

Taxon: Aloe hemmingii	Family: Xanthorrhoeaceae
Common Name(s): mosaic aloe	Synonym(s): NA

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 8 Jul 2015
WRA Score: 1.0	Designation: L	Rating: Low Risk

Keywords: Basal-rosette, Succulent, Sharp Teeth, Self-Incompatible, Capsular Fruit

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	?
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		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	n
405	Toxic to animals		
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans		
408	Creates a fire hazard in natural ecosystems	y=1, n=0	n
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		

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	y=1, n=-1	n
605	Requires specialist pollinators		
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant		
704	Propagules adapted to wind dispersal	y=1, n=-1	y
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
	Thulin, M. (ed.). 2008. Flora of Somalia Volume 4. University of Chicago Press, Chicago, IL	No evidence
102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA
103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	Weber, O. 2013. Aloe hemmingii. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	"A. hemmingii is native to northern Somalia above 700 m altitude. The eastern-most locality where the species has been seen is along the main road which leads through Shiikh and down to Berbera some 50 km away at the coast."
202	Quality of climate match data	High
	Source(s)	Notes
	Weber, O. 2013. Aloe hemmingii. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Weber, O. 2013. Aloe hemmingii. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	"Aloe hemmingii is native to the Sanaag region of northern Somalia. Occurs between 700 and 1,200 m."
	Dave's Garden. 2015. Aloe - Aloe hemmingii. http://davesgarden.com/guides/pf/go/61377/ . [Accessed 7 Jul 2015]	"Hardiness: USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F) "

Qsn #	Question	Answer
204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Weber, O. 2013. <i>Aloe hemmingii</i> . The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	" <i>Aloe hemmingii</i> is native to the Sanaag region of northern Somalia. Occurs between 700 and 1,200 m."

205	Does the species have a history of repeated introductions outside its natural range?	?
	Source(s)	Notes
	Dave's Garden. 2015. <i>Aloe - Aloe hemmingii</i> . http://davesgarden.com/guides/pf/go/61377/ . [Accessed 8 Jul 2015]	"This plant has been said to grow in the following regions: Apache Junction, Arizona Carefree, Arizona Chandler, Arizona Phoenix, Arizona Queen Creek, Arizona Brea, California Reseda, California Spring Valley, California Tarzana, California Thousand Oaks, California Sarasota, Florida Tallahassee, Florida Metairie, Louisiana Dallas, Texas"
	WRA Specialist. 2015. Personal Communication	Limited information on cultivation outside native range

301	Naturalized beyond native range	n
	Source(s)	Notes
	All Things Plants. 2015. <i>Aloe (Aloe hemmingii)</i> in the Aloes Database. http://allthingsplants.com/plants/view/71527/Aloe-Aloe-hemmingii/ . [Accessed 8 Jul 2015]	"Uses: Will Naturalize"
	Randall, R.P. 2012. <i>A Global Compendium of Weeds</i> . 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence
	Wagner, W.L., Herbst, D.R. & Lorence, D.H. 2015. <i>Flora of the Hawaiian Islands</i> . Smithsonian Institution, Washington, D.C. http://botany.si.edu/pacificislandbiodiversity/hawaiianflora/index.htm . [Accessed 8 Jul 2015]	No evidence to date (Only <i>Aloe vera</i> reported as naturalized)

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. 2012. <i>A Global Compendium of Weeds</i> . 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

Qsn #	Question	Answer
303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence
304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence
305	Congeneric weed	y
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R. & Lorence, D.H. 2015. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/pacificislandbiodiversity/hawaiianflora/index.htm . [Accessed 8 Jul 2015]	"Aloe vera (L.) Burm. f. Status: Naturalized Distribution: K (Hanapepe & Kekaha)/ O (Ko: Makapu`u Head)/ Mo (Kalaupapa Pen.)/ L (Kaunapali Gul.)/ WM (Lahaina District)"
	Queensland Government. 2011. Weeds of Australia. Broad-leaf aloe. <i>Aloe maculata</i> . http://keyserver.lucidcentral.org/weeds/data/080c0106-040c-4508-8300-0b0a06060e01/media/Html/Aloe_maculata.htm . [Accessed 7 Jul 2015]	"Broad-leaf aloe (<i>Aloe maculata</i>) is a moderately common environmental weed in south-eastern Australia. It is also seen as a minor weed or "sleeper weed" in other parts of the country. This succulent plant is widely cultivated as a garden ornamental and often becomes established in bushland after being dumped in garden waste." ... "Broad-leaf aloe (<i>Aloe maculata</i>) is currently of most concern in Victoria, where it is thought to pose a serious threat to one or more vegetation formations. This invasive succulent is listed as an environmental weed by several local and regional authorities in this state (e.g. in the City of Hume, the Mornington Peninsula Shire, the North Grampians Shire, Swan Hill Rural City, Banyule City and the Goulburn Broken Catchment). It is also regarded as an important environmental weed in French Island National Park and has been recorded in Yarra Bend Park in suburban Melbourne."
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	A number of Aloe species are naturalized and/or listed as weeds

