

Family: *Euphorbiaceae*

Taxon: *Euphorbia grandicornis*

Synonym: NA

Common Name: cow's horn
big horned euphorbia

Questionnaire :	current 20090513	Assessor:	Assessor	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Assessor	WRA Score	2
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)		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		?
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		y
402	Allelopathic		y=1, n=0		
403	Parasitic		y=1, n=0		n
404	Unpalatable to grazing animals		y=1, n=-1		n
405	Toxic to animals		y=1, n=0		
406	Host for recognized pests and pathogens		y=1, n=0		
407	Causes allergies or is otherwise toxic to humans		y=1, n=0		y
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

412	Forms dense thickets	y=1, n=0	
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	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	
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	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m2)	y=1, n=-1	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 2

Supporting Data:

101	2002. Schmidt, E./Lötter, M./McClelland, W.. Trees and shrubs of Mpumalanga and Kruger National Park. Jacana Media, Johannesburg, South Africa	[Is the species highly domesticated? No evidence]
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Species suited to tropical or subtropical climate(s) 2-High] "Native: AFRICA - South Tropical Africa: Mozambique Southern Africa: South Africa - KwaZulu Natal; Swaziland"
202	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Quality of climate match data 2-High]
203	2013. Dave's Garden. PlantFiles: Cow's Horn Euphorbia grandicornis. http://davesgarden.com/guides/pf/go/58081/ [Accessed 03 Nov 2013]	[Broad climate suitability (environmental versatility)? No] "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)"
204	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native: AFRICA - South Tropical Africa: Mozambique Southern Africa: South Africa - KwaZulu Natal; Swaziland"
205	2013. WRA Specialist. Personal Communication.	[Does the species have a history of repeated introductions outside its natural range? Unknown] Cultivated as a barrier plant, and apparently more commonly as a house plant, but distribution in tropical areas outside native range is uncertain
301	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Naturalized beyond native range? No] No evidence
301	2012. Wagner, W.L./Herbst, D.R./Khan, N./Flynn, T.. Hawaiian Vascular Plant Updates: A Supplement to the Manual of the Flowering Plants of Hawai'i & Hawai'i's Ferns & Fern Allies. http://botany.si.edu/pacificislandbiodiversity/hawaii/anflora/supplement.htm	[Naturalized beyond native range? No] 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] 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] No evidence
304	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Environmental weed? No] No evidence
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Congeneric weed? Yes] "Euphorbia esula...spreads by seeds and by vegetative growth from the rootstock. It rapidly expands and forms large and dense patches that displace native grasses and forbs."
401	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=namelist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Produces spines, thorns or burrs? Yes] "Succulent shrub 50 cm to 2 m high, branching from the base. Branches ascending or occasionally procumbent, simple or sometimes rebranching near the apices, 2–4 angled, deeply constricted into broad segments obovate in outline; segments 5–12 × 5–15 cm; angles winged, with wings 3–7 cm broad and up to 5 mm thick, the margins irregularly sinuate with tubercles 1–2.5 cm apart along the margins. Spine shields joined in a continuous horny margin; spines 1.5–7 cm long, but reduced to c. 3 mm long at the constrictions of the branches; prickles minute; secondary spines often flanking the flowering eyes, 1–2 mm long. Leaves 1 × 1.5 mm, deciduous."
402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]

