

Family: *Poaceae*

Taxon: *Gigantochloa atroviolacea*

Synonym: *Gigantochloa verticillata* (Willd.) Munro sens **Common Name:** black bamboo
bambu hitam

Questionnaire : current 20090513 **Assessor:** HPWRA OrgData **Designation:** L
Status: Assessor Approved **Data Entry Person:** HPWRA OrgData **WRA Score** -2

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)	Low
203	Broad climate suitability (environmental versatility)	y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	y
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	
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	
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	y
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	
602	Produces viable seed	y=1, n=-1	y
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	y
705	Propagules water dispersed	y=1, n=-1	
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	
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 -2

Supporting Data:

101	1998. Rao, A.N./Rao, V.R./Williams, J.T. (eds.). Priority Species of Bamboo and Rattan. IPGRI-APO, Serdang, Malaysia	[Is the species highly domesticated? No] "Only known in cultivation, said to be a Javanese species, commonly cultivated, introduced to India more than 100 years ago." [No evidence that cultivation has dramatically changed this species]
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Species suited to tropical or subtropical climate(s) 2-High] "This bamboo is only known in cultivation and its origin is unknown. <i>G. atroviolacea</i> is widely cultivated on a small scale in central and western Java, and it has been introduced in Sumatra. This species has also been planted in botanical gardens in Peredenya (Sri Lanka) and Calcutta (India). A report also indicates that this species has been used in plantations in India (Agrawal et al., 1992)."
202	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Quality of climate match data 0-Low] "This bamboo is only known in cultivation and its origin is unknown."
203	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Broad climate suitability (environmental versatility)? No] "Gigantochloa atroviolacea grows well in the perhumid lowland tropics, with annual rainfall of 1500–3700 mm, relative humidity of over 70% and average temperature of 20–32°C."
203	2013. Dave's Gardern. PlantFiles: Tropical Black Bamboo - Gigantochloa atroviolacea. http://davesgarden.com/guides/pf/go/65534/ [Accessed 28 Mar 2013]	[Broad climate suitability (environmental versatility)? No] "Hardiness: USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"
204	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Native or naturalized in regions with tropical or subtropical climates Yes] " <i>G. atroviolacea</i> is widely cultivated on a small scale in central and western Java, and it has been introduced in Sumatra. This species has also been planted in botanical gardens in Peredenya (Sri Lanka) and Calcutta (India). A report also indicates that this species has been used in plantations in India (Agrawal et al., 1992)."
205	1999. Ohrnberger, D.. The Bamboos of the World: Annotated Nomenclature and Literature of the Species and the Higher and Lower Taxa. Elsevier, Amsterdam	[Does the species have a history of repeated introductions outside its natural range? Yes] "Distribution: Only known in cultivation. INDONESIA: Java (widely cultivated in the western and central parts). Introduced to South Sumatra. Introduced early to Calcutta (India), recently to Thailand, and possibly cultivated elsewhere in tropical Asia. Introduced from Java to Australia (northern Queensland) many years ago. Apparently prefers to grow in dry areas on soil rich in limestone."
301	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Naturalized beyond native range? No] Present in the Philippines, but not documented to be naturalized
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 <i>Gigantochloa</i> species are listed as naturalized, but there is no evidence or references to them as invasive weeds
401	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Produces spines, thorns or burrs? No] "HABIT Perennial; caespitose; clumped loosely. Rhizomes short; pachymorph. Culms erect; 600–1200 cm long; 60–80 mm diam.; woody; with aerial roots from the nodes. Culm internodes terete; thin-walled; 40–50 cm long; purple; distally pubescent. Lateral branches dendroid. Culm-sheaths deciduous; 16–20 cm long; hispid; with appressed hairs; with dark brown hairs; auriculate; with 3–5 mm high auricles; ciliate on shoulders; shoulders with 3–7 mm long hairs. Culm-sheath ligule 2 mm high; dentate. Culm-sheath blade ovate; spreading, or reflexed; 4–9 cm long. Leaf sheaths pubescent; hairs white. Leaf sheath auricles erect; 1 mm long. Ligule an eciliate membrane; 2 mm long; erose. Collar with external ligule. Leaf-blade base with a brief petiole-like connection to sheath; petiole 0.3–0.5 cm long. Leaf-blades lanceolate; 20–28 cm long; 2–5 mm wide. Leaf-blade surface glabrous. Leaf-blade apex acute. "

