Taxon: Pourouma cecropiifolia Mart. **Family:** Urticaceae

Common Name(s): Amazon grape
sacha uvillas

Synonym(s):

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 10 Mar 2016

WRA Score: -6.0 **Designation:** L **Rating:** Low Risk

Keywords: Tropical Tree, Dioecious, Edible Fruit, Recalcitrant, Zoochorous

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	y
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?	y=1, n=-1	n
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	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		
403	Parasitic	y=1, n=0	n
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	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		

Qsn #	Question	Answer Option	Answer
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		
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	n
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	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)		
708	Propagules survive passage through the gut	y=1, n=-1	y
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		
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?**	**y**
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"Amazon tree grape, Pourouma cecropiifolia (Cecropiaceae), was domesticated by indigenous Amazonians and was widely distributed in western Amazonia, including Peru, Ecuador, Colombia, Venezuela and Brazil, in pre-Colombian times (Clement and Chavez-Flores, 1984)." ... "In western Brazil this species is found in its wild state as an element of the forest understory to lower canopy within high tropical forests. As a domesticated plant, it is considered a light-demanding species, although this may be an adaptation to cultivation in gardens."
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"The present range of distribution of the very uniform P. cecropiifolia might be largely anthropogenous."

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"The present range of distribution of the very uniform P. cecropiifolia might be largely anthropogenous." [No evidence, although natural and anthropogenic distributions are unclear]

103	**Does the species have weedy races?**	**n**
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

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**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Extending from Colombia (Meta) through Amazonian Ecuador, Peru, and Brazil (Acre and western Amazonas) to Amazonian Bolivia, also in Amazonian Venezuela"

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	

203	**Broad climate suitability (environmental versatility)**	**n**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The tree is adapted to the lowland humid tropics, with an average annual temperature between 20 and 28°C. The highest temperature that it will tolerate is not known. The precipitation in this area varies from 1500 to 4000 mm / year, and the relative humidity of the air varies from 60 to 85% (CORPOICA, 1998)."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Extending from Colombia (Meta) through Amazonian Ecuador, Peru, and Brazil (Acre and western Amazonas) to Amazonian Bolivia, also in Amazonian Venezuela"

205	Does the species have a history of repeated introductions outside its natural range?	n
	Source(s)	**Notes**
	FAO. 1986. Food and fruit-bearing forest species 3: Examples from Latin America. FAO Forestry Paper, 44(3). Food & Agriculture Organization of the United Nations, Rome	"Despite its popularity the species has not been widely dispersed since precolombian times, perhaps due to the short viability of the seed, although in recent years it has been more widely dispersed through the American humid tropics as a result of air transport."
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Often cultivated and their occurrence often indicating previous human inhabitation. Also cultivated in some places outside the species range, e.g., Bahia (Brazil)."

301	Naturalized beyond native range	n
	Source(s)	**Notes**
	FAO. 1986. Food and fruit-bearing forest species 3: Examples from Latin America. FAO Forestry Paper, 44(3). Food & Agriculture Organization of the United Nations, Rome	"Today it occurs in much of the Peruvian, Ecuadorian and Colombian Amazon as well as the extreme western port of the Brazilian Amazon. Irrespective as to whether the species is wild or a cultigen, there is no published information on its abundance." [No evidence, but distinction between natural & anthropogenic ranges is unclear]
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	Not documented as naturalized outside native range

302	Garden/amenity/disturbance weed	n
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**

Qsn #	Question	Answer
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

304	Environmental weed	n
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

305	Congeneric weed	n
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Pourouma bicolor Mart. var. chocoana reported to be naturalized]

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[No evidence] "The tree attains about 15 m in height, with a pagoda-branched, leafy canopy. The trunk is straight, showing clearly the leaf petiole scars. The trunk bark is rough and white-grey. The branching occurs in whorls of three, sometimes with six branches, giving the tree a pagoda-type architecture and an umbrella-shaped crown. The leaves are large (20-60 cm in length by 15-50 cm in width), alternate, with long petioles (20-40 cm in length by 0.5-1.5 cm in thickness) with lateral stipules. The leaf blade is palmately lobed (between three and 13 lobes), leathery in texture, clear-green underneath and dark green on the upper surface."

402	Allelopathic	
	Source(s)	**Notes**
	WRA Specialist. 2016. Personal Communication	Unknown

403	Parasitic	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The tree attains about 15 m in height, with a pagoda-branched, leafy canopy. The trunk is straight, showing clearly the leaf petiole scars." [Urticaceae. Formerly Cecropiaceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	**Notes**

Qsn #	Question	Answer
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[Fruit consumed by animals. Palatability of foliage unknown] "The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "A single hard, oval-shaped seed is found per fruit" ... "There is strong competition from birds and bats, and the losses can be considerable during the harvest."

405	Toxic to animals	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "There is strong competition from birds and bats, and the losses can be considerable during the harvest."
	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, although extracts of fruit show moderate cytotoxicity

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	FAO. 1986. Food and fruit-bearing forest species 3: Examples from Latin America. FAO Forestry Paper, 44(3). Food & Agriculture Organization of the United Nations, Rome	"During the early juvenile stage the leaf cutter ant may be a. problem, otherwise the species is surprisingly free of insect pests . A trunk borer has been observed near Leticia, Colombia. A root disease has killed some trees near Manaus, Brazil ."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Lim, T.K. 2013. Edible Medicinal And Non-Medicinal Plants. Volume 6, Fruits. Springer, Dordrecht	[No evidence] "The fruit is sweet and juicy, eaten fresh and made into jams, jellies, other confections and wine. The fruit is very fragile and has poor post harvest shelf-life which limits marketing options. The sweet flower perianth is eaten raw or used for making drinks and wine. The toasted seeds can be used as a substitute for coffee and the leaf ash is sometimes substituted as a coca additive."
	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

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[No evidence. Does not occur in fire prone ecosystems] "The tree is adapted to the lowland humid tropics, with an average annual temperature between 20 and 28°C. The highest temperature that it will tolerate is not known. The precipitation in this area varies from 1500 to 4000 mm / year, and the relative humidity of the air varies from 60 to 85% (CORPOICA, 1998)."

Qsn #	Question	Answer
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	No evidence

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	Useful Tropical Plants Database. 2016. Pourouma cecropiifolia. http://tropical.theferns.info/viewtropical.php?id=Pourouma+cecropiifolia. [Accessed 10 Mar 2016]	"Succeeds in full sun or dappled shade"
	Mostacedo C, B., & Fredericksen, T. S. 1999. Regeneration status of important tropical forest tree species in Bolivia: assessment and recommendations. Forest Ecology and Management, 124(2): 263-273	"Table 1 Status of regeneration of tropical forest tree species in Bolivia" [Pourouma cecropiifolia - Shade tolerance - IE shade-intolerant]
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[Shade tolerance may depend on level of domesticity of seed source] "In western Brazil this species is found in its wild state as an element of the forest understory to lower canopy within high tropical forests. As a domesticated plant, it is considered a light demanding species, although this may be an adaptation to cultivation in gardens."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	**Notes**
	Useful Tropical Plants Database. 2016. Pourouma cecropiifolia. http://tropical.theferns.info/viewtropical.php?id=Pourouma+cecropiifolia. [Accessed 10 Mar 2016]	"Found in the wild on fertile, clayey soil"
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The species grows naturally on oxisols and utisols. In general, it prefers well-drained, good structured, loamy-surfaced soils, even though these are generally poor in nutrients."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Lim, T.K. 2013. Edible Medicinal And Non-Medicinal Plants. Volume 6, Fruits. Springer, Dordrecht	"A medium-sized, evergreen, dioecious, branched tree reaching 7-15 III high with grey bark marked by leaf scars with a rosette of branches high up the tree and leaves crowded toward the tips of the branches"

412	Forms dense thickets	n
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	[No evidence] "in non-inundated forest, at altitudes up to ca. 1000 m. Often cultivated and their occurrence often indicating previous human inhabitation."
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	No evidence

Qsn #	Question	Answer
501	Aquatic	n
	Source(s)	Notes
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	[Terrestrial] "Tree, up to 20 m tall ... in non-inundated forest, at altitudes up to ca. 1000 m."

502	Grass	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 10 Mar 2016]	Family: Urticaceae Altfamily: Cecropiaceae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network, 2016. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 10 Mar 2016]	Family: Urticaceae Altfamily: Cecropiaceae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Tree, up to 20 m tall."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	[No evidence] "Extending from Colombia (Meta) through Amazonian Ecuador, Peru, and Brazil (Acre and western Amazonas) to Amazonian Bolivia, also in Amazonian Venezuela; in non-inundated forest, at altitudes up to ca. 1000 m. Often cultivated and their occurrence often indicating previous human inhabitation."

602	Produces viable seed	y
	Source(s)	Notes
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The tree is propagate by seed."

603	Hybridizes naturally	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	[Unknown for P. cecropiifolia] "Unnamed Collections" ... "The latter has most characters in common with the form of P. bicolor subsp. bicolor with an entire lamina, being smooth above. However, the indument of the leafy twigs, petiole, and lower lea/surface resembles that of P. cucura. The former collection with 5-parted leaves and incisions down to the petiole may represent the juvenile form of the latter collection. The mixture of characters suggests possible hybridization."

604	Self-compatible or apomictic	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"This dioecious species has paniculate axillary inflorescences that are 15-20 cm in length."

605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"During the flowering period, mainly during the morning (from 6 a.m. to 1 p.m.), several species of bees are observed (Oxitrigona obscura, Trigona obscura, Trigona dellatarreana, Trigona sp.). Bees are considered the principal pollinators."
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Falcao and Lleras (1980) found a number of bee species as pollinators of P. cecropiifolia. The bees collect pollen in the staminate inflorescences and fly to pistillate inflorescences. The authors do not give indications about the attractant(s) of the pistillate inflorescences."

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The tree is propagate by seed." ... "To date, no reports of vegetative propagation have been published. The extremely light wood is almost herbaceous and often hollow in seedlings hindering all cutting and grafting methods. Air layering may be possible, but is probably not economical given the low value of the fruit."

607	Minimum generative time (years)	3
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The juvenile period is from 3-4 years."

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

Qsn #	Question	Answer
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "A single hard, oval-shaped seed is found per fruit" [No evidence & unlikely. Fruits & seeds are relatively large & lack means of external attachment]

702	Propagules dispersed intentionally by people	y
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Most, if not all, Pourouma species have edible fruits. As far as known, only P. cecropiijolia is cultivated as a fruit tree, however. The taste of the fleshy (mesocarp-like) inner layer of the perianth strongly resembles that of grapes."
	Fruit Lover's Seed Co. 2016. Tropical Fruit Seed List. http://www.fruitlovers.com/seedlistUSA.html. [Accessed 10 Mar 2016]	Seeds sold commercially

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "A single hard, oval-shaped seed is found per fruit" [No evidence & unlikely. Fruits & seeds are relatively large & would probably be easily detected in other produce or agricultural products]

704	Propagules adapted to wind dispersal	n
	Source(s)	**Notes**
	Berg, C. C., Akkermans, R. W. A. P., & Van Heusden, E. C. H (1990). Cecropiaceae: Coussapoa and Pourouma, with an introduction to the family. Flora Neotropica, 51: 1-208	"Again, little is known about dispersal of Pourouma seeds. One may assume that the 'fruits' with a fleshy mesocarp-like inner layer of the enlarged perianth, and a purple to black (or a red-brown) exocarp-like outer layer (skin) are eaten by several frugiverous arboreal animals; monkeys are mentioned in label data."

705	Propagules water dispersed	
	Source(s)	**Notes**
	FAO. 1986. Food and fruit-bearing forest species 3: Examples from Latin America. FAO Forestry Paper, 44(3). Food & Agriculture Organization of the United Nations, Rome	"Fruit drupaceous, avoid to spherical, 2-4 cm long, 1-4 cm in diameter, grape-like, with rough skin turning from green through violet to black when ripe; pulp juicy, gelatinous and sweet, slightly fibrous, surrounding a single, ovoid seed." [Buoyancy of fruit unknown. Unlikely, but may be moved by water if growing in riparian habitat]

706	Propagules bird dispersed	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[Presumably yes, although seed may be too large for most avian frugivores in the Hawaiian Islands] "The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "A single hard, oval-shaped seed is found per fruit" ... "There is strong competition from birds and bats, and the losses can be considerable during the harvest."

707	Propagules dispersed by other animals (externally)	
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The fruit is a drupe with an oval-globose to oblong shape that varies in length from 2 to 4 cm and 1-4 cm in diameter." ... "A single hard, oval-shaped seed is found per fruit" ... "There is strong competition from birds and bats, and the losses can be considerable during the harvest." [Fruits & seeds are relatively large & lack means of external attachment. However, some animals may carry fruit externally to consume pulp & discard seed]

708	Propagules survive passage through the gut	y
	Source(s)	**Notes**
	Guzmán, A., & Stevenson, P. R. (2008). Seed dispersal, habitat selection and movement patterns in the Amazonian tortoise, Geochelone denticulata. Amphibia-Reptilia, 29(4), 463-472	"Table 4. List of plant species dispersed by Geochelone denticulata at Los Amigos Biological Station, Peru." [Includes Pourouma cecropiifolia]
	Culot, L., Lazo, F. J. J. M., Huynen, M. C., Poncin, P., & Heymann, E. W. (2010). Seasonal variation in seed dispersal by tamarins alters seed rain in a secondary rain forest. International Journal of Primatology, 31(4), 553-569	[Dispersed by tamarins] "For a 2-yr period, we followed a mixed-species group of tamarins in Peru to determine how their role as seed dispersers in a 9-yr-old secondary-growth forest varied across seasons. These tamarins dispersed small to large seeds of 166 tree species, 63 of which were into a degraded area." ... "All the seeds dispersed in the secondary forest were relatively large, with 57.6% of seeds >1 cm (see Fig. 3 for seed length and width distribution). Cecropiaceae (Cecropia and Pourouma), Fabaceae (Inga and Parkia), and Moraceae (Naucleopsis, Ficus, Helicostylis, and Clarisia) were the families most often dispersed into secondary forest."

801	Prolific seed production (>1000/m2)	n
	Source(s)	**Notes**
	FAO. 1986. Food and fruit-bearing forest species 3: Examples from Latin America. FAO Forestry Paper, 44(3). Food & Agriculture Organization of the United Nations, Rome	[Single-seeded fruit with recalcitrant seeds. Unlikely to achieve high seed densities in the soil] "Fruit drupaceous, avoid to spherical, 2-4 cm long, 1-4 cm in diameter, grape-like, with rough skin turning from green through violet to black when ripe; pulp juicy, gelatinous and sweet, slightly fibrous, surrounding a single, ovoid seed." ... "Germination is very rapid (10 to 20 days if the seed are sown immediately after extraction from the fruit). However the seeds are of the type known as "recalcitrant" and loose their viability extremely rapidly . One afternoon in the sun will kill them and even protected in saw dust or char coal powder they lose viability within days or a week at room temperature ."

Qsn #	Question	Answer
802	**Evidence that a persistent propagule bank is formed (>1 yr)**	**n**
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"The seeds are recalcitrant, hence difficult to store, and lose viability in less than 1 week if kept at room temperature."

803	**Well controlled by herbicides**	
	Source(s)	**Notes**
	WRA Specialist. 2016. Personal Communication	Unknown. No information on herbicide efficacy or evidence of chemical control of this species

804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	
	Source(s)	**Notes**
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"To date, no reports of vegetative propagation have been published. The extremely light wood is almost herbaceous and often hollow in seedlings hindering all cutting and grafting methods. Air layering may be possible, but is probably not economical given the low value of the fruit." [Unknown. No reports of coppicing]

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	WRA Specialist. 2016. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits
• Thrives in tropical climates
• Reproduces by seeds
• Rapid growth rate & reaches maturity in 3+ years
• Seeds dispersed by birds. Frugivorous mammals & intentionally by people

Low Risk Traits
• Domesticated by indigenous people of South America
• No reports of invasiveness or naturalization, but no evidence of widespread introduction outside native range
• Unarmed (no spines, thorns or burrs)
• Edible fruit
• Dioecious
• Not reported to spread vegetatively
• Relatively large fruit & seeds unlikely to be inadvertently dispersed
• Seeds recalcitrant & unable to form a persistent seed bank