

Assessment of Non-native Plants in Florida's Natural Areas assessment.ifas.ufl.edu

Assessment date 15 June 2017

1.01	Morrenia odorata ALL ZONES Is the species highly domesticated?	Answer	Score 0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	у	1
2.04	Native or naturalized in habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	У	1
2.05	Does the species have a history of repeated introductions outside its natural range?	у	
3.01	Naturalized beyond native range	unk	
3.02	Garden/amenity/disturbance weed	у	2
3.03	Weed of agriculture	у	4
3.04	Environmental weed	?	
3.05	Congeneric weed	unk	
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	у	1
4.05	Toxic to animals	у	1
4.06	Host for recognised pests and pathogens	у	1
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North &	unk	
	Central Zones: infertile soils; South Zone: shallow limerock or Histisols.		0
4.11	Climbing or smothering growth habit	у	1
4.12	Forms dense thickets	unk	0
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0

6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	у	1
6.03	Hybridizes naturally	unk	-1
6.04	Self-compatible or apomictic	unk	-1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	2	0
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked unk		
	areas)		-1
7.02	Propagules dispersed intentionally by people	у	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	у	1
7.05	Propagules water dispersed	unk	-1
7.06	Propagules bird dispersed	unk	-1
7.07	Propagules dispersed by other animals (externally)	unk	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production	у	1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	unk	-1
8.03	Well controlled by herbicides	n	1
8.04	Tolerates, or benefits from, mutilation or cultivation	у	1
8.05		?	
	Total Score	8	3
	Implemented Pacific Second Screening	n	0
	Risk Assessment Results	Hiş	gh

section		satisfy
	# questions answered	minimum?
Α		8 yes
В		8 yes
С		14 yes
total		30 yes

	Reference	Source data
1.01		Cultivated, but no sign of selection for reduced weediness
1.02		Skip to 2.01
1.03		Skip to 2.01
2.01	1. Global Plant Hardiness Zones for Phytosanitary Risk Analysis. http://naldc.nal.usda.gov/download/36586/PDF (Accessed: 28	
	October 2016) 2. US National Plant Germplasm System. https://npgsweb.ars- grin.gov/gringlobal/taxonomydetail.aspx?24605 (Accessed: 28 October 2016) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/3170228 (Accessed: 28 October	 Figure 3. Florida North Zone: Hardiness zones 8 and 9. Central Zone: Hardiness zones 9 and 10. South Zone: Hardiness zone 10. Native to Southern America: Brazil, Argentina, Paraguay, Uruguay, and Bolivia 3. See distribution map. 4. "It is widely distributed in the south-eastern region of central South America
	2016) 4. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_c ontents (Accessed: 2 November 2016) 5. Dave's Garden. http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016)	comprising south-eastern Bolivia, Paraguay, southern Brazil, Uruguay, and southern and central Argentina" 5. USDA Zones 8b through 11
2.02		Native range well known
2.03	1. The University of Melbourne. Köppen-Geiger Climate Map of the Wolrd. http://people.eng.unimelb.edu.au/mpeel/koppen.html (Accessed: 28 October 2016) 2. US National Plant Germplasm System. https://npgsweb.ars- grin.gov/gringlobal/taxonomydetail.aspx?24605 (Accessed: 28 October 2016) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/3170228 (Accessed: 28 October 2016) 4. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_contents (Accessed: 2 November 2016) 1. Climate Charts. World Climate Maps. http://www.climate-	1. Native or naturalized to Köppen-Geiger Climate Zones: Af, Am, Aw, BWh, BWk, BSh, Cwa, Cwb, Cfa, and Cfb. 2. Native to Southern America: Brazil, Argentina, Paraguay, Uruguay, and Bolivia 3. See distribution map. 4. "It is widely distributed in the south-eastern region of central South America comprising south-eastern Bolivia, Paraguay, southern Brazil, Uruguay, and southern and central Argentina"
	charts.com/World-Climate-Maps.html#rain (Accessed: 28 October 2016) 2. US National Plant Germplasm System. https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?24605 (Accessed: 28 October 2016) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/3170228 (Accessed: 28 October 2016) 4. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_contents (Accessed: 2 November 2016)	1. Native and naturalized in areas with rainfall within these ranges. 2. Native to Southern America: Brazil, Argentina, Paraguay, Uruguay, and Bolivia 3. See distribution map. 4. "It is widely distributed in the south-eastern region of central South America comprising south-eastern Bolivia, Paraguay, southern Brazil, Uruguay, and southern and central Argentina"
2.05	1. Landolt, Peter. US Department of Agriculture. Agricultural Resource Service. Gainesville, FL. http://journals.fcla.edu/flaent/article/viewFile/59050/56729 (Accessed: 1 November 2016) 2. ITIS Report. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TS N&search_value=503875#null (Accessed: 1 November 2016) 3. Zipcode Zoo. http://zipcodezoo.com/index.php/Morrenia_odorata (Accessed: 1 November 2016) 4. Encyclopedia of Life. http://eol.org/pages/489455/overview (Accessed: 1 November 2016) 5. Wilson (1857) The Rural Cyclopedia, Or A General Dictionary of Agriculture, and, Volume 3. Edinburgh: A Fullarton and Co.	1. Introduced to Florida 2. " Continental US, Introduced" 3. "US Nativity: Introduced" 4. "introduced range includes: Lower 48 United States of America" 5. Introduced to Britain

	1. The Institute for Regional Conservation. Floristic Inventory of South Florida Database Online. http://regionalconservation.org/ircs/database/plants/PlantPage.as p?TXCODE=Morrodor (Accessed: 1 November 2016) 2. Weaver, Richard E. Tri-ology. https://www.freshfromflorida.com/content/download/12585/15181 0/4404.pdf (Accessed: 3 November 2016) 1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Arenas, Pastor. Economic	Yes in Florida, but no evidence beyond this state. Completion of the PT requires data from outside the state to predict behavior within the state. 1. "SOUTH FLORIDA Native Status: Not Native, Naturalized" 2. "A genus of two species native to southern South America, one of these widely naturalized in Florida." 1. "Milkweed Vine continues as a difficult weed to manage in both groves, roadsides, and in urban areas on fences and ornamental plants. The first infestation furnished the seed to
	Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_contents (Accessed: 2 November 2016) 3. Global Compendium of Weeds. http://www.hear.org/gcw/species/morrenia_odorata/(Accessed: 3 November 2016)	start many new infestations and began the spread of this pest."
3.03	1. Spellman, D. L., & Gunn, C. R. (1976). Morrenia odorata and Araujia sericofera (Asclepiadaceae): weeds in citrus groves. Castanea, 139-148. 2. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 3. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016) 4. UF Institute of Food and Agricultural Science EDIS. http://edis.ifas.ufl.edu/hs185 (Accessed: 2 November 2016)	1. Morrenia odorata has become a serious weed of Californian citrus groves 2. See photo. "Milkweed Vines are a problem in Citrus groves. Note how the stems have wound around each other as they climb into this tree."; "Vines compete with the tree or shrub for light and can shade the entire canopy if left uncontrolled." 3. "In orange groves, this vine climbs the citrus trees and twines tightly around them. As the stem becomes woody it becomes hard and inflexible, effectively strangling the growing trees in an ever-tightening collar of vines." 4. Described as a vine weed of Florida citrus
3.04	UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016)	Yes in Florida, but no evidence beyond this state. Completion of the PT requires data from outside the state to predict behavior within the state.1. "Vines compete with the tree or shrub for light and can shade the entire canopy if left uncontrolled." 2. "In orange groves, this vine climbs the citrus trees and twines tightly around them. As the stem becomes woody it becomes hard and inflexible, effectively strangling the growing trees in an evertightening collar of vines."
3.05		No evidence
H	1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_contents (Accessed: 2 November 2016)	No evidence of these features found in the description of this plant
4.02		No evidence
4.03		No evidence
4.04	1. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016) 2. Baualdo, I., N. Soria, M. Ortiz, L. Acosta, R. Degen, and A. Eliceche. 1992. Plantas toxicas para el ganado en lost departamentos de Concepcion y Amambay (Paraguay). Editora de la Universidad Nacional de Asuncion (EDUNA). Asuncion, Paraguay. (Accessed: 2 November 2016)	1. "When the stem is damaged or leaves of this vine are removed, the plant bleeds a milky sap that is high in natural latex. This milk sap is toxic to cattle and like all milkweeds, this vine should be removed from pasture and grazing land." 2. Vegetative parts of plant are toxic to cattle. It causes gastric disorders and repiratory failure significant enough to be fatal.

4.05	1. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016) 2. Baualdo, I., N. Soria, M. Ortiz, L. Acosta, R. Degen, and A. Eliceche. 1992. Plantas toxicas para el ganado en lost departamentos de Concepcion y Amambay (Paraguay). Editora de la Universidad Nacional de Asuncion (EDUNA). Asuncion, Paraguay. (Accessed: 2 November 2016)	1. "When the stem is damaged or leaves of this vine are removed, the plant bleeds a milky sap that is high in natural latex. This milk sap is toxic to cattle and like all milkweeds, this vine should be removed from pasture and grazing land." 2. Vegetative parts of plant are toxic to cattle. It causes gastric disorders and repiratory failure significant enough to be fatal.
4.06	1. Landolt, Peter. US Department of Agriculture. Agricultural Resource Service. Gainesville, FL. http://journals.fcla.edu/flaent/article/viewFile/59050/56729 (Accessed: 1 November 2016) 2. Brunt, A.A., Crabtree, K., Dallwitz, M.J., Gibbs, A.J., Watson, L. and Zurcher, E.J. (eds.) (1996 onwards). `Plant Viruses Online: Descriptions and Lists from the VIDE Database. Version: 16th January 1997. http://sdb.im.ac.cn/vide/descr032.htm (Accessed: 3 November 2016)	1. "I report here that papaya fruit flies have been reared from field-collected fruit of Morrenia odorata Lindl., an asclepiad or milkweed, in Florida"; "Twenty three adult papaya fruit flies, Toxotrypana curvicauda Gerstaecker, were obtained from 34 mature larvae that emerged from field-collected fruit of the milkweed vine, Morrenia odorata Lindl. collected in Sarasota, Florida. Morrenia odorata appears to be an alternate host for the papaya fruit fly in Florida." 2. Araujia mosaic potyvirus "First reported in Araujia angustifolia and Morrenia odorata; from Argentina; by Charudattan et al. (1976)."
4.07	Dave's Garden. http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016) 2. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016) 3. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_contents (Accessed: 2 November 2016)	1. "Danger: Handling plant may cause skin irritation or allergic reaction" 2. "The vine bears a fruit that is apparently rather tasty and is edible to humans. These fruits look a bit like chayote and can grow to about 5 or 6 inches in length. Additionally, the new leaves and shoots can be consumed as greens." 3. "Morrenia odorata Lindley is a liana that is widely used as good by various indigenous peoples of the Gran Chaco, as well as by non-indigenous settlers. The fruit is the favorite part, but observation shows that, apart from the roots, the whole plant serves as food.", "the author can report having seen it eaten by infants without adverse effects, and he himself has been unharmed by its consumption, both in raw and cooked states"
4.08		No evidence
4.09	Dave's Garden. http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016) 2. Zipcode Zoo. http://zipcodezoo.com/index.php/Morrenia_odorata (Accessed: 3 November 2016) 3. Georgia Vines. http://www.georgiavines.com/cart/index.php?main_page=product_info&products_id=1992 (Accessed: 3 November 2016)	"Sun Exposure: Full Sun, Sun to Partial Shade" 2. "Sun Exposure: full sun" 3. "Latexplant likes sun to partial shade"
4.10	1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016)	These results are consistent with the field observations that milkweedvine germinates well under both well-drained deep sandy soils and poorly drained shallow soils."
4.11	UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Tampa Museum of Science and Industry. http://lepcurious.blogspot.com/2012/10/milkweed-vine.html (Accessed: 1 November 2016)	1. "A fast growing vine in central South America, it climbed over shrubs and trees and was found in thickets throughout those countries."; See photo. "Milkweed Vines are a problem in Citrus groves. Note how the stems have wound around each other as they climb into this tree." 2. "Also known as 'strangler vine'", "In orange groves, this vine climbs the citrus trees and twines tightly around them. As the stem becomes woody it becomes hard and inflexible, effectively strangling the growing trees in an evertightening collar of vines."
4.12	UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.htm (Accessed: 1 November 2016)	"A fast growing vine in central South America, it climbed over shrubs and trees and was found in thickets throughout those countries."

 5.01 1. Solereder, Hans and Scott, Dukinfield Henry. Systematic anatomy of the dicotyledons. https://books.google.com/books?id=_YDwAAAAMAAJ&pg=PA98 8&lpg=PA988&dq=%22Morrenia+odorata%22+terrestrial&source =bl&ots=UPDlpzEEiX&sig=oJzTSyjH95oCuxyX1g1tsnUgUSk&hl= en&sa=X&ved=0ahUKEwj0kabg_sfQAhWBQyYKHQsWCM4Q6A EIITAB#v=onepage&q=%22Morrenia%20odorata%22%20terrestrial&f=false (Accessed: 3 November 2016) 5.02 1. USDA Plants Database. 	
5 02 11 USDA Plants Database	
http://plants.usda.gov/core/profile?symbol=MOOD3 (Accessed: 1. "Growth Habit: Forb/herb" 28 October 2016)	
5.03 1. USDA Plants Database. http://plants.usda.gov/core/profile?symbol=MOOD3 (Accessed: 28 October 2016) 1. "Family: Asclepiadaceae"	
1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_con tents (Accessed: 2 November 2016)	
6.01 No evidence	
6.02 1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht 1. "Inside the pod are hundreds of black seed. Each bundle of white fibrous material, the milkweed floss called "coma". This fluff is designed to get the seed.	
m (Accessed: 1 November 2016) 2. Dave's Garden. http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016) when the pod splits open, taking this battalion of se areas for the vine to invade." 2. "Propagation Methods seed"	ed to new
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Method seed"	ed to new
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Methods seed" 6.03 No evidence	ed to new
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Metholsed" 6.03 No evidence 6.04 No evidence	ed to new
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Methology seed" 6.03 No evidence 6.04 No evidence 6.05 1. Wiemner, Sersic, Marino, Simoes, and Cocucci. Annals of Botany. Volume 109, Issue 1. http://aob.oxfordjournals.org/content/109/1/77.short (Accessed: 3 pollination"	ed to new ods: From
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Methologies (Propagation Propagation	wasp sive root oot pieces
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 areas for the vine to invade." 2. "Propagation Methological seed" 6.03 No evidence 6.04 No evidence 6.05 1. Wiemner, Sersic, Marino, Simoes, and Cocucci. Annals of Botany. Volume 109, Issue 1. http://aob.oxfordjournals.org/content/109/1/77.short (Accessed: 3 November 2016) 6.06 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 system capable of regenerating new shoots from ro	wasp sive root oot pieces ntire canopy of gs of from May
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016) areas for the vine to invade." 2. "Propagation Methologies ed" No evidence No evidence 1. Wiemner, Sersic, Marino, Simoes, and Cocucci. Annals of Botany. Volume 109, Issue 1. http://aob.oxfordjournals.org/content/109/1/77.short (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. The vine grows vigorously and can shade the er a citrus tree after 1 yr of growth. In Florida, seedling milkweedvine (or sprouts from root pieces) emerge through August. Vines reach full maturity and productions.	wasp sive root oot pieces ntire canopy of gs of from May uce seed pods
http://davesgarden.com/guides/pf/go/72930/ (Accessed: 1 November 2016) areas for the vine to invade." 2. "Propagation Methoseed" No evidence No evidence 1. Wiemner, Sersic, Marino, Simoes, and Cocucci. Annals of Botany. Volume 109, Issue 1. http://aob.oxfordjournals.org/content/109/1/77.short (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 1. The vine grows vigorously and can shade the eracitrus tree after 1 yr of growth. In Florida, seedling milkweedvine (or sprouts from root pieces) emerge through August. Vines reach full maturity and product to 2 yr later" 7.01 1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht	wasp sive root oot pieces ntire canopy of from May uce seed pods nanage in both and ornamental

7.04	1. UF Institute of Food and Agriculture Okeechobee County Extension Service. http://okeechobee.ifas.ufl.edu/News%20columns/Milkweed.vine.ht m (Accessed: 1 November 2016) 2. Arenas, Pastor. Economic Botany. https://www.jstor.org/stable/4256159?seq=1#page_scan_tab_con tents (Accessed: 2 November 2016) 3. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016)	1. "Inside the pod are hundreds of black seed. Each seed has a bundle of white fibrous material, the milkweed floss, which is also called "coma". This fluff is designed to get the seed airborne when the pod splits open, taking this battalion of seed to new areas for the vine to invade." 2. "The numerous seeds are flat, oblong, and chestnut-colored, and they have a coma of long, silky hairs" 3. "Wind dispersal"
7.05		No evidence
7.06		No evidence
7.07		No evidence
7.08		No evidence
8.01	1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016) 2. Burnett. Florida Department of Agriculture and Consumer Services. Division of Plant Industry. https://www.freshfromflorida.com/content/download/11133/14308 9/pp126.pdf (Accessed: 3 November 2016)	"prolific seed production (more than 1,000 viable seeds per pod)" 2. "Control is particularly difficult because of its prolific seed production"
8.02		No evidence
8.03	m (Accessed: 1 November 2016) 2. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016)	1. "Most vines are easier to control with herbicides when they are young seedlings. If they reach into the tree canopy they blend into the foliage and make it hard to use herbicides. Careful application of non-selective herbicides like glyphosate can kill small vines if the spray is kept off desirable plants. But for mature vines this will be difficult." 2. " high degree of tolerance to most herbicides used in citrus groves"
8.04	1. Singh, Megh and Achhireddy, Nagi Reddy. Weed Sciences. https://www.jstor.org/stable/pdf/4044040.pdf (Accessed: 3 November 2016)	"extensive root system capable of regenerating new shoots from root pieces remaining after tillage"
8.05	UF Institute of Food and Agriculture Okeechobee County Extension Service.	on young vines and reduces this offending weed in citrus groves.