

Taxon: Handroanthus chrysotrichus (Mart. ex DC.) Mattos	Family: Bignoniaceae
Common Name(s): aipe golden trumpet tree ipe ipe amarelo ipe do morro ipe tabaco pau d'arco amarelo pau mulato	Synonym(s): Tabebuia chrysotricha (Mart. ex DC.) " " Tecoma chrysotricha Mart. ex DC.

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 19 Aug 2022
WRA Score: 0.0	Designation: L	Rating: Low Risk

Keywords: Naturalized, Tropical Tree, Ornamental, Self-Compatible, Wind-dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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)	n
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans		
408	Creates a fire hazard in natural ecosystems		
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		
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)		
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	n
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	n
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	No evidence in genus

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Mata atlantica of coastal Brazil, mostly in coastal restingas; also in other kinds of open or shrubby forest, as on tops of morros and in disturbed forest, especially on sandy soils."
	USDA, Agricultural Research Service, National Plant Germplasm System. (2022). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/ . [Accessed 16 Aug 2022]	"Native Southern America BRAZIL: Brazil [Bahia, Espírito Santo, Minas Gerais, Paraíba, Paraná, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo] SOUTHERN SOUTH AMERICA: Argentina (n.e.)"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2022). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/ . [Accessed 16 Aug 2022]	

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"near sea level to 1000 m."
	Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i> : Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/ . [Accessed 17 Aug 2022]	"USDA hardiness zones: 10A through 11"

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Mata atlantica of coastal Brazil, mostly in coastal restingas; also in other kinds of open or shrubby forest, as on tops of morros and in disturbed forest"
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Also widely planted as a small street tree"
	Imada, C.T., Staples, G.W. & Herbst, D.R. (2005). Annotated Checklist of Cultivated Plants of Hawai'i. http://www2.bishopmuseum.org/HBS/botany/cultivatedplants/ . [Accessed 16 Aug 2022]	" <i>Tabebuia chrysotricha</i> (Martius ex A. P. de Candolle) Standley (Confirmed) First Collected: 1986 Locations: Foster Botanical Garden (Confirmed) Harold L. Lyon Arboretum Ho'omaluhia Botanical Garden (Confirmed) Waimea Arboretum & Botanical Garden"
	Hosking, J. R., Conn, B. J., Lepschi, B. J., & Barker, C. H. (2007). Plant species first recognised as naturalised for New South Wales in 2002 and 2003, with additional comments on species recognized as naturalised in 2000–2001. <i>Cunninghamia</i> , 10(1): 139-166	[New South Wales] "Bellingen, J.R. Hosking 2268 & I. Turnbull, 13 Mar 2003 (CANB, MEL, NE, NSW). Notes: Spread by wind-dispersed seed. Only known to have naturalised at Bellingen, not known to be naturalised elsewhere in Australia or overseas."
	Maroyi, A. (2006). Preliminary checklist of introduced and naturalized plants in Zimbabwe. <i>Kirkia</i> , 18(2): 177-247	[Zimbabwe] " <i>Tabebuia chrysotricha</i> (DC.) Standl. Tree, ornamental. Zim C; Biegel 4606"

301	Naturalized beyond native range	y
	Source(s)	Notes

Qsn #	Question	Answer
	Bostock, P.D. and Holland, A.E. (eds) (2014). Introduction to the Census of the Queensland Flora 2014. Queensland Department of Science, Information Technology, Innovation and the Arts: Brisbane	"Handroanthus chrysotrichus (Mart. ex DC.) Mattos, new doubtfully naturalised species for Queensland"
	Hosking, J. R., Conn, B. J., Lepschi, B. J., & Barker, C. H. (2007). Plant species first recognised as naturalised for New South Wales in 2002 and 2003, with additional comments on species recognized as naturalised in 2000–2001. <i>Cunninghamia</i> , 10(1): 139-166	[<i>Tabebuia chrysotricha</i>] "New South Wales Distribution / Habitats: North Coast. On well-drained red earth soils in a high rainfall area at Bellingen. First Record: Naturalised in Bellingen Hospital grounds, Bellingen, J.R. Hosking 2268 & I. Turnbull, 13 Mar 2003 (CANB, MEL, NE, NSW). Notes: Spread by wind-dispersed seed. Only known to have naturalised at Bellingen, not known to be naturalised elsewhere in Australia or overseas."

