

<b>Taxon:</b> <i>Eragrostis barrelieri</i> Daveau	<b>Family:</b> Poaceae
<b>Common Name(s):</b> Mediterranean love grass pitted love grass	<b>Synonym(s):</b> <i>Eragrostis barrelieri</i> ssp. <i>ambigua</i> <i>Eragrostis barrelieri</i> var. <i>ambigua</i> <i>Eragrostis insulatlantica</i> <i>Eragrostis panormitana</i> <i>Eragrostis vulgaris</i> ssp. <i>barrelieri</i>

<b>Assessor:</b> Chuck Chimera	<b>Status:</b> Assessor Approved	<b>End Date:</b> 30 Mar 2022
<b>WRA Score:</b> 11.0	<b>Designation:</b> H(HPWRA)	<b>Rating:</b> High Risk

**Keywords:** Annual Grass, Disturbance Weed, Fodder, Self-Fertile, Gravity Dispersed

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	y
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	n=0, y = 1*multiplier (see Appendix 2)	y
303	Agricultural/forestry/horticultural weed		
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	n
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
408	Creates a fire hazard in natural ecosystems		
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets		
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	y
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	y
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	y
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		
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides	y=-1, n=1	y
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
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[No evidence] "Tropical Africa, southwestern Asia, Mediterranean."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2022). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 29 Mar 2022]	"Native Africa MACARONESIA: Cabo Verde, Spain [Canarias], Portugal [Madeira Islands] NORTHERN AFRICA: Algeria, Egypt, Libya, Morocco NORTHEAST TROPICAL AFRICA: Eritrea, Ethiopia, Sudan (n.), Somalia WEST TROPICAL AFRICA: Niger Asia-Temperate ARABIAN PENINSULA: Oman, Saudi Arabia, Yemen WESTERN ASIA: Afghanistan, Iran, Israel, Turkey (e.) Asia-Tropical INDIAN SUBCONTINENT: Pakistan Europe SOUTHEASTERN EUROPE: Italy (incl. Sicily) SOUTHWESTERN EUROPE: Spain (incl. Balears), France (s.)"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Tropical Africa, southwestern Asia, Mediterranean."

Qsn #	Question	Answer
202	Quality of climate match data	High
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2022). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 29 Mar 2022]	

203	Broad climate suitability (environmental versatility)	y
	Source(s)	Notes
	Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a> . [Accessed 29 Mar 2022]	"Eragrostis barrelieri is a European species that is now naturalized in the Flora region, primarily in the south-western United States. It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 10-2000 m." [Elevation range exceeds 1000 m]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Preferred Climate/s: Dryland, Mediterranean, Subtropical, Tropical"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Tropical Africa, southwestern Asia, Mediterranean."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Preferred Climate/s: Dryland, Mediterranean, Subtropical, Tropical Origin: Africa, C Asia, E Asia, Europe, W Asia"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Tropical Africa, southwestern Asia, Mediterranean."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	KewScience. (2022). Plants of the World Online - <i>Eragrostis barrelieri</i> . <a href="http://powo.science.kew.org">http://powo.science.kew.org</a> . [Accessed 29 Mar 2022]	"Introduced into: Alabama, Argentina Northeast, Argentina Northwest, Arizona, Belgium, Botswana, Brazil Southeast, California, Cape Provinces, Colombia, Colorado, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Florida, Free State, Great Britain, Greece, Haiti, Jamaica, Kansas, Lebanon-Syria, Leeward Is., Louisiana, Maryland, Massachusetts, Mexico Central, Mexico Northeast, Mexico Northwest, Mexico Southeast, Mexico Southwest, Missouri, Mozambique, Myanmar, Namibia, Nebraska, Netherlands, Nevada, New Mexico, New South Wales, Northern Provinces, Northern Territory, Oklahoma, Palestine, Portugal, Puerto Rico, South Australia, South Carolina, St.Helena, Swaziland, Switzerland, Tennessee, Texas, Uruguay, Utah, Western Australia, Zambia, Zimbabwe "

