

Australia/New Zealand Weed Risk Assessment adapted for United States.

Data used for analysis published in: Gordon, D.R. and C.A. Gantz. 2008. Potential impacts on the horticultural industry of screening new plants for invasiveness. Conservation Letters 1: 227-235. Available at: <http://www3.interscience.wiley.com/cgi-bin/fulltext/121448369/PDFSTART>

<i>Areca ridleyana</i>			
	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 U.S. climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	1	
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 regions with an average of 11-60 inches of annual precipitation	N	0
2.05	Does the species have a history of repeated introductions outside its natural range?	?	
3.01	Naturalized beyond native range	N	-1
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		
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		
4.09	Is a shade tolerant plant at some stage of its life cycle	Y	1
4.1	Grows on one or more of the following soil types: alfisols, entisols, or mollisols	Y	1
4.11	Climbing or smothering growth habit	N	0
4.12	Forms dense thickets		
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	N	0
6.02	Produces viable seed	?	
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators		
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)	N	-1

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		
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)		
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 U.S.		
Total Score			0

Outcome	Accept
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section	# questions answered	satisfy minimum?
A	10	Yes
B	7	Yes
C	10	Yes
total	27	Yes

Data collected 2008

Question number	Reference	Source data
1.01		no evidence of cultivation
1.02		
1.03		
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgn d.tif). 2. Palm and Cycad Societies of Australia (http://www.pacsoa.org.au/palms/Areca/ridleyana.html).	1. Global hardiness zones 12-13. 2. Peninsula Malaysia rainforest.
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Palm and Cycad Societies of Australia (http://www.pacsoa.org.au/palms/Areca/ridleyana.html).	1. Only one climatic region. 2. Peninsular Malaysia rainforest.

2.04	Atlapedia Online (http://www.atlapedia.com/online/countries/malaysia.htm).	For peninsular Malaysia: "average annual precipitation for West Malaysia is 2,540 mm (100 inches)."
2.05		no evidence
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
4.01	Backer, CA, and RC Bakhuizen van den Brink, Jr (1968) Flora of Java, vol. III. Wolters-Noordhoff, Groningen, the Netherlands.	unarmed [genus]
4.02		
4.03	Backer, CA, and RC Bakhuizen van den Brink, Jr (1968) Flora of Java, vol. III. Wolters-Noordhoff, Groningen, the Netherlands.	no description of parasitism
4.04		
4.05		no evidence
4.06		
4.07		no evidence
4.08		
4.09	1. Jones, DL (1995) Palms Throughout the World. Smithsonian Institution Press, Washington, D.C. 2. Palm and Cycad Societies of Australia (http://www.pacsoa.org.au/palms/Areca/ridleyana.html).	1. "Requires a sheltered, shady position". 2. Understory species in rainforest habitat.
4.1	USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources (http://soils.usda.gov/use/worldsoils/mapindex/order.html).	Malaysia: almost entirely ultisols, with very small amounts of alfisols, entisols and inceptisols (and also very small amounts of histisols and oxisols).
4.11	Palm and Cycad Societies of Australia (http://www.pacsoa.org.au/palms/Areca/ridleyana.html).	A small understory clumping palm.
4.12		
5.01		Terrestrial
5.02		Arecaceae
5.03		Arecaceae
5.04	Palm and Cycad Societies of Australia (http://www.pacsoa.org.au/palms/Areca/ridleyana.html).	A small understory clumping palm.
6.01		no evidence
6.02	Huxley, AJ (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	"Propagate by seed" [genus description].
6.03		
6.04		
6.05		
6.06		
6.07		
7.01		
7.02	Jones, DL (1995) Palms Throughout the World.	"Highly ornamental palm".

	Smithsonian Institution Press, Washington, D.C.	
7.03		no evidence
7.04	Backer, CA, and RC Bakhuizen van den Brink, Jr (1968) Flora of Java, vol. III. Wolters-Noordhoff, Groningen, the Netherlands.	Fruit a drupe. [no evidence of adaptations to wind dispersal]
7.05		
7.06	Jones, DL (1995) Palms Throughout the World. Smithsonian Institution Press, Washington, D.C.	"Brilliant-red, elliptical fruit about 0.5 cm long".
7.07	Backer, CA, and RC Bakhuizen van den Brink, Jr (1968) Flora of Java, vol. III. Wolters-Noordhoff, Groningen, the Netherlands.	Fruit a drupe. [no evidence of adaptations to external dispersal]
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		