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i> : Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/ . [Accessed 18 Aug 2022]	"UF/IFAS Invasive Assessment Status: not considered a problem species at this time, may be recommended (North, Central, South)"
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	Cited as a weed in India. Cited reference (Global Register of Introduced and Invasive Species) states that there is no evidence of impacts
	GBIF Secretariat (2022). <i>Handroanthus chrysotrichus</i> (Mart. ex DC.) Mattos. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/4092405 . [Accessed 18 Aug 2022]	Recorded as introduced in: India According to: Global Register of Introduced and Invasive Species - India Evidence of impact: No Occurrences in GBIF: 1

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	Cited as a weed in India. Cited reference (Global Register of Introduced and Invasive Species) states that there is no evidence of impacts
	CABI. (2022). <i>Invasive Species Compendium</i> . Wallingford, UK: CAB International. www.cabi.org/isc	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	Cited as a weed in India. Cited reference (Global Register of Introduced and Invasive Species) states that there is no evidence of impacts
	CABI. (2022). <i>Invasive Species Compendium</i> . Wallingford, UK: CAB International. www.cabi.org/isc	No evidence

305	Congeneric weed	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence for <i>Handroanthus</i> . Several species of <i>Tabebuia</i> are listed as invasive

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	[No evidence] "Usually rather small tree 2- 10 m tall, the branchlets subtetragonal to subterete, stellate-rufescent when young, more or less glabrescent. Leaves palmately (3-)5-foliolate, the leaflets oblong- obovate to oblong-elliptic, obtuse or rounded to abruptly cuspidate-subacuminate, basally obtuse to truncate, the terminal leaflet (1.5-)2-11 cm long, (1-)1.7-5.5 cm wide (to 15 x 9 cm in juveniles and in "intermediate" population discussed below), the laterals progressively smaller, entire or rarely slightly obtusely dentate near apex, membranaceous to chartaceous, lepidote above and below, above also glabrescently stellate-puberulous, below persistently stellate-puberulous with trichomes scattered over the clearly visible greenish to dark olive surface and denser on the thus tannish-drying main veins, always scabrous above and usually below; terminal petiolule 0.2-7(-8 in juveniles) cm long, the petiole 1-2.5 cm long, tannish or reddish stellate puberulous."

402	Allelopathic	n
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Usually rather small tree 2- 10 m tall, the branchlets subtetragonal to subterete, stellate-rufescent when young, more or less glabrescent." [Bignoniaceae. No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	Notes
	SelecTree. (2022). "Handroanthus chrysotrichus Tree Record." 1995-2022. Cal Poly State University, San Luis Obispo. https://selectree.calpoly.edu/tree-detail/1372 . [Accessed 18 Aug 2022]	"Wildlife interactions: Tree is deer resistant" [Possibly unpalatable]
	WRA Specialist. (2022). Personal Communication	Unknown

405	Toxic to animals	n
	Source(s)	Notes
	The University of Arizona. (2022). Campus Arboretum. <i>Handroanthus chrysotrichus</i> . https://apps.cals.arizona.edu . [Accessed 18 Aug 2022]	"Toxicity: Benign "

