

**Taxon:** *Sicana odorifera* (Vell.) Naudin

**Family:** Cucurbitaceae

**Common Name(s):** casabanana  
cassabanana  
musk-cucumber  
sikana

**Synonym(s):** Cucurbita evodicarpa Hassk.  
Cucurbita odorifera Vell.

**Assessor:** Chuck Chimera

**Status:** Assessor Approved

**End Date:** 6 Apr 2016

**WRA Score:** 2.0

**Designation:** EVALUATE

**Rating:** Evaluate

**Keywords:** Domesticated Vine, Naturalized, Smothering, Edible Fruit, Shade-Tolerant

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	y
102	Has the species become naturalized where grown?	y=1, n=-1	y
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	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
404	Unpalatable to grazing animals		
405	Toxic to animals		
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans		
408	Creates a fire hazard in natural ecosystems		

Qsn #	Question	Answer Option	Answer
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	y
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	y
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		
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	n
705	Propagules water dispersed	y=1, n=-1	y
706	Propagules bird dispersed		
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
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
	Morton, J. 1987. Cassabanana. p. 444–445. In: Fruits of Warm Climates. Julia F. Morton, Miami, FL	"The cassabanana is believed native to Brazil but it has been spread throughout tropical America. Historians have evidence that it was cultivated in Ecuador in pre-Hispanic times. It was first mentioned by European writers in 1658 as cultivated and popular in Peru."
	Nee, M. (1990). The Domestication of Cucurbita (Cucurbitaceae). Economic Botany, 44(3), 56–68	"The five domesticated species of Cucurbita have arisen from the mesophytic group; and a sixth, <i>C. ecuadorensis</i> Cutler & Whitaker, may prove to have been partially domesticated. In contrast, among the ca. 335 remaining species of Cucurbitaceae in the New World (Jeffrey 1978) only chayote, <i>Sechium edule</i> (Jacq.) Sw.; achojcha, <i>Cyclanthera pedata</i> (L.) Schrad.; cassabanana, <i>Sicana odorifera</i> ; and bottle gourd, <i>Lagenaria siceraria</i> , were domesticated."

102	Has the species become naturalized where grown?	y
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"The single species is cultivated to some extent in Panama and is persistent after cultivation or naturalized in ruderal areas."
	Guézou, A., Trueman, M., Buddenhagen, C. E., Chamorro, S., Guerrero, A. M., Pozo, P., & Atkinson, R. (2010). An extensive alien plant inventory from the inhabited areas of Galapagos. PLoS One, 5(4), e10276	<i>Sicana odorifera</i> - escaped (originally introduced for cultivation, naturalized)

103	Does the species have weedy races?	n
	Source(s)	Notes
	Liogier, H.A. 1997. Descriptive Flora of Puerto Rico and Adjacent Islands: Spermatophyta, Volume V. Acanthaceae to Compositae. La Editorial, UPR, San Juan, Puerto Rico	"Cultivated and probably escaped in P.R.; native of South America. grown for its fragrant fruits."
	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
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"A native of South America, <i>Sicana odorifera</i> is cultivated widely in the Neotropics for its fragrant fruit."
	Janick, J. & Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"Casabanana, <i>Sicana odorifera</i> (Vell.) Naud., is not known in the wild but undoubtedly is native to tropical lowland South America, probably Peru, Brazil and/or Bolivia."

Qsn #	Question	Answer
202	Quality of climate match data	High
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	

203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Janick, J.& Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"Casabanana needs a long, sultry growing season for complete ripening of its fruit . Attempts at growing casabanana outside of the tropical regions have failed. The summers of mid-latitude regions are too short and, like other tropical cucurbits. <i>Sicana</i> is a short-day plant; fruit production is inhibited by the long days of spring and summer in mid - latitude regions."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"A native of South America, <i>Sicana odorifera</i> is cultivated widely in the Neotropics for its fragrant fruits."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"A native of South America, <i>Sicana odorifera</i> is cultivated widely in the Neotropics for its fragrant fruits."

