

<i>Gynerium sagittatum</i> (Uva grass, Wild cane) -- UNITED STATES		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 US climates (USDA hardiness 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 with mean annual precipitation of 11-60 inches.	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	n	
3.01	Naturalized beyond native range.	n	0
3.02	Garden/amenity/disturbance weed	?	
3.03	Weed of agriculture	?	
3.04	Environmental weed	?	
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		
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans.		
4.08	Creates a fire hazard in natural ecosystems		
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on any soil order representing >5% cover in the US.	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	y	1
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	n	0
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y	1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant		
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	y	1
7.06	Propagules bird dispersed		
7.07	Propagules dispersed by other animals (externally)	?	
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 the contiguous US and Alaska		
	Total Score		13
	Implemented Pacific Second Screening		no
	Risk Assessment Results		High Risk

	Reference	Source data
1.01	1. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	No evidence of selection for reduced weediness. 1. This plant has been subject of little scientific attention, and the genus <i>Gynerium</i> is regarded as monotypic. However, there are two different types of <i>Gynerium</i> that have been reported; 'small' <i>Gynerium</i> and 'large' <i>Gynerium</i> . 'Small' has shorter, more slender and frequently branching culms with rigid leaf-blades, while the 'large' has tall, stout, unbranched culms with long and wide leaf-blades which droop at their tips.
1.02		Skip to 2.01
1.03		Skip to 2.01
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnnd.tif). 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (31 December 2013).	No computer analysis was performed. 1. Global plant hardiness zones (7-?) 8-13; equivalent to USDA Hardiness zones (7a?) 7b-11b. 2. Distribution range: native to Mexico; Caribbean: Cuba, Dominic, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Puerto Rico, St. Lucia; South America: Argentina, Belize, Boliva, Brazil, Columbia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guiana, Guyana, Honduras, Nicaragua, Panama, Paraguay, Peru, Suriname, Venezuela.
2.02		No computer analysis was performed. Native range is well known; refer to 2.01 source data.
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf).	1. Distribution is well-known and occurs in more than 3 climatic groups.
2.04	1. World Climate Maps. http://www.climate-charts.com/World-Climates-Maps.html . Accessed 31 December 2013.	1. 125 mm-4974 mm (5.0"-195.9").
2.05		No records indicating that it has been introduced outside its native range.
3.01	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. It is not known to have naturalized elsewhere.
3.02	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. If not controlled, wild cane slowly invades wet bottomland pastures and eliminates forage plants. 2. <i>Gynerium</i> only persists in the region through continuous invasion into new, recently exposed sites, and this persistence is under the allogenic control of river channel migration.
3.03	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. If not controlled, wild cane slowly invades wet bottomland pastures and eliminates forage plants. 2. <i>Gynerium</i> only persists in the region through continuous invasion into new, recently exposed sites, and this persistence is under the allogenic control of river channel migration.

3.04	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. If not controlled, wild cane slowly invades wet bottomland pastures and eliminates forage plants. 2. <i>Gynerium</i> only persists in the region through continuous invasion into new, recently exposed sites, and this persistence is under the allogenic control of river channel migration.
3.05		No evidence.
4.01		These structures are not included in the description of this species.
4.02		
4.03	1. USDA, NRCS. 2013. The PLANTS Database (http://plants.usda.gov , 2 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA.	1. Family: Poaceae (not a parasitic family).
4.04		
4.05		
4.06		
4.07		
4.08		
4.09	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Disturbance that creates bare, wet soil is necessary for seedling establishment. Forest edges "shade out" portions of wild cane stands. 2. Specialized successional trees grow over <i>Gynerium</i> , and even more trees germinate in this declining zone thus causing its eventual mortality.
4.10	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Grows on sites with moist soils, usually high in organic matter, often with the water table near the surface. 2. Seed germination of 'small' type took place in moist parts of the sandy or silty sediment substrata.
4.11	1. USDA, NRCS. 2013. The PLANTS Database (http://plants.usda.gov , 2 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA. 2. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. Family: Poaceae. 2. A tall shrub with a grass-like habit.
4.12	1. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. From the Amazonian lowlands in Peru, the species often forms extensive high-density stands (cañabravales) on the riverbanks. In the successional forests, <i>Gynerium</i> often forms thickets in which only a few other plant species are present.

5.01	1. USDA, NRCS. 2013. The PLANTS Database (http://plants.usda.gov , 2 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA. 2. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. Family: Poaceae. 2. A tall shrub with a grass-like habit.
5.02	1. USDA, NRCS. 2013. The PLANTS Database (http://plants.usda.gov , 2 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA. 2. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. Family: Poaceae. 2. A tall shrub with a grass-like habit.
5.03	1. USDA, NRCS. 2013. The PLANTS Database (http://plants.usda.gov , 2 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA. 2. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. Family: Poaceae. 2. A tall shrub with a grass-like habit.
5.04		
6.01		
6.02	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Almost all the seeds of the "short" type from the Amazon Basin germinated within 3 weeks, and 0 to 2 percent of the "large" type germinated (Kalliola and others 1992). 2. The 'small' type characteristically formed extensive seedling stands with up to 3 seedlings m ⁻² .
6.03	1. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Two distinct types of <i>Gynerium sagittatum</i> were recognized, the 'large' and 'small' types, and a third one ('intermediate') showing characteristics of both. The 'large' and 'small' types were generally sympatric, but they usually grew along different rivers or on separate sites. The intermediate type, which only occurred in low numbers, could represent hybridization of the two, or they could be phenotypes of either the 'large' or 'small' <i>Gynerium</i> .
6.04		
6.05	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. Wind pollinated.

6.06	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Vegetative propagation is also important, both for expanding colonies and establishing new ones. Horizontal runners or rhizomes, surface or underground, are constantly active and establish new plants or clumps as far as 20 m from the parent plants (Pohl 1983). Segments of culm or rhizome, carried by floodwaters and covered with soil or debris, sprout and start new colonies. 2. Vegetative propagation by rhizomes is crucial for 'large' <i>Gynerium</i> . The long-distance dispersal of the 'large' type took place vegetatively through stem cuts which were eroded from the river bank and carried elsewhere. The 'small' type also spreads vegetatively within the growth sites.
6.07	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf .	1. It is not known how long seedlings take to reach maturity and how rapidly suckers grow.
7.01	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Seeds are dispersed by wind and water (Kalliola and others 1992). 2. The fruits of <i>Gynerium</i> are narrow and oblong, about 1 mm long, covered with silky hairs which enable effective dispersion by wind or water.
7.02	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (31 December 2013).	1. Economic importance: materials (cane).
7.03		
7.04	1. Francis, J.K. USDA, USFS, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984. http://www.fs.fed.us/global/iitf/pdf/shrubs/Gynerium%20sagittatum.pdf . 2. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. Seeds are dispersed by wind and water (Kalliola and others 1992). 2. The fruits of <i>Gynerium</i> are narrow and oblong, about 1 mm long, covered with silky hairs which enable effective dispersion by wind or water.
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7.06		
7.07	1. Kalliola, R. et al. 1992. Intraspecific variation, and the distribution and ecology of <i>Gynerium sagittatum</i> (Poaceae) in the western Amazon. <i>Flora</i> , 186(3-4): 153-167.	1. The fruits of <i>Gynerium</i> are narrow and oblong, about 1 mm long, covered with silky hairs.
7.08		
8.01		
8.02		

8.03		
8.04		
8.05		