TAXON: *Malachra alceifolia Jacq.* SCORE: *13.0* RATING: *High Risk*

Taxon: Malachra alceifolia Jacq.

Family: Malvaceae

Common Name(s): bastard okra
malva de caballo
quesillo
wild okra
yellow leafbract

Synonym(s): Malachra conglomerata Turcz.
Malachra hispida Sessé & Moc.
Malachra officinalis Klotzsch
Malachra rotundifolia Schrank
Urena capitata var. alceifolia

Assessor: Chuck Chimera **Status:** Approved **End Date:** 26 Oct 2025

WRA Score: 13.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Weedy herb/subshrub, Disturbance Weed, Noxious Weed, Irritating Hairs, Seed Contaminant

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	y
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n = question 205	y
302	Garden/amenity/disturbance weed	y = 1*multiplier (see Appendix 2), n = 0	y
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	y
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	n
405	Toxic to animals	y = 1, n = 0	n
406	Host for recognized pests and pathogens	y = 1, n = 0	y
407	Causes allergies or is otherwise toxic to humans	y = 1, n = 0	n
408	Creates a fire hazard in natural ecosystems	y = 1, n = 0	n

Qsn #	Question	Answer Option	Answer
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)		
411	Climbing or smothering growth habit	y = 1, n = 0	n
412	Forms dense thickets	y = 1, n = 0	y
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	1
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y = 1, n = -1	y
702	Propagules dispersed intentionally by people	y = 1, n = -1	n
703	Propagules likely to disperse as a produce contaminant	y = 1, n = -1	y
704	Propagules adapted to wind dispersal	y = 1, n = -1	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y = 1, n = -1	n
707	Propagules dispersed by other animals (externally)		
708	Propagules survive passage through the gut	y = 1, n = -1	n
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y = 1, n = -1	y
803	Well controlled by herbicides	y = -1, n = 1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y = 1, n = -1	y
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**
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	[No evidence of domestication] "Malachra alceifolia is a neotropical species extremely variable especially in indumentum, in shape of leaf blades and bracts, and in length of stipules. In Panama two varieties can be easily recognized: var. alceifolia and var. fasciata. The latter variety was retained as a species in Giirke's monograph of the genus (Engl. Bot. Jahrb. 16: 330-361. 1892) (for discussion of the variability in the genus Malachra, see also Hochreutiner, Ann. Conserv. Jard. Bot. Geneve 20: 144- 149. 1917). Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes; the stiff hairs of stem and branchlets easily penetrate the skin; the var. alceifolia is called colloquially malva, while the var. fasciata is known in Panama as malva macho or borraja."

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). 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**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru."

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru."

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	n
	Source(s)	**Notes**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	[Low elevation tropics] "Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru."
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Low elevations of Hawaiian Islands] "Native to the American tropics and subtropics, naturalized elsewhere; in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui. First collected on O'ahu in 1940 (Kawahara s.n., BISH)."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	**Notes**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to the American tropics and subtropics, naturalized elsewhere; in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui. First collected on O'ahu in 1940 (Kawahara s.n., BISH)."
	GBIF Secretariat (2025). Malachra alceifolia Jacq. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/3152767. [Accessed 21 Oct 2025]	Collected in Benin, India, Thailand, and the Hawaiian Islands as well as in multiple locations within its native range

301	Naturalized beyond native range	y
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to the American tropics and subtropics, naturalized elsewhere; in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui. First collected on O'ahu in 1940 (Kawahara s.n., BISH)."

302	Garden/amenity/disturbance weed	y
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui."
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes"

Qsn #	Question	Answer
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru. It flowers throughout the year."
	WRA Specialist. (2025). Personal Communication	A weed of disturbed sites that may negatively impact agriculture

303	Agricultural/forestry/horticultural weed	y
	Source(s)	**Notes**
	Hawaii Administrative Rules. (1992). Title 4. Department of Agriculture. Subtitle 6. Division of Plant Industry. Chapter 67 Seed Rules. https://dab.hawaii.gov/wp-content/uploads/2012/12/AR-67.pdf. [Accessed 21 Oct 2025]	"§4-67-3 Noxious weed seed. (a) The following are declared prohibited noxious weed seed:" [Includes Malachra alceifolia]
	Rodríguez, N. N., Hermoso, A., & Girón, C. (2005). Weed control in coconut (Cocos nucifera L.) groves in Yoco and Yaguaraparo localities. In Proceedings of the XVII Congreso de la Asociación Latinoamericana de Malezas (ALAM), I Congreso Iberoamericano de Ciencia de las Malezas, IV Congreso Nacional de Ciencia de Malezas (pp. 291-292). Matanzas, Cuba	"In order to evaluate different herbicides and their mixtures in the control of weeds in the base of coconut trees and their surroundings, 72 plants high Creole coconut trees were selected in two properties, located in two localities of Sucre State, Venezuela: Yaguaraparo, Municipality of Cagigal, and Yoco, Municipality of Valdez. A statistical design of randomized blocks with three replications and eight treatments was used. Treatments applied were: glyphosate 50 cc; 2,4 -D amine 100 cc+glyphosate 50 cc; paraquat 80 cc; diuron 45 g; dicamba 2,4-D amine 100 cc; diurón 45 gr+paraquat 15 cc; 2,4-D amine 50 cc+MSMA 100 cc; and a check (manually weeded). The doses were dissolved in 15 liters of water and sprayed with a manual backpack sprayer. The treatments were applied at 45 days after a manual weeding. The evaluation of the experiment was carried out by visual observation of weed control, in three observations during 15 days, in winter and drought seasons. The results indicate that, in winter season, the most effective treatment was the mixture 2,4-D amine 100 cc+glyphosate 50 cc, in both localities, with 91,75% weed control in Yaguaraparo and 94,17% weed control in Yoco, followed by paraquat 80 cc (89,03%) and the mixture diuron 45 gr+paraquat 75 cc (94,02% control). In the dry season, the most effective treatment in Yoco was 2,4-D amine 100 cc (96,49% control). The predominant weeds were: Jagged Aldana (yellow flower), Ipomoea sp., (morning glory), Capraria biflora (fregosa), Guásuma ulmifolia (guásimo), Malachra alceifolia (mallow)."
	Hawaii Administrative Rules. (1992). Title 4. Department of Agriculture. Subtitle 6. Division of Plant Industry. Chapter 68 Noxious Weed Rules. https://dab.hawaii.gov/pi/files/2013/01/AR-68.pdf. [Accessed 21 Oct 2025]	"List of Plant Species Designated as Noxious Weeds for Eradication or Control Purposes by the Hawaii Department of Agriculture, June 18, 1992" [Includes Malachra alceifolia]
	Thompson, S. (1988). Range Expansion by Alien Weeds in the Coastal Farmlands of Guyana. Journal of Biogeography, 15(1), 109-118	"P. virgatum, M. alceifolia and A. curassavica are significant weeds in tropical South and Central America, and are common in coastal Guyana, but little is known of their relative importance as weeds."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Bananas, Orchards and Plantations"

Qsn #	Question	Answer
304	Environmental weed	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui." [Primarily in disturbed habitats]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Bananas, Orchards and Plantations" [Primarily an agricultural, and disturbance weed]

305	Congeneric weed	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Malachra capitata (L.) L. Malvaceae Synonym/s (n° of refs): Malachra alceifolia Jacq. (24) Total N° of Refs: 75 Global Risk Score: 2.88 Rating: Low Habit: perennial Herb Preferred Climate/s: Subtropical, Tropical Major Pathway/s: Contaminant, Herbal, Ornamental Dispersed by: Humans Weed of: Bananas, Cereals, Cotton, Orchards & Plantations"
	Gavhale, R. V., Mahakhode, R. H., & Bakale, V. L. (2010). Effect of herbicides on seed germination and seedling growth of weed Malachra capitata Linn. Journal of Soils and Crops 20(1): 159-166	"The experimental work was conducted in laboratory at Department of Botany, Institute of Science, Nagpur to study the effect of herbicides viz., 2,4-D, glyphosate and butachlor, on seed germination of Malachra capitata. Seeds were treated with various concentrations of herbicides for 24 hours and then seeds were washed with distilled water and germinated in petri dishes under laboratory conditions. 2,4-D were found to be most efficient in inhibiting seed germination of Mafachra capitata followed by glyphosate. The lethal doses for 2,4-D and glyphosate were 5000 and 50,000 ppm respectively, butachlor was less effective in inhibiting the seed germination upto 50,000 ppm when compared with 2,4-D and glyphosate. The germination percentage of treated seeds at sublethal doses were ranges from 55.4 to 14.11 at 1000 to 4000 ppm of 2, 4-D and 70.91 to 42.10 at 10,000 to 50,000 ppm of glyphosate respectively as against 80% in control. Similarly the percentage of germination in butachlor treated seeds were decreased from 63.20 to 48.00 at 10,000 to 50,000 ppm. A graduals inhibition of hypocotyls and radicles were observed with increasing concentrations in all the herbicidal treatments. Herbicidal treatments also exhibited malformed seedlings at higher concent;ation. Swollen hypocotyi and radicle were observed after 2, 4 -D, glyphosate and butachlor treatment."