301	Naturalized beyond native range	y
	Source(s)	Notes
	Bungartz, F., Herrera, H.W., Jaramillo, P., Tirado, N., Jiménez Uzcátegui, G., Ruiz, D., Guézou, A. & Ziemmeck, F. (eds.). 2009. Charles Darwin Foundation Galapagos Species Checklist. Charles Darwin Foundation, Puerto Ayora, Galapagos: <a href="http://www.darwinfoundation.org/datazone/checklists/">http://www.darwinfoundation.org/datazone/checklists/</a> . [Accessed 4 Apr 2016]	" <i>Sicana odorifera</i> ..Taxon introduced for agricultural or domestic use; naturalized in the wild."
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"The single species is cultivated to some extent in Panama and is persistent after cultivation or naturalized in ruderal areas."
	Guézou, A., Trueman, M., Buddenhagen, C. E., Chamorro, S., Guerrero, A. M., Pozo, P., & Atkinson, R. (2010). An extensive alien plant inventory from the inhabited areas of Galapagos. PLoS One, 5(4), e10276	<i>Sicana odorifera</i> - escaped (originally introduced for cultivation, naturalized

Qsn #	Question	Answer
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
	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	No evidence

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[No evidence] "Vines; stems puberulent when young, glabrescent. Leaves suborbicular, 10- 24 cm long, nearly or equally as wide as long, shallowly 3- to 5-lobate, the lobes acute, cordate at the base, chartaceous, the margin undulate denticulate, both the surfaces with white pustular dots, puberulent on the veins, at least near the base; petioles slender, 4-15 cm long."

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

Qsn #	Question	Answer
403	Parasitic	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"Vines; stems puberulent when young, glabrescent." [Cucurbitaceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	Notes
	Morton, J. 1987. Cassabanana. p. 444–445. In: Fruits of Warm Climates. Julia F. Morton, Miami, FL	[Fruit palatable to humans. Palatability of foliage to animals unknown] "The ripe flesh, sliced thin, is eaten raw, especially in the summer when it is appreciated as cooling and refreshing. However, it is mainly used in the kitchen for making jam or other preserves. The immature fruit is cooked as a vegetable or in soup and stews."

405	Toxic to animals	
	Source(s)	Notes
	Dave's Garden. 2016. Cassabanana - <i>Sicana odorifera</i> . <a href="http://davesgarden.com/guides/pf/go/2775/">http://davesgarden.com/guides/pf/go/2775/</a> . [Accessed 6 Apr 2016]	"Danger: Seed is poisonous if ingested Parts of plant are poisonous if ingested" [Peer-reviewed literature does not corroborate these reports of toxicity]
	Bussmann, R. W., Malca, G., Glenn, A., Sharon, D., Nilsen, B., Parris, B., Dubose, D., Ruiz, D., Saleda, J., Martinez, M., Carillo, L., Walker, K., Kuhlman, A., & Townesmith, A. (2011). Toxicity of medicinal plants used in traditional medicine in Northern Peru. <i>Journal of Ethnopharmacology</i> , 137(1), 121-140	"Table 1 Toxicity of medicinal plants used in Northern Peru." [LC50 (µg/ml) aqueous = >10,000]
	Quattrocchi, U. 2012. <i>CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology</i> . CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. 2008. <i>International poisonous plants checklist: an evidence-based reference</i> . CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	Montano, H. G., Brioso, P. S., & Pimentel, J. P. (2007). List of phytoplasma hosts in Brazil. <i>Bulletin of Insectology</i> , 60 (2), 129-130	"In Brazil, phytoplasma diseases have been described in association with several plant species, distributed among 28 botanical families, comprising wild and economically important species. Insect vectors involved in phytoplasmas transmission have not been identified yet, except for <i>Dalbulus maidis</i> , the vector of the phytoplasma associated with maize bushy stunt disease."

Qsn #	Question	Answer
	Montano, H. G., Brioso, P. S., Pereira, R. C., & Pimentel, J. P. (2007). <i>Sicana odorifera</i> (Cucurbitaceae) a new phytoplasma host. <i>Bulletin of Insectology</i> , 60(2), 287-288	" <i>Sicana odorifera</i> also known as cassabanana, sikana or musk cucumber, is naturally grown from Mexico to Brazil and the west Indies. Fruits are edible, the pulp and the seeds have a medicinal use, and the whole plant is used as an ornamental. In the State of Rio de Janeiro, Brazil, naturally diseased sikana plants were observed, for the first time, with witches' broom growths and other symptoms characteristic of plant diseases caused by phytoplasmas. The present work aimed at detecting and classifying the phytoplasma that may be the causal agent of the disease. Phytoplasma was discovered in sikana affected by witches' broom, on the basis of phytoplasma-specific DNA amplification in PCR. The phytoplasma found in sikana belongs to group 16SrIII. The disease was named sikana witches' broom."
	Conover, R. A. (1964). Mild mosaic and faint mottle ringspot, two papaya virus diseases of minor importance in Florida. <i>Proceedings of the Florida State Horticultural Society</i> , 77, 444-448	[ <i>S. odorifera</i> not a host] "Three viruses cause diseases of papaya in Florida. A previous paper dealt with distortion ringspot (DR), the most severe of the three virus diseases" ... "Hosts of MMV, determined by mechanical inoculation, were found only in the Caricaceae and Cucurbitaceae." ... "Cucumber, muskmelon, summer squash, watermelon, <i>Carica querdifolia</i> , <i>Jacaratia</i> spp., <i>Phaseolus vulgaris</i> , <i>Vigna sinensis</i> , <i>Nicotiana tabacum</i> , <i>N. glutinosa</i> , <i>Momordica charantia</i> , <i>Sicana odorifera</i> and <i>Passiflora edulis</i> f. <i>flavacarpa</i> , were not susceptible and MMV was not recovered from them." ... "Hosts of FMRV, determined by mechanical inoculation of the virus, were found only in the Caricaceae and Cucurbitaceae." ... "The following species were not susceptible and the virus was not recovered from them: <i>Carica canadamaricensis</i> , <i>C. quercifolia</i> , <i>Luffa cylindrical</i> <i>Momordica charantia</i> , <i>Sicana odorifera</i> ,..."

407	Causes allergies or is otherwise toxic to humans	
	Source(s)	Notes
	Dave's Garden. 2016. Cassabanana - <i>Sicana odorifera</i> . <a href="http://davesgarden.com/guides/pf/go/2775/">http://davesgarden.com/guides/pf/go/2775/</a> . [Accessed 6 Apr 2016]	"Danger: Seed is poisonous if ingested Parts of plant are poisonous if ingested" [Peer-reviewed literature does not corroborate these reports of toxicity]
	Bussmann, R. W., Malca, G., Glenn, A., Sharon, D., Nilsen, B., Parris, B., Dubose, D., Ruiz, D., Saleda, J., Martinez, M., Carillo, L., Walker, K., Kuhlman, A., & Townesmith, A. (2011). Toxicity of medicinal plants used in traditional medicine in Northern Peru. <i>Journal of Ethnopharmacology</i> , 137(1), 121-140	"Table 1 Toxicity of medicinal plants used in Northern Peru." [LC50 (µg/ml) aqueous = >10,000]
	Quattrocchi, U. 2012. <i>CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology</i> . CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. 2008. <i>International poisonous plants checklist: an evidence-based reference</i> . CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2016. Personal Communication	Unknown. May act as a fuel ladder into trees if growing in fire prone areas.

