

Taxon: <i>Kalanchoe gracilipes</i>	Family: Crassulaceae
Common Name(s): kalanchoe kitchingia	Synonym(s): Bryophyllum gracilipes (Baker) Eggli Kitchingia gracilipes Baker

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 20 Jun 2015
WRA Score: 0.0	Designation: L	Rating: Low Risk

Keywords: Tropical, Perennial, Epiphyte, Ornamental, Rare

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)	y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	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)	y
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	y=1, n=0	n
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	y

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	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		
602	Produces viable seed		
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators		
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
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		
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	n
801	Prolific seed production (>1000/m ²)	y=1, n=-1	n
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?	n
	Source(s)	Notes
	Eggli, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[No evidence of domestication] "This attractive species is one of the rare epiphytes in the genus, having its home in shady rain forests with high air humidity. It is intermediate between section <i>Kalanchoe</i> (stamens inserted above the middle of the corolla tube) and section <i>Bryophyllum</i> (calyx, pendent flowers) but belongs to the latter."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 19 Jun 2015]	"Native: AFRICA Western Indian Ocean: Madagascar"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 19 Jun 2015]	

203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Dave's Garden. 2015. <i>Kalanchoe - Kalanchoe gracilipes</i> . http://davesgarden.com/guides/pf/go/97886/ . [Accessed 19 Jun 2015]	"Hardiness: USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"

Qsn #	Question	Answer
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"This attractive species is one of the rare epiphytes in the genus, having its home in shady rain forests with high air humidity."
	Tropicos.org. 2015. Tropicos [Online Database]. Missouri Botanical Garden. http://www.tropicos.org/ . [Accessed 19 Jun 2015]	Collected at elevations ranging from 1550 - 2602 m, possibly exceeding 1000 m, although collection is an estimate of range. Possibly demonstrating environmental versatility

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 19 Jun 2015]	"Native: AFRICA Western Indian Ocean: Madagascar"

205	Does the species have a history of repeated introductions outside its natural range?	n
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	No evidence. Limited information on cultivation outside native range

301	Naturalized beyond native range	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

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

Qsn #	Question	Answer
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	y
	Source(s)	Notes
	Herrera, I., Hernandez, M. J., Lampo, M., & Nassar, J. M. 2012. Plantlet recruitment is the key demographic transition in invasion by <i>Kalanchoe daigremontiana</i> . <i>Population Ecology</i> , 54(1): 225-237	"Biological invasions have a great impact on biodiversity and ecosystem functioning worldwide. <i>Kalanchoe daigremontiana</i> is a noxious invasive plant in arid zones. Besides being toxic for domestic animals and wildlife, this species inhibits the growth of native plants. Its rapid proliferation in Cerro Saroche National Park (Venezuela) is of great concern because this area hosts several species endemic to the scarce arid zones in the Caribbean. The traits of <i>K. daigremontiana</i> that contribute to its invasive success are unknown."
	CABI, 2015. <i>Kalanchoe pinnata</i> [original text by J. Rojas-Sandoval & P. Acevedo-Rodríguez]. In: <i>Invasive Species Compendium</i> . Wallingford, UK: CAB International. www.cabi.org/isc	"The major impact of <i>K. pinnata</i> is the formation of thick stands that displace existing vegetation, reducing local biodiversity. On the island of St John, US Virgin Islands, <i>K. pinnata</i> forms dense stands crowding out native herbaceous vegetation (Ting, 1989), and in the Galapagos Islands, <i>K. pinnata</i> not only replaces the herb layer with a monospecific stand, but forms a dense carpet that inhibits the regeneration of the shrub and tree layers (Tye, 2001). Allelopathic chemicals released from roots and fallen leaves may facilitate this invasion and displacement of native flora."

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Eggl, U. (ed.). 2003. <i>Illustrated Handbook of Succulent Plants: Crassulaceae</i> . Springer-Verlag, Berlin - Heidelberg - New York	[No evidence] "Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm. with fibrous R [roots] from the lower nodes; L [leaves] green, petiolate, petiole terete, 6 - 22 mm, lamina oblong, ovate to ovate-orbicular, 1 - 3 x 0.5 - 2 cm, tip obtuse, base cuneate, margins deeply crenate."

