

Taxon: <i>Euphorbia venefica</i> Trémaux ex Kotschy	Family: Euphorbiaceae
Common Name(s): candle plant cylindrical euphorbia	Synonym(s): <i>Euphorbia mamillaris</i> Trémaux <i>Euphorbia venefica</i> Trémaux ex Kotschy

Assessor: Chuck Chimera	Status: Approved	End Date: 3 Jan 2025
WRA Score: 0.0	Designation: L	Rating: Low Risk

Keywords: Spiny Shrub, Succulent, Toxic Sap, Slow Growing, Ballistic Dispersal

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	y = 1*multiplier (see Appendix 2), n = 0	n
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	n
304	Environmental weed	y = 2*multiplier (see Appendix 2), n = 0	n
305	Congeneric weed	y = 1*multiplier (see Appendix 2), n = 0	y
401	Produces spines, thorns or burrs	y = 1, n = 0	y
402	Allelopathic		
403	Parasitic	y = 1, n = 0	n
404	Unpalatable to grazing animals	y = 1, n = -1	y
405	Toxic to animals	y = 1, n = 0	y
406	Host for recognized pests and pathogens		
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		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y = 1, n = 0	n

Qsn #	Question	Answer Option	Answer
411	Climbing or smothering growth habit	y = 1, n = 0	n
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)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	>3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y = 1, n = -1	n
702	Propagules dispersed intentionally by people	y = 1, n = -1	y
703	Propagules likely to disperse as a produce contaminant	y = 1, n = -1	n
704	Propagules adapted to wind dispersal	y = 1, n = -1	n
705	Propagules water dispersed	y = 1, n = -1	n
706	Propagules bird dispersed	y = 1, n = -1	n
707	Propagules dispersed by other animals (externally)	y = 1, n = -1	n
708	Propagules survive passage through the gut	y = 1, n = -1	n
801	Prolific seed production (>1000/m ²)		
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
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	[No evidence of domestication or widespread cultivation] "Although succulent growers desire to get plants of this species, the populations are so widely distributed that we do not see any immediate threat from this. We therefore propose the conservation assessment 'Least Concern' (LC)."
102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	NA
103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2024). 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
	KewScience. (2025). Plants of the World Online . http://powo.science.kew.org . [Accessed 2 Jan 2025]	"Native to: Chad, Ethiopia, Sudan, Uganda"
202	Quality of climate match data	High
	Source(s)	Notes
	KewScience. (2025). Plants of the World Online . http://powo.science.kew.org . [Accessed 2 Jan 2025]	"Native to: Chad, Ethiopia, Sudan, Uganda"
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Origin and Habitat: Chad, Sudan, Ethiopia and Egypt (Nubia). Type locality: Sudan, Dar Foq Soudan Orient., Atlas Altitude range: Around 1200-1220 metres above sea level. Habitat: Stony slopes in dry grassland with scattered trees. Locally abundant. Arid hills and open rocky hillsides with <i>Combretum</i> ." ... "Very slow growing and cold sensitive species can to grow in both pots and in the ground in areas with mild climate, but they can even be grown indoors."
	World of Succulents. (2025). <i>Euphorbia venefica</i> (Cylindrical <i>Euphorbia</i>). https://worldofsucculents.com/euphorbia-venefica-cylindrical-euphorbia/ . [Accessed 2 Jan 2025]	"USDA hardiness zone 10a to 11b: from 30 °F (-1.1 °C) to 50 °F (+10 °C)."
204	Native or naturalized in regions with tropical or subtropical climates	y

Qsn #	Question	Answer
	Source(s)	Notes
	Neuwinger, H.D. (1996). African Ethnobotany: Poisons and Drugs: Chemistry, Pharmacology, Toxicology. CRC Press, Boca Raton, FL	"Distribution Sudan (Kordofan, Bahr el Ghazal), Ethiopia (Galla-Sidamo), Uganda (lie District), CAR (central Sharl river), Chad (Lake Iro), north Ivory Coast (upper Sassandra). Stony slopes in dry grassland with scattered trees."

205	Does the species have a history of repeated introductions outside its natural range?	n
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Euphorbia venefica is not widely cultivated. Its cultivation may be limited primarily due to its toxicity, as it produces a milky latex that is highly poisonous and can cause severe irritation upon contact with skin or eyes.

301	Naturalized beyond native range	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	GBIF Secretariat (2025). Euphorbia venefica Trémaux ex Kotschy. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/9249115 . [Accessed 3 Jan 2025]	No evidence
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch . [Accessed 3 Jan 2025]	No evidence

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	CABI. (2025). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi . [Accessed 3 Jan 2025]	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	CABI. (2025). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi . [Accessed 3 Jan 2025]	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

Qsn #	Question	Answer
	CABI. (2025). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi . [Accessed 3 Jan 2025]	No evidence

305	Congeneric weed	y
	Source(s)	Notes
	Weber, E. (2017). <i>Invasive Plant Species of the World, 2nd Edition: A Reference Guide to Environmental Weeds</i> . CABI Publishing, Wallingford, UK	[<i>Euphorbia esula</i>] "Leafy spurge has become one of the worst invaders in northern America causing both ecological and economic damage."
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	Numerous <i>Euphorbia</i> species have become invasive weeds

401	Produces spines, thorns or burrs	y
	Source(s)	Notes
	Neuwinger, H.D. (1996). <i>African Ethnobotany: Poisons and Drugs: Chemistry, Pharmacology, Toxicology</i> . CRC Press, Boca Raton, FL	"The persistent spines are much dilated or flattened at the base, they end abruptly at their dilated base, but not extending into a suborbicular shield."

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. Currently, there is no specific evidence indicating that <i>Euphorbia venefica</i> exhibits allelopathic properties. While many species within the <i>Euphorbia</i> genus are known to produce allelochemicals that can inhibit the growth of other plants, such as <i>Euphorbia heterophylla</i> and <i>Euphorbia esula</i> , no studies have directly examined the allelopathic effects of <i>E. venefica</i> .

403	Parasitic	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Shrub or small tree, usually 2-5 m high." [Euphorbiaceae. No evidence]

Qsn #	Question	Answer
404	Unpalatable to grazing animals	y
	Source(s)	Notes
	The National Gardening Association. (2025). <i>Euphorbia venefica</i> . https://garden.org/plants/view/119432/Euphorbia-Euphorbia-venefica/ . [Accessed 3 Jan 2025]	"Resistances: Deer Resistant Rabbit Resistant Squirrels"
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	[Toxic and spiny. Presumably unpalatable] "Warning: When a plant get damaged it exudes a thick white milky sap known as latex. This latex (resin) is poisonous contains some of the most potent irritants known. The latex is particularly dangerous for the eyes, skin and mucous membranes. So pay extreme attention not to get any in your eyes or mouth. Cultivated plants must be handled carefully."
	WRA Specialist. (2024). Personal Communication	Currently, there is no specific evidence indicating that <i>Euphorbia venefica</i> is browsed or grazed by animals. The plant produces a toxic latex that is caustic and can deter herbivores from feeding on it. This toxicity likely makes <i>Euphorbia venefica</i> unpalatable to most animals, reducing the likelihood of it being grazed.

405	Toxic to animals	y
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"According to Burkill (1994; recorded as <i>E. unispina</i>), the caustic and vesicant latex of this species is used from the Ivory Coast to Sudan as a component in arrow-poisons (see also Lewin (1893; 1923) about the use in Sudan to poison other weapons) and is added to bait in traps." ... "The Konta people in south-western Ethiopia told Tesfaye Awas that they mix the latex of this plant with flour to make a poison that kills rats."
	Neuwinger, H.D. (1996). <i>African Ethnobotany: Poisons and Drugs: Chemistry, Pharmacology, Toxicology</i> . CRC Press, Boca Raton, FL	"The plant has been for a long time as an arrow poison in Sudan."

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	World of Succulents. (2025). <i>Euphorbia venefica</i> (Cylindrical <i>Euphorbia</i>). https://worldofsucculents.com/euphorbia-venefica-cylindrical-euphorbia/ . [Accessed 3 Jan 2025]	"They tend to grow problem-free, but there are a few pests and diseases to be alert for."

407	Causes allergies or is otherwise toxic to humans	y
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Warning: When a plant get damaged it exudes a thick white milky sap known as latex. This latex (resin) is poisonous contains some of the most potent irritants known. The latex is particularly dangerous for the eyes, skin and mucous membranes. So pay extreme attention not to get any in your eyes or mouth. Cultivated plants must be handled carefully."

Qsn #	Question	Answer
408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"The plants flower and have leaves in the wet season and do not seem to suffer from grass fires in the dry season, being protected by a thin, grey mantle of corky tissue, but the plants are slow growing."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Sun Exposure: Light shade."
	The National Gardening Association. (2025). <i>Euphorbia</i> (<i>Euphorbia venefica</i>). https://garden.org/plants/view/119432/Euphorbia-Euphorbia-venefica/ . [Accessed 3 Jan 2025]	"Sun Requirements: Full Sun Full Sun to Partial Shade"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	n
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Habitat: Stony slopes in dry grassland with scattered trees. Locally abundant. Arid hills and open rocky hillsides with <i>Combretum</i> ."
	Rankel, K. (2025). Soil Recommendations for <i>Euphorbia venefica</i> . https://greg.app/euphorbia-venefica-soil/ . [Accessed 3 Jan 2025]	"Well-draining soil is crucial for <i>Euphorbia venefica</i> 's health. Optimal pH: 6.0-7.0 for nutrient uptake; watch for mold and compaction. Ideal mix: Perlite, peat moss, worm castings, and coarse sand or pumice."

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Shrub or small tree, usually 2-5 m high. Normally with one, occasionally with a few stems from the base, sparsely branched, mostly with three branches at each point of branching, and sometimes branching again. The branches spreading to ascending, cylindrical, up to c. 3.5 cm thick on first or second years' growth (base of branches, older branches and main stem thicker), whitish to pale green when fresh, grey to dark grey or brown when dried, soon developing a thin corky mantle around assimilating, succulent tissue, inside of which a cylinder of lignified tissue around a spongy pith. Branches that have flowered appear uniform, without clearly marked zones from previous flowering below the current flowering at the end of the branches."

Qsn #	Question	Answer
412	Forms dense thickets	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	[No evidence in native range] "As circumscribed here, the species is very widespread, but with scattered populations. Although the populations are of limited size and occur both on dry rocky outcrops and in woodland, they are mostly found in rocky localities, which are unsuitable for cultivation."
501	Aquatic	n
	Source(s)	Notes
	Neuwinger, H.D. (1996). <i>African Ethnobotany: Poisons and Drugs: Chemistry, Pharmacology, Toxicology</i> . CRC Press, Boca Raton, FL	[Terrestrial] "Stony slopes in dry grassland with scattered trees."
502	Grass	n
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch . [Accessed 2 Jan 2025]	"Genus: <i>Euphorbia</i> Family: Euphorbiaceae Subfamily: Euphorbioideae Tribe: Euphorbieae Subtribe: Euphorbiinae"
503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch . [Accessed 2 Jan 2025]	"Genus: <i>Euphorbia</i> Family: Euphorbiaceae Subfamily: Euphorbioideae Tribe: Euphorbieae Subtribe: Euphorbiinae"
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Shrub or small tree, usually 2-5 m high. Normally with one, occasionally with a few stems from the base, sparsely branched, mostly with three branches at each point of branching, and sometimes branching again."
601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes

Qsn #	Question	Answer
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Conservation assessment: As circumscribed here, the species is very widespread, but with scattered populations. Although the populations are of limited size and occur both on dry rocky outcrops and in woodland, they are mostly found in rocky localities, which are unsuitable for cultivation. The plants flower and have leaves in the wet season and do not seem to suffer from grass fires in the dry season, being protected by a thin, grey mantle of corky tissue, but the plants are slow growing. Rauh et al. (1969: 212) observed a growth of a few mm per year in cultivation, and even if growth is faster in nature, plants 2-5 m tall must have a remarkable age and be dependent on relatively undisturbed habitats. Although succulent growers desire to get plants of this species, the populations are so widely distributed that we do not see any immediate threat from this. We therefore propose the conservation assessment 'Least Concern' (LC)."

