

**Family:** *Poaceae*

**Taxon:** *Gigantochloa robusta*

**Synonym:** *Gigantochloa verticillata* (Willd.) Munro **Common Name:** robust bamboo

Questionnaire :	current 20090513	Assessor:	HPWRA OrgData	Designation: L
Status:	Assessor Approved	Data Entry Person:	HPWRA OrgData	<b>WRA Score -4</b>
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	
103	Does the species have weedy races?		y=1, n=-1	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)		y=1, n=0	y
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0	n
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0	n
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	
405	Toxic to animals		y=1, n=0	n
406	Host for recognized pests and pathogens		y=1, n=0	n
407	Causes allergies or is otherwise toxic to humans		y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		y=1, n=0	n
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	y
411	Climbing or smothering growth habit		y=1, n=0	n

412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	>3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m2)	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	n
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score -4

## Supporting Data:

101	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Is the species highly domesticated? No evidence] "Origin and geographic distribution The origin of Gigantochloa robusta is unknown, but it is found growing wild in Java (Banten, West Java and Banyuwangi, East Java). It is mainly known from cultivation in Sumatra, Mentawai Islands, Java and Bali."
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Species suited to tropical or subtropical climate(s) 2-High] "DISTRIBUTION Asia-tropical: Malesia."
202	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Quality of climate match data? 2-High]
203	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Broad climate suitability (environmental versatility)? Yes] "Gigantochloa robusta can be found growing in the perhumid tropics from sea-level up to 1500 m altitude, in areas with average annual rainfall of 2350—4200 mm, temperatures of 20—32°C, and relative humidity of over 70%. It normally grows on latosols." [Elevation range exceeds 1000 m, demonstrating environmental versatility in tropical climates]
204	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Native or naturalized in regions with tropical or subtropical climates? Yes] "DISTRIBUTION Asia-tropical: Malesia."
205	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Does the species have a history of repeated introductions outside its natural range? No] "The origin of Gigantochloa robusta is unknown, but it is found growing wild in Java (Banten, West Java and Banyuwangi, East Java). It is mainly known from cultivation in Sumatra, Mentawai Islands, Java and Bali."
301	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Naturalized beyond native range? No] No evidence
302	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Garden/amenity/disturbance weed? No] No evidence
303	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Agricultural/forestry/horticultural weed? No] No evidence
304	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Environmental weed? No] No evidence
305	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Congeneric weed? No] Several Gigantochloa species are listed as naturalized, but there is no evidence or references to them as invasive weeds
401	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Produces spines, thorns or burrs? No] "Perennial; caespitose; clumped densely. Rhizomes short; pachymorph. Culms erect; 1500–2000 cm long; 70–90 mm diam.; woody; with aerial roots from the nodes. Culm internodes terete; thin-walled; 30–40 cm long; light green and yellow; striped; distally pubescent. Lateral branches dendroid. Culm sheaths deciduous; 17–35 cm long; hispid; with dark brown hairs; truncate at apex; auriculate; with 7 mm high auricles; ciliate on shoulders; shoulders with 5 mm long hairs. Culm-sheath ligule 5 mm high; fimbriate. Culm sheath blade triangular; reflexed; 10–14 cm long; 35–50 mm wide. Leaf-sheath oral hairs setose; 5 mm long. Leaf-sheath auricles erect; 1 mm long. Ligule a ciliate membrane; 1 mm long. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath; petiole 0.4 cm long. Leaf-blades lanceolate; 15–27 cm long; 25–50 mm wide. Leaf-blade surface pubescent; hairy abaxially."