401	Produces spines, thorns or burrs	y
	Source(s)	Notes
	Janzen, D. H., & Liesner, R. (1980). Annotated check-list of plants of lowland Guanacaste Province, Costa Rica, exclusive of grasses and non-vascular cryptogams. .- Brenesia 18: 15-90	"Malachra alceifolia Jacq. - very hairy and spiny with lots of large holes eaten in leaves, thick stem herb, massive inflorescences, corolla yellow, stem hairs to 1 mm long."
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"the stiff hairs of stem and branchlets easily penetrate the skin" [Irritating hairs may be a nuisance]

402	Allelopathic	

Qsn #	Question	Answer
	Source(s)	Notes
	Ono Morikawa, C. I., Miyaura, R., Tapia Y Figueroa, M. D. L., Rengifo Salgado, E. L., & Fujii, Y. (2012). Screening of 170 Peruvian plant species for allelopathic activity by using the Sandwich Method. Weed Biology and Management, 12 (1): 1-11	[Leaf leachates demonstrate some allelopathic activity] "Peru is one of the 20 botanically extremely diverse countries in the world, with >17 000 flowering plants, of which 30% are endemic. So far, no systematic research has been conducted on the screening of the allelopathic plants. In this study, the allelopathic activity of 170 species from 61 families of Peruvian plants that were collected from the three main regions of Peru – the Costa (Pacific coastline), the Sierra (Andean mountains), and the Selva (Amazonian rainforest) – was evaluated. The allelopathic activity was determined by the Sandwich Method, which can evaluate the activity of leaf leachates. The species that were found to be highly inhibitory in this screening, under the criterion of >90% inhibition of the radicle of lettuce (Lactuca sativa) seed- lings, were Aristeguietia ballii and Diplostephium foliosissimum (Asteraceae) and Spondias mombin (Anacardiaceae). All of these species are native plants from Peru. This study gives a strong clue regarding the potential of isolating potent allelochemicals from these plants in the future." "Table 2. Allelopathic activity of the 176 samples (170 species) of Peruvian plants by the Sandwich Method" [Malachra alceifolia - Table 1 gives the details about the collection sites; ‡percentage growth rate, compared to that of the control; §stronger inhibitory activity in the radicle: * M – 1(σ)]

403	Parasitic	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Stiffly branched, erect herbs or subshrubs 0.5-2.5 m tall" [No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	Notes
	Botanikks. (2025). Malachra alceifolia Jacq. - Yellow Leafbract. https://www.botanikks.com/plants/malachra-alceifolia-jacq/557284/1. [Accessed 22 Oct 2025]	"The plant is also used as fodder for livestock, and the seeds are a food source for small birds."
	Cervantes-Ceballos, L., Sánchez-Hoyos, J., Sanchez-Hoyos, F., Torres-Niño, E., Mercado-Camargo, J., Echeverry-Gómez, A., Jotty Arroyo, K., del Olmo-Fernández, E., & Gómez-Estrada, H. (2022). An overview of genus Malachra L.—Ethnobotany, phytochemistry, and pharmacological activity. Plants, 11(20), 2808	[Generic description. Palatability of Malachra alceifolia not specifically addressed] "The species in the genus Malachra L. are frequently reported as weeds, in pastures and rangelands, and usually serving as food for livestock."
	WRA Specialist. (2025). Personal Communication	While comprehensive feeding studies may be limited, current scientific and botanical sources consistently report that Malachra alceifolia is used as fodder and is consumed by grazing animals.

