Key Words: Low Risk; Fruit Tree; High Elevation, Self-compatible, Mammal Dispersed

***Family:*** ***Sapotaceae***

***Taxon:*** ***Pouteria lucuma***

***Synonym:*** *Achras lucuma Ruiz & Pav. (basionym)*
*Lucuma obovata Kunth*

***Common Name:*** lucmo
lúcuma

**Questionaire :** current 20090513 **Assessor:** Chuck Chimera **Designation:** L
**Status:** Assessor Approved **Data Entry Person:** Chuck Chimera **WRA Score -1**

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|---|---|---|---|
| **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)** | **Low** |
| **202** | **Quality of climate match data** | **(0-low; 1-intermediate; 2-high) (See Appendix 2)** | **High** |
| **203** | **Broad climate suitability (environmental versatility)** | **y=1, n=0** | **y** |
| **204** | **Native or naturalized in regions with tropical or subtropical climates** | **y=1, n=0** | **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)** | |
| **401** | **Produces spines, thorns or burrs** | **y=1, n=0** | **n** |
| **402** | **Allelopathic** | **y=1, n=0** | |
| **403** | **Parasitic** | **y=1, n=0** | **n** |
| **404** | **Unpalatable to grazing animals** | **y=1, n=-1** | |
| **405** | **Toxic to animals** | **y=1, n=0** | **n** |
| **406** | **Host for recognized pests and pathogens** | **y=1, n=0** | |
| **407** | **Causes allergies or is otherwise toxic to humans** | **y=1, n=0** | **n** |
| **408** | **Creates a fire hazard in natural ecosystems** | **y=1, n=0** | **n** |
| **409** | **Is a shade tolerant plant at some stage of its life cycle** | **y=1, n=0** | |
| **410** | **Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)** | **y=1, n=0** | **y** |
| **411** | **Climbing or smothering growth habit** | **y=1, n=0** | **n** |

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| **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** | |
| **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** | **n** |
| **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** | |
| **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** | **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** **-1**

**Supporting Data:**

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|---|---|---|
| 101 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Is the species highly domesticated? No evidence that tree has been selected for traits that would reduce invasiveness] "The lucmo was first seen and reported by Europeans in Ecuador in 1531. Archaeologists have found it frequently depicted on ceramics at burial sites of the indigenous people of coastal Peru. It is native and cultivated in the highlands of western Chile and Peru and possibly southeastern Ecuador where it is known to have been cultivated since ancient times. It is grown also, to a limited extent, in the Andes of eastern Bolivia and the fruit is sold in the markets of La Paz." |
| 101 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Is the species highly domesticated? No evidence that tree has been selected for traits that would reduce invasiveness] "The large edible fruit is greatly appreciated by the inhabitants of the Andean altiplano, where it has been protected and cultivated for centuries" |
| 102 | 2012. WRA Specialist. Personal Communication. | NA |
| 103 | 2012. WRA Specialist. Personal Communication. | NA |
| 201 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Species suited to tropical or subtropical climate(s) 0-Low] "This species is not tropical, but grows at temperate elevations–between 9,000 and 10,000 ft (2,700-3,000 m) in Peru. It is adapted to fairly dry locations." [Would probably do well in higher elevations of the Hawaiian archipelago and other high elevation islands of the Pacific] |
| 202 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Quality of climate match data 2-High] |
| 203 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Broad climate suitability (environmental versatility)? Yes. Elevation range exceeds 1000 m] "Distribution. Andean Colombia southward to N Chile, in wet montane and cloud forest, usually between 1500 and 3000 m altitude, rarely as low as 700 m." |
| 204 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Native or naturalized in regions with tropical or subtropical climates? High elevation tropics] "This species is not tropical, but grows at temperate elevations–between 9,000 and 10,000 ft (2,700-3,000 m) in Peru. It is adapted to fairly dry locations." |
| 204 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Native or naturalized in regions with tropical or subtropical climates? Yes. High elevations of the tropics and subtropics] "Lucuma is a sub-tropical tree native to the inter-Andean valleys where annual rainfall ranges from 1000 to 1800 mm and mean temperatures range from $20^0$ C to $22^0$ C. Lucuma is best adapted to high altitudes (2700-3000 m) in areas with no freezing temperatures." [Would likely do well at mid to upper elevations of higher tropical islands such as Hawaii, Maui, Kauai and Tahiti, among others] |
| 205 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Does the species have a history of repeated introductions outside its natural range? No] "There have been several attempts to grow the tree in southern Florida. It has not lived long. One specimen actually bore fruit at the Fairchild Tropical Garden, developed galls, and eventually succumbed. The lucmo grows well in parts of Mexico and Hawaii but the fruit is not widely favored." |
| 205 | 2001. Hanelt, P. (ed.). Mansfeld's Encyclopedia of Agricultural and Horticultural Crops (except Ornamentals), Volume 1. Springer-Verlag, Berlin, Heidelberg, New York | [Does the species have a history of repeated introductions outside its natural range? No] "Andean Colombia to N. Chile. Cultivated there but also in Mexico and Hawaii as a fruit tree." |
| 301 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Naturalized beyond native range? No evidence] |
| 302 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Garden/amenity/disturbance weed? No evidence] |
| 303 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Agricultural/forestry/horticultural weed? No evidence] |
| 304 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Environmental weed? No evidence] |

