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

Pavonia dasypetala			
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 U.S. climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	1	
2.03	Broad climate suitability (environmental versatility)	?	
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	?	
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		
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	y	1
6.05	Requires specialist pollinators	y	-1
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)		
7.02	Propagules dispersed intentionally by people	n	-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)	y	1
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			-2

Outcome	**Accept**

section	**# questions answered**	**satisfy minimum?**
A	8	Yes
B	6	Yes
C	13	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%20lgnd.tif). 2. Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx. 3. McDade, LA, and P Davidar (1984) Determinants of fruit and seed set in *Pavonia dasypetala* (Malvaceae). Oecologia 64: 61-67.	1. Global hardiness zones (9?-)10-13. 2. "From Central America (as far N as Honduras) and N South America (Colombia and Venezuela), at elevations of 0-1200 m." 3. Costa Rica to northern South America.
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. Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx. 3. McDade, LA, and P Davidar (1984) Determinants of fruit and seed set in *Pavonia dasypetala* (Malvaceae). Oecologia 64: 61-67.	1. Distribution range is not specific enough to determine; possibly three climatic regions. 2. "From Central America (as far N as Honduras) and N South America (Colombia and Venezuela), at elevations of 0-1200 m." 3. Costa Rica to northern South America.
2.04	Honduras: Atlapedia Online (http://www.atlapedia.com/online/countries/honduras.htm).	For Honduras: Average annual precipitation varies from 1,770 mm (70 inches) to 2,540 mm (100 inches) in the north, while along the Pacific coastal plains it varies from 1,520 mm (60 inches) to 2,030 mm (80 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	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York	no description of these traits

	Botanical Garden Press, Bronx.	
4.02		
4.03	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx.	no description of this
4.04		
4.05		no evidence
4.06		
4.07		no evidence
4.08		
4.09		
4.1	USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources (http://soils.usda.gov/use/worldsoils/mapindex/order.html).	Honduras: mostly alfisols, inceptisols, and ultisols, with very small amounts of entisols and mollisols; Nicaragua: mostly ultisols, with some alfisols and inceptisols (also with some andisols on the Pacific Coast); Costa Rica: mostly ultisols with a small amount of inceptisols (also with a small amount andisols); Panama: almost all ultisols with a very small amount of inceptisols (and also a very small amount of andisols); Colombia: mostly alfisols, entisols, and ultisols (also with oxisols and andisols present in the south and along the Pacific Coast); Venezuela: mostly alfisols, inceptisols, and ultisols with some entisols and a very small amount of mollisols in the north (also primarily oxisols in southern Venezuela).
4.11	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx.	Shrubs or small trees 1-5(-7) m tall.
4.12		
5.01		terrestrial
5.02	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx.	Malvaceae
5.03	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York	Malvaceae

	Botanical Garden Press, Bronx.	
5.04	Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx.	Shrubs or small trees 1-5(-7) m tall.
6.01		no evidence
6.02		
6.03		
6.04	McDade, LA, and P Davidar (1984) Determinants of fruit and seed set in *Pavonia dasypetala* (Malvaceae). Oecologia 64: 61-67.	"*Pavonia* flowers are not apomictic" BUT "Limited selfing occurs (Table 1), perhaps as a result of stylar movements that bring stigmas into contact with anthers in some flowers toward the end of anthesis".
6.05	McDade, LA, and P Davidar (1984) Determinants of fruit and seed set in *Pavonia dasypetala* (Malvaceae). Oecologia 64: 61-67.	"The only observed pollinator of *Pavonia* flowers at this site was the long-tailed hermit hummingbird (*Phaethornis superciliosus*)."
6.06		
6.07		
7.01		
7.02		no evidence
7.03		no evidence
7.04	1. Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx. 2. Croat, TB (1978) Flora of Barro Colorado Island. Stanford University Press, Stanford, California.	1. "Fruits oblate, ca. 1 cm diam., blackish and viscid at maturity; mericarps 6 mm high, carinate and reticulately veined." 2. "Mericarps 5, obovoid, to 6 mm long and 3 mm wide, ± 3-sided, black; seeds ca 4.5 mm long, black, surrounded by a whitish aril." [no evidence of adaptations to wind dispersal]
7.05		
7.06	Smithsonian Tropical Research Institute (http://striweb.si.edu/esp/tesp/details.php?id=3114) .	dispersal modes: mammal, bird
7.07	1. Fryxell, PA (1999) Flora Neotropica Monograph 76, Pavonia cavanilles (Malvaceae). The New York Botanical Garden Press, Bronx. 2. Croat, TB (1978) Flora of Barro Colorado Island. Stanford University Press, Stanford, California.	1. "Fruits oblate, ca. 1 cm diam., blackish and viscid at maturity; mericarps 6 mm high, carinate and reticulately veined." 2. "Mericarps 5, obovoid, to 6 mm long and 3 mm wide, ± 3-sided, black; seeds ca 4.5 mm long, black, surrounded by a

		whitish aril." [no evidence of adaptations to wind dispersal]
7.08	Smithsonian Tropical Research Institute (http://striweb.si.edu/esp/tesp/details.php?id=3114) .	dispersal modes: mammal, bird
8.01		
8.02		
8.03		
8.04		
8.05		