405	Toxic to animals	n
	Source(s)	Notes
	Cervantes-Ceballos, L., Sánchez-Hoyos, J., Sanchez-Hoyos, F., Torres-Niño, E., Mercado-Camargo, J., Echeverry-Gómez, A., Jotty Arroyo, K., del Olmo-Fernández, E., & Gómez-Estrada, H. (2022). An overview of genus Malachra L.—Ethnobotany, phytochemistry, and pharmacological activity. Plants, 11(20), 2808	"The species in the genus Malachra L. are frequently reported as weeds, in pastures and rangelands, and usually serving as food for livestock" [No evidence. Current sources suggest that Malachra alceifolia is used as livestock feed without reported toxicity. However, a definitive safety assessment would require more specific toxicological research.]

Qsn #	Question	Answer
406	Host for recognized pests and pathogens	y
	Source(s)	Notes
	Hall, G. C., Graham, A. P., & Roye, M. E. (2008). Tobacco leaf curl Cuba virus infects the weed Malachra alceifolia in Jamaica. Plant Pathology, 57(2): 398	"This is the first report of the occurrence of TbLCuCUV in Jamaica and the first report of a geminivirus infecting M. alceifolia. Although geminiviral infection of tobacco has not been reported in Jamaica, this finding indicates that Jamaica's small commercial tobacco cultivation may be at risk of infection by TbLCuCUV."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence
	WRA Specialist. (2025). Personal Communication	There is no clear evidence that Malachra alceifolia is toxic to people or animals. However, information on this species is limited, and some related plants in the same genus have caused skin irritation and photosensitivity in livestock. As a precaution, avoid eating this plant and do not allow pets or livestock to graze on it. Handle with care and wash hands after contact. Note: Plant Pono provides this information for awareness only. The absence of reported toxicity does not guarantee safety. Always use caution when handling or using unfamiliar plants.

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes;" [No evidence. Unlikely in moist habitats]
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites" [No evidence. Unlikely in wet sites]
	Cervantes-Ceballos, L., Sánchez-Hoyos, J., Sanchez-Hoyos, F., Torres-Niño, E., Mercado-Camargo, J., Echeverry-Gómez, A., Jotty Arroyo, K., del Olmo-Fernández, E., & Gómez-Estrada, H. (2022). An overview of genus Malachra L.—Ethnobotany, phytochemistry, and pharmacological activity. Plants, 11(20), 2808	"The species in the genus Malachra L. are frequently reported as weeds, in pastures and rangelands, and usually serving as food for livestock" [No evidence]

Qsn #	Question	Answer
409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	Sunshine Seeds. (2025). Malachra alceifolia. https://www.sunshine-seeds.de/Malachra-alceifolia-63553p.html. [Accessed 22 Oct 2025]	"Locations: sun to semi-shade"
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes" [Suggests high light environments]
	Botanikks. (2025). Malachra alceifolia Jacq. - Yellow Leafbract. https://www.botanikks.com/plants/malachra-alceifolia-jacq/557284/1. [Accessed 22 Oct 2025]	"Malachra alceifolia Jacq., commonly known as dwarf hollyhock or baby mallow, prefers full sun to partial shade."
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites" [Occurs in open, higher light environments]

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui." [Unlikely to be particular to soil type in disturbed habitats, but may require good drainage]
	Botanikks. (2025). Malachra alceifolia Jacq. - Yellow Leafbract. https://www.botanikks.com/plants/malachra-alceifolia-jacq/557284/1. [Accessed 22 Oct 2025]	"The plant prefers well-draining soil that is rich in organic matter. A slightly acidic to neutral soil pH between 5.5 and 7.5 is ideal for the growth of M. alceifolia. The addition of compost or aged manure can enhance the soil's nutrient-level and improve drainage. Additionally, the soil should retain moisture, but not be waterlogged, as excessively wet soils can lead to root rot or fungal infections."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Stiffly branched, erect herbs or subshrubs 0.5-2.5 m tall"

412	Forms dense thickets	y
	Source(s)	**Notes**
	Ocampo, R., & Balick, M. J. (2009). lants of Semillas Sagradas: An Ethnomedicinal Garden in Costa Rica (R. Goldstein & K. Herrera, Eds.). Finca Luna Nueva Extractos de Costa Rica, S.A.	"A plant of impressive appearance, commonly known as malva, this wild species forms colonies in warm humid tropical habitats with plenty of light."
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes"
	PictureThis. (2025). Yellow leafbract (Malachra alceifolia). https://www.picturethisai.com/wiki/Malachra_alceifolia.html. [Accessed 22 Oct 2025]	"Yellow leafbract is a tropical shrub with heart-shaped, lobed leaves and clusters of small yellow flowers. It thrives in warm climates and well-drained soil, often found along roadsides and disturbed areas, where it rapidly forms dense stands."

