

Family: *Meliaceae*

Taxon: *Swietenia mahagoni*

Synonym: *Cedrela mahagoni* L. (basionym)

Common Name: Cuban mahogany
Spanish mahogany
West Indian mahogany

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	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)	High
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	y
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)	y
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	n
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	n
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	y
603	Hybridizes naturally	y=1, n=-1	y
604	Self-compatible or apomictic	y=1, n=-1	y
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	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	n
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 2

Supporting Data:

101	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Is the species highly domesticated? No] No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Species suited to tropical or subtropical climate(s) - " It is indigenous to the Caribbean (Bahamas, Cuba and Jamaica) and Honduras, but it is now a rare species there due to land clearance."
202	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Quality of climate match data? 2-high] "It is indigenous to the Caribbean (Bahamas, Cuba and Jamaica) and Honduras, but it is now a rare species there due to land clearance."
203	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Broad climate suitability (environmental versatility)? Potentially yes] "Climatic amplitude (estimates) - Altitude range: 50 - 1500 m - Mean annual rainfall: 1300 - 4000 mm - Rainfall regime: bimodal; uniform - Dry season duration: 0 - 4 months - Mean annual temperature: 15 - 32°C - Mean maximum temperature of hottest month: 23 - 28°C - Mean minimum temperature of coldest month: 11 - 12°C - Absolute minimum temperature: > 0°C"
203	2011. World Agroforestry Centre. Agroforestry Tree Database - Swietenia mahagoni. PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Broad climate suitability (environmental versatility)? No] "In its original habitat, the climate is warm and equable, with temperatures ranging from 16 to 32 deg. C; rainfall varies from 1250 to 2500 mm, coming mostly in summer but spreading almost through the whole year. Best developments have been observed in areas receiving lower rainfall of 1000-1500 mm, in localities not far from the sea, and at elevations near sea level."
204	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Native or naturalized in regions with tropical or subtropical climates? Yes] "The native range of West Indies mahogany includes the southern tip of Florida, the Florida Keys, the Bahamas, Cuba, Jamaica, and the island of Hispaniola"
204	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Native or naturalized in regions with tropical or subtropical climates? Yes] "It is indigenous to the Caribbean (Bahamas, Cuba and Jamaica) and Honduras, but it is now a rare species there due to land clearance."
205	2011. Norghauer, J.M./Martin, A.R./Mycroft, E.E./James, A./Thomas, S.C.. Island Invasion by a Threatened Tree Species: Evidence for Natural Enemy Release of Mahogany (Swietenia macrophylla) on Dominica, Lesser Antilles. PLoS ONE. 6(4): e18790.: doi:10.137	[Does the species have a history of repeated introductions outside its natural range? Yes] "Because of their valuable timber, plantations of American mahoganies (Swietenia macrophylla King, S. humilis Zucc., and S. mahagoni (L.) Jacq.) have been repeatedly established throughout the tropics."
205	2011. World Agroforestry Centre. Agroforestry Tree Database - Swietenia mahagoni. PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Does the species have a history of repeated introductions outside its natural range? Yes] "Geographic distribution Native : Bahamas, Cuba, Haiti, Jamaica, Netherlands Antilles, United States of America Exotic : Bangladesh, Benin, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, Fiji, Gambia, Ghana, Guinea, Guinea-Bissau, India, Indonesia, Liberia, Malaysia, Mali, Mauritania, Niger, Nigeria, Philippines, Puerto Rico, Senegal, Sierra Leone, Sri Lanka, Togo"
301	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Naturalized beyond native range? Yes] "It has naturalized or escaped in a number of sites in Puerto Rico and the U.S. Virgin Islands (author, personal observation)."
301	1991. Francis, J.K./Liogier, H.A.. Naturalized Exotic Tree Species in Puerto Rico. General Technical Report SO-82. United States Department of Agriculture Forest Service, New Orleans, LA	[Naturalized beyond native range? Yes] "A tree species is considered naturalized when it has reproduced (generally from seed) and grown to at least sapling size, without the deliberate aid of humans. Three degrees of integration into the local flora have been observed in Puerto Rico. Species demonstrating the highest degree of integration are able to escape from the vicinity of the original planting and compete in primary forests. Examples are Syzygium jambos (L.) Alst. in moist and wet forests and Swietenia mahagoni (L.) Jacq. in dry forest areas."