402	2013. WRA Specialist. Personal Communication. [Allelopathic? Unknown]	
403	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Parasitic? No] Poaceae
404	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Unpalatable to grazing animals? Unknown] "Young shoots are eaten as a vegetable." [Palatable to humans, so probably also palatable to grazing animals at younger growth stages]
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? No] No evidence from genus
406	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Host for recognized pests and pathogens? No] "Diseases and pests Throughout its growing phase, no serious diseases and pests occur on Gigantochloa robusta. Witches' broom caused by Epichloe bambusae often occurs but does not harm the culms. Harvested culms and derived products suffer seriously from powder post beetles."
407	1999. Ohrnberger, D.. The Bamboos of the World: Annotated Nomenclature and Literature of the Species and the Higher and Lower Taxa. Elsevier, Amsterdam	[Causes allergies or is otherwise toxic to humans? No] "Uses: Culms uses for making water carrying vessels, traditional musical instruments (Anklung), and for building materials such as floors and walls. Shoots consumed as a vegetable." [Multiple human uses, including as food, with no evidence of toxicity]
407	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Creates a fire hazard in natural ecosystems? No] "Gigantochloa robusta can be found growing in the perhumid tropics from sea level up to 1500 m altitude, in areas with average annual rainfall of 2350—4200 mm, temperatures of 20—32°C, and relative humidity of over 70%." [No evidence, and unlikely given wet habitat]
409	2013. Backyard Gardener. Gigantochloa robusta. <a href="http://www.backyardgardener.com/plantname/pda_b634.html">http://www.backyardgardener.com/plantname/pda_b634.html</a> [Accessed 19 Mar 2013]	[Is a shade tolerant plant at some stage of its life cycle?] "Light Range: Part Shade to Full Sun"
409	2013. Plant This. Gigantochloa robusta. <a href="http://plantthis.com/plant-information.asp?gardener=15131&amp;tabview=hazards&amp;plantSpot=1">http://plantthis.com/plant-information.asp?gardener=15131&amp;tabview=hazards&amp;plantSpot=1</a> [Accessed 19 Mar 2013]	[Is a shade tolerant plant at some stage of its life cycle? No] "Sunlight: hot overhead sun to dappled light"
410	2011. Benton, A./Thomson, L./Berg, P./Ruskin, S.. Farm and Forestry Production and Marketing Profile for Bamboo (various species). In Elevitch, C.R. (ed.) Specialty Crops for Pacific Island Agroforestry. Permanent Agriculture Resources (PAR), Holualoa, HI	[Tolerates a wide range of soil conditions? Yes] "Bamboos will grow in most types of soil, except extremely sand, saline, or waterlogged soils." ... "Bamboos prefer soils with slightly acidic pH, but some of the Gigantochloa spp. Can handle alkaline soils with pH of up to 8."
411	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Climbing or smothering growth habit? No] "Perennial; caespitose; clumped densely. Rhizomes short; pachymorph. Culms erect; 1500–2000 cm long; 70–90 mm diam.; woody; with aerial roots from the nodes."
412	2013. Plant This. Gigantochloa robusta. <a href="http://plantthis.com/plant-information.asp?gardener=15131&amp;tabview=hazards&amp;plantSpot=1">http://plantthis.com/plant-information.asp?gardener=15131&amp;tabview=hazards&amp;plantSpot=1</a> [Accessed 19 Mar 2013]	[Forms dense thickets? No] "Plant type: evergreen rhizomatous clumping bamboo" [Clumping, not running bamboo will restrict the dense growth to a confined area]
501	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Aquatic? No] Terrestrial
502	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Grass? No] Poaceae
503	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. Grassbase - The Online World Grass Flora. <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Nitrogen fixing woody plant? No] Poaceae