Qsn #	Question	Answer
	Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a> . [Accessed 29 Mar 2022]	"Md., Kans., Okla., Colo., N.Mex., Tex., La., Utah, Calif., Puerto Rico, Virgin Islands, Ala., Nebr., Tenn., S.C., Mass., Ariz., Fla., Mo., Nev. "

301	Naturalized beyond native range	y
	Source(s)	Notes
	Giraldo Cañas, D., Peterson, P. M. and Sánchez Vega, I. (2012). The genus <i>Eragrostis</i> (Poaceae: Chloridoideae) in northwestern South America (Colombia, Ecuador, and Peru): Morphological and taxonomic studies. Biblioteca José Jerónimo Triana No. 24. Universidad Nacional de Colombia. Bogotá D.C., Colombia	"Distribution and habitat. <i>Eragrostis barrelieri</i> is a European species that is now naturalized in some regions of America, primarily in the southwestern United States, Ecuador, and Argentina. It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 1500–2500 m. Herein, we cited this species for the first time for Colombia."
	Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a> . [Accessed 29 Mar 2022]	" <i>Eragrostis barrelieri</i> is a European species that is now naturalized in the Flora region, primarily in the south-western United States. It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 10-2000 m."

302	Garden/amenity/disturbance weed	y
	Source(s)	Notes
	Felger, R. S. (1990). Non-native plants of Organ Pipe Cactus National Monument, Arizona. Technical Report No. 31. Cooperative National Park Resources Studies Unit, University of Arizona, Tucson	"A weedy species introduced from southern Europe. It is common as a " street weed " in Arizona, including Pima and Yuma counties, and is an agricultural weed in Sonora (at least in the southern part of the state). It is apparently established as an urban weed in Lukeville and Sonoyta and is expected in the agricultural regions as well. This weedy species is probably frequently overlooked, but can be expected throughout much of southern Arizona and most of Sonora."
	Loflin, B., Loflin, S., & Hatch, S. L. (2006). Grasses of the Texas Hill Country: A Field Guide. Texas A&M University Press, College Station, TX	"This grass is a weed, able to grow in most habitats. Its delicate appearance when in flower is attractive in gardens as a soft border. Care must be given, however, to avoid its invading other areas where unwanted." ... "Mediterranean lovegrass is an introduced weed that inhabits waste places and fields." ... "Mediterranean lovegrass escapees are found in vacant lots and other little-maintained sites."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Cereals, Pastures"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"weed species naturalized elsewhere, often aromatic, growing on disturbed ground, cultivated land, sandy soil, gardens, road verges, gravelly roadsides, floodplains"

303	Agricultural/forestry/horticultural weed	
	Source(s)	Notes
	Hyde, M.A., Wursten, B.T., Ballings, P. & Coates Palgrave, M. (2022). Flora of Mozambique: Species information: <i>Eragrostis barrelieri</i> . <a href="https://www.mozambiqueflora.com">https://www.mozambiqueflora.com</a> . [Accessed 30 Mar 2022]	"A weed of low to medium altitudes, often on agricultural research stations and in irrigation schemes; also on river banks and in disturbed ground at roadsides"

Qsn #	Question	Answer
	Martin, C.G. & Brym, Z.T. (2022). Common Weedy Plants on Open, Tilled, and Rocky Soil in the Redland Agricultural Area, Miami-Dade County, Florida. SS-AGR-459. UF/IFAS Extension. <a href="https://edis.ifas.ufl.edu/publication/AG460">https://edis.ifas.ufl.edu/publication/AG460</a> . [Accessed 30 Mar 2022]	"Native to Europe, Mediterranean lovegrass is most common in Florida in highly disturbed locations such as in open, tilled rocky soil. The species can also be an attractive lawn grass. In agriculture, it readily takes advantage of any holes or tears in plastic mulch."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Cereals, Pastures"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"weed species naturalized elsewhere, often aromatic, growing on disturbed ground, cultivated land, sandy soil, gardens, road verges, gravelly roadsides, floodplains"
	WRA Specialist. (2022). Personal Communication	Often identified as a weed of disturbance, and associated with agricultural or cultivated settings, but negative impacts on crop yields, or other productivity metrics in the reviewed sources have not been specified or quantified