301	2005. Wagner, W.L./Herbst, D.R./Lorence, D.H.. Flora of the Hawaiian Islands website. Smithsonian Institution, Washington, D.C. http://botany.si.edu/pacificislandbiodiversity/hawaiianflora/index.htm	[Naturalized beyond native range? Not documented in the Hawaiian Islands]
301	2011. Norghauer, J.M./Martin, A.R./Mycroft, E.E./James, A./Thomas, S.C.. Island Invasion by a Threatened Tree Species: Evidence for Natural Enemy Release of Mahogany (<i>Swietenia macrophylla</i>) on Dominica, Lesser Antilles. <i>PLoS ONE</i> . 6(4): e18790. doi:10.137	[Naturalized beyond native range? Yes] "Initial observations at the site suggested that <i>S. macrophylla</i> and <i>S. mahagoni</i> trees planted in the 1960s have established a viable naturalized population, with progeny evading attacks by <i>H. grandella</i> and recruiting outside of planting zones."
302	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Garden/amenity/disturbance weed? No] "In Hawaii, West Indian mahogany is planted as a shade and street tree. It could be used more often, though it has admitted drawbacks: the leaf litter requires cleanup and the hard, woody fruit sections are a hazard for mowers and bare feet." [Potential nuisance tree, but no evidence of weediness]
303	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Agricultural/forestry/horticultural weed? No] "More than 11,000 West Indian mahogany seedlings were set out in forestry plantings on the main islands between 1918 and 1960." [No evidence of becoming a weed of agriculture or forestry]
304	1992. Stone, C.P./Smith, C.W./Tunison, J.T. (eds.). Alien Plant Invasions in Native Ecosystems of Hawai'i: Management and Research. Cooperative National Park Resources Studies Unit, University of Hawaii, Manoa, Honolulu, HI	[Environmental weed? No] No evidence from Hawaiian Islands
304	2010. Rana, M.P./Akhter, F.. Uses of Invasive Alien Plant Species in Rema-Kalenga Wildlife Sanctuary of Bangladesh. <i>Journal of Mountain Science</i> . 7: 380-385.	[Environmental weed? Not in Bangladesh] "Table 1 Various invasive alien plant species found in the Rema-Kalenga Wildlife Sanctuary, Bangladesh" [<i>Swietenia mahagoni</i> - Level of Invasion = ? No evidence of impacts from Bangladesh]
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Congeneric weed? Yes. <i>S. macrophylla</i>] "A fast growing and shade tolerant tree that withstands pronounced periods of dry weather. It establishes well in disturbed sites and in secondary forests, becoming the dominant species and will suppress native plants. Seed production is prolific and seeds are dispersed by wind. The tree has some ability to sprout after cutting."
