and saplings are glyphosate or triclopyr."
8.04	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Remaley (2005) Silk tree. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/alju1.htm).	1. has "the ability to resprout after damage" 2. "If cut or top-killed, trees resprout quickly"
8.05		