

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>Agave filifera</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	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	y	1
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		
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	n	0
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)		
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	?	
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		
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)		
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		
8.05	Effective natural enemies present in Florida, or east of the continental divide		
Total Score			-1

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	9	yes
C	12	yes
total	28	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	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	restricted distribution in Mexico [and no evidence of naturalization elsewhere]
2.04		
2.05	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	" <i>Agave filifera</i> is well known in European horticulture".
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	<i>A. americana</i> considered an environmental weed in southern Europe and southern Africa.
4.01	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	spines at tips of leaves 1-2 cm long
4.02		no evidence
4.03	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	no description of this
4.04		
4.05		no evidence
4.06		
4.07		no evidence
4.08		no evidence
4.09	1. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. 2. Kimnach, M. (1995) A new agave from Sinaloa, Mexico: <i>A. filifera</i> subsp. <i>microceps</i> . Cactus and Succulent Journal 67: 306-310.	1. bright direct sunlight 2. in the wild, occurs in very open habitat
4.1		
4.11	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	succulent rosettes
4.12		no evidence
5.01		terrestrial
5.02	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	Agavaceae
5.03	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	Agavaceae
5.04	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	"roots hard fibrous" [for genus <i>Agave</i>]
6.01		
6.02	Kimnach, M. (1995) A new agave from Sinaloa,	plants were grown from wild-

	Mexico: <i>A. filifera</i> subsp. <i>microiceps</i> . Cactus and Succulent Journal 67: 306-310.	collected seed
6.03		
6.04		
6.05	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	Bats are important pollinators of agaves, and agave flowers are also visited by hummingbirds, other birds, and insects. [primary pollinators are specialists]
6.06	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	bears suckers
6.07	Kimnach, M. (1995) A new agave from Sinaloa, Mexico: <i>A. filifera</i> subsp. <i>microiceps</i> . Cactus and Succulent Journal 67: 306-310.	One specimen flowered 3 times in 18 years; another flowered after 7 years. [but time to vegetative reproduction unknown]
7.01		
7.02	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	used horticulturally
7.03		no evidence
7.04	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	fruit of genus <i>Agave</i> "a dehiscent, loculicidal capsule" [no evidence of adaptations to wind dispersal]
7.05		no evidence
7.06		
7.07	Gentry (1982) Agaves of Continental North America. The University of Arizona Press.	fruit of genus <i>Agave</i> "a dehiscent, loculicidal capsule" [no evidence of any means of attachment]
7.08		
8.01	Kimnach, M. (1995) A new agave from Sinaloa, Mexico: <i>A. filifera</i> subsp. <i>microiceps</i> . Cactus and Succulent Journal 67: 306-310.	One specimen flowered 3 times in 18 years; another flowered after 7 years. [so few seeds per year]
8.02		
8.03		
8.04		
8.05		