305	2004. Richardson, D.M./Binggeli, P./Schroth, G.. Invasive agroforestry trees: problems & solutions. Pp. 371-396 in Schroth, G. et al. (eds.) <i>Agroforestry & biodiversity conservation in tropical landscapes</i> . Island Press, Washington, D.C.	[Congeneric weed? Yes. <i>S. macrophylla</i>] "In future agroforestry programs, experience with invasive plantation species must be taken into account to avoid introducing potentially invasive species into sensitive areas, such as buffer zones. For example, <i>Swietenia macrophylla</i> (mahogany, Meliaceae), is planted by farmers in association with fruit trees both in its native Amazonia and in Indonesia, where it is alien (Michon and de Foresta 1995); invasion by this species of native forests especially after disturbance (Commonwealth Agricultural Bureau International 2000) has been observed in Sri Lanka, Asia, and the Pacific Islands."
305	2011. World Agroforestry Center. Agroforestry Tree Database - <i>Swietenia macrophylla</i> . http://www.worldagroforestry.org/treedb2/AFTPDFS/Swietenia_macrophylla.pdf	[Congeneric weed? Yes. <i>S. macrophylla</i>] "The species has some weed potential and may invade native forest communities, especially following disturbance. It should not be planted in close proximity to areas of high nature conservation significance."
401	1964. Little, Jr. E.L./Wadsworth, F.H.. Common trees of Puerto Rico and the Virgin Islands. Agriculture Handbook No. 249. U.S.D.A. Forest Service, Washington, D.C	[Produces spines, thorns or burrs? No] "A medium-sized to large deciduous tree with maximum size 40-60 feet in height and 3-4 1/2 feet in trunk diameter."
402	1994. Taide, Y.B./Babu, L.C./Abraham, C.C.. Influence of host species in the initial growth and development of sandal (<i>Santalum album</i> Linn.). <i>Indian Journal of Forestry</i> . 17(4): 288-292.	[Allelopathic? No] "AB: Sandal is known to grow vigorously in association with certain preferred host plants. Pot experiments on the influence of 15 host plants on the initial growth and development of sandal are described here. <i>Casuarina equisetifolia</i> was the most suitable host, followed by <i>Terminalia catappa</i> , <i>Albizia lebbek</i> , <i>Dalbergia latifolia</i> and <i>Pongamia glabra</i> [P. pinnata]. <i>Embllica officinalis</i> [<i>Phyllanthus emblica</i>], <i>Ailanthus malabarica</i> [<i>A. triphysa</i>], <i>Cassia siamea</i> , <i>Delonix regia</i> and <i>Psidium guajava</i> were not favourable for sandal growth. The other species tested were <i>Leucaena leucocephala</i> , <i>Lagerstroemia speciosa</i> , <i>Swietenia mahagoni</i> , <i>Acacia auriculiformis</i> and <i>Azadirachta indica</i> . Some combinations had synergistic effects while others showed allelopathic effects." [No evidence of allelopathy]
403	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Parasitic? No] " <i>S. mahagoni</i> is a fast growing tree up to approximately 30 m tall." [No evidence. Meliaceae]