Qsn #	Question	Answer
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. (2008). International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	Lucini, F., & Putzke, J. (2015). Pathogenic fungi in <i>Handroanthus chrysotrichus</i> (yellow ipe-Bignoniaceae) cultivated in Santa Cruz and Venâncio Aires municipalities, southern Brazil. <i>Caderno de Pesquisa, Série Biologia</i> , 27 (1), 49-55	"Abstract : The pathology of native tree species and especially those involved in urban forestry has been little worked in Brazil. A contribution associating symptoms with causative agents is very important to speed up treatment procedures. <i>Handroanthus</i> (<i>Tabebuia</i>), belongs to the family Bignoniaceae one of the most used among native to urban tree planting in Brazil. Several species are among cultivated, highlighting <i>Handroanthus chrysotrichus</i> (Mart. ex DC.) Mattos (yellow ipe), one of the most used in southern Brazil for hardiness, growth rate, fast and exuberant flowering. There are few pathogens known to be associated with this tree. In this regard it has been prepared this paper that sought to collect symptoms in leaflets of the yellow ipe in urban areas in the municipalities of Venâncio Aires and Santa Cruz do Sul - central region of Rio Grande do Sul state, southern Brazil, between March and June 2015. The collections were analyzed under optical microscope to evaluate and direct observation for the presence symptoms associated mold structures. Samples were collected from 100 trees, 50 in the city of Venâncio Aires and 50 in Santa Cruz do Sul. There were found symptoms associated with fungi in 100% of samples. Eight fungal species were associated with symptoms and were identified, being among them: <i>Fusarium oxysporum</i> (associated with leaf necrosis) which was found in 8% of the samples, <i>Colletotrichum gloeosporioides</i> (associated with apical blight) found in 8% of the samples, <i>Alternaria alternata</i> (associated the leaf yellowing) found in 70% of the samples, <i>Asteromidium tabebuiae</i> (associated with necrosis along the secondary veins) found in 4% of the samples, which is a new reference to Rio Grande do Sul, <i>Cercospora</i> sp. and <i>Meliola</i> sp. (associated with necrosis and yellowing in the leaf apex) found in 4% of the samples, <i>Uredo</i> sp. (associated with white rust) found in 8% of the samples, <i>Helminthosporium</i> sp. (associated with necrosis in the leaf apex) found in 4% of the samples."
	Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i> : Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/ . [Accessed 18 Aug 2022]	"Pests and Diseases No pests or diseases are of major concern."

407	Causes allergies or is otherwise toxic to humans	
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Qsn #	Question	Answer
	Source(s)	Notes
	The University of Arizona. (2022). Campus Arboretum. <i>Handroanthus chrysotrichus</i> . https://apps.cals.arizona.edu . [Accessed 18 Aug 2022]	"Allergen: Non-allergenic Invasive: Benign Toxicity: Benign"
	Dave's Garden. (2022). Golden Trumpet Tree, Golden Trumpet Vine, Yellow Ipe, Yellow Trumpet Tree - <i>Handroanthus chrysotrichus</i> . https://davesgarden.com/guides/pf/go/57947/ . [Accessed 18 Aug 2022]	"Danger: Handling plant may cause skin irritation or allergic reaction"
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. (2008). International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Mata atlantica of coastal Brazil, mostly in coastal restingas; also in other kinds of open or shrubby forest, as on tops of morros and in disturbed forest, especially on sandy soils." [Unknown. No evidence found]

409	Is a shade tolerant plant at some stage of its life cycle	n
	Source(s)	Notes
	Oakman, H. (1995). Harry Oakman's what flowers when: the complete guide to flowering times in tropical and subtropical gardens. Univ. of Queensland Press, St. Lucia, Australia	"Has a long deciduous period; young plants make rapid growth; need a rich soil and full exposure to sunshine"
	Dave's Garden. (2022). Golden Trumpet Tree, Golden Trumpet Vine, Yellow Ipe, Yellow Trumpet Tree - <i>Handroanthus chrysotrichus</i> . https://davesgarden.com/guides/pf/go/57947/ . [Accessed 18 Aug 2022]	"Sun Exposure: Full Sun"
	Souza, L. A. D., Iwazaki, M. C., & Moscheta, I. S. (2005). Morphology of the pericarp and seed of <i>Tabebuia chrysotricha</i> (Mart. ex DC.) Standl. (Bignoniaceae). <i>Brazilian Archives of Biology and Technology</i> , 48, 407-418	" <i>Tabebuia chrysotricha</i> (Mart. ex DC.) Standl. ("ipê-amarelo") is a species belonging to Bignoniaceae that is very often used as an ornamental plant in parks and gardens, as well as in the lining of streets. It is a deciduous plant and a heliophyte typical of the Atlantic rainforest." [heliophyte - a plant thriving in or tolerating full sunlight]

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes

Qsn #	Question	Answer
	<p>SelecTree. (2022). "Handroanthus chrysotrichus Tree Record." 1995-2022. Cal Poly State University, San Luis Obispo. https://selecttree.calpoly.edu/tree-detail/1372. [Accessed 18 Aug 2022]</p>	<p>"Soil texture: Loam or Sand Soil pH: Slightly Acidic to Slightly Alkaline"</p>
	<p>Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i>: Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/. [Accessed 18 Aug 2022]</p>	<p>"Soil tolerances: clay; sand; loam; acidic; alkaline; well-drained"</p>

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Usually rather small tree 2- 10 m tall ... "

412	Forms dense thickets	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Mata atlantica of coastal Brazil, mostly in coastal restingas; also in other kinds of open or shrubby forest, as on tops of morros and in disturbed forest, especially on sandy soils." [No evidence]

501	Aquatic	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	[Terrestrial] "Mata atlantica of coastal Brazil, mostly in coastal restingas; also in other kinds of open or shrubby forest, as on tops of morros and in disturbed forest, especially on sandy soils."

502	Grass	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	Bignoniaceae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	Bignoniaceae

Qsn #	Question	Answer
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). <i>Flora Neotropica</i> 25(2): 1-370	"Usually rather small tree 2- 10 m tall ... "

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	KewScience. (2022). Plants of the World Online - <i>Handroanthus chrysotrichus</i> . http://powo.science.kew.org . [Accessed 18 Aug 2022]	"Native to: Argentina Northeast, Brazil Northeast, Brazil South, Brazil Southeast"

602	Produces viable seed	y
	Source(s)	Notes
	Oakman, H. (1995). <i>Harry Oakman's what flowers when: the complete guide to flowering times in tropical and subtropical gardens</i> . Univ. of Queensland Press, St. Lucia, Australia	"Flowers are in tight, 8-centimetre long, golden-yellow clusters, and these bloom almost simultaneously; soon succeeded by numerous pods of readily germinating seeds." ... "raised from seed"
	Bittencourt Jr., N. S., & Semir, J. (2005). LateActing Self-Incompatibility and Other Breeding Systems in <i>Tabebuia</i> (Bignoniaceae). <i>International Journal of Plant Sciences</i> , 166(3), 493–506	" <i>Tabebuia chrysotricha</i> . Pollination experiments in <i>Tabebuia chrysotricha</i> resulted in relatively high proportions of fruit set by self-pollination in cultivated as well as in native trees (table1). However, one of the trees in the natural population (tree7) did not set fruits by self-pollination. Fruit set by natural pollination was much lower than in both types of hand pollinations." ... "Break-down of SI seems to have occurred in <i>T. chrysotricha</i> and <i>T. heptaphylla</i> because relatively high proportions of fruits resulting from self-pollination were verified in these species."

603	Hybridizes naturally	
	Source(s)	Notes
	Hodel, D. R., Henrich, J. E., Greby, K. J., & Yansura, D. (2017). <i>Handroanthus x lewisii</i> (Bignoniaceae), a new hybrid from cultivation. <i>Phytoneuron</i> 2017-46: 1–21	"Others have made this hybrid in recent years. Eric Schmidt (pers. com.) of Harry P. Leu Gardens in Orlando, Florida notes that Bernie Peterson of Rockledge Gardens in Cocoa, Florida has made several hybrids involving various combinations of <i>Handroanthus chrysotrichus</i> , <i>H. heptaphyllus</i> , <i>H. impetiginosus</i> , and <i>H. umbellatus</i> . One of the hybrids made was perhaps <i>H. xlewisii</i> ." [Artificial hybridization possible]

604	Self-compatible or apomictic	y
	Source(s)	Notes

Qsn #	Question	Answer
	Bittencourt Jr., N. S., & Semir, J. (2005). Late-Acting Self-Incompatibility and Other Breeding Systems in <i>Tabebuia</i> (Bignoniaceae). <i>International Journal of Plant Sciences</i> , 166(3), 493–506	" <i>Tabebuia chrysotricha</i> . Pollination experiments in <i>Tabebuia chrysotricha</i> resulted in relatively high proportions of fruit set by self-pollination in cultivated as well as in native trees (table1). However, one of the trees in the natural population (tree7) did not set fruits by self-pollination. Fruit set by natural pollination was much lower than in both types of hand pollinations." ... "Break-down of SI seems to have occurred in <i>T. chrysotricha</i> and <i>T. heptaphylla</i> because relatively high proportions of fruits resulting from self-pollination were verified in these species."

605	Requires specialist pollinators	n
	Source(s)	Notes
	Pfeiffer, P. M. M. (2018). Plant-bee interactions and pollen flux in restored areas of Atlantic Forest. Doctoral dissertation. University of São Paulo, São Paulo	"Appendix 1.2. Tree Species with Pollination Modes and Number of Sites Present on Each Forest Type." [Handroanthus chrysotrichus - Pollination mode = bee]
	da Silva Lóz, S. C., et al. (2019). Síndromes de polinização das espécies arbóreas em um fragmento de Mata Atlântica, Alagoas, Brasil. <i>Brazilian Journal of Development</i> , 5(12), 29243-29253	"Fifty-one species were recorded, distributed in 26 families. Among the sampled species, bee pollination (melithophilia) was the most frequent pollination system among species." [Handroanthus chrysotrichus described as bee pollinated]

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i> : Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/ . [Accessed 18 Aug 2022]	"Propagation is by seed or layering."

607	Minimum generative time (years)	n
	Source(s)	Notes
	Gilman, E.F., Watson, D.G., Klein, R.W., Koeser, A.K., Hilbert, D.R. and McLean, D.C. (2018). <i>Tabebuia chrysotricha</i> : Golden Trumpet Tree. Fact Sheet ENH-772. Revised. Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL. http://hort.ifas.ufl.edu/ . [Accessed 18 Aug 2022]	"Growth rate: fast" [Time to maturity unknown]
	SelectTree. (2022). "Handroanthus chrysotrichus Tree Record." 1995-2022. Cal Poly State University, San Luis Obispo. https://selectree.calpoly.edu/tree-detail/1372 . [Accessed 18 Aug 2022]	"Maximum tree height: 30 feet Canopy width: 25-30 feet Growth rate: ~36 in/year"

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes

Qsn #	Question	Answer
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body." [Winged seed, adapted for wind dispersal, lack means of external attachment]

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"Also widely planted as a small street tree; near sea level to 1000 m."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Ornamental Dispersed by: Humans References: India-W-1977."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"Fruit a linear-cylindric capsule, narrowing to base and apex, 11-38 cm long, 0.8-1.2 cm wide, usually reddish (occasionally golden-tannish) villous with barbate and sparsely dendroid 1-1.5 mm long trichomes, also with shorter stellate hairs and the bases of longer hairs usually more or less stellate; seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body." [Unlikely, as capsules and seeds are relatively large and probably would not become an inadvertent contaminant of produce]

704	Propagules adapted to wind dispersal	y
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body."
	Hosking, J. R., Conn, B. J., Lepschi, B. J., & Barker, C. H. (2007). Plant species first recognised as naturalised for New South Wales in 2002 and 2003, with additional comments on species recognized as naturalised in 2000–2001. <i>Cunninghamia</i> , 10(1): 139-166	[<i>Tabebuia chrysotricha</i>] "Notes: Spread by wind-dispersed seed. Only known to have naturalised at Bellingen, not known to be naturalised elsewhere in Australia or overseas."

705	Propagules water dispersed	n
	Source(s)	Notes
	Collevatti, R. G., Estolano, R., Ribeiro, M. L., Rabelo, S. G., Lima, E. J., & Munhoz, C. B. (2014). High genetic diversity and contrasting fine-scale spatial genetic structure in four seasonally dry tropical forest tree species. <i>Plant Systematics and Evolution</i> , 300(7), 1671-1681	"Seeds are small, light, winged and wind dispersed. They are early successional species and rely on forest gaps due to light demand for seed germination." [Although water may provide secondary dispersal, seeds are primarily adapted for wind dispersal]

706	Propagules bird dispersed	n
	Source(s)	Notes

Qsn #	Question	Answer
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"Fruit a linear-cylindric capsule, narrowing to base and apex, 11-38 cm long, 0.8-1.2 cm wide, usually reddish (occasionally golden-tannish) villous with barbate and sparsely dendroid 1-1.5 mm long trichomes, also with shorter stellate hairs and the bases of longer hairs usually more or less stellate; seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body." [Not fleshy-fruited]

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"Fruit a linear-cylindric capsule, narrowing to base and apex, 11-38 cm long, 0.8-1.2 cm wide, usually reddish (occasionally golden-tannish) villous with barbate and sparsely dendroid 1-1.5 mm long trichomes, also with shorter stellate hairs and the bases of longer hairs usually more or less stellate; seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body." [Fruit and seeds lack means of external attachment]

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Gentry, A.H. (1992). Bignoniaceae: Part II (Tribe Tecomeae). Flora Neotropica 25(2): 1-370	"Fruit a linear-cylindric capsule, narrowing to base and apex, 11-38 cm long, 0.8-1.2 cm wide, usually reddish (occasionally golden-tannish) villous with barbate and sparsely dendroid 1-1.5 mm long trichomes, also with shorter stellate hairs and the bases of longer hairs usually more or less stellate; seeds 0.6-0.9 cm long, 1.7-2.9 cm wide, the wings hyaline-membranaceous, conspicuously demarcated from seed body." [Unlikely to be consumed, and adapted for wind dispersal]

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes
	Barbosa, K. C., & Pizo, M. A. (2006). Seed rain and seed limitation in a planted gallery forest in Brazil. Restoration Ecology, 14(4): 504-515	"Table 2. Seed species collected in 53 1-m2 seed traps from September 2002 to August 2003 in a restored gallery forest in SE Brazil" [Tabebuia chrysotricha - Number of Seeds = 618. Densities collected are well below 1000 m-2]

Qsn #	Question	Answer
802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	Notes
	Martins, L., Lago, A. A. D., & Sales, W. R. M. (2009). Conservação de sementes de ipê-amarelo (<i>Tabebuia chrysotricha</i> (Mart. ex A. DC.) Standl.) em função do teor de água das sementes e da temperatura do armazenamento. <i>Revista Brasileira de Sementes</i> , 31, 86-95	"No entanto, Natale e Carvalho (1983) constataram perda total do potencial fisiológico de sementes de ipê-roxo após 150 dias de armazenamento (em ambiente normal de laboratório) e somente 2% de germinação aos 120 dias." [Translation from Portuguese: However, Natale and Carvalho (1983) found total loss of physiological potential of ipê-roxo seeds after 150 days of storage (in a normal laboratory environment) and only 2% germination at 120 days.]
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species
804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Dave's Garden. (2022). Golden Trumpet Tree, Golden Trumpet Vine, Yellow Ipe, Yellow Trumpet Tree - <i>Handroanthus chrysotrichus</i> . https://davesgarden.com/guides/pf/go/57947/ . [Accessed 18 Aug 2022]	"On Mar 10, 2004, Pameladragon from Appomattox, VA wrote:" ... "The tree lives in our garden room all winter and spends the spring, summer and fall on the patio with the citrus. One year a friend forgot to take it inside for me when we were traveling and it was hit by a hard freeze. Thinking it dead, I left it outside all winter and was surprised to see it regrow from the roots that spring."
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Thrives and spreads in regions with tropical climates
- Naturalized in Queensland, Australia (but no evidence in the Hawaiian Islands to date)
- Unconfirmed report that plant may be an allergen
- Tolerates many soil types
- Reproduces by seeds
- Self-compatible
- Fast growth rate
- Seeds dispersed by wind and through intentional cultivation
- Seeds may form a persistent seed bank (up to 4 years)
- Tolerates heavy grazing, mowing and fire

Low Risk Traits

- No reports of negative impacts where grown
- Unarmed (no spines, thorns, or burrs)
- Thrives in full sun and high light environments (dense shade may inhibit spread)
- Seeds lose viability after 150 days of storage (unlikely to form a persistent seed bank)