304	Environmental weed	n
	Source(s)	Notes
	White, M., Cheal, D., Carr, G. W., Adair, R., Blood, K. and Meagher, D. (2018). Advisory list of environmental weeds in Victoria. Arthur Rylah Institute for Environmental Research Technical Report Series No. 287. Department of Environment, Land, Water and Planning, Heidelberg, Victoria	"Advisory list of environmental weeds in Victoria" [ <i>Eragrostis barrelieri</i> - Impact on natural systems = Currently insignificant; Potential for invasion = Currently non-invasive]
	Felger, R. S. (1990). Non-native plants of Organ Pipe Cactus National Monument, Arizona. Technical Report No. 31. Cooperative National Park Resources Studies Unit, University of Arizona, Tucson	"Elsewhere in Arizona it seldom becomes truly abundant and potential impact to ORPI seems minimal."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	y
	Source(s)	Notes

Qsn #	Question	Answer
	<p>Weber, E. (2017). Invasive Plant Species of the World, 2nd Edition: A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK</p>	<p>[<i>Eragrostis curvula</i>] "The grass is invasive because it forms dense swards crowding out natural vegetation, preventing regeneration of native species and affecting wildlife (State of Queensland, 2014). In Australia, African love grass invades habitats of endangered plant species, e.g. narrow-petalled featherflower (<i>Verticordia plumosa</i> var. <i>pleiobotrya</i>) and pine donkey orchid (<i>Diuris tricolor</i>). In New South Wales, <i>Eragrostis curvula</i> threatens an endangered ecological community, the Bega dry grass forest. This open forest is dominated by the tree species <i>Eucalyptus tereticornis</i> and <i>Angophora floribunda</i> (Keith and Bedward, 1999; State of Queensland, 2014). During the dry season, the grass is highly flammable and creates an increased fire hazard (US Forest Service, 2014)."</p> <p>[<i>Eragrostis lehmanniana</i>] "This highly drought tolerant grass has become invasive in the deserts of southwestern USA (Anable et al., 1992). It spreads quickly and forms dense stands that affect native communities in a number of ways. Native perennial grasses and forbs are displaced and dense populations of <i>E. lehmanniana</i> have a diminished faunal diversity. Areas with a high cover of this exotic grass experience lower soil disturbances by ground squirrels and attine ants (Hupy et al., 2004), which may affect nutrient cycling. In addition to these biotic effects, spread of Lehmann's love grass alters soil evaporation and transpiration rates in invaded semi-arid areas (Moran et al., 2009). The grass also accumulates a large amount of litter and dead stems, thus increasing fire hazards (US Forest Service, 2014)."</p>

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	<p>Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a>. [Accessed 29 Mar 2022]</p>	<p>[No evidence] "Plants annual; tufted, without innovations. Culms (5)10-60 cm, erect or decumbent, much-branched near the base, with a ring of glandular tissue below the nodes, rings often shiny or yellowish. Sheaths hairy at the apices, hairs to 4 mm; ligules 0.2-0.5 mm, ciliate; blades 1.5-10 cm long, 1-3(5) mm wide, flat, abaxial surfaces glabrous, adaxial surfaces glabrous, sometimes scabridulous, occasionally with white hairs to 3 mm, margins without crateriform glands. Panicles 4-20 cm long, 2.2-8(10) cm wide, ovate, open to contracted, rachises with shiny or yellowish glandular spots or rings below the nodes; primary branches 0.5-6 cm, diverging 20-100° from the rachises; pulvini glabrous; pedicels 1-4 mm, stout, stiff, divergent, without glandular bands. Spikelets 4-7(11) mm long, 1.1-2.2 mm wide, narrowly ovate, reddish-purple to greenish, occasionally grayish, with 7-12(20) florets; disarticulation acropetal, paleas persistent. Glumes broadly ovate, membranous, 1-veined; lower glumes 0.9-1.4 mm; upper glumes 1.2-1.6 mm; lemmas 1.4-1.8 mm, broadly ovate, membranous, apices acute to obtuse; paleas 1.3-1.7 mm, hyaline, keels scabrous, scabridities to 0.1 mm, apices obtuse to acute; anthers 3, 0.1-0.2 mm, reddish-brown. Caryopses 0.4-0.7 mm, ellipsoid, not grooved, smooth to faintly striate, light brown."</p>

402	Allelopathic	
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. (2022). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Annual, tufted to loosely tufted, simple or much branched near the base, erect or geniculate, sprawling to decumbent" [Poaceae. No evidence]

404	Unpalatable to grazing animals	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"forage, browsed by all stock"
	Al Harthi, L. S., Robinson, M. D., & Mahgoub, O. (2008). Diets and resource sharing among livestock on the Saiq Plateau, Jebel Akhdar Mountains, Oman. International Journal of Ecology and Environmental Sciences, 34(2), 113-120	"Goats, sheep and donkeys took a variety of grasses, principally Cymbopogon sp., Eragrostis barrelieri Daveau, Enneapogon persicus Boiss., Cenchrus ciliaris and Chloris gayana."
	Lazarides, M. (1970). The grasses of central Australia. Australian National University Press, Canberra	"Readily grazed."
	Loflin, B., Loflin, S., & Hatch, S. L. (2006). Grasses of the Texas Hill Country: A Field Guide. Texas A&M University Press, College Station, TX	"This lovegrass is considered to be of little forage value for cattle or wildlife."
	Hatch, S.L., Schuster, J.L. & Drawe, D.L. (1999). Grasses of the Texas Gulf Prairies and Marshes. Texas A&M University Press, College Station, TX	"Usually grows as a weed on disturbed sites, especially graded roadsides of mid and lower Gulf Coast. Poor livestock and wildlife values."

405	Toxic to animals	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"forage, browsed by all stock" [No evidence]
	Burrows, G. E., & Tyrl, R. J. (2013). Toxic Plants of North America. Second Edition. Wiley-Blackwell, Hoboken, NJ	No evidence
	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

406	Host for recognized pests and pathogens	n
	<b>Source(s)</b>	<b>Notes</b>



Qsn #	Question	Answer
	Aghajani, M. A., Alizadeh, A., & Rahimian, H. (2008). Host range of <i>Rhizoctonia zeae</i> in Iran. <i>Journal of Plant Pathology</i> , 90(3), 587-587	"In summer and autumn 1998 and 1999, during a survey for diseases of Gramineae in the central regions of Mazandaran province (Iran), a seemingly new disease was observed in sugarcane ( <i>Saccharum officinarum</i> ) fields at Babol, Babolsar, and Sari, with an incidence of up to 90%." ... "The same fungus was also isolated from the soil and from sheath and culm tissues of <i>Zea mays</i> , <i>Sorghum bicolor</i> , <i>S. vulgare</i> var. <i>sudanense</i> , <i>S. halepense</i> , <i>Cynodon dactylon</i> , <i>Saccharum ravennae</i> , and <i>Eragrostis barrelieri</i> ." [Importance unknown]

407	Causes allergies or is otherwise toxic to humans	n
	<b>Source(s)</b>	<b>Notes</b>
	Burrows, G. E., & Tyrl, R. J. (2013). <i>Toxic Plants of North America</i> . Second Edition. Wiley-Blackwell, Hoboken, NJ	No evidence
	Quattrocchi, U. (2012). <i>CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology</i> . CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	
	<b>Source(s)</b>	<b>Notes</b>
	Lazarides, M. (1970). <i>The grasses of central Australia</i> . Australian National University Press, Canberra	"A somewhat uncommon plant, occurring on sandy soils in disturbed or well-watered habitats, sometimes developing dense local stands." [Flammability and fire regime unknown. This grass may increase fire risk when growing in dense local stands, or during dry seasons or periods of drought]
	WRA Specialist. (2022). Personal Communication	Unclear. Identified as a weed of disturbed ground, cultivated land, gardens, road verges, gravelly roadsides, and floodplains, but with no mention of contributions to fire risk or fuel load.

409	Is a shade tolerant plant at some stage of its life cycle	n
	<b>Source(s)</b>	<b>Notes</b>
	Prigge, B. A., & Gibson, A. C. (2012). A naturalist's flora of the Santa Monica Mountains and Simi Hills, California. Web version, included in <i>Wildflowers of the SMMNRA</i> . <a href="https://www.smmflowers.org/">https://www.smmflowers.org/</a> . [Accessed 30 Mar 2022]	" <i>Eragrostis barrelieri</i> is a summer-active, C4 grass; it tends to grow prostrate-spreading in full sun, and has conspicuous, warty, ringlike glands present in the axils of the inflorescence."
	El-Keblawy, A. (2017). Germination response to light and temperature in eight annual grasses from disturbed and natural habitats of an arid Arabian desert. <i>Journal of Arid Environments</i> , 147, 17-24	[Positive photoblastic. Seeds stimulated to germinate by light] "Seeds of three of the four weedy grasses ( <i>Dactyloctenium aegyptium</i> , <i>Eragrostis barrelieri</i> and <i>E. papposa</i> ) were strongly positive photoblastic. Such light requirement could be an environmental signal for seeds to sense their location on or near soil surface after seasonal soil tilling. Seeds of <i>E. barrelieri</i> germinated mainly at high temperatures, but those of <i>E. papposa</i> germinated at lower temperatures."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y

Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	Loflin, B., Loflin, S., & Hatch, S. L. (2006). Grasses of the Texas Hill Country: A Field Guide. Texas A&M University Press, College Station, TX	"Mediterranean lovegrass will grow in most soil types."
	Jessop, J. (2018). Grasses of South Australia: An illustrated guide to the native and naturalised species. Wakefield Press, Adelaide	"Occurs on clay, loam, sandy and calcareous soils, often on disturbed sites and in the north often associated with temporary creek beds."

411	Climbing or smothering growth habit	n
	<b>Source(s)</b>	<b>Notes</b>
	Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a> . [Accessed 29 Mar 2022]	"Plants annual; tufted, without innovations."

412	Forms dense thickets	n
	<b>Source(s)</b>	<b>Notes</b>
	Lazarides, M. (1970). The grasses of central Australia. Australian National University Press, Canberra	"A somewhat uncommon plant, occurring on sandy soils in disturbed or well-watered habitats, sometimes developing dense local stands."
	WRA Specialist. (2022). Personal Communication	Other than Lazarides (1970), no references were found indicating that this species forms dense stands. Most references describe it as a somewhat weedy species of disturbed ground, cultivated land and roadsides, with no mention of population densities.

501	Aquatic	n
	<b>Source(s)</b>	<b>Notes</b>
	Flora of North America Editorial Committee, eds. (1993+). Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. <a href="http://beta.floranorthamerica.org">http://beta.floranorthamerica.org</a> . [Accessed 29 Mar 2022]	[Terrestrial] "Eragrostis barrelieri is a European species that is now naturalized in the Flora region, primarily in the south-western United States. It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 10-2000 m."

502	Grass	y
	<b>Source(s)</b>	<b>Notes</b>
	USDA, Agricultural Research Service, National Plant Germplasm System. (2022). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 29 Mar 2022]	Family: Poaceae (alt. Gramineae) Subfamily: Chloridoideae Tribe: Eragrostideae Subtribe: Eragrostidinae

Qsn #	Question	Answer
503	<b>Nitrogen fixing woody plant</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	Poaceae

504	<b>Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Annual, tufted to loosely tufted, simple or much branched near the base, erect or geniculate, sprawling to decumbent, prostrate, fibrous root"

601	<b>Evidence of substantial reproductive failure in native habitat</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

602	<b>Produces viable seed</b>	y
	<b>Source(s)</b>	<b>Notes</b>
	Jurado, E., & Westoby, M. (1992). Germination biology of selected central Australian plants. Australian Journal of Ecology, 17(3), 341-348	"Appendix I. Germination percentages at three temperatures for 105 species in central Australia" [Eragrostis barrelieri - Germination percentage - 28°C = 89; 20°C = 68; 12°C = 0; Speed (days) = 4]
	Bhatt, A., Gallacher, D. J., & Souza-Filho, P. R. (2020). Germination strategies of annual and short-lived perennial species in the Arabian Desert. Journal of Arid Land, 12(6), 1071-1082	"Seed germination of E. barrelieri and P. monspeliensis presented no dormancy, and the behavior could be attributed to after-ripening (Atia et al., 2011; El-Keblawy, 2017). Germination of fresh seeds was present but low (10%–20%) for three species, indicating a cautious germination strategy (Guterman, 2002; Bhatt et al., 2016a)."
	El-Keblawy, A. (2017). Germination response to light and temperature in eight annual grasses from disturbed and natural habitats of an arid Arabian desert. Journal of Arid Environments, 147, 17-24	"Seeds of three of the four weedy grasses (Dactyloctenium aegyptium, Eragrostis barrelieri and E. papposa) were strongly positive photoblastic. Such light requirement could be an environmental signal for seeds to sense their location on or near soil surface after seasonal soil tilling. Seeds of E. barrelieri germinated mainly at high temperatures, but those of E. papposa germinated at lower temperatures. Consequently, as tiny seeds of these species are more likely to be buried, they could germinate only after soil tilling in spring/summer for E. barrelieri and winter tilling in E. papposa, providing the availability of a suitable water condition."

603	<b>Hybridizes naturally</b>	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. (2022). Personal Communication	Unknown. No evidence found. Hybrids documented in genus

Qsn #	Question	Answer
604	<b>Self-compatible or apomictic</b>	<b>y</b>
	<b>Source(s)</b>	<b>Notes</b>
	Koch, S. D. (1978). Notes on the genus <i>Eragrostis</i> (Gramineae) in the southeastern United States. <i>Rhodora</i> , 80(823), 390-403	"The small caryopses, tendency toward weediness, and self-fertility or even cleistogamy of many species of <i>Eragrostis</i> make casual introductions of members of the genus outside their natural distributions very likely."
	Giraldo Cañas, D., Peterson, P. M. and Sánchez Vega, I. (2012). The genus <i>Eragrostis</i> (Poaceae: Chloridoideae) in northwestern South America (Colombia, Ecuador, and Peru): Morphological and taxonomic studies. <i>Biblioteca José Jerónimo Triana No. 24</i> . Universidad Nacional de Colombia. Bogotá D.C., Colombia	[The subtribe Eragrostidinae] "cleistogamous spikelets present, often in the lower leaf sheaths; glumes persistent; and caryopses that are narrowly elliptical and somewhat beaked at the apex" [Cleistogamy is a type of automatic self-pollination of certain plants that can propagate by using non-opening, self-pollinating flowers]

605	<b>Requires specialist pollinators</b>	<b>n</b>
	<b>Source(s)</b>	<b>Notes</b>
	Alien Plants in Greece: A web-based platform. (2022). <i>Eragrostis barrelieri</i> Daveau. <a href="https://www.alienplants.gr/taxa/eragrostis-barrelieri">https://www.alienplants.gr/taxa/eragrostis-barrelieri</a> . [Accessed 30 Mar 2022]	"Pollination Type Anemogamy" [Pollination by wind]
	Giraldo Cañas, D., Peterson, P. M. and Sánchez Vega, I. (2012). The genus <i>Eragrostis</i> (Poaceae: Chloridoideae) in northwestern South America (Colombia, Ecuador, and Peru): Morphological and taxonomic studies. <i>Biblioteca José Jerónimo Triana No. 24</i> . Universidad Nacional de Colombia. Bogotá D.C., Colombia	"Regardless of position, extrafloral nectaries are never directly involved in pollination (Nepi 2007) since the pollination in <i>Eragrostis</i> is anemophilous and their main function is to feed the ants that are thought to protect the plant from herbivores"

606	<b>Reproduction by vegetative fragmentation</b>	<b>n</b>
	<b>Source(s)</b>	<b>Notes</b>
	Lazarides, M. (1970). The grasses of central Australia. Australian National University Press, Canberra	[No evidence. Unbranched annual, or short-lived perennial] "Habit: Tufted annual or short-lived perennial, 22-45 cm high, dense and leafy near the base. Stems: Unbranched"

607	<b>Minimum generative time (years)</b>	<b>1</b>
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Annual, tufted to loosely tufted, simple or much branched near the base, erect or geniculate, sprawling to decumbent, prostrate, fibrous root"

701	<b>Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)</b>	<b>y</b>
	<b>Source(s)</b>	<b>Notes</b>

Qsn #	Question	Answer
	Felger, R. S. (1990). Non-native plants of Organ Pipe Cactus National Monument, Arizona. Technical Report No. 31. Cooperative National Park Resources Studies Unit, University of Arizona, Tucson	"A weedy species introduced from southern Europe. It is common as a " street weed " in Arizona, including Pima and Yuma counties, and is an agricultural weed in Sonora (at least in the southern part of the state). It is apparently established as an urban weed in Lukeville and Sonoyta and is expected in the agricultural regions as well. This weedy species is probably frequently overlooked but can be expected throughout much of southern Arizona and most of Sonora."
	Giraldo Cañas, D., Peterson, P. M. and Sánchez Vega, I. (2012). The genus <i>Eragrostis</i> (Poaceae: Chloridoideae) in northwestern South America (Colombia, Ecuador, and Peru): Morphological and taxonomic studies. Biblioteca José Jerónimo Triana No. 24. Universidad Nacional de Colombia. Bogotá D.C., Colombia	"It grows on gravelly roadsides, in gardens, and other disturbed, sandy sites, especially near railroad yards, at 1500–2500 m."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental, Pasture Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	KewScience. (2022). Plants of the World Online - <i>Eragrostis barrelieri</i> . <a href="http://powo.science.kew.org">http://powo.science.kew.org</a> . [Accessed 29 Mar 2022]	"Introduced into: Alabama, Argentina Northeast, Argentina Northwest, Arizona, Belgium, Botswana, Brazil Southeast, California, Cape Provinces, Colombia, Colorado, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Florida, Free State, Great Britain, Greece, Haiti, Jamaica, Kansas, Lebanon-Syria, Leeward Is., Louisiana, Maryland, Massachusetts, Mexico Central, Mexico Northeast, Mexico Northwest, Mexico Southeast, Mexico Southwest, Missouri, Mozambique, Myanmar, Namibia, Nebraska, Netherlands, Nevada, New Mexico, New South Wales, Northern Provinces, Northern Territory, Oklahoma, Palestine, Portugal, Puerto Rico, South Australia, South Carolina, St.Helena, Swaziland, Switzerland, Tennessee, Texas, Uruguay, Utah, Western Australia, Zambia, Zimbabwe "
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental, Pasture Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"

703	Propagules likely to disperse as a produce contaminant	y
	Source(s)	Notes
	Koch, S. D. (1978). Notes on the genus <i>Eragrostis</i> (Gramineae) in the southeastern United States. <i>Rhodora</i> , 80(823), 390-403	"In the southeast, it has been collected once on manganese ore piles in Baltimore, Maryland ( C. F. Reed 43644, us)."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental, Pasture Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"
	Friedel, M. H. (2020). Unwelcome guests: a selective history of weed introductions to arid and semi-arid Australia. <i>Australian Journal of Botany</i> , 68(2), 75-99	"Since <i>Eragrostis barrelieri</i> is native to the home of the cameleers (Appendix 1, and see McKnight 1969 for origins of cameleers), it is probable that it arrived in camel harness."

704	Propagules adapted to wind dispersal	n
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	Alien Plants in Greece: A web-based platform. (2022). <i>Eragrostis barrelieri</i> Daveau. <a href="https://www.alienplants.gr/taxa/eragrostis-barrelieri">https://www.alienplants.gr/taxa/eragrostis-barrelieri</a> . [Accessed 30 Mar 2022]	"Dispersal Mode Barochory" [Dispersal is done only by gravity (seeds fall under the parent plant)]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"
	Jurado, E., Westoby, M., & Nelson, D. (1991). Diaspore weight, dispersal, growth form and perenniality of central Australian plants. <i>The Journal of Ecology</i> , 79(3): 811-828	Appendix [ <i>Eragrostis barrelieri</i> - Dispersal = unassisted (U)]

705	Propagules water dispersed	
	<b>Source(s)</b>	<b>Notes</b>
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental, Pasture Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"
	Hyde, M.A., Wursten, B.T., Ballings, P. & Coates Palgrave, M. (2022). Flora of Mozambique: Species information: <i>Eragrostis barrelieri</i> . <a href="https://www.mozambiqueflora.com">https://www.mozambiqueflora.com</a> . [Accessed 30 Mar 2022]	[Occurrence along irrigation and river banks suggests water may secondarily disperse seeds] "A weed of low to medium altitudes, often on agricultural research stations and in irrigation schemes; also on river banks and in disturbed ground at roadsides"
	Quattrocchi, U. (2006). CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[Occurrence in floodplains suggests water may secondarily disperse seeds] "weed species naturalized elsewhere, often aromatic, growing on disturbed ground, cultivated land, sandy soil, gardens, road verges, gravelly roadsides, floodplains"
	Jurado, E., Westoby, M., & Nelson, D. (1991). Diaspore weight, dispersal, growth form and perenniality of central Australian plants. <i>The Journal of Ecology</i> , 79(3): 811-828	Appendix [ <i>Eragrostis barrelieri</i> - Dispersal = unassisted (U)]

706	Propagules bird dispersed	n
	<b>Source(s)</b>	<b>Notes</b>
	Jurado, E., Westoby, M., & Nelson, D. (1991). Diaspore weight, dispersal, growth form and perenniality of central Australian plants. <i>The Journal of Ecology</i> , 79(3): 811-828	Appendix [ <i>Eragrostis barrelieri</i> - Dispersal = unassisted (U)]

707	Propagules dispersed by other animals (externally)	
	<b>Source(s)</b>	<b>Notes</b>
	Giraldo Cañas, D., Peterson, P. M. and Sánchez Vega, I. (2012). The genus <i>Eragrostis</i> (Poaceae: Chloridoideae) in northwestern South America (Colombia, Ecuador, and Peru): Morphological and taxonomic studies. <i>Biblioteca José Jerónimo Triana No. 24</i> . Universidad Nacional de Colombia. Bogotá D.C., Colombia	"Caryopses 0.4–0.7 mm long, ellipsoid, not grooved, smooth to faintly striate, light brown. [Small size may allow for attachment to animals in soil]"
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"

708	Propagules survive passage through the gut	
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock, Sheep, Vehicles"
	WRA Specialist. (2022). Personal Communication	Possibly. Reported to be grazed, and dispersed by animals, but information on seed survival following animal gut passage was not found.

801	Prolific seed production (>1000/m2)	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. (2022). Personal Communication	Unknown. No evidence of prolific seed production was found

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	<b>Source(s)</b>	<b>Notes</b>
	Bhatt, A., Gallacher, D. J., & Souza-Filho, P. R. (2020). Germination strategies of annual and short-lived perennial species in the Arabian Desert. Journal of Arid Land, 12(6), 1071-1082	[Possibly no. No dormancy] "Seed germination of <i>E. barrelieri</i> and <i>P. monspeliensis</i> presented no dormancy, and the behