

Assessment date 1/13/2015

<i>Phyllostachys meyeri--Meyer bamboo</i>		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 FL 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 in regions with an average of 11-60 inches of annual precipitation	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	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	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	n	-1
4.05	Toxic to animals	n	0
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	n	0
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	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	n	-1
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)	>4	-1
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	n	-1
7.04	Propagules adapted to wind dispersal		
7.05	Propagules water dispersed	unk	-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)	n	-1
8.03	Well controlled by herbicides	unk	1
8.04	Tolerates, or benefits from, mutilation or cultivation	unk	0
8.05	Effective natural enemies present in U.S.		
Total Score		6	
Implemented Pacific Second Screening		Yes	
Risk Assessment Results		Evaluate	

section	# questions answered	satisfy minimum?
A		11 yes
B		9 yes
C		14 yes
total		34 yes

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness.
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%20lnd.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 (00 Month 0000).	No computer analysis was performed. 1. Global hardiness zone: 8, 9, 10; equivalent to USDA Hardiness zones: 8a: to -12.2 °C (10 °F) USDA Zone 8b: to -9.4 °C (15 °F) USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) 2. Native to ASIA TEMPERATE: Taiwan and Chinese provinces Hunan, Anhui, Fujian, Hubei, Zhejiang
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 in the native/cultivated range occurs in Cfa Cfb Cfw
2.04	1. Chinamaps http://www.chinamaps.org/china/provincemaps/hunan.html (1-7-2015) 2. World Bank http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisRegion=Asia&ThisCCode=CHN (1-7-2015)	29.5 inches to 67 inches
2.05	1. Bright Side Bamboo Nursery http://www.brightsidebamboo.com/nursery.html (1-7-2015) 2. Lewis Bamboo http://www.lewisbamboo.com/Phyllostachys.html (1-7-2015)	Readily available from internet nurseries.
3.01	1. Diamond, A.R. 2013. New Cyperaceae and Poaceae records from Alabama. <i>Phytoneuron</i> 2013-75: 1–18. Published 27 September 2013. ISSN 2153 733X 2. Tucker, Gordon. "The Genera of Bambusoideae (Gramineae) In the Southeastern United States." <i>Journal of Arnold Arboretum</i> 69.1 (1988): 241.	1. <i>Phyllostachys aureosulcata</i> , <i>P. bambusoides</i> , and <i>P. meyeri</i> are confirmed as escaped and naturalized in the state [Alabama]. 2. [G]olden bamboo and <i>P. Meyer</i> McClure have been collected as possible escapes in North and South Carolina, Georgia, and Florida.
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	1. Holm, LeRoy G. <i>A Geographical Atlas of World Weeds</i> . Malabar, FL: Krieger Pub., 1991. Print. 2. United States Department of Agriculture Animal and Plant Health Inspection Service August 20, 2012 Version 1 Weed Risk Assessment for <i>Phyllostachys aureosulcata</i> McClure (Poaceae) – Yellow groove bamboo	1. <i>Phyllostachys mitis</i> is a principle weed in New Zealand 2. <i>Phyllostachys pubescens</i> has invaded forests in Japan, forming uniform monolayers of foliage (monoculture), and dominating competing vegetation; between 1975 and 1993, this bamboo had replaced the trees in a once-mixed forest (Isagi and Torii, 1977). <i>Phyllostachys flexuosa</i> is reported to form dense stands which prevent native vegetation from growing (GISD, 2008).
4.01	Encyclopedia of Life http://eol.org/pages/1115499/details (1-9-2014)	These characteristics are not listed in the description of the species.
4.02	no evidence	
4.03	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 (00 Month 0000).	1. Family: Poaceae (not a parasitic family).
4.04	Backyard Gardener http://www.backyardgardener.com/plantname/pda_5bc6.html (1-9-2014)	Tolerances: Deer, drought, heat & humidity, pollution, rabbits, seashore, slope.