Qsn #	Question	Answer
401	Produces spines, thorns or burrs	y
	Source(s)	Notes
	Brickell, C. 2011. American Horticultural Society Encyclopedia of Plants and Flowers. DK, London / New York	"Ovate to lance-shaped. olive green leaves, with dull, white streaks, have short, sharp teeth at the margins."
	Thulin, M. (ed.). 2008. Flora of Somalia Volume 4. University of Chicago Press, Chicago, IL	"Plants stemless, solitary or in small groups. Leaves about 10, lanceolate, spreading, 10–12 x 3–4 cm, shiny dark green with numerous elongated white spots; margins with hard dark brown triangular teeth, 1.5 mm long, 5 mm apart."

402	Allelopathic	
	Source(s)	Notes
	Arowosegbe, S., Wintola, O. A., & Afolayan, A. J. (2012). Phytochemical constituents and allelopathic effect of <i>Aloe ferox</i> Mill. root extract on tomato. <i>Journal of Medicinal Plants Research</i> , 6(11), 2094-2099	[Unknown. Allelopathy documented in genus] "Phytochemical constituents of the root extract of <i>Aloe ferox</i> were estimated using standard quantitative analysis. The extract contained phenols, flavonoids, flavonols, tannins alkaloids and saponins in different proportions; with more of phenols and saponins. Allelopathic effect of the aqueous root extract of the plant on tomato was also investigated. The extract reduced the germination of the tomato seeds. However, root and shoot elongations of the tomato seedlings were significantly inhibited by the extract, with the percentage inhibition increasing as the concentration of the extract increased. The observed allelopathic activity of the root extract of <i>A. ferox</i> on the seed germination and seedling growth of tomato was attributed to the presence of the allelopathic phytochemicals in <i>A. ferox</i> roots."

403	Parasitic	n
	Source(s)	Notes
	Brickell, C. 2011. American Horticultural Society Encyclopedia of Plants and Flowers. DK, London / New York	"Basal-rosetted. perennial succulent." [No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	Notes
	Parker, D. M., & Bernard, R. T. F. (2009). Levels of aloe mortality with and without elephants in the Thicket Biome of South Africa. <i>African Journal of Ecology</i> , 47(2): 246-251	[Aloe species are palatable to goats & other domestic herbivores] "It is important to note that other wild and domestic herbivores may inflict different forms of damage to aloes (e.g. greater kudu, <i>Tragelaphus strepsiceros</i> , Pallas, and goats, <i>Capra hircus</i> , L.) by browsing on the leaves but head (crown) removal, particularly of tall aloes, is exclusively because of elephants (Breebaart, Bhikraj & O'Connor, 2002; Shackleton & Gambiza, 2007)."

Qsn #	Question	Answer
	Breebaart, L., Bhikraj, R., & O'Connor, T. G. (2002). Impact of goat browsing on <i>Aloe ferox</i> in a South African savanna. <i>African Journal of Range and Forage Science</i> , 19(1), 77-78	[Goats browse on other <i>Aloe</i> species] "The extent and impact of the utilisation of <i>Aloe ferox</i> by Boer goats during winter in a South African savanna was determined using a plant-based approach. All <i>Aloe</i> plants rooted within the transects were eaten by goats, with small plants utilised more frequently than tall plants. The density of dying and dead <i>Aloe</i> plants was significantly greater than live plants. Mortality of <i>Aloe ferox</i> was a result of extensive browsing by Boer goats. The future survival of <i>Aloe ferox</i> in this savanna system is highly unlikely."