402	Allelopathic	
	Source(s)	Notes
	Bär, W., Pfeifer, P., & Dettner, K. (1997). Intra- and interspecific allelochemical effects in three <i>Kalanchoe</i> -species (Crassulaceae). <i>Zeitschrift für Naturforschung C- Journal of Biosciences</i> , 52(7), 441-449	[Allelopathy documented in genus] "The intra- and interspecific acting allelochemicals of <i>Kalanchoe daigremontiana</i> , <i>K. tubiflora</i> and <i>K. pinnata</i> (Crassulaceae) were isolated and could be identified as p-hydroxybenzoic-, protocatechuic-, gallic-, p-coumaric- and coffeic acid. By measuring length of stems and primary roots of <i>Kalanchoe</i> -daughter plants the intra- and interspecific inhibitory activities of authentic compounds could be demonstrated."
	WRA Specialist. 2015. Personal Communication	Unknown

403	Parasitic	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Perennial epiphytes"
404	Unpalatable to grazing animals	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown
405	Toxic to animals	
	Source(s)	Notes
	Smith, G. (2004). Toxicology Brief: Kalanchoe species poisoning in pets. Veterinary Medicine 99: 933-936	[Unknown for <i>K. gracilipes</i>] "Kalanchoe species contain cardiac glycosides and are toxic to animals. In South Africa and Australia, where these plants are found in the wild, cattle and sheep poisonings are common."
406	Host for recognized pests and pathogens	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown
407	Causes allergies or is otherwise toxic to humans	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown. Other <i>Kalanchoe</i> species reported to be toxic
408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"This attractive species is one of the rare epiphytes in the genus, having its home in shady rain forests with high air humidity." [No evidence. Unlikely given wet habitat]
409	Is a shade tolerant plant at some stage of its life cycle	y
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[Presumably Yes] "This attractive species is one of the rare epiphytes in the genus, having its home in shady rain forests with high air humidity."
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes

Qsn #	Question	Answer
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm, with fibrous roots from the lower nodes." [Epiphytic, so may have specialized requirements]
	Dave's Garden. 2015. Kalanchoe - Kalanchoe gracilipes. http://davesgarden.com/guides/pf/go/97886/ . [Accessed 19 Jun 2015]	"Soil pH requirements: Unknown - Tell us"

411	Climbing or smothering growth habit	y
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm. with fibrous R [roots] from the lower nodes;"

412	Forms dense thickets	n
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[No evidence] "Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm, with fibrous roots from the lower nodes."

501	Aquatic	n
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm. with fibrous R [roots] from the lower nodes;"

502	Grass	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 19 Jun 2015]	"Family: Crassulaceae subfamily: Sedoideae tribe: Kalanchoeae"

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 19 Jun 2015]	"Family: Crassulaceae subfamily: Sedoideae tribe: Kalanchoeae"

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm. with fibrous R [roots] from the lower nodes;"

601	Evidence of substantial reproductive failure in native habitat	
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[Unknown] "This attractive species is one of the rare epiphytes in the genus, having its home in shady rain forests with high air humidity."

602	Produces viable seed	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced. Probably self-sterile."
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	"Se [seed] oblong, ± 1.6 mm long"

603	Hybridizes naturally	
	Source(s)	Notes
	Raadts, E. 1977. The genus <i>Kalanchoe</i> (Crassulaceae) in tropical East Africa. <i>Willdenowia</i> 8: 101-157	[Unknown for <i>K. gracilipes</i> . Hybridization recorded in genus] " <i>K. densiflora</i> ROLFE X <i>K. lanceolata</i> (FORSSKP.E) RS." ... "Note. The hybrid was found among <i>K. densiflora</i> and <i>K. lanceolata</i> on the same spot. It combines characters of the two species."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced. Probably self-sterile."
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Family Description. Uncertain for <i>K. pinnata</i>] "Crassulaceae appear to be usually self-incompatible but <i>Sedum</i> sect. <i>Gormanina</i> shows self-compatibility in varying degrees (Denton 1979)."

Qsn #	Question	Answer
605	Requires specialist pollinators	
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[Unknown] "Inflorescences 2- to 6-flowered corymbs, pedicels very slender, 12 - 20 mm. Flowers pendent, calyx green, tube 2 - 3 mm, sepals ovate to semi-orbicular, 2.5 - 3.5 x 3.5 - 4.5 mm, corolla urceolate, bright red, orange-red, yellow, yellow-green or light pink, tube 20 - 25 mm, petals ovate to semi-orbicular, obtuse, ± 4 x 6 mm, stamens included, anthers black."
606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	[Unknown if natural vegetative reproduction occurs] "Very rare epiphytic rain forest plant. Only clones of one plant are available. Blooms profusely, no seeds ever produced. Probably self-sterile."
607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced."
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Unknown for <i>K. gracilipes</i>] "Dispersal. The follicles usually release the seeds immediately after ripening. The seeds are dispersed by gravity and wind, but are much larger than typical anemochorous dust seeds (e.g. orchids, many parasites)."
702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Sustainable Bioresources, LLC. 2015. <i>Kitchingia gracilipes</i> - unrooted cuttings. http://sustainablebioresources.com/store/index.php?main_page=product_info&products_id=7 . [Accessed 20 Jun 2015]	[Rare in cultivation] "An unusual , vine like epiphytic succulent from the rain forests of Madagascar. Blooms profusely with pendant, bell shaped coral colored flowers."
703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	[Unlikely, Rare in cultivation & limited or no seed production] "Blooms profusely, no seeds ever produced. Probably self-sterile."
704	Propagules adapted to wind dispersal	

Qsn #	Question	Answer
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Family Description. Possibly, although unverified for <i>K. gracilipes</i>] "Dispersal. The follicles usually release the seeds immediately after ripening. The seeds are dispersed by gravity and wind, but are much larger than typical anemochorous dust seeds (e.g. orchids, many parasites)."

705	Propagules water dispersed	n
	Source(s)	Notes
	Eggl, U. (ed.). 2003. Illustrated Handbook of Succulent Plants: Crassulaceae. Springer-Verlag, Berlin - Heidelberg - New York	[Epiphytes unlikely to be water dispersed] "Perennial epiphytes, entirely glabrous, with slender flexuose stems from a decumbent base, pendent, to 60 cm, with fibrous roots from the lower nodes."
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Family Description] "Dispersal. The follicles usually release the seeds immediately after ripening. The seeds are dispersed by gravity and wind, but are much larger than typical anemochorous dust seeds (e.g. orchids, many parasites)."

706	Propagules bird dispersed	n
	Source(s)	Notes
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Family description] "Dispersal. The follicles usually release the seeds immediately after ripening. The seeds are dispersed by gravity and wind, but are much larger than typical anemochorous dust seeds (e.g. orchids, many parasites)."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced."
	Kubitzki, K., Bayer, C. 7 Stevens, P.F. 2007. The families and genera of vascular plants: Volume IX. Flowering Plants. Eudicots. Springer-Verlag, Berlin, Heidelberg, New York	[Family description] "Dispersal. The follicles usually release the seeds immediately after ripening. The seeds are dispersed by gravity and wind, but are much larger than typical anemochorous dust seeds (e.g. orchids, many parasites)."

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Gordon, D. R., Mitterdorfer, B., Pheloung, P. C., Ansari, S., Buddenhagen, C., Chimera, C., ... & Williams, P. A. 2010). Guidance for addressing the Australian Weed Risk Assessment questions. Plant Protection Quarterly, 25(2): 56-74	[Epiphytic & fruit not fleshy-fruited. Unlikely to be consumed] "Answer 'no' where the taxon is unlikely to be eaten by animals or if seeds are not viable following passage through the gut."

Qsn #	Question	Answer
801	Prolific seed production (>1000/m²)	n
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced. Probably self-sterile."
802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 12 April	"Blooms profusely, no seeds ever produced."
	Royal Botanic Gardens Kew. 2008. Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/ . [Accessed 20 Jun 2015]	Unknown. Most <i>Kalanchoe</i> species have orthodox seeds
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. 2015. 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. 2015. Personal Communication	Unknown
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Thrives in tropical climates
- Other *Kalanchoe* species have become invasive weeds
- Shade tolerant
- Very limited information on the biology and ecology of this species. Accuracy of risk prediction may be limited

Low Risk Traits

- No reports of invasiveness or naturalization, but no evidence of widespread introduction outside native range
- Unarmed (no spines, thorns or burrs)
- Ornamental
- May not produce seeds in cultivation