403	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Parasitic? No] "Succulent shrub 50 cm to 2 m high, branching from the base." [Euphorbiaceae]
404	2013. Cactus Art Nursery. Euphorbia grandicornis subsp. Grandicornis. http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Unpalatable to grazing animals? No] "If you have goats or cattle, they will eat this plant on the edges , trying to avoid the spines. It seems the latex doesn't bother or irritate the animals, truly weird!"
405	2013. Cactus Art Nursery. Euphorbia grandicornis subsp. Grandicornis. http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Toxic to animals? Possibly No] "If you have goats or cattle, they will eat this plant on the edges , trying to avoid the spines. It seems the latex doesn't bother or irritate the animals, truly weird!"
406	2013. International Farm Society Organization. Euphorbia grandicornis. http://www.farmsociety.org/plant.php?id=97&name=Euphorbia-grandicornis [Accessed 03 Nov 2013]	[Host for recognized pests and pathogens?] "Pests: scale insects, mealybugs and spider mites; Diseases: fungus, Black Tip Fungus, Stem Rot "
407	2013. Cactus Art Nursery. Euphorbia grandicornis subsp. Grandicornis. http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Causes allergies or is otherwise toxic to humans? Yes] "Warning: All Euphorbias contain a white sap that can be irritating to eyes and mucous membranes. If contact is made with this white sap, take care to not touch face or eyes before washing hands with soap and water. "
407	2013. Dave's Garden. PlantFiles: Cow's Horn Euphorbia grandicornis. http://davesgarden.com/guides/pf/go/58081/ [Accessed 03 Nov 2013]	[Causes allergies or is otherwise toxic to humans? Yes] "Danger: Handling plant may cause skin irritation or allergic reaction"
408	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Creates a fire hazard in natural ecosystems? No] "Succulent shrub 50 cm to 2 m high, branching from the base." [No evidence, and unlikely as plants are succulent]
409	2013. Cactus Art Nursery. Euphorbia grandicornis subsp. Grandicornis. http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Is a shade tolerant plant at some stage of its life cycle? Moderate shade] "It can tolerate moderate shade, and a plant that has been growing in shade should be slowly hardened off before placing it in full sun as the plant will be severely scorched if moved too suddenly from shade into sun."
410	2013. Learn 2 Grow. Euphorbia grandicornis. http://www.learn2grow.com/plants/euphorbia-grandicornis/ [Accessed 03 Nov 2013]	[Tolerates a wide range of soil conditions? Yes, but must be well-drained] "Soil pH - Acidic, Neutral, Alkaline; Soil Drainage - Well Drained; Soil type - Loam, Sand"
411	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Climbing or smothering growth habit? No] "Succulent shrub 50 cm to 2 m high, branching from the base."
412	2002. Schmidt, E./Lötter, M./McClelland, W.. Trees and shrubs of Mpumalanga and Kruger National Park. Jacana Media, Johannesburg, South Africa	[Forms dense thickets?] "A very robust plant, usually in small colonies, often partially covered with well-protected grass."
412	2005. Loffler, L./Loffler, P.. Swaziland Tree Atlas—including selected shrubs and climbers. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria, S.A.	[Forms dense thickets? Unknown. Forms robust colonies] "Sparsely scattered the northeast, with an isolated patch near Bovane in central southern Swaziland." ... "Habitat: Forms robust colonies in low-altitude dry bushveld. Usually on poorly drained soils."
501	2002. Schmidt, E./Lötter, M./McClelland, W.. Trees and shrubs of Mpumalanga and Kruger National Park. Jacana Media, Johannesburg, South Africa	[Aquatic? No] "A very robust plant, usually in small colonies, often partially covered with well-protected grass."