404	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Unpalatable to grazing animals? No] "The seedlings are susceptible to fire, frost, drought, and damage by browsing... Descriptors: oils; gums; medicinal products; fodder; dyestuffs; bark products; green manures; honey" [Used as fodder]
405	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Toxic to animals? No] "The seedlings are susceptible to fire, frost, drought, and damage by browsing... Descriptors: oils; gums; medicinal products; fodder; dyestuffs; bark products; green manures; honey" [Used as fodder. No evidence of toxicity]
406	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Host for recognized pests and pathogens? No] "Its susceptibility to attack by <i>Hypsipyla robusta</i> is a major problem in plantations, and research is being conducted on selection and propagation of <i>H. robusta</i> resistant trees."
407	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Causes allergies or is otherwise toxic to humans? No] No evidence
407	2007. Nelson, L./Shih, R.D./Balick, M.J.. Handbook of poisonous and injurious plants. The New York Botanical Garden. Springer, New York, NY	[Causes allergies or is otherwise toxic to humans? Seeds are poisonous] "A single case report involving an adult describes gastrointestinal, central nervous system, and cardiac effects after the ingestion of two seeds. The patient had multiple episodes of vomiting followed by coma, bradycardia, and hypotension. He was treated with fluids, atropine, and vasopressors, with recovery occurring over the ensuing 48 hours." {Despite this case, the widespread cultivation of mahogany without reports of toxicity or poisoning suggest that such instances are extremely rare]
408	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Creates a fire hazard in natural ecosystems? No] "If protected from fire, West Indies mahogany will invade adjacent forests occupied by the <i>Pinus elliotii</i> Engelm. <i>Serenoa repens</i> (Bertr.) Small type (8)." [No evidence of increased fire hazards in Florida]
408	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Creates a fire hazard in natural ecosystems? No] No evidence
409	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Is a shade tolerant plant at some stage of its life cycle? No] "West Indies mahogany is intolerant of shade. Seedlings can survive for extended periods in the understory of dry forest, but overtopped trees weaken and eventually die (author, personal observation)."
409	2011. World Agroforestry Centre. Agroforestry Tree Database - <i>Swietenia mahagoni</i> . PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Is a shade tolerant plant at some stage of its life cycle? No] "The seedlings of <i>S. mahagoni</i> require light; if they are deprived of overhead light they are damaged by insects. They do not develop if the overhead shade is too dense; best results are obtained by irregularly interrupted cover."
410	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] "West Indies mahogany grows on a variety of sites within its native range. It is tolerant of relatively high pH (up to about 8.5)."
411	1964. Little, Jr. E.L./Wadsworth, F.H.. Common trees of Puerto Rico and the Virgin Islands. Agriculture Handbook No. 249. U.S.D.A. Forest Service, Washington, D.C	[Climbing or smothering growth habit? No] "A medium-sized to large deciduous tree with maximum size 40-60 feet in height and 3-4 1/2 feet in trunk diameter."
412	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Forms dense thickets? No] "The species frequently dominates on pockets of deeper soil on dry limestone ridges and may be found growing on all slopes and aspects." [No evidence that it is excluding other vegetation]
412	2002. Armentano, T.V./Jones, D.T./Ross, M.S./Gamble, B.W.. Vegetation Pattern & Process in Tree Islands of the Southern Everglades and Adjacent Areas. Ch. 8 in Sklar, F.H. & van der Valk, A. (eds.). Tree islands of the Everglades. Kluwer Academic Publishers	[Forms dense thickets? No] "West Indian mahogany (<i>Swietenia mahagoni</i> (L.) Jacq. dominates the upper canopy of mahogany hammocks in the later successional stages after disturbance by hurricanes (Olmsted et al. 1980). This species is generally absent in other interior hammocks, including Long Pine Key hammocks, where <i>Lysiloma</i> , like <i>Swietenia</i> , establishes by seed soon after disturbance, particularly after fires (Olmsted et al. 1980). Mahogany hammocks reveal their coastal affinities in the presence of such species as <i>Acoelorrhapha wrightii</i> (Griseb. and H. Wendl.) Becc. (paurotis palm) and <i>Eugenia foetida</i> Pers. (Spanish stopper), both absent from the hammocks of Long Pine Key." [Dominates canopy, but does not appear to form a monoculture]
501	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Aquatic? No] " <i>S. mahagoni</i> is a fast growing tree up to approximately 30 m tall." [Terrestrial]
502	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Grass? No] Meliaceae