602	Produces viable seed	y
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Propagation: Usually by seeds, it can also be propagated by cuttings; if you remove an offset, remember to let it dry for a week or so, letting the wound heal (cutting planted to soon easily rot before they can grow roots). It is better to wash the cut to remove the latex."
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth."
	World of Succulents. (2025). <i>Euphorbia venefica</i> (Cylindrical <i>Euphorbia</i>). https://worldofsucculents.com/euphorbia-venefica-cylindrical-euphorbia/ . [Accessed 3 Jan 2025]	"These succulents can be grown from seed, but they can be difficult to germinate (or even find)."

603	Hybridizes naturally	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. No evidence found

604	Self-compatible or apomictic	
	Source(s)	Notes
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	"In Euphorbiaceae, with open-pollinated strictly unisexual flowers, self-incompatibility is rare, and earlier reports of it appear to be incorrect. Self-incompatibility has been shown to be absent or incomplete in <i>Chamaesyce</i> (herbaceous species, Ehrenfeld 1976), <i>Hevea</i> (Bouharmont 1962), and <i>Manihot</i> (Jennings 1963; George and Shifriss 1967)."

605	Requires specialist pollinators	n
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed 3 Jan 2025]	"Flowers: Liked by bees and many other insects. Apiculture."

Qsn #	Question	Answer
	Kubitzki, K. (ed.). (2014). The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales. Springer, New York	"In Euphorbiaceae, with open-pollinated strictly unisexual flowers, self-incompatibility is rare, and earlier reports of it appear to be incorrect. Self-incompatibility has been shown to be absent or incomplete in Chamaesyce (herbaceous species, Ehrenfeld 1976), Hevea (Bouharmont 1962), and Manihot (Jennings 1963; George and Shifriss 1967)."

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	LLIFLE. (2025). <i>Euphorbia venefica</i> Trémaux ex Kotschy. http://www.llifle.com/Encyclopedia/SUCCULENTS/Family/Euphorbiaceae/29436/Euphorbia_venefica . [Accessed]	[No evidence] "Propagation: Usually by seeds, it can also be propagated by cuttings; if you remove an offset, remember to let it dry for a week or so, letting the wound heal (cutting planted to soon easily rot before they can grow roots). It is better to wash the cut to remove the latex."

607	Minimum generative time (years)	>3
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	[Unknown, but due to slow growth rate, likely more than 4 years] "The plants flower and have leaves in the wet season and do not seem to suffer from grass fires in the dry season, being protected by a thin, grey mantle of corky tissue, but the plants are slow growing. Rauh et al. (1969: 212) observed a growth of a few mm per year in cultivation, and even if growth is faster in nature, plants 2-5 m tall must have a remarkable age and be dependent on relatively undisturbed habitats."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. <i>Bulletin de la Société des Naturalistes Luxembourgeois</i> 122 : 57-82	"Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth." [No means of attachment. The seeds of <i>Euphorbia venefica</i> , like many other species in the genus <i>Euphorbia</i> , are typically dispersed through a mechanism called explosive dehiscence.

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	<i>Euphorbia venefica</i> is not widely cultivated outside its native range, likely due to its specialized habitat requirements and potentially toxic properties, which are characteristic of many <i>Euphorbia</i> species.

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	No evidence. If <i>Euphorbia venefica</i> was found as a contaminant in produce, it would likely be an accidental and isolated occurrence rather than a systemic issue. Proper agricultural management and produce handling practices can mitigate such risks.