409	Is a shade tolerant plant at some stage of its life cycle	y
	<b>Source(s)</b>	<b>Notes</b>
	Dave's Garden. 2016. Cassabanana - <i>Sicana odorifera</i> . <a href="http://davesgarden.com/guides/pf/go/2775/">http://davesgarden.com/guides/pf/go/2775/</a> . [Accessed 6 Apr 2016]	"Sun Exposure: Sun to Partial Shade"
	De Clerck, F. A., & Negreros-Castillo, P. (2000). Plant species of traditional Mayan homegardens of Mexico as analogs for multistrata agroforests. <i>Agroforestry Systems</i> , 48(3), 303-317	[ <i>Sicana odorifera</i> occurs under 93% canopy closure, implying shade tolerance] "Plants were considered shade tolerant if they grew below a canopy closure of 90% or more." ... "Table 1. Plants of the Zona Maya of Quintana Roo, Mexico listed alphabetically by specific epithet, common name, lifeform, origin, soil type in which they were found, the maximal canopy closure under which they were found, the frequency with which they were found in the homegardens and their various uses." [ <i>Sicana odorifera</i> - Canopy closure (%) = 93]

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	<b>Source(s)</b>	<b>Notes</b>
	Driftwood Gardens - This and That Warehouse. 2016. <i>Sicana odorifera</i> . <a href="http://www.thisandthatwarehouse.com/sicanaodorifera.htm">http://www.thisandthatwarehouse.com/sicanaodorifera.htm</a> . [Accessed 6 Apr 2016]	"not fussy about soil type."
	Dave's Garden. 2016. Cassabanana - <i>Sicana odorifera</i> . <a href="http://davesgarden.com/guides/pf/go/2775/">http://davesgarden.com/guides/pf/go/2775/</a> . [Accessed 6 Apr 2016]	"Soil pH requirements: 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline)" "Prefers sandy soil generously enriched with compost. "

411	Climbing or smothering growth habit	y
	<b>Source(s)</b>	<b>Notes</b>
	Morton, J. 1987. Cassabanana. p. 444–445. In: <i>Fruits of Warm Climates</i> . Julia F. Morton, Miami, FL	"Brazilians train the vine to grow over arbors or they may plant it close to a tree. However, if it is allowed to climb too high up the tree there is the risk that it may smother and kill it."
	Janick, J. & Paull, R.E. 2008. <i>The Encyclopedia of Fruit &amp; Nuts</i> . CABI Publishing, Wallingford, UK	"Casabanana plants are large, heavy, perennial vines having herbaceous, fibrous stems that can attain a length of 15 m." ... "If allowed to grow on bushes and trees, the rampant, strong, grasping casabanana plant can seriously weaken them."



Qsn #	Question	Answer
412	Forms dense thickets	n
	Source(s)	Notes
	Janick, J. & Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	[Climbing, smothering habit] "Casabanana plants are large, heavy, perennial vines having herbaceous, fibrous stems that can attain a length of 15 m." ... "If allowed to grow on bushes and trees, the rampant, strong, grasping casabanana plant can seriously weaken them."

501	Aquatic	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[Terrestrial] "Vines; stems puberulent when young, glabrescent"

502	Grass	n
	Source(s)	Notes
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	Cucurbitaceae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Monoecious, annual or perennial, herbaceous climber, to 15 m long." [Cucurbitaceae]

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"Vines; stems puberulent when young, glabrescent"

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"A native of South America, <i>Sicana odorifera</i> is cultivated widely in the Neotropics for its fragrant fruits."

602	Produces viable seed	y
	Source(s)	Notes

Qsn #	Question	Answer
	Janick, J. & Paull, R.E. 2008. The Encyclopedia of Fruit & Nuts. CABI Publishing, Wallingford, UK	"Casabanana is propagated from seeds and from cuttings and is best grown on strong trellises."
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"Fruits yellow, red, purplish, or dark green, oblong ovoid or cylindrical, 30-60 cm long, glabrous, very fragrant; seeds oblong ovate, compressed, marginate, ca. 1 cm long and nearly as wide."

603	Hybridizes naturally	
	Source(s)	Notes
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	[Unknown] "About four species in the Caribbean Islands and Central America (Lira Saade 1991); in rainforest and secondary scrub; one species, <i>S. odorifera</i> Naudin, widely cultivated as a vegetable."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	[Unknown] "Monoecious ..." ... "Flowers solitary, medium-sized to large, showy; receptacle tube obconical or campanulate; sepals triangular-lanceolate, reflexed or less often ascendent; corolla campanulate, divided in the upper ¼; petals yellow; stamens inserted close to the mouth of the tube; filaments short, distinct or connate; two anthers 2-thecous, one 1-thecous; thecae duplicate; pollen large (polar and equatorial axes 79–98(120?) mm), (3?)6–8-pantoporate, echinate (Marticorena 1963; Ayala-Nieto et al. 1988); ovary elliptical; placentae 3; ovules many, horizontal; style short; stigmas 3; staminodes 0, 3 or 5."

605	Requires specialist pollinators	n
	Source(s)	Notes
	Ashworth, S. 2002. Seed to Seed: Seed Saving and Growing Techniques for the Vegetable Gardener. Seed Savers Exchange, Decorah, Iowa	"All members of the Cucurbitaceae family rely on insects for pollination. Each plants produce both male and female flowers. Insects, especially honeybees, randomly move pollen from flower to flower and from plant to plant."
	asklepios-seeds-com. 2016. <i>Sicana odorifera</i> seeds, Cassabanana. <a href="http://www.asklepios-seeds.de/gb/sicana-odorifera-seeds.html">http://www.asklepios-seeds.de/gb/sicana-odorifera-seeds.html</a> . [Accessed 5 Apr 2016]	"It smells like melon and attracts butterflies, bees and birds for pollination."
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"Staminate flowers solitary, axillary; hypanthium campanulate, 6-8 mm long, ashy tomentose; calyx lobes 9-12 mm long, broadly lanceolate, ashy tomentose, reflexed; corolla almost fleshy, the lobes ca. 2 cm long, the outer surface tomentose, the inner surface papillate, 5-nerved; stamens glabrous, the filaments 3-5 mm long, ? as long as the flexuous anthers; peduncle 2-5 cm long. Pistillate flowers with the perianth as in the staminate flowers; ovary oblong ovoid, glabrate, 5-6 cm long, the style ca. 1 cm long, the stigma capitate, 8-10 mm wide; staminodes 4-5 mm long."

Qsn #	Question	Answer
606	<b>Reproduction by vegetative fragmentation</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Morton, J. 1987. Cassabanana. p. 444–445. In: Fruits of Warm Climates. Julia F. Morton, Miami, FL	"Fenzi says that the cassabanana is grown from seeds or cuttings."
607	<b>Minimum generative time (years)</b>	
	<b>Source(s)</b>	<b>Notes</b>
	Morton, J. 1987. Cassabanana. p. 444–445. In: Fruits of Warm Climates. Julia F. Morton, Miami, FL	[Fast-growing perennial. Probably fruits within 1-2 years] "The vine is perennial, herbaceous, fast growing, heavy, requiring a strong trellis; climbing trees to 50 ft (15 m) or more by means of 4-parted tendrils equipped with adhesive discs that can adhere tightly to the smoothest surface."
701	<b>Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[No evidence. Large fruit & seeds lack means of external attachment] "Fruits yellow, red, purplish, or dark green, oblong ovoid or cylindrical, 30-60 cm long, glabrous, very fragrant; seeds oblong ovate, compressed, marginate, ca. 1 cm long and nearly as wide."
702	<b>Propagules dispersed intentionally by people</b>	y
	<b>Source(s)</b>	<b>Notes</b>
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	"A native of South America, <i>Sicana odorifera</i> is cultivated widely in the Neotropics for its fragrant fruits."
703	<b>Propagules likely to disperse as a produce contaminant</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[No evidence. Large fruit & seeds unlikely to become a contaminant of produce] "Fruits yellow, red, purplish, or dark green, oblong ovoid or cylindrical, 30-60 cm long, glabrous, very fragrant; seeds oblong ovate, compressed, marginate, ca. 1 cm long and nearly as wide."
704	<b>Propagules adapted to wind dispersal</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[No adaptations for wind dispersal] "Fruits yellow, red, purplish, or dark green, oblong ovoid or cylindrical, 30-60 cm long, glabrous, very fragrant; seeds oblong ovate, compressed, marginate, ca. 1 cm long and nearly as wide."
705	<b>Propagules water dispersed</b>	y

Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Other genera (Hodgsonia, Fevillea, Sicana) evolved large fleshy buoyant fruits apparently adapted to water dispersal."

706	Propagules bird dispersed	
	<b>Source(s)</b>	<b>Notes</b>
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Possibly. No evidence, but fleshy-fruited, so might be consumed & dispersed by birds] "Berry pendulous, cylindrical or ellipsoid, 30-50 cm long and ca. 10 cm in diameter, yellowish brown or mulberry-colored; seeds, numerous, asymmetrically ovate, compressed, with the margin darker, 13.5-15 mm long."

707	Propagules dispersed by other animals (externally)	n
	<b>Source(s)</b>	<b>Notes</b>
	Woodson, R. E., Schery, R. W., & Wunderlin, R. P.. (1978). Flora of Panama. Part IX. Family 182. Cucurbitaceae. Annals of the Missouri Botanical Garden, 65(1), 285–366	[No evidence. Large fruits & seeds lack means of external attachment] "Fruits yellow, red, purplish, or dark green, oblong ovoid or cylindric, 30-60 cm long, glabrous, very fragrant; seeds oblong ovate, compressed, marginate, ca. 1 cm long and nearly as wide."

708	Propagules survive passage through the gut	y
	<b>Source(s)</b>	<b>Notes</b>
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Presumably Yes] "Berry pendulous, cylindrical or ellipsoid, 30-50 cm long and ca. 10 cm in diameter, yellowish brown or mulberry-colored; seeds, numerous, asymmetrically ovate, compressed, with the margin darker, 13.5-15 mm long."

801	Prolific seed production (>1000/m2)	
	<b>Source(s)</b>	<b>Notes</b>
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Unknown. Seeds numerous] "Berry pendulous, cylindrical or ellipsoid, 30-50 cm long and ca. 10 cm in diameter, yellowish brown or mulberry-colored; seeds, numerous, asymmetrically ovate, compressed, with the margin darker, 13.5-15 mm long."

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2016. Personal Communication	Unknown

Qsn #	Question	Answer
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. 2016. 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
	WRA Specialist. 2016. Personal Communication	Unknown

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

- Elevation range exceeds 1000 m, demonstrating environmental versatility
- Thrives in tropical climates
- Possibly naturalizing on Oahu, Hawaiian Islands (confirmation needed)
- Latex highly caustic to the skin, possibly poisonous if ingested
- Tolerates many soil types
- Seeds dispersed by birds & intentionally by people
- Seeds able to be stored for extended periods; May form a persistent seed bank
- Able to coppice & resprout after cutting

## Low Risk Traits

- No reports of invasiveness or naturalization (with the possible exception of Oahu()), but no evidence of widespread introduction outside native range
- Unarmed (no spines, thorns or burrs)
- Provides fodder for livestock (palatable despite reports of toxicity)
- Ornamental
- Not reported to spread vegetatively
- Limited ecological information makes accurate risk prediction difficult

## Second Screening Results for Vines

- (A) Reported as a weed of cultivated lands? No  
(B) Shade tolerant or known to form dense stands? > Yes. Shade tolerant  
(C) Bird-dispersed? > Unknown. Fleshy-fruited, but no reports of bird-dispersal  
(D) Life-cycle < 4 years? Unknown. Fast-growing vine, so likely yes, but no direct evidence found

Outcome = Evaluate