503	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Nitrogen fixing woody plant? No] Meliaceae
504	1964. Little, Jr. E.L./Wadsworth, F.H.. Common trees of Puerto Rico and the Virgin Islands. Agriculture Handbook No. 249. U.S.D.A. Forest Service, Washington, D.C	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "A medium-sized to large deciduous tree with maximum size 40-60 feet in height and 3-4 1/2 feet in trunk diameter."
601	2011. Norghauer, J.M./Martin, A.R./Mycroft, E.E./James, A./Thomas, S.C.. Island Invasion by a Threatened Tree Species: Evidence for Natural Enemy Release of Mahogany (<i>Swietenia macrophylla</i>) on Dominica, Lesser Antilles. PLoS ONE. 6(4): e18790.: doi:10.137	[Evidence of substantial reproductive failure in native habitat? No. Rarity due to overharvesting] " <i>Swietenia mahagoni</i> is native to the southern Florida peninsula and the Greater Antilles, whereas <i>S. macrophylla</i> has a far greater range, from Mexico through Central America into South America (Columbia, Peru Ecuador, and Brazil; [20,24]). Both of these <i>Swietenia</i> species are on the IUCN Red List. Where accessible, mahogany populations have been effectively 'mined' in their native forests, most of which have become fragmented and converted to agriculture and ranching after logging [20,21,31]. In spite of CITES protections— <i>S. mahagoni</i> was listed in 1992, and <i>S. macrophylla</i> added in 2003 — <i>S. macrophylla</i> is still widely harvested in an unsustainable manner [31,36], while <i>S. mahagoni</i> has long been "commercially extinct" [19,20,24]."
602	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Produces viable seed? Yes] "Germination is hypogeal. An average of 70-percent germination was noted in tests in Puerto Rico, and an average time lapse of 18 days was noted before the first seeds germinated (28)."
603	1972. Styles, B.T.. The Flower Biology of the Meliaceae and its Bearing on Tree Breeding. <i>Silvae Genetica</i> . 21(5): 175-182.	[Hybridizes naturally? Yes] "There is already evidence that the two species hybridise naturally when they occur together in plantations (HUGUET and VERDUZCO, 1952; STEHLE, 1958; F. B. LAMB, 1960; BRISCOE and LAMB, 1962; NOBLES and BRISCOE, 1966; CHALBE, 1967) ... That some cross-pollination and therefore out breeding can occur is shown by obvious and frequent hybrids occurring between <i>Swietenia macrophylla</i> and <i>S. mahagoni</i> grown together in close association."
603	1998. Bauer, G.P./Francis, J.K.. <i>Swietenia macrophylla</i> King. Honduras mahogany . Caoba.. Meliaceae Mahogany family. SO-IITF-SM-81. USDA Forest Service, International Institute of Tropical Forestry, Rio Piedras, Puerto Rico	[Hybridizes naturally? Yes] "The <i>Swietenia</i> species freely hybridize. A spontaneous hybrid between <i>S. macrophylla</i> and <i>S. mahagoni</i> was found growing in Puerto Rico in 1935, with traits more or less midway between the two parent species (69). The F2 generation is reported to segregate into the parent species and the hybrid, according to the Mendelian ratio of 1:2:1 (41). Despite considerable variability, the hybrid has become important in forest plantings in the region."
604	1972. Styles, B.T.. The Flower Biology of the Meliaceae and its Bearing on Tree Breeding. <i>Silvae Genetica</i> . 21(5): 175-182.	[Self-compatible or apomictic? Yes] "On the other hand LEE (1965), who has made the only studies of breeding behaviour in the family, thinks that trees of these two species of <i>Swietenia</i> may be completely self-compatible, as he obtained 83% fertile seed from one tree of <i>S. mahagoni</i> which he had self-pollinated."
604	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Self-compatible or apomictic? Yes] " <i>Swietenia</i> spp. are normally outbreeding, but can set high quantities of seeds by self-pollination (62)."
605	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Requires specialist pollinators? No] "The flowers are unisexual and the trees are monoecious, with male and female flowers present in each inflorescence ... The flowers are apparently pollinated by bees and moths."
605	2011. World Agroforestry Centre. Agroforestry Tree Database - <i>Swietenia mahagoni</i> . PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Requires specialist pollinators? No] "Flowers are unisexual and the tree is monoecious. Pollination is by insects."
606	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Reproduction by vegetative fragmentation? No] "Vegetative Reproduction.- Rooting of leafy cuttings of West Indies mahogany under mist has been demonstrated (16). Seedlings, saplings, and poles sprout readily; large trees seem much less able to regrow by sprouting."
606	2011. World Agroforestry Centre. Agroforestry Tree Database - <i>Swietenia mahagoni</i> . PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Reproduction by vegetative fragmentation? No] "The fruit is preferably collected from the trees just before it splits open or from the ground immediately after it falls. The species is generally propagated from seed..."