501	Aquatic	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	[Terrestrial] "Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes"

502	Grass	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	Malvaceae

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	Malvaceae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Stiffly branched, erect herbs or subshrubs 0.5-2.5 m tall; stems glabrate or stellate pubescent, often hispid with simple hairs."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	**Notes**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	[No evidence] "Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites; it occurs widely in Mexico at low elevation (Fig. 68), and in the West Indies, Central America, and northern South America from Guiana to Peru. It flowers throughout the year."

602	Produces viable seed	y
	Source(s)	**Notes**
	Johnston, A. (1949). The germination of Malvaceous seeds. Tropical Agriculture, 26, 63-65	"Experiments are reported in which seeds of Malachra alceifolia, Malvastrum coromandelianum, Sida rhombi-folia and okra, Hibiscus esculentus[Abelmoschus esculentus], were treated in two Ways before sowing: (1) immersion in H2SO4 (cone.) for varying periods, (2) part removal of testa. In all species, germination was greatly improved and accelerated by either treatment, but cutting was superior to the sulfuric acid method. The optimum period of immersion for the latter varied; for Malachra it was 15-30 minutes, for Malvastrum 10-30 minutes and for Sida 30-60 minutes, or possibly more; okra germinated best after 3 hours' immersion but there was no appreciable falling off even after 220.5 hours."

Qsn #	Question	Answer
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Mericarps 5, muticous, papery, 3-3.5 mm long, reddish-veined, glabrous or puberulent. Seeds black, ca. 2.5 mm long, glabrous."
	Sunshine Seeds. (2025). Malachra alceifolia. https://www.sunshine-seeds.de/Malachra-alceifolia-63553p.html. [Accessed 21 Oct 2025]	"Propagation: Seeds/Cuttings Pre-Treatment: 0 Sowing Time: all year round Sowing Deep: ca. 0,5 cm Sowing Mix: Coir or sowing mix + sand or perlite Germination Temperature: ca. 22-25°C Location: bright + keep constantly moist, not wet Germination Time: ca. 2-4 weeks"

603	Hybridizes naturally	
	Source(s)	**Notes**
	Cervantes-Ceballos, L., Sánchez-Hoyos, J., Sanchez-Hoyos, F., Torres-Niño, E., Mercado-Camargo, J., Echeverry-Gómez, A., Jotty Arroyo, K., del Olmo-Fernández, E., & Gómez-Estrada, H. (2022). An overview of genus Malachra L.–Ethnobotany, phytochemistry, and pharmacological activity. Plants, 11(20), 2808	There is no documented evidence that Malachra alceifolia naturally hybridizes with other species.

604	Self-compatible or apomictic	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Flowers in sessile or short-pedunculate heads, subtended and at least partly enclosed by whitish, green-veined, ovate to triangular, cordate, folded bracts 1-2.5 cm long; calyx white with reddish veins, tubular-campanulate, 0.5-0.8 cm long; petals pale to dark yellow, 1-2 cm long, nearly equalling the yellow staminal column, styles, and stigmas." [Unknown. Flowers are hermaphroditic and likely self-compatible.]
	Raju, P. S., & Raju, A. S. (2013). Mixed breeding system and entomophily in Malachra capitata L.(Malvaceae). Taprobanica: The Journal of Asian Biodiversity, 5(2): 131-137	[Related species self-compatible] "Malachra capitata is a small seasonal herb. Flowering occurs during September-October. It is hermaphroditic and self-compatible with a mixed breeding system. The conspicuous floral displays, non-tubular nature of the flower, and the small volume of nectar with high sugar concentration attract bees and butterflies with bees serving as the principal pollinator. The fruit set is 21% in open-pollination mode despite the hectic foraging activity of bees and butterflies. The observed fruit set rate is attributed to the high percentage of flower predation by beetles, and by the nature of soil nutrient/environment requirements. The fruit is a schizocarp with five 1-seeded indehiscent mericarps. New plants arise from seed during the rainy season mostly at parental sites and usually form pure stands; the plants complete their life cycle within six or seven months."

605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Sardi-Saavedra, A., Manzano, M. R., Vargas, G., & Rivera-Pedroza, L. F. (2024). Melitofauna del agropaisaje de caña de azúcar en el Valle del Cauca, Colombia. Biota colombiana, 25. doi.org/10.21068/2539200x.1128	"Anexo 1. Plantas visitadas por las abejas en las franjas de vegetación y fragmentos de bosque en el agropaisaje de caña" [Annex 1. Plants visited by bees in vegetation strips and forest fragments in the sugarcane agrolandscape] [Malachra alceifolia visited by Xylocopa lachnea Nannotrigona tristella Anthidielum sp.]

Qsn #	Question	Answer
	Raju, P. S., & Raju, A. S. (2013). Mixed breeding system and entomophily in Malachra capitata L.(Malvaceae). Taprobanica: The Journal of Asian Biodiversity, 5(2): 131-137	[Related species with similar floral morphology pollinated by bees] "Malachra capitata is a small seasonal herb. Flowering occurs during September-October. It is hermaphroditic and self-compatible with a mixed breeding system. The conspicuous floral displays, non-tubular nature of the flower, and the small volume of nectar with high sugar concentration attract bees and butterflies with bees serving as the principal pollinator."

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Thompson, S. (1988). Range Expansion by Alien Weeds in the Coastal Farmlands of Guyana. Journal of Biogeography, 15(1), 109-118	"TABLE 1. Attributes and distribution of six alien weeds in coastal Guyana" [Malachra alceifolia - Mode of Reproduction - Seed]
	WRA Specialist. (2025). Personal Communication	Does not reproduce by vegetative fragmentation. Spreads primarily through seed production and seedling establishment in disturbed areas.

607	Minimum generative time (years)	1
	Source(s)	**Notes**
	Botanikks. (2025). Malachra alceifolia Jacq. - Yellow Leafbract. https://www.botanikks.com/plants/malachra-alceifolia-jacq/557284/1. [Accessed 22 Oct 2025]	"Malachra alceifolia Jacq., also known as "Bastard false mallow" or "Diamante", is a species of annual herb that belongs to the family Malvaceae."
	Thompson, S. (1988). Range Expansion by Alien Weeds in the Coastal Farmlands of Guyana. Journal of Biogeography, 15(1), 109-118	"TABLE 1. Attributes and distribution of six alien weeds in coastal Guyana" [Malachra alceifolia - Life cycle - Annual/perennial]

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y
	Source(s)	**Notes**
	Fryxell, P. (1988). Malvaceae of Mexico. Systematic Botany Monographs, 25, 1-522	"Malachra alceifolia occurs primarily in disturbed situations (roadsides, pastures, etc.), often in wet sites" [Occurs on roadsides, suggesting dispersal by human activities]
	Thompson, S. R. (1984). Colonizing abilities of six alien weeds in the coastal farmlands of Guyana, SA [Doctoral dissertation, McGill University]	[Common in heavily trafficked areas] "Two species had established large populations in cultivated fields (E. colonum and M. lathyroides), whereas the remaining four–A. curassavica, E. fosbergii, M. alceifolia, and P. virgatum–although infrequent in cultivated fields, were locally dominant along roadsides, in waste places, or in abandoned fields at the C.A.S.. as well as elsewhere along the coast."
	WRA Specialist. (2025). Personal Communication	Malachra alceifolia is frequently found along roadsides, pastures, and disturbed areas, where its small, readily detached seeds can be transported in soil, on equipment, or by animals. These characteristics suggest that propagules are likely to be dispersed unintentionally, especially in heavily trafficked or managed landscapes, although they otherwise lack means of external attachment.

702	Propagules dispersed intentionally by people	n
	Source(s)	**Notes**
	Hawaii Administrative Rules. (1992). Title 4. Department of Agriculture. Subtitle 6. Division of Plant Industry. Chapter 68 Noxious Weed Rules. https://dab.hawaii.gov/pi/files/2013/01/AR-68.pdf. [Accessed]	A listed noxious weed. There is no evidence that Malachra alceifolia is intentionally dispersed or cultivated by people. The species is not known to be used ornamentally or agriculturally, and while it has minor traditional medicinal uses in parts of its range, these do not appear to involve deliberate planting or propagation.