405	Toxic to animals	
	Source(s)	Notes
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence, but other <i>Aloe</i> species may have toxic properties or contribute to contact dermatitis

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	Reynolds, T. 2004. <i>Aloes: The genus Aloe</i> . CRC Press, Boca Raton, FL	[Generic description] "Cultivated aloes are more susceptible to arthropod pests than those growing in their natural habitats. The main arthropod pests include mealy bugs, scales, beetles, mites and aphids."
	Kelly, J. and Olsen, M. 2011. Problems and Pests of Agave, Aloe, Cactus and Yucca. Cooperative Extension College of Agriculture and Life Sciences The University of Arizona Tucson, Arizona	[Generic description] "Mites are not insects, but are closely related to spiders. Mites are very small and can be observed only with a magnifying lens or microscope. The mites that attack aloe and other species such as <i>Haworthia</i> and <i>Gasteria</i> are eriophyid mites, a group of plant-feeding mites that often cause galling or abnormal growth of the host plant tissues..." ... "Unlike their spider mite relatives that have four sets of legs, aloe mites have only two sets of legs. They cause malformations in plants by injecting a chemical that induces galling into the plant tissue. Stems, leaves and flowers may be affected. The damage to the aloe plant is irreversible, and infected plants should be removed. After removal, place all infected plants in plastic trash bags to prevent re-infestation of remaining plants."

407	Causes allergies or is otherwise toxic to humans	
	Source(s)	Notes
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence, but other <i>Aloe</i> species may have toxic properties or contribute to contact dermatitis

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Dave's Garden. 2015. Aloe - <i>Aloe hemmingii</i> . http://davesgarden.com/guides/pf/go/61377/ . [Accessed 8 Jul 2015]	[Succulent. Unlikely to burn] "Foliage: Grown for foliage Evergreen Shiny/Glossy-Textured Mottled Succulent"

Qsn #	Question	Answer
409	Is a shade tolerant plant at some stage of its life cycle	y
	Source(s)	Notes
	Dave's Garden. 2015. Aloe - Aloe hemmingii. http://davesgarden.com/guides/pf/go/61377/ . [Accessed 7 Jul 2015]	"Sun Exposure: Sun to Partial Shade Light Shade" "On Aug 29, 2004, palmbob from Acton, CA (Zone 8b) wrote: ... So far I have had no problems with any- survive in full sun, full shade, heavy water, no water"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes
	Weber, O. 2013. Aloe hemmingii. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	"Habitat and Ecology: The species is found in semi-deciduous dwarf scrub on limestone."
	Dave's Garden. 2015. Aloe - Aloe hemmingii. http://davesgarden.com/guides/pf/go/61377/ . [Accessed 7 Jul 2015]	"Soil pH requirements: 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline)"

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Brickell, C. 2011. American Horticultural Society Encyclopedia of Plants and Flowers. DK, London / New York	"Basal-rosetted. perennial succulent. H 6in (15cm), S 10in (25cm)."

412	Forms dense thickets	n
	Source(s)	Notes
	Eggle, U. (ed.). 2001. Illustrated Handbook of Succulent Plants: Monocotyledons. Springer-Verlag, Berlin, Heidelberg, New York	"Acaulescent or very shortly caulescent, simple or in small groups"
	Thulin, M. (ed.). 2008. Flora of Somalia Volume 4. University of Chicago Press, Chicago, IL	"Plants stemless, solitary or in small groups." [No evidence from native range]
	Mysterious Gardens. 2015. Aloe Plant - Hemmingii. http://store.mysteriousgardens.net/aloe-plant-hemmingii/ . [Accessed 8 Jul 2015]	"This species grows to about the size of a cereal bowl, and slowly offsets at the base to form a small clump."

501	Aquatic	n
	Source(s)	Notes
	Weber, O. 2013. Aloe hemmingii. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	"Systems: Terrestrial"

502	Grass	n
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Qsn #	Question	Answer
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 7 Jul 2015]	"Family: Xanthorrhoeaceae subfamily Asphodeloideae. Also sometimes placed in: Aloaceae Asphodelaceae"

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 7 Jul 2015]	"Family: Xanthorrhoeaceae subfamily Asphodeloideae. Also sometimes placed in: Aloaceae Asphodelaceae"

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Kubitzki, K. (ed.). 1998. The Families and genera of vascular plants. Volume III. Flowering plants, Monocotyledons: Liliales (except Orchidaceae). Springer-Verlag, Berlin, Heidelberg, New York	[Generic description] "Herbaceous or woody succulent perennials, with roots cylindrical or rarely fusiform."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Weber, O. 2013. <i>Aloe hemmingii</i> . The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org	"Red List Category & Criteria: Near Threatened" ... "There is not much information available about the threats to this species. The subpopulation in the eastern extent of the range is near the village Shiikh and there is a main road that leads over the mountains from Shiikh to Berbera. Erosion as a result of removal of the vegetation is a general threat affecting this mountain area."

602	Produces viable seed	y
	Source(s)	Notes
	All Things Plants. 2015. <i>Aloe (Aloe hemmingii)</i> in the Aloes Database. http://allthingsplants.com/plants/view/71527/Aloe-Aloe-hemmingii/ . [Accessed 8 Jul 2015]	"Propagation: Seeds: Can handle transplanting Other info: Sow seeds in sandy soil. Seeds germinate in a few weeks at temperatures between 68 and 75 degrees F. Seedlings need moist but well-drained soil."

603	Hybridizes naturally	
	Source(s)	Notes

Qsn #	Question	Answer
	Parker, D. M., & Bernard, R. T. F. (2009). Levels of aloe mortality with and without elephants in the Thicket Biome of South Africa. <i>African Journal of Ecology</i> , 47(2): 246-251	"Hybridization occurs between species and between genera to such an extent that some students of the group have wondered whether perhaps there is only one real genus in the Aloineae. Hybridization has compounded to a great extent the problems of taxonomy, but reduction of all genera to one would not simplify the question. Hybridization is so extensive that it cannot be ignored as a foremost factor in the evolution of the tribe. Not only is interspecific hybridization found on a large scale, but intergeneric hybrids are not rare."
	Eggl, U. (ed.). 2001. <i>Illustrated Handbook of Succulent Plants: Monocotyledons</i> . Springer-Verlag, Berlin, Heidelberg, New York	No evidence for <i>A. hemmingii</i> , but natural hybrids documented within genus

604	Self-compatible or apomictic	n
	Source(s)	Notes
	Reynolds, T. 2004. <i>Aloes: The genus Aloe</i> . CRC Press, Boca Raton, FL	"Almost all aloes are self-incompatible ..." ... "The species formerly in the genus <i>Lomatophyllum</i> are reported as exceptions in being self-compatible (Lavranos, 1998)."
	Riley, H. P. & Majumdar, S. K. 1979. <i>The Aloineae: A Biosystematic Survey</i> . University Press of Kentucky, Lexington, KY	"As mentioned in Chapter 10, the plants of these species are highly self-incompatible, almost never setting seed with their own pollen."

605	Requires specialist pollinators	
	Source(s)	Notes
	Reynolds, T. 2004. <i>Aloes: The genus Aloe</i> . CRC Press, Boca Raton, FL	"Flowers of almost all <i>Aloe</i> species are diurnal, tubular, brightly coloured red or yellow, unscented and produce abundant nectar. These features point to ornithophily as the pollination syndrome, and sunbirds (<i>Nectariniidae</i>) are frequent visitors to aloe flowers in the field and in African gardens..." ... "Although they are not typical melittophilous flowers, aloes are also visited by bees."
	Thulin, M. (ed.). 2008. <i>Flora of Somalia Volume 4</i> . University of Chicago Press, Chicago, IL	"Inflorescence simple, to 40 cm tall; racemes cylindric, to 15 cm long, lax; bracts 8 x 3 mm; pedicels 6–8 mm long. Flowers reddish pink, pendulous; perianth 24 mm long, 8 mm across the ovary, outer tepals free for 8 mm. Anthers exerted 2–3 mm. Stigma exerted 3–4 mm. Ovary 5 x 2 mm."
	Kubitzki, K. (ed.). 1998. <i>The Families and genera of vascular plants. Volume III. Flowering plants, Monocotyledons: Liliales (except Orchidaceae)</i> . Springer-Verlag, Berlin, Heidelberg, New York	[Family description] "Species of <i>Asphodelaceae</i> are visited by numerous microfaunal species, as well as birds (Hoffman 1988; Smith et al. 1992; Ratsirarson 1995; McCabe 1995). Most species appear to be either ornithophilous or entomophilous, or utilize a combination of birds and insects to ensure effective pollination. Detailed studies, however, are lacking for most genera."

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes

Qsn #	Question	Answer
	All Things Plants. 2015. Aloe (<i>Aloe hemmingii</i>) in the Aloes Database. http://allthingsplants.com/plants/view/71527/Aloe-Aloe-hemmingii/ . [Accessed 8 Jul 2015]	[Unknown if natural vegetative spread is possible] "Propagation: Other methods: Cuttings: Stem Division Offsets Other: Stems cut below a node root easily. Cut a stem that has gotten leggy, let it dry out for at least a few hours to form a seal on the cut surface. Place the cutting in rooting medium kept moist, but not wet, until roots form."

607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	Notes
	Reynolds, T. 2004. Aloes: The genus <i>Aloe</i> . CRC Press, Boca Raton, FL	[Generic description. Unknown if seeds, if produced, would be accidentally dispersed] "Most aloes produce capsules, dry dehiscent fruits that split open at maturity to release the seeds."

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Dave's Garden. 2015. Aloe - <i>Aloe hemmingii</i> . http://davesgarden.com/guides/pf/go/61377/ . [Accessed 8 Jul 2015]	"Rapidly becoming one of the most commonly sold aloes at nursery outlet centers... I always see these for sale there... must be easy growers."

703	Propagules likely to disperse as a produce contaminant	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

704	Propagules adapted to wind dispersal	y
	Source(s)	Notes
	Reynolds, T. 2004. Aloes: The genus <i>Aloe</i> . CRC Press, Boca Raton, FL	[Generic description] "Most aloes produce capsules, dry dehiscent fruits that split open at maturity to release the seeds. As the inflorescences sway in the wind the seeds, which are winged, are thrown our and blown away."

705	Propagules water dispersed	n
	Source(s)	Notes
	Reynolds, T. 2004. Aloes: The genus <i>Aloe</i> . CRC Press, Boca Raton, FL	[Generic description. Buoyancy of seeds unknown, but unlikely, as plants occur in arid, rocky habitats] "Most aloes produce capsules, dry dehiscent fruits that split open at maturity to release the seeds. As the inflorescences sway in the wind the seeds, which are winged, are thrown our and blown away."

Qsn #	Question	Answer
706	Propagules bird dispersed	n
	Source(s)	Notes
	Reynolds, T. 2004. Aloes: The genus Aloe. CRC Press, Boca Raton, FL	[Generic description. Not fleshy-fruited] "Most aloes produce capsules, dry dehiscent fruits that split open at maturity to release the seeds. As the inflorescences sway in the wind the seeds, which are winged, are thrown our and blown away."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Reynolds, T. 2004. Aloes: The genus Aloe. CRC Press, Boca Raton, FL	[Generic description] "Most aloes produce capsules, dry dehiscent fruits that split open at maturity to release the seeds. As the inflorescences sway in the wind the seeds, which are winged, are thrown our and blown away." [Seeds, if produces, would lack means of external attachment]

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Gordon, D. R., Mitterdorfer, B., Pheloung, P. C., Ansari, S., Buddenhagen, C., Chimera, C., ... & Williams, P. A. 2010). Guidance for addressing the Australian Weed Risk Assessment questions. Plant Protection Quarterly, 25(2): 56-74	"Answer 'no' where the taxon is unlikely to be eaten by animals"
	Kubitzki, K. (ed.). 1998. The Families and genera of vascular plants. Volume III. Flowering plants, Monocotyledons: Liliaceae (except Orchidaceae). Springer-Verlag, Berlin, Heidelberg, New York	[Family] "The fruits are thick-walled, almost leathery, loculicidally dehiscent capsules." [Genus] "Fruit a loculicidal capsule; seeds numerous."

801	Prolific seed production (>1000/m2)	
	Source(s)	Notes
	Kubitzki, K. (ed.). 1998. The Families and genera of vascular plants. Volume III. Flowering plants, Monocotyledons: Liliaceae (except Orchidaceae). Springer-Verlag, Berlin, Heidelberg, New York	[Unknown. Generic description] "Fruit a loculicidal capsule; seeds numerous."

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	Cousins, S. R., & Witkowski, E. T. F. (2012). African aloe ecology: a review. Journal of Arid Environments, 85: 1-17	"Additional germination and long-term seed storage studies on Critically Endangered aloe taxa would also be beneficial for enhancing their conservation."
	Royal Botanic Gardens Kew. 2008. Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/ . [Accessed 8 Jul 2015]	Unknown. Orthodox seed storage reported in Aloe

803	Well controlled by herbicides	

Qsn #	Question	Answer
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Grows in tropical climates
- Other Aloe species have become invasive
- Leaves with sharp marginal teeth
- Reported to be shade tolerant
- Reproduces by seed
- Seeds, when produced, wind-dispersed
- Intentional dispersal by people
- Limited biological and ecological information reduces accuracy of risk prediction

Low Risk Traits

- No reports of invasiveness or naturalization, but limited evidence of widespread introduction outside native range
- Aloe species palatable to browsing animals such as goats
- Ornamental
- Self-incompatible
- May require specialized pollinators, which could limit seed production

Second Screening Results for Herbs or Low Stature Shrubby Life Forms

(A) Reported as a weed of cultivated lands?> No.

Outcome = Accept (Low Risk)