504	2010. Gordon, D.R./Mitterdorfer, B./Pheloung, P.C. et al.. Guidance for addressing the Australian Weed Risk Assessment questions. <i>Plant Protection Quarterly</i> . 25(2): 56-74.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "This question relates to perennial plants with tubers, corms or bulbs. This question is specifically to deal with plants that have specialized organs and should not include plants merely with rhizomes/ stolons"
601	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Evidence of substantial reproductive failure in native habitat? No] "In Indonesia it is said that <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting. Flowers attract honey bees and other insects, but seed has never been observed." [Cultivated by vegetative propagation with no trouble reported]
602	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Produces viable seed? Probably No] "In Indonesia it is said that <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting. Flowers attract honey bees and other insects, but seed has never been observed."
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2013. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	2006 (onwards). Clayton, W.D./Harman, K.T./Williamson, H.. <i>Grassbase - The Online World Grass Flora</i> . <a href="http://www.kew.org/data/grasses-db.html">http://www.kew.org/data/grasses-db.html</a> .	[Requires specialist pollinators? No] "INFLORESCENCE Synflorescence bractiferous; clustered at the nodes; in stellate clusters; with glumaceous subtending bracts; with axillary buds at base of spikelet; prophyllate below lateral spikelets." [Grasses are wind pollinated]
606	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Reproduction by vegetative fragmentation? No] "Densely tufted, sympodial bamboo." ... " <i>Gigantochloa robusta</i> is only propagated vegetatively by rhizome or culm cuttings." [A clumping bamboo with no evidence of vegetative spread other than by human cultivation]
607	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Minimum generative time (years)? 50+] "In Indonesia it is said that <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting."
701	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] " <i>Gigantochloa robusta</i> is only propagated vegetatively by rhizome or culm cuttings." .... "... <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting...seed has never been observed." [No evidence, and unlikely given lack of seed production until potentially at the end of its life cycle]
702	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules dispersed intentionally by people? Yes] "The origin of <i>Gigantochloa robusta</i> is unknown, but it is found growing wild in Java (Banten, West Java and Banyuwangi, East Java). It is mainly known from cultivation in Sumatra, Mentawai Islands, Java and Bali."
703	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules likely to disperse as a produce contaminant? No] " <i>Gigantochloa robusta</i> is only propagated vegetatively by rhizome or culm cuttings." .... "... <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting...seed has never been observed." [No evidence, and unlikely given lack of seed production until potentially at the end of its life cycle]
704	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules adapted to wind dispersal? Unknown] "...seed has never been observed." [If seeds were produced, they would likely be wind dispersed]
705	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules water dispersed? Effectively No] " <i>Gigantochloa robusta</i> is only propagated vegetatively by rhizome or culm cuttings." .... "... <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting...seed has never been observed."
706	1995. Widjaja, E.A.. <i>Gigantochloa robusta</i> Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules bird dispersed? No] " <i>Gigantochloa robusta</i> is only propagated vegetatively by rhizome or culm cuttings." .... "... <i>Gigantochloa robusta</i> clumps flower gregariously more than 50 years after planting...seed has never been observed." [If seeds were produced, they would likely be adapted for wind dispersal]

707	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Propagules dispersed by other animals (externally)? Effectively No] "Gigantochloa robusta is only propagated vegetatively by rhizome or culm cuttings." .... "...Gigantochloa robusta clumps flower gregariously more than 50 years after planting...seed has never been observed."
708	2013. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown] Although lack of seed production, if at all, until end of life cycle probably makes this question irrelevant
801	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Prolific seed production (>1000/m <sup>2</sup> )? Unknown] "In Indonesia it is said that Gigantochloa robusta clumps flower gregariously more than 50 years after planting. Flowers attract honey bees and other insects, but seed has never been observed."
802	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Evidence that a persistent propagule bank is formed (>1 yr)? No] "Caryopsis unknown." ... "In Indonesia it is said that Gigantochloa robusta clumps flower gregariously more than 50 years after planting. Flowers attract honey bees and other insects, but seed has never been observed." [Propagated vegetatively with no effectively no seed bank until possibly at the end of the life cycle]
803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species
804	1995. Widjaja, E.A.. Gigantochloa robusta Kurz[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia <a href="http://www.proseanet.org">http://www.proseanet.org</a> . [Accessed 19 Mar 2013]	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Harvesting First harvesting may start 4—5 years after planting. It is recommended to harvest in the dry season by cutting mature culms just above the ground. A selective felling system in a 3-year cycle is recommended in Indonesia. Yield In Indonesia it is estimated that a mature clump produces yearly an average of 6 mature culms (about 900 culms per ha at planting distance of 8 m x 8 m)."
805	2013. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## **Summary of Risk Traits**

### **High Risk / Undesirable Traits**

- Thrives in tropical climates
- Can grow from sea level to 1500 m elevation
- Tolerates many soil conditions (and potentially able to exploit many different habitat types)
- Will resprout after repeated cutting or harvesting of shoots & culms (may be difficult to remove from unwanted areas)

### **Low Risk / Desirable Traits**

- No reports of naturalization or invasiveness found, and no negative impacts have been documented
- Non-toxic
- Edible shoots
- Landscaping and ornamental value
- A sympodial, or clumping bamboo
- Flowering occurs in plants that are 50+ years old
- Lack of seed production until possibly at the end of long life cycle