402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Parasitic? No] Poaceae
404	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	[Unpalatable to grazing animals? Unknown] "Bamboo leaves make excellent fodder for livestock including cows, horses and pigs." [Probably palatable, but no specific information on <i>G. atroviolacea</i> found]
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.. <i>Gigantochloa atroviolacea</i> Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Host for recognized pests and pathogens? No] "Diseases and pests Witches' broom disease, caused by <i>Epichloe bambusae</i> , commonly attacks <i>Gigantochloa atroviolacea</i> but causes no real damage. Young plants may be harmed by termites. Harvested culms and derived products are damaged by powder-post beetles (e.g. <i>Dinoderus minutus</i> and <i>Chlorophorus annularis</i>). The damage is more serious when the harvested culms are not quite mature."
406	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Host for recognized pests and pathogens?] "Pests recorded Fungus diseases: <i>Epichloe bambusae</i> "
407	1998. Rao, A.N./Rao, V.R./Williams, J.T. (eds.). Priority Species of Bamboo and Rattan. IPGRI-APO, Serdang, Malaysia	[Causes allergies or is otherwise toxic to humans? No] "Very popular to make musical instruments in Java, used to make handicrafts, furniture, also used in building construction and yields edible shoots." [No evidence]
408	1995. Widjaja, E.A.. <i>Gigantochloa atroviolacea</i> Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Creates a fire hazard in natural ecosystems? No] " <i>Gigantochloa atroviolacea</i> is only known from cultivation and its origin is unknown." ... " <i>Gigantochloa atroviolacea</i> grows well in the perhumid lowland tropics, with annual rainfall of 1500—3700 mm, relative humidity of over 70% and average temperature of 20—32°C." [Probably not. Occurs in wet habitat]
409	2013. Dave's Gardern. PlantFiles: Tropical Black Bamboo - <i>Gigantochloa atroviolacea</i> . http://davesgarden.com/guides/pf/go/65534/ [Accessed 28 Mar 2013]	[Is a shade tolerant plant at some stage of its life cycle?] "Sun Exposure: Sun to Partial Shade"
409	2013. The Eden Index. <i>Gigantochloa</i> Tropical Black Bamboo - <i>Gigantochloa atroviolacea</i> . http://gardenplantsearch.org/Gigantochloa-atroviolacea-9.htm [Accessed 28 Mar 2013]	[Is a shade tolerant plant at some stage of its life cycle?] "Sun: some shade tolerance"
410	2005. Burt, J.. Growing bamboos in the home garden. Gardennote No. 46. State of Western Australia Department of Agriculture, www.agric.wa.gov.au	[Tolerates a wide range of soil conditions?] Although loamy soils are optimum, bamboos will grow on a wide range of soils provided they are well drained." General description for all bamboo taxa]
410	2011. Bamboo Information Network. Growing Bamboo for Money and Healthy Environment. http://www.pcaarrd.dost.gov.ph/home/momentum/bamboo/index.php?option=com_content&view=article&id=1312:growing-bamboo-for-money-and-healthy-environment&catid=118&Itemid=5 [[Tolerates a wide range of soil conditions?] "As a versatile plant it can grow in a wide range of soils and produces high amount of biomass." [General description for all bamboo taxa]
410	2013. Backyard Gardener. <i>Gigantochloa atroviolacea</i> . http://www.backyardgardener.com/plantname/pda_656c.html [Accessed 29 Mar 2013]	[Tolerates a wide range of soil conditions?] "Soil Range: Sandy Loam to Clay Loam"
411	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Climbing or smothering growth habit? No] "The culms are erect, up to 12 m in height, 6-8 cm in diameter, dark green when young, turning to dark purple (almost black). The internodes are 40-50 cm long, with branches arising from the mid-culm node upwards."
412	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Forms dense thickets? No] " <i>G. atroviolacea</i> is a loosely tufted, sympodial bamboo, and has dark brownish-purple, almost black, culms." [A clumping bamboo only known in cultivation]
501	2013. WRA Specialist. Personal Communication.	[Aquatic? No] Terrestrial

