

**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.**

<b><i>Abutilon megapotamicum (trailing abutilon)</i></b>			
<b>Question number</b>	<b>Question</b>	<b>Answer</b>	<b>Score</b>
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)		
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	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	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	?	
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)	n	0
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		
6.07	Minimum generative time (years)	2	0
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		
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		
<b>Total Score</b>			<b>2</b>

<b>Outcome</b>	<b>Evaluate*</b>
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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	6	yes
B	9	yes
C	11	yes
total	26	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	Hortocopia 4.0	hardy range 9B to 11
2.02		
2.03	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland ( <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?751">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?751</a> ). 2. New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List.	1. probable origin Brazil 2. also naturalized in New Zealand
2.04		
2.05	1. Hortocopia 4.0. 2. Cooke (1998) The Plantfinder's Guide to Tender Perennials. Timber Press: Portland, Oregon.	horticultural species (1, 2)
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	Holm (1979) A Geographical Atlas of World Weeds. John Wiley and Sons.	<i>A. indicum</i> considered a serious weed of agriculture in Ghana, and a common weed in India.
4.01	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	no description of these traits
4.02		no evidence
4.03	Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	no description of this
4.04		
4.05		no evidence
4.06		
4.07		no evidence
4.08		no evidence
4.09	1. Hortocopia 4.0. 2. Cooke (1998) The Plantfinder's Guide to Tender Perennials. Timber Press: Portland, Oregon. 3. Horticulture News (May/June 2006) UF/IFAS Nassau County Extension ( <a href="http://nassau.ifas.ufl.edu/horticulture/newsletter/Newsletters06/mayjune06.pdf">http://nassau.ifas.ufl.edu/horticulture/newsletter/Newsletters06/mayjune06.pdf</a> ). 4. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	1. partial shade or partial sun to full sun; "This plant thrives in sun and will not bloom in deep shade." 2. "all abutilons need full sun to thrive" 3. "It prefers morning sun but shade in the hot afternoon". 4. "Grow in full sun or part-day shade"
4.1	1. Hortocopia 4.0. 2. Cooke (1998) The Plantfinder's Guide to Tender Perennials. Timber Press: Portland, Oregon. 3. Huxley (1992) The New Royal Horticultural Society	1. "Suitable soil is well-drained/loamy." 2. "all abutilons need...a well-drained fertile soil" 3. "Grow...in fertile, well-drained soils."

	Dictionary of Gardening. The MacMillan Press, London.	
4.11	Hortocopia 4.0	shrub, woody plant
4.12		no evidence
5.01		terrestrial
5.02	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Malvaceae
5.03	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Malvaceae
5.04	Hortocopia 4.0	"This plant's roots are fibrous."
6.01		
6.02	1. Hortocopia 4.0. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	propagate from seeds (1, 2)
6.03	Cooke (1998) The Plantfinder's Guide to Tender Perennials. Timber Press: Portland, Oregon.	<i>A. x millerii</i> is probably a hybrid between <i>A. megapotamicum</i> and <i>A. pictum</i> . [but likely an artificial hybrid]
6.04		
6.05		
6.06		
6.07	Hortocopia 4.0	fast growth rate [assumption of 2 years for fast-growing woody plant]
7.01		
7.02	1. Hortocopia 4.0. 2. Cooke (1998) The Plantfinder's Guide to Tender Perennials. Timber Press: Portland, Oregon.	horticultural species (1, 2)
7.03		no evidence
7.04	Fryxell, P.A. (1997) The American genera of Malvaceae II. Brittonia 49: 204-269.	Fruits of genus <i>Abutilon</i> schizocarpic; mericarps 5 to many, usually with 3-6 seeds each; seeds glabrous or slightly pubescent. [no evidence of adaptations to wind dispersal]
7.05		no evidence
7.06		
7.07	Fryxell, P.A. (1997) The American genera of Malvaceae II. Brittonia 49: 204-269.	Fruits of genus <i>Abutilon</i> schizocarpic; mericarps 5 to many, usually with 3-6 seeds each; seeds glabrous or slightly pubescent. [no evidence of any means of attachment]
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		