4.05		no evidence
4.06		no evidence
4.07		no evidence
4.08		no evidence
4.09		no evidence
4.10	Plants for a Future http://www.pfaf.org/user/Plant.aspx?LatinName=Phyllostachys+meyeri (1-9-2014)	Suitable for: light (sandy), medium (loamy) and heavy (clay) soils. Suitable pH: acid, neutral and basic (alkaline) soils. It prefers moist soil.
4.11	Floras of China http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=24233760 (1-9-2014)	These characteristics are not listed in the description of the species.
4.12	Backyard Gardener http://www.backyardgardener.com/plantname/pda_5bc6.html (1-9-2014)	Runner types send out underground stems to varying distances and send up vertical shoots. These will grow in large thickets or groves if left alone.
5.01	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 (00 Month 0000).	1. Family: Poaceae.
5.02	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 (00 Month 0000).	1. Family: Poaceae.
5.03	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 (00 Month 0000).	1. Family: Poaceae.
5.04	1. Wang, K. et al. 2010. Identification of genes related to the development of bamboo rhizome bud. <i>Journal of Experimental Botany</i> , 61(2): 551–561.	1. According to the type of the rhizome, bamboos have been divided into three groups: scattered bamboos with a monopodial rhizome, caespitose bamboos with a sympodial rhizome, and pluricaespitose bamboos with a monopodial and sympodial rhizome. The rhizome bud can either develop into a bamboo shoot which will grow into a bamboo culm in a very short period, or develop into a new rhizome which will enable the sustainable production of the bamboo grove.
6.01	no evidence	
6.02	John, CK et al. 1994. Selection - A valuable method for bamboo improvement. <i>Current Science (Bangalore)</i> , 66(11): 822-824.	The most easy method of bamboo propagation is by means of seeds. Propagation of economically important bamboo species by seeds is not possible annually because of their very long inter-mast periods.
6.03	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. <i>Current Science (Bangalore)</i> , 66(11): 822-824.	1. The peculiar flowering behaviour in bamboos make genetic improvement by hybridizations very difficult. The flowering and seeding at long intervals (7-120 years) render the overlapping of flowering in more than one species, in the same locality very difficult to obtain, making attempts at hybridizations impossible.
6.04	Plants for a Future http://www.pfaf.org/user/Plant.aspx?LatinName=Phyllostachys+meyeri (1-9-2014)	The flowers are hermaphrodite (have both male and female organs).
6.05	1. Shor, B., Southern California Chapter. From Flowers to Seedlings. American Bamboo Society. Accessed: 18 March 2014. http://www.bamboo.org/GeneralInfoPages/FromFlowersToSeedlings.html	1. Most bamboos are wind-pollinated. Insects may be involved with some species.

6.06	1. Wang, K. et al. 2010. Identification of genes related to the development of bamboo rhizome bud. Journal of Experimental Botany, 61(2): 551–561.	1. The rhizome bud can either develop into a bamboo shoot which will grow into a bamboo culm in a very short period, or develop into a new rhizome which will enable the sustainable production of the bamboo grove.
6.07	1. Hisamoto & Kobayashi (2013) Flowering habits of two bamboo species, <i>Phyllostachys meyeri</i> and <i>Shibataea chinensis</i> , analyzed with flowering gene expression. Plant Species Biol 28: 109-117.	1. Rhizomes planted in the 1990s flowered in 2004.
7.01	1. Diamond, A.R. 2013. New Cyperaceae and Poaceae records from Alabama. Phytoneuron 2013-75: 1–18. Published 27 September 2013. ISSN 2153 733X 2.	"The Wilcox county site was possibly originally established around 1960 as part of Auburn University's experiments with bamboo as a possible source of pulp for paper production (Sturkie et. al 1968). It has since spread via rhizomes over a large area of a pine plantation." Also visible growing on roadside and disturbed logging area.
7.02	1. Scurlock et al. 2000 Bamboo: an overlooked biomass resource? Biomass and Bioenergy, 19:229-244. 2. Liese and Hamburg. 1987. Research on bamboo. Wood Science and Technology, 21:189-209	1. Cultivated for erosion control, windbreaks, building material, food, bamboo fiber clothes, etc. 2. Also, has been proposed as a source for pulp for paper and possible biofuel source.
7.03	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. Very unlikely. The longevity of the seeds varies from species to species, but usually only last 2-3 months under natural conditions. Furthermore, seeds must be sowed immediately in optimal conditions to prevent damping off.
7.04	Plants for a Future http://www.pfaf.org/user/Plant.aspx?LatinName=Phyllostachys+meyeri (1-9-2014)	The flowers are hermaphrodite (have both male and female organs) and are pollinated by Wind.
7.05		No evidence found. Other species of <i>Phyllostachys</i> have been found beside rivers and streams suggesting that culms and rhizomes can be moved by water and washed downstream from upstream sources
7.06		no evidence
7.07		No morphological features that would suggest bamboo seeds are adapted for attachment.
7.08		no evidence
8.01		no evidence
8.02	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. The longevity of the seeds varies from species to species. Under natural conditions it is for 2-3 months.
8.03		Other <i>Phyllostachys</i> can be controlled with Round Up
8.04	Plants for a Future http://www.pfaf.org/user/Plant.aspx?LatinName=Phyllostachys+meyeri (1-9-2014)	Divisions from the open ground do not transplant well, so will need careful treatment and nurturing under cover in pots until at least late spring. Division is best carried out in wet weather and small divisions will establish better than large clumps. Another report says that you can take large divisions from established clumps and transfer them straight to their permanent positions, misting or drenching them frequently until they are established
8.05		no evidence