502	2001. Carter, S./Leach, L.C.. <i>Euphorbia grandicornis</i> Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Grass? No] Euphorbiaceae
503	2001. Carter, S./Leach, L.C.. <i>Euphorbia grandicornis</i> Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Nitrogen fixing woody plant? No] Euphorbiaceae
504	2001. Carter, S./Leach, L.C.. <i>Euphorbia grandicornis</i> Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Succulent shrub 50 cm to 2 m high, branching from the base. Branches ascending or occasionally procumbent, simple or sometimes rebranching near the apices, 2–4 angled, deeply constricted into broad segments obovate in outline; segments 5–12 × 5–15 cm; angles winged, with wings 3–7 cm broad and up to 5 mm thick, the margins irregularly sinuate with tubercles 1–2.5 cm apart along the margins. Spine shields joined in a continuous horny margin; spines 1.5–7 cm long, but reduced to c. 3 mm long at the constrictions of the branches; prickles minute; secondary spines often flanking the flowering eyes, 1–2 mm long. Leaves 1 × 1.5 mm, deciduous."
601	2005. Loffler, L./Loffler, P.. Swaziland Tree Atlas—including selected shrubs and climbers. Southern African Botanical Diversity Network Report No. 38. SABONET, Pretoria, S.A.	[Evidence of substantial reproductive failure in native habitat? No] "Conservation Status: Least Concern"
602	2013. International Farm Society Organization. <i>Euphorbia grandicornis</i> . http://www.farmsociety.org/plant.php?id=97&name=Euphorbia-grandicornis [Accessed 03 Nov 2013]	[Produces viable seed? Yes] "Propagation: propagated by stem cutting or seed"
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2001. Carter, S./Leach, L.C.. <i>Euphorbia grandicornis</i> Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=na_melist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Self-compatible or apomictic? Unknown] "Cymes 1–3 in a horizontal line at each flowering eye, simple, with lateral cyathia vertically arranged; peduncles and cyme branches 3–5 mm long; bracts 2 × 2.5 mm, scale-like. Cyathia with funnel shaped involucre 4 × 6–8 mm in diameter; glands transversely oblong, 4 mm wide, touching, yellow; lobes subquadrate, fimbriate. Male flowers: bracteoles lacinate-fimbriate, c. 3.5 mm long; stamens c. 5.5. mm long. Female flower: perianth 3-lobed, with lobes c. 1 mm long; styles 4 mm long, united to halfway, apices spreading, capitate."
605	2010. Johnson, S.D./Jürgens, A.. Convergent evolution of carrion and faecal scent mimicry in fly-pollinated angiosperm flowers and a stinkhorn fungus. <i>South African Journal of Botany</i> . 76(4): 796-807.	[Requires specialist pollinators? No] "We also included <i>Euphorbia grandicornis</i> Goebel ex N.E. Br. (Euphorbiaceae) for comparison because its cyathial glands are sweetsmelling, yet its flowers are often visited by blowflies along with a wide diversity of other insects (S.D. Johnson, unpublished observations)." ... "In the case of the sweetsmelling flowers of <i>E. grandicornis</i> , the basis for attraction of flies is more likely to be simple nectar-seeking and may thus involve associative conditioning."
606	2013. Cactus Art Nursery. <i>Euphorbia grandicornis</i> subsp. <i>Grandicornis</i> . http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Reproduction by vegetative fragmentation? Possibly Yes] "Propagation: It is easy to propagate by cuttings in late spring to summer, just take a cutting of the plant let it dry for 1 or 2 weeks and stuff it in the ground (preferably dry, loose, extremely well draining soil)."
606	2013. Learn 2 Grow. <i>Euphorbia grandicornis</i> . http://www.learn2grow.com/plants/euphorbia-grandicornis/ [Accessed 03 Nov 2013]	[Reproduction by vegetative fragmentation? Yes] "This great succulent produces multiple branching from the base, with some of the outer limbs forced along the ground where they are inclined to root. The central branches are more upright, but sit at a slight angle for a more irregular character."
607	2013. Cactus Art Nursery. <i>Euphorbia grandicornis</i> subsp. <i>Grandicornis</i> . http://www.cactus-art.biz/schede/EUPHORBIA/Euphorbia_grandicornis/Euphorbia_grandicornis/Euphorbia_grandicornis.htm [Accessed 03 Nov 2013]	[Minimum generative time (years)?] "It is a moderately fast grower, and will quickly become large landscape masterpieces in just 3-5 years."
701	2013. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Unknown] No evidence, and seeds lack any means of external attachment. Small size may aid in dispersal, but limited information is available about the dispersal ecology of this species.