607	2002. Vozzo, J.A.. Tropical Tree Seed Manual. USDA Forest Service, Washington, D.C.	[Minimum generative time (years)? 12+] "Flowering and fruiting of plantation trees starts at 12 to 13 years of age"
607	2011. World Agroforestry Centre. Agroforestry Tree Database - Swietenia mahagoni. PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Minimum generative time (years)? >4] "The tree fruits well and produces fertile seeds, sometimes as early as at 20 years of age, although usually it does not seed until it is 30 40 years old. Seed production varies according to site and year."
701	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit : A large, woody, upright, egg-shaped capsule, 6-13 cm long, 3-7 cm wide, splitting into 5 parts from the base and releasing numerous winged seeds." [No evidence, and no means of external attachment]
702	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Propagules dispersed intentionally by people? Yes] " It has been planted throughout the tropics in reforestation and plantation programmes."
703	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Propagules likely to disperse as a produce contaminant? No] "The winged seeds spin and fly sideways as they descend. The seeds are not known to be transported by animals. Without the aid of humans, the spread of West Indies mahogany into new habitat is fairly slow." [No evidence]
704	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Propagules adapted to wind dispersal? Yes] "The winged seeds spin and fly sideways as they descend. The seeds are not known to be transported by animals. Without the aid of humans, the spread of West Indies mahogany into new habitat is fairly slow."
704	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	[Propagules adapted to wind dispersal? Yes] "Fruit : A large, woody, upright, egg-shaped capsule, 6-13 cm long, 3-7 cm wide, splitting into 5 parts from the base and releasing numerous winged seeds."
705	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Propagules water dispersed? No] "The winged seeds spin and fly sideways as they descend. The seeds are not known to be transported by animals. Without the aid of humans, the spread of West Indies mahogany into new habitat is fairly slow." [No evidence]
706	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	[Propagules bird dispersed? No] "Fruit : A large, woody, upright, egg-shaped capsule, 6-13 cm long, 3-7 cm wide, splitting into 5 parts from the base and releasing numerous winged seeds." [Not fleshy-fruited]
707	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Propagules dispersed by other animals (externally)? No] "The seeds are not known to be transported by animals."
707	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	[Propagules dispersed by other animals (externally)? No] "Fruit : A large, woody, upright, egg-shaped capsule, 6-13 cm long, 3-7 cm wide, splitting into 5 parts from the base and releasing numerous winged seeds." [No evidence, and no means of external attachment]
708	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Propagules survive passage through the gut? Unknown] "The winged seeds spin and fly sideways as they descend. The seeds are not known to be transported by animals. Without the aid of humans, the spread of West Indies mahogany into new habitat is fairly slow." [Unlikely to be ingested]
801	1991. Francis, J.K.. Swietenia mahagoni Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Prolific seed production (>1000/m2)? No] "Seed production is irregular from year to year (51). A capsule may contain up to 60 seeds (9). Fifty capsules sampled from a number of trees in Puerto Rico averaged 39.9 :t 1.3 seeds and ranged from 19 to 56 seeds per capsule (author, personal observation). Large trees produce a few to over 100 capsules. There are about 7,000 air-dried seeds per kilogram (28)."
802	2011. World Agroforestry Centre. Agroforestry Tree Database - Swietenia mahagoni. PROSEA, http://www.worldagroforestrycentre.org/sea/Products/AFDbases/AF/asp/SpeciesInfo.asp?SpID=1567	[Evidence that a persistent propagule bank is formed (>1 yr)? No] "Without any special treatment, seeds lose much of their viability in 3 months and almost entirely in 6 months. Dried in the sun and sealed in airtight containers, they remain fairly viable for over 6 months. The seeds were provisionally classified as recalcitrant because of widespread reports of their short life span, but to the contrary, their viability can be maintained in hermetic air-dry storage at room temperature for 1 year. "

803	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Well controlled by herbicides? Unknown] "Specific control methods for this species are not available. Seedlings and saplings may be hand pulled or dug out. Larger trees are cut and the cut stumps treated with herbicide." [Refers to <i>S. macrophylla</i> . No information on herbicide efficacy or chemical control of <i>S. mahagoni</i>]
803	2011. Krisnawati, H./Kallio, M./Kanninen, M.. <i>Swietenia macrophylla</i> King: ecology, silviculture and productivity. Center for International Forestry Research, Bogor, Indonesia	[Well controlled by herbicides? Unknown] "Chemical weeding is not possible in <i>S. macrophylla</i> as the seedlings are very sensitive to herbicide." [Probably true for <i>S. mahagoni</i> as well]
804	1991. Francis, J.K.. <i>Swietenia mahagoni</i> Jacq. West Indies mahogany. Meliaceae Mahogany family. SO-ITF-SM-46. USDA Forest Service, International Institute of Tropical Forestry, Rfo Piedras, Puerto Rico	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes, for smaller trees] "Seedlings, saplings, and poles sprout readily; large trees seem much less able to regrow by sprouting."
804	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "- Ability to coppice"
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown] Unlikely