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| 305 | 1976. Morton, J.F.. Pestiferous spread of many ornamental and fruit species in South Florida. Proceedings of the Florida State Horticultural Society. 89: 348-353. | [Congeneric weed? Possibly. P. campechiana controlled in Florida, but rated as Low Risk by HPWRA] "Abstract. The massive invasion of large tracts of South Florida by Melaleuca quinquenervia and Casuarina equisetifolia from Australia and Schinus terebinthifolius from Brazil is an environmental problem now receiving serious attention. There are dozens of other introduced ornamental plants and fruit trees which have been multiplying spontaneously in our area for many years or have recently become conspicuous as weeds on private and public properties—some because of seed distribution by exotic birds new to our fauna. Outstanding examples are Cestrum diurnum, Bischofia javanica, Washingtonia robusta, Ptychosperma elegans, Aaurraya paniculata, Eriobotrya japonica, Pouteria campechiana and Pithecellobium dulce. We should try to discourage the planting of some undesirable species and warn of the need to control the spread of others, in order to reduce the maintenance load of cultivated grounds and the threat to undeveloped areas which are being overrun by vigorous alien vegetation." |
| 305 | 2001. Langeland, K.A./Stocker, R.K.. Control of Non-native Plants in Natural Areas of Florida. Institute of Food & Agricultural Sciences, University of Florida, Gainesville, FL http://mrec.ifas.ufl.edu/ldspmgt/Ldsp%20Turf%20Mgmt/PDFfiles/WG20900.pdf | [Congeneric weed? Possibly. P. campechiana controlled in Florida, but rated as Low Risk by HPWRA] "Pouteria campechiana...Treatment: Hand pull seedlings; basal bark application of 10% Garlon 4…Comments: Small to medium tree; yellow, edible fruit; prolific invader of hammocks but local in distribution; fruit eaten by raccoons and opossums." |
| 401 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Produces spines, thorns or burrs? No] "This attractive tree ranges from 25 to 50 ft (8 15 m) in height, has a dense, rounded crown, velvety hairs on its young branchlets, and copious milky latex. The evergreen leaves, clustered at the tips of small branches, are obovate, oval or elliptic, blunt at the apex, pointed at the base, 5 to 10 in (12.5-25 cm) long; thin or slightly leathery; dark-green on the upper surface, pale and sometimes brown hairy on the underside." |
| 402 | 2012. Morikawa, C.I.O./Miyaura, R./Tapia Y Figueroa, M.D.L./Rengifo Salgado, E.L./Fujii, Y.. Screening of 170 Peruvian plant species for allelopathic activity by using the Sandwich Method. Weed Biology and Management. 12: 1–11. | [Allelopathic? Potentially. Greenhouse trials show inhibitory effects for Pouteria lucuma] "Table 2. Allelopathic activity of the 176 samples (170 species) of Peruvian plants by the Sandwich Method" |
| 403 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Parasitic? No] "Tree to 20 m high and 30 cm diam. with dark greyish-brown fissured bark and milky white exudate." [Sapotaceae] |
| 404 | 2012. WRA Specialist. Personal Communication. | [Unpalatable to grazing animals? Unknown] |
| 405 | 2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL http://www.crcnetbase.com/isbn/9781420062533 | [Toxic to animals? No evidence] |
| 406 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Host for recognized pests and pathogens?] "The major insect pests of lucuma include serpentine fruit fly (Anastrepha serpentina), which attacks the fruit, the hairy worm (Clutomulus spp.), whitefly (Aleurothrixus spp.) and hemispherical scale (Saissetia coffeae), which attack the leaves (Villachica et al., 1996)." … "The major fungal disease is caused by Oidium spp. Which attacks the leaves and is controlled with fungicide." |
| 406 | 2012. Chiri, A.. In the Fullerton Arboretum - Lucuma – Pouteria lucuma – Sapotaceae. http://www.ocfruit.com/files/LUCUMA.htm [Accessed 08 Nov 2012] | [Host for recognized pests and pathogens? No evidence] "No serious diseases are known to be of sufficient importance to require control measures. Trees are very resistant to pests and diseases in the adult stage. Snails and grasshoppers are "nippers" of the leaves in young trees, but as they grow older, the rich latex will discourage them." |
| 407 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Causes allergies or is otherwise toxic to humans? No evidence] "The fruit is eaten raw, out-of-hand, when fully ripe but Costa Ricans find that, though the flavor is appealing at first, one soon finds it repulsive because of the peculiar aftertaste. The lucmo has been stewed in sirup, used as pie-filling, and made into preserves. Currently, some fruits are being shipped from Chile to England where they are being used in making ice cream. A dehydrated, powdered product is being produced by a tomato cannery in Peru." |
| 407 | 2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL http://www.crcnetbase.com/isbn/9781420062533 | [Causes allergies or is otherwise toxic to humans? No evidence] |
| 408 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Creates a fire hazard in natural ecosystems? No evidence] "Andean Colombia southward to N Chile, in wet montane and cloud forest, usually between 1500 and 3000 m altitude, rarely as low as 700 m." [Unlikely given habitat] |

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| 409 | 2012. Chiri, A.. In the Fullerton Arboretum - Lucuma – Pouteria lucuma – Sapotaceae. http://www.ocfruit.com/files/LUCUMA.htm [Accessed 08 Nov 2012] | [Is a shade tolerant plant at some stage of its life cycle? Possibly No] "Mature trees withstand temperatures between 40°F. - 100°F., and prefer open yard sun. " |
| 409 | 2012. Dave's Gardern. PlantFiles: Lucmo, Lucuma - Pouteria lucuma. http://davesgarden.com/guides/pf/go/102876/ [Accessed 08 Nov 2012] | [Is a shade tolerant plant at some stage of its life cycle?] "Sun Exposure: Full Sun Sun to Partial Shade" |
| 410 | 2012. Chiri, A.. In the Fullerton Arboretum - Lucuma – Pouteria lucuma – Sapotaceae. http://www.ocfruit.com/files/LUCUMA.htm [Accessed 08 Nov 2012] | [Tolerates a wide range of soil conditions? Yes] "The tree will grow in a wide range of soils and will grow well in areas subjected to occasional dry-ness. It tolerates seasonal rains well, but not water logging. The tree best adapts to sandy or rocky sites and needs well drained soils. It tolerates moderate salinity, however it thrives in soils high in organic matter." |
| 411 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Climbing or smothering growth habit? No] "Tree to 20 m high and 30 cm diam. with dark greyish-brown fissured bark and milky white exudate." |
| 412 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Forms dense thickets? No evidence] "Andean Colombia southward to N Chile, in wet montane and cloud forest, usually between 1500 and 3000 m altitude, rarely as low as 700 m." |
| 501 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Aquatic? No] Terrestrial Tree |
| 502 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Grass? No] Sapotaceae |
| 503 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Nitrogen fixing woody plant? No] Sapotaceae |
| 504 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Tree; young shoots puberulous to shortly pubescent, becoming glabrous, pale grey-brown, slightly roughened and scaling, lenticellate or not. Leaves clustered, spirally arranged, 6-30 x 3.1- 15 cm, broadly oblanceolate to elliptic, apex usually obtuse, rounded or slightly emarginate, less frequently acute, base narrowly attenuate to acute, chartaceoust o thinly coriaceous, glabrous above, finely puberulous (hairs crisped or appressed) below or more often glabrous; venation eucamptodromous to partly brochidodromous, midrib flat or slightly raised on the upper surface, marginal vein obscure or absent, secondary veins 9- 15 pairs, parallel, straight or slightly arcuate; intersecondaries absent, tertiaries oblique; quaternary reticulum usually present. Petiole 1.3-2 cm long, not channelled, shortly pubescent." |
| 601 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Evidence of substantial reproductive failure in native habitat? No evidence] |
| 602 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Produces viable seed? Yes] "Trees may be propagated by seed and superior cultivars by grafting and marcottage." |
| 603 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Hybridizes naturally? Unknown] No evidence |
| 604 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Self-compatible or apomictic? Yes] "Lucuma trees may bloom and fruit all year and appear to be self-fertile and insect pollinated." |
| 605 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Requires specialist pollinators? No] "The simpler tubular flowers with included stamens, common throughout Pouteria, are probably visited by small bees and other insects," … "Flowers bisexual. Sepals five, 0.7-1 cm long, elliptic, ovate or suborbicular, apex acute to rounded, outside puberulous, inside appressed puberulousn eart he apex, ciliate. Corolla cylindrical, 1-1.8 cm long, tube 0.65-1 cm long, lobes five, 4-8 mm long, oblong, apex rounded, papillose, otherwise glabrous or occasionally with some appressed hairs on the outside of the lobes. Stamens five, fixed at the top of the corolla tube; filaments 1.5 - 2 mm long, geniculate at apex, glabrous; anthers 2.5-3 mm long, oblong-lanceolate, glabrous. Staminodes five 3-4.5 mm long, narrowly subulate, papillose. Disk absent. Ovary oblong ovoid, sometimes truncate at apex, five(-six)- locular, pubescent; style 0.8-1.5 cm long after anthesis, exserted or equalling the corolla, glabrous; style-head simple." |
| 605 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Requires specialist pollinators? No evidence] "Lucuma trees may bloom and fruit all year and appear to be self-fertile and insect pollinated." |
| 606 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Reproduction by vegetative fragmentation? No evidence] "Trees may be propagated by seed and superior cultivars by grafting and marcottage." |

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| 607 | 1992. Jordan, M./Oyanedel, E.. Regeneration of Pouteria lucuma (Sapotaceae) plants in vitro. Plant Cell, Tissue and Organ Culture. 31: 249-252. | [Minimum generative time (years)? 15+] "Due to its long juvenile period (15 years), propagation by grafting is used to bring plants into production within 4-5 years (Reyes 1989)." |
| 607 | 2012. Chiri, A.. In the Fullerton Arboretum - Lucuma – Pouteria lucuma – Sapotaceae. http://www.ocfruit.com/files/LUCUMA.htm [Accessed 08 Nov 2012] | [Minimum generative time (years)? 6+] "Although growth is slow, the lúcuma is reputed to start producing in 6 to 10 years." |
| 701 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough-skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long, subglobose to ellipsoid (when solitary) or shaped like the segment of an orange (when several)," [Unlikely as fruits and seeds are relatively large and lack means of external attachment] |
| 702 | 2001. Hanelt, P. (ed.). Mansfeld's Encyclopedia of Agricultural and Horticultural Crops (except Ornamentals), Volume 1. Springer-Verlag, Berlin, Heidelberg, New York | [Propagules dispersed intentionally by people? Yes] "Andean Colombia to N. Chile. Cultivated there but also in Mexico and Hawaii as a fruit tree." |
| 703 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules likely to disperse as a produce contaminant? No] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough-skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long, subglobose to ellipsoid (when solitary) or shaped like the segment of an orange (when several)," [Unlikely as fruits and seeds are relatively large and would not accidentally become a contaminant of other produce] |
| 704 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules adapted to wind dispersal? No] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough-skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long, subglobose to ellipsoid (when solitary) or shaped like the segment of an orange (when several), testa hard, smooth, shining, 0.5-0.75 mm thick" |
| 705 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules water dispersed? No evidence[ "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long, subglobose to ellipsoid (when solitary) or shaped like the segment of an orange (when several), testa hard, smooth, shining, 0.5-0.75 mm thick" [Fruits and seeds relatively large. Distribution does not suggest water dispersal] |
| 706 | 1987. Morton, J.F.. Fruits of warm climates - Lucmo (Pouteria lucuma). J.F. Morton, Miami, FL http://www.hort.purdue.edu/newcrop/morton/lucmo.html [Accessed 08 Nov 2012] | [Propagules bird dispersed? No. Fruit too large for frugivorous birds of the Hawaiian Islands] "The fruit is oblate, ovate or elliptic, pointed or depressed at the apex; 3 to 4 in (7.5 10 cm) long, with thin, delicate skin, brownish green more or less overlaid with russet, and bright yellow, firm, dry, mealy, very sweet pulp, permeated with latex until almost overripe. There may be 1 to 5, usually 2, rounded or broad-oval, dark-brown, glossy seeds with a whitish hilum on one flattish side." … "The tree blooms and fruits all year. Mature fruits fall to the ground but they are not edible until they have been kept on hand for several days. Peruvian Indians bury them in stored grain, cured hay, chaff, dry leaves or other materials until they become soft." |
| 707 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules dispersed by other animals (externally)? Possibly] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long" [Possible that rodents may transport fruit externally to consume pulp or seeds away from parent tree] |
| 708 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Propagules survive passage through the gut? Presumably Yes] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough skinned and densely lenticellate, glabrous." [Feral pigs could presumably consume the fruit and disperse the seeds internally] |
| 708 | 2004. Link, A./Stevenson, P.R.. Fruit dispersal syndromes in animal disseminated plants at Tinigua National Park, Colombia. Revista Chilena de Historia Natural. 77: 319-334. | [Propagules survive passage through the gut? Yes] "Appendix 1 Animal dispersed plant species in Tinigua National Park, that were included in the analyses of dispersal syndromes. The columns show the morphological traits for each plant species. Fruit size refers to the largest dimension of the fruit (width or length)" [Includes P. lucuma] |
| 801 | 1990. Pennington, T.D.. Sapotaceae. Flora Neotropica. 52: 1-770. | [Prolific seed production (>1000/m2)? No] "Fruit 6-12 cm long, globose, apex obtuse or rounded, base rounded or truncate, rough-skinned and densely lenticellate, glabrous. Seeds one-several, 1.8-3.5 cm long, subglobose to ellipsoid (when solitary) or shaped like the segment of an orange (when several)," … "Tree to 20 m high and 30 cm diam. with dark greyish-brown fissured bark and milky white exudate." [Unlikely as fruits and seeds are relatively large] |

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| 802 | 2008. Janick, J./Paull, R.E.. The Encyclopedia of Fruit & Nuts. Cabi Publishing, Wallingford, UK | [Evidence that a persistent propagule bank is formed (>1 yr)? No] "Seeds are short lived and should be planted within a few days after removal from the fruit." |
| 803 | 2012. WRA Specialist. Personal Communication. | [Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species |
| 804 | 1999. Pinard, M.A./Putz, F.E,/Licona, J.C.. Tree mortality and vine proliferation following a wildfire in a subhumid tropical forest in eastern Bolivia. Forest Ecology and Management. 116(1-3): 247-252. | [Tolerates, or benefits from, mutilation, cultivation, or fire? Yes. Survives fire] "In 1994, 1x1,000,000 ha of subhumid forest in eastern Bolivia burned in an uncontrolled wildfire; the objective of this study was to measure tree and liana mortality a year after this fire." … "For the five most abundant species, incidence of mortality varied among species … mortality ranged from 19% in Pouteria lucuma…" |
| 805 | 2012. WRA Specialist. Personal Communication. | [Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown] |

**Summary of Risk Traits**

**High Risk / Undesirable Traits**

- Native to high elevation tropical climates
- Tolerates many soil conditions (and potentially able to exploit many different habitat types)
- Self-fertile
- Seeds dispersed by humans and frugivorous mammals
- Tolerates and recovers from fires

**Low Risk / Desirable Traits**

- No evidence of naturalization or invasiveness reported elsewhere
- Unarmed (no spines, thorns or burrs)
- Non-toxic
- Edible fruit
- Long time to reproductive maturity (6+ years)
- Large fruit & seeds unlikely to be accidentally dispersed
- Seeds will not persist in the soil