704	Propagules adapted to wind dispersal	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	"Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth." [No adaptations for wind dispersal. Like many species in the genus <i>Euphorbia</i> , their seeds are dispersed mainly through explosive dehiscence. This mechanism involves the fruit capsule drying and building tension until it bursts, forcefully ejecting the seeds away from the parent plant. The seeds are flung over short distances, but this mechanism does not rely on wind.]

705	Propagules water dispersed	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	"Although the populations are of limited size and occur both on dry rocky outcrops and in woodland, they are mostly found in rocky localities, which are unsuitable for cultivation." [Not reported to grow in riparian areas or close to bodies of water. While water could play a minor, opportunistic role in dispersing <i>Euphorbia venefica</i> seeds in specific habitats, it is not the plant's primary dispersal strategy.]

706	Propagules bird dispersed	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	"Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth." [There is no evidence to suggest that <i>Euphorbia venefica</i> seeds are dispersed by birds (ornithochory). Seeds dispersed by birds typically have characteristics that attract them, such as bright-colored, fleshy fruits or arils, which are absent in <i>Euphorbia venefica</i> .]

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	"Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth." [No evidence. Seeds that are dispersed externally by animals typically have specialized features, such as hooks, barbs, or sticky coatings, that allow them to adhere to fur, feathers, or skin. <i>Euphorbia</i> seeds, including those of <i>Euphorbia venefica</i> , generally lack these adaptations.]

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed <i>Euphorbia</i> with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	"Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth." [No evidence of ingestion or internal dispersal]

Qsn #	Question	Answer
801	Prolific seed production (>1000/m2)	
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed Euphorbia with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	[Densities unknown] "Fruits on reflexed pedicels which elongate during ripening up to a length of c. 5 mm; capsule distinctly 3-lobed, c. 4 mm wide, c. 6 mm long, smooth and glabrous, greyish-green to greyish at maturity. Seeds subglobose, c. 2.5 mm in diameter, mottled, smooth."

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. Many Euphorbia species produce seeds with hard coats that can remain dormant in the soil for extended periods, allowing them to germinate under favorable conditions. This suggests the potential for a persistent seed bank.

803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of <i>Euphorbia venefica</i>

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Weber, O., Atinafe, E., Awas, T., & Friis, I. (2020). <i>Euphorbia venefica</i> Trémaux ex Kotschy (Euphorbiaceae) and other shrub-like cylindrically stemmed Euphorbia with spirally arranged single spines. Bulletin de la Société des Naturalistes Luxembourgeois 122 : 57-82	[Possibly resistant to or tolerant of fires] "The plants flower and have leaves in the wet season and do not seem to suffer from grass fires in the dry season, being protected by a thin, grey mantle of corky tissue, but the plants are slow growing."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown

Summary of Risk Traits:

Euphorbia venefica is a shrub or small tree, usually 2-5 m high native to Chad, Ethiopia, Sudan, and Uganda. It typically grows as a succulent or semi-succulent shrub, adapting well to arid and semi-arid climates. The plant's latex is known to be highly toxic and may cause severe irritation or injury upon contact or ingestion. The caustic latex of this species is used from the Ivory Coast to Sudan as a component in arrow-poisons and is added to bait in traps. From the Ivory Coast to Nigeria it is used by medicine-men for various medicinal purposes, for example as an external vesicant on areas of leprosy, small-pox, chicken-pox, measles, etc. Uses in relation to magic have also been recorded from various parts of West Africa. There is limited evidence that it is cultivated outside its native range, and is currently not reported to be naturalized or invasive anywhere in the world.

High Risk / Undesirable Traits

- Thrives and could spread in regions with arid tropical climates
- Other *Euphorbia* species are invasive or high-risk weeds
- With spirally arranged single spines on cylindrical stems
- Toxic and unpalatable to browsing animals
- Sap caustic and toxic to people
- Reproduces by seed
- Seeds dispersed by ballistic dehiscence and through intentional cultivation

Low Risk Traits

- No reports of invasive or negative impacts where cultivated (but limited evidence outside native range)
- Grows best in high light environments (dense shade may inhibit spread)
- Slow growing