702	1998. Vermeulen, N.. Encyclopedia of House Plants. 2nd Print. Rebo Productions, Lisse, Netherlands	[Propagules dispersed intentionally by people? Yes] "This plant which grows up to 2 m (6 ft) in height is not cultivated for its flowers but for the outlandish shapes of its shoots with three wing-like angles which are of high decorative value in a modern interior."
702	2008. Kobayashi, K./Criley, R./Kaufman, A./Tsugawa, S./Ricordi, A./Clifford, P.. Barrier Plants. L-20. College of Tropical Agriculture and Human Resources (CTAHR, Honolulu, HI http://www.ctahr.hawaii.edu/freepubs	[Propagules dispersed intentionally by people? Yes] "A spiny, succulent plant with milky sap, it has a bushy growth habit, growing up to 6 feet high, and spikes that resemble the shape of cows' horns." [Recommended as a barrier plant]
703	2013. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No evidence, and unlikely. Plant is most commonly grown as a barrier plant and frequently propagated by vegetative means]
704	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=namelist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Propagules adapted to wind dispersal? No] "Capsule c. 6 × 13 mm, obtusely lobed, truncate at the base, red when mature, sessile. Seed c. 2.5 × 2 mm, subglobose, buff with brown speckles, smooth." [Capsules presumably dehisce to expel seeds, which otherwise lack adaptations for wind dispersal]
705	2002. Schmidt, E./Lötter, M./McClelland, W.. Trees and shrubs of Mpumalanga and Kruger National Park. Jacana Media, Johannesburg, South Africa	[Propagules water dispersed? No] "on low-altitude, hot, dry alluvial soil"
705	2013. WRA Specialist. Personal Communication.	[Propagules water dispersed? No. Fruit morphology and distribution suggest seeds are not water dispersed]
706	2013. NParks Flora&FaunaWeb. Euphorbia grandicornis. National Parks Board, Singapore https://florafanaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=6332 [Accessed 03 Nov 2013]	[Propagules bird dispersed? No] "Fruit Type : Dehiscent Dry Fruit (Capsule)"
707	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=namelist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Propagules dispersed by other animals (externally)? No] "Capsule c. 6 × 13 mm, obtusely lobed, truncate at the base, red when mature, sessile. Seed c. 2.5 × 2 mm, subglobose, buff with brown speckles, smooth." [No means of external attachment]
708	2013. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown. Unlikely to be consumed and internally dispersed]
801	2001. Carter, S./Leach, L.C.. Euphorbia grandicornis Goebel ex N.E. Br.: Flora Zambesiaca Vol. 9 part: 5. Euphorbiaceae. http://apps.kew.org/efloras/namedetail.do?qry=namelist&flora=fz&taxon=7363&nameid=18519 [Accessed 03 Nov 2013]	[Prolific seed production (>1000/m ²)? Unknown] "Succulent shrub 50 cm to 2 m high, branching from the base. Branches ascending or occasionally procumbent, simple or sometimes rebranching near the apices, 2–4 angled, deeply constricted into broad segments obovate in outline; segments 5–12 × 5–15 cm; angles winged, with wings 3–7 cm broad and up to 5 mm thick, the margins irregularly sinuate with tubercles 1–2.5 cm apart along the margins. Spine shields joined in a continuous horny margin; spines 1.5–7 cm long, but reduced to c. 3 mm long at the constrictions of the branches; prickles minute; secondary spines often flanking the flowering eyes, 1–2 mm long. Leaves 1 × 1.5 mm, deciduous. Cymes 1–3 in a horizontal line at each flowering eye, simple, with lateral cyathia vertically arranged; peduncles and cyme branches 3–5 mm long; bracts 2 × 2.5 mm, scale-like. Cyathia with funnel shaped involucre 4 × 6–8 mm in diameter; glands transversely oblong, 4 mm wide, touching, yellow; lobes subquadrate, fimbriate. Male flowers: bracteoles lacinate-fimbriate, c. 3.5 mm long; stamens c. 5.5 mm long. Female flower: perianth 3-lobed, with lobes c. 1 mm long; styles 4 mm long, united to halfway, apices spreading, capitate. Capsule c. 6 × 13 mm, obtusely lobed, truncate at the base, red when mature, sessile. Seed c. 2.5 × 2 mm, subglobose, buff with brown speckles, smooth."
802	2013. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species.
804	2013. WRA Specialist. Personal Communication.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown] Other Euphorbia species are capable of resprouting when cut or pruned.
805	2013. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

Summary of Risk Traits

High Risk / Undesirable Traits

- Grows in tropical climates
- Related Euphorbia species have become invasive
- Sap toxic and an irritant to people and possibly also animals
- Tolerates many soil types
- Seeds dispersed by dehiscent capsules & people
- Limited ecological information from native and introduced ranges makes accurate risk predications difficult

Low Risk Traits

- No reports of naturalization or invasiveness world wide (but outdoor cultivation in tropical climates may be limited)