502	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Grass? No] Poaceae
503	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Nitrogen fixing woody plant? Yes] Poaceae
504	2010. Gordon, D.R./Mitterdorfer, B./Pheloung, P.C. et al.. Guidance for addressing the Australian Weed Risk Assessment questions. Plant Protection Quarterly. 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	1999. Ohrnberger, D.. The Bamboos of the World: Annotated Nomenclature and Literature of the Species and the Higher and Lower Taxa. Elsevier, Amsterdam	[Evidence of substantial reproductive failure in native habitat? Unknown] "Only known in cultivation. INDONESIA: Java (widely cultivated in the western and central parts). Introduced to South Sumatra. Introduced early to Calcutta (India), recently to Thailand, and possibly cultivated elsewhere in tropical Asia."
602	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Produces viable seed?] "Caryopsis unknown." ... "Gigantochloa atroviolacea is only propagated vegetatively by rhizome or culm cuttings."
602	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Produces viable seed? Yes] "FRUIT - Caryopsis with adherent pericarp." [Description of seeds provided, but most references state that this bamboo is only cultivated by vegetative means]
602	2009. Lantican, C.B.. Bamboo Propagation: Practical Experiences of Some Private Nursery Operators in Laguna, Philippines. VIII World Bamboo Congress Proceedings. 6: 13-21.	[Produces viable seed? Yes] "Bamboo seeds are seldom available so like other propagators in the country and other parts of the world, bamboo propagators in Laguna rarely use seeds to produce new plants. Recently, however, one operator bought seeds of two species of black bamboo, Java black bamboo (Gigantochloa atroviolacea) and Timor black bamboo (Bambusa lako), from eBay. He placed an order for 100 seeds for each species and sowed them immediately when they arrived. More than 50% of the Java black bamboo germinated within two weeks after sowing. No germination was obtained from Timor black bamboo; the reason could be that the seeds have lost their viability after many months of storage at the sellers' outfit."
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Self-compatible or apomictic? Unknown] "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. Fertile spikelets sessile. FERTILE SPIKELETS Spikelets comprising 4 fertile florets; with diminished florets at the apex. Spikelets lanceolate, or ovate; laterally compressed; 8–11 mm long; 3 mm wide; breaking up at maturity; disarticulating above glumes but not between florets. Rhachilla internodes suppressed between florets. GLUMES Glumes two; persistent; similar; shorter than spikelet. Upper glume ovate; 3–5 mm long. Upper glume surface pubescent. Upper glume hairs tawny. Upper glume apex acute; mucronate. FLORETS Fertile florets increasing in size upwards. Fertile lemma ovate; 6–10 mm long; chartaceous; without keel; 8–10 veined. Lemma apex acuminate. Palea 2-keeled. Palea apex entire; acute. Apical sterile florets 1 in number; barren; lanceolate. FLOWER Lodicules absent. Anthers 6; 4–5 mm long; yellow; anther tip with extended connective and pubescent. Filaments united in a tube. Ovary umbonate; pubescent on apex. "
605	1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London	[Requires specialist pollinators? No] Poaceae [anemophilous. Wind-pollinated]
606	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Reproduction by vegetative fragmentation? No] "Gigantochloa atroviolacea is only propagated vegetatively by rhizome or culm cuttings."
606	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Reproduction by vegetative fragmentation? No] "- Vegetative propagation by cuttings" [A clumping bamboo that does not spread by rhizomes over long distances]

607	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Minimum generative time (years) 4+] "G. atroviolacea is slow growing in comparison to other bamboos, with an average daily growth rate of 9 cm, or 2 years after planting approximately 15 culms may developed (Dransfield and Widjaja, 1995)."
701	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Caryopsis unknown." ... "Gigantochloa atroviolacea is only propagated vegetatively by rhizome or culm cuttings." [No evidence, and effectively not given lack of seed production until end of long life cycle]
702	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules dispersed intentionally by people? Yes] "The culms are used to make musical instruments and furniture. The future is bright for this purplish-black bamboo because of the increasing interest in the furniture, handicraft and musical instrument industries."
703	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Propagules likely to disperse as a produce contaminant? No] "Caryopsis unknown." ... "Gigantochloa atroviolacea is only propagated vegetatively by rhizome or culm cuttings." [No evidence, and not likely given lack of seed production until possible at the end of a long life cycle]
704	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Propagules adapted to wind dispersal? Yes] "FRUIT - Caryopsis with adherent pericarp." [When produced, seeds presumably wind or gravity dispersed]
705	2013. WRA Specialist. Personal Communication.	[Propagules water dispersed? Unknown] Perhaps possible if occurring along riverbanks, as is typical of other Gigantochloa species. Any water dispersal of propagules would be limited by the infrequent occurrence of flowering & seed set of this and other long lived bamboo taxa
706	2013. WRA Specialist. Personal Communication.	[Propagules bird dispersed? No] Not fleshy fruited, and only flowers after 50+ years
707	2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html	[Propagules dispersed by other animals (externally)? No] "FRUIT - Caryopsis with adherent pericarp." [Seeds, when produced, lack means of external attachment]
708	2013. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown] Seeds rarely produced, and unlikely to be consumed or internally dispersed
801	1995. Widjaja, E.A.. Gigantochloa atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Prolific seed production (>1000/m ²)? Unknown] "Caryopsis unknown." ... "Gigantochloa atroviolacea is only propagated vegetatively by rhizome or culm cuttings." [Effectively no, but large seed numbers may be produced when this bamboo eventually flowers]
802	2013. Dave's Gardern. PlantFiles: Tropical Black Bamboo - Gigantochloa atroviolacea. http://davesgarden.com/guides/pf/go/65534/ [Accessed 28 Mar 2013]	[Evidence that a persistent propagule bank is formed (>1 yr)?] "Seed Collecting: Seed does not store well; sow as soon as possible"
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 atroviolacea Widjaja[Internet] Record from Proseabase. PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org . [Accessed 28 Mar 2013]	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Harvesting Harvesting may start 4—5 years after planting. It is recommended to harvest only in the dry season. Yield In Java the average yield of mature Gigantochloa atroviolacea clumps is estimated at 20 culms per 3 years (or with 200 clumps per ha, about 4000 culms per ha every 3 years)."
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
- May produce viable seeds that can be dispersed by gravity, wind or people
- Will resprout after repeated cutting or harvesting of shoots & culms (may be difficult to remove from unwanted areas)

Low Risk / Desirable Traits

- No negative impacts have been documented
- Non-toxic
- Edible shoots
- Landscaping and ornamental value
- A sympodial, or clumping bamboo
- Flowering occurs rarely
- Lack of seed production until end of long life cycle