Qsn #	Question	Answer
703	**Propagules likely to disperse as a produce contaminant**	**y**
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Herbal Dispersed by: Humans"
	Charles Darwin Foundation. (2025). Galapagos Species Database, Malachra alceifolia, dataZone. https://datazone.darwinfoundation.org/en/checklist/?species=580. [Accessed 21 Oct 2025]	"Mode of introduction: Accidental Introduction Pathway: Contaminant Subpathway: Contaminant on plants (inc. seeds and plant associated material) Introduced status: Naturalized"

704	**Propagules adapted to wind dispersal**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Mericarps 5, muticous, papery, 3-3.5 mm long, reddish-veined, glabrous or puberulent. Seeds black, ca. 2.5 mm long, glabrous." [Propagules of Malachra alceifolia are not adapted for wind dispersal. The plant produces small, heavy mericarps that lack wings or other aerodynamic structures, indicating that dispersal occurs primarily by gravity or through unintentional transport in soil or on animals rather than by wind.]

705	**Propagules water dispersed**	
	Source(s)	**Notes**
	Woodson, R. E., Schery, R. W., & Robyns, A. (1965). Flora of Panama. Part VI. Family 115. Malvaceae. Annals of the Missouri Botanical Garden, 52(4), 497-578	"Mericarps 3-3.5 mm long and 2-2.5 mm broad, minutely puberulus or glabrous; seeds ca 2-2.5 mm long." ... "Malachra alceifolia grows in moist thickets and weedy fields, among bushes, and on open slopes" [There is no clear evidence that Malachra alceifolia propagules are adapted for water dispersal, and its fruit and seed morphology suggest this is unlikely. However, secondary or accidental dispersal by water (e.g., surface runoff or flooding in disturbed areas) could occasionally occur.]

706	**Propagules bird dispersed**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Mericarps 5, muticous, papery, 3-3.5 mm long, reddish-veined, glabrous or puberulent. Seeds black, ca. 2.5 mm long, glabrous." [Propagules of Malachra alceifolia are not adapted for bird dispersal. The dry, non-fleshy mericarps lack features that would attract frugivorous birds or allow attachment to feathers. Dispersal by birds is therefore considered unlikely.]

707	**Propagules dispersed by other animals (externally)**	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Mericarps 5, muticous, papery, 3-3.5 mm long, reddish-veined, glabrous or puberulent. Seeds black, ca. 2.5 mm long, glabrous." [There is some potential for Malachra alceifolia propagules to be dispersed externally by animals, though this would be incidental rather than adaptive. The fruits lack specialized structures for adhesion, but their small size, rough texture, and occurrence in disturbed habitats frequented by livestock make occasional transport on fur, hooves, or mud possible]

Qsn #	Question	Answer
708	**Propagules survive passage through the gut**	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Mericarps 5, muticous, papery, 3-3.5 mm long, reddish-veined, glabrous or puberulent. Seeds black, ca. 2.5 mm long, glabrous." [There is no evidence that Malachra alceifolia seeds survive passage through animal digestive tracts. The small, dry mericarps lack protective or dormancy traits typical of endozoochorous species, and the plant is not known to be eaten by livestock or wildlife. Gut dispersal is therefore considered unlikely.]

801	**Prolific seed production (>1000/m2)**	
	Source(s)	**Notes**
	Cervantes-Ceballos, L., Sánchez-Hoyos, J., Sanchez-Hoyos, F., Torres-Niño, E., Mercado-Camargo, J., Echeverry-Gómez, A., Jotty Arroyo, K., del Olmo-Fernández, E., & Gómez-Estrada, H. (2022). An overview of genus Malachra L.–Ethnobotany, phytochemistry, and pharmacological activity. Plants, 11(20), 2808	"The fruits have bracts and persistent calyx, with numerous seeds, up to 2 mm in diameter, dark colored, and flattened"
	WRA Specialist. (2025). Personal Communication	Quantitative data on seed production for Malachra alceifolia are lacking. Each flower produces 10–15 one-seeded fruits, and plants can flower over several months, suggesting moderate to high fecundity typical of ruderal Malvaceae. However, based on morphology and comparisons with related species, production exceeding 1,000 seeds per square meter appears unlikely.

802	**Evidence that a persistent propagule bank is formed (>1 yr)**	y
	Source(s)	**Notes**
	Thompson, S. R. (1984). Colonizing abilities of six alien weeds in the coastal farmlands of Guyana, SA [Doctoral dissertation, McGill University]	"M. alceifolia seeds are also viable after five years, with a germination rate of 57%. The husk on M. alceifolia seeds may well be the source of some inhibition, although no tests were made to verify this proposal."
	Baskin, C. C., & Baskin, J. M. (2025). Seed dormancy and germination in the Malvaceae: a palaeohistory, subfamily, growth form and geographical distribution perspective. Seed Science Research, 1-28. doi:10.1017/S0960258525100068	"Table 6. Persistent soil seed banks for species of Malvaceae" [Includes Malachra alceifolia]

Qsn #	Question	Answer
803	**Well controlled by herbicides**	y
	Source(s)	**Notes**
	Sosa, L., & Medrano, C. (1992). Evaluación de herbicidas para el control de malezas arbustivas en pastizales del estado Zulia. Revista de la Facultad de Agronomía (LUZ), 9, 199-212	"During the period of october to december 1988 in two locations of Zulia State: La Esperanza and Alto Viento Farms (Perijá and Urdaneta Municipalities), were compared the herbicida Weedone CB (2-(2,4-Dichlorophenoxy) propionie acid, butoxyethanol ester 11.7% plus 2,4 Dichlorophenoxy acetic acid, butoxyethanol ester 11.9%) and Tordon 212 (amine salt of 4 amine 3, 5, 6 - Tricldoropicolinic acid 18.1% plus 2,4 Dichlorophenoxy acetic 37.7%). The experimental design was completely randomized in a factorial arranged of 2 (herbicidas) x 3 (apphcation methods) x 4 (evaluation times). The most important woody weeds were selected in each farm. The application method was concentrated spray to the foliage, basal bark treatment and stump treatment. Weedone CB as well as Tordon 212 gave excellent control of Pavonia sidaefolia H.B.K., Crataeva tapia L., Randia spinosa (Jacq) Karst, Malachra alceifolia Jacq and Uncaria guian,ensis (Aubl) Gmel (> 92%). The two herbicidas also controlled well Pithecolobium sp. and Machaerium cultratum Pittier (> 84%). The most effective application methods were those apphed to foliage and stump treatment."

804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	y
	Source(s)	**Notes**
	Thompson, S. R. (1984). Colonizing abilities of six alien weeds in the coastal farmlands of Guyana, SA [Doctoral dissertation, McGill University]	"Species group 4 was closely associated with site group 1. These sites are most frequently hand- or machine-cut. Field observations verified that species such as Malva alceifolia, Ruellia sp., Sida sp., and Sporobolus indicus resprouted, either from stumps or from basal meristems."

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R. & Sohmer, S.H. (1999). Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Unknown. No evidence of natural enemies impacting plants] "in Hawai'i naturalized in disturbed places at low elevations on Kaua'i, O'ahu, and Maui."

Summary of Risk Traits:

Malachra alceifolia, commonly known as bastard okra, wild okra, or yellow leafbract, is a weedy herb or subshrub that poses a high invasion risk in tropical regions like Hawai'i. This plant is characterized by its stiff, irritating hairs and ability to form dense thickets in disturbed areas. It is a prolific seed producer, with seeds that remain viable in the soil for over five years, enabling long-term persistence and making eradication difficult. Its seeds are easily spread as contaminants in soil and agricultural produce, and the plant can resprout after cutting, allowing it to quickly colonize roadsides, pastures, and cultivated fields. It is documented as naturalized on Kaua'i, O'ahu, and Maui.

Despite being palatable to livestock and non-toxic, its negative impacts outweigh any potential benefits. Malachra alceifolia is listed as a noxious weed in Hawai'i and can host crop diseases, such as the Tobacco leaf curl Cuba virus. Effective management requires a persistent approach, including herbicide applications and careful monitoring to prevent re-establishment from the soil seed bank. Preventing its introduction and spread is crucial to protecting agricultural lands and native ecosystems.

High Risk / Undesirable Traits
• Broad tropical/subtropical climate suitability
• Naturalized beyond native range
• Agricultural and disturbance weed
• Forms dense thickets
• Annual with rapid generation time
• Persistent soil seed bank (>5 years)
• Tolerates mutilation (resprouts after cutting)
• Unintentional human-mediated dispersal
• Seed contaminant
• Irritating hairs

Low Risk Traits
• Non-toxic to humans and animals
• Palatable to livestock
• Non-climbing growth habit
• No fire hazard
• Herbicide controllable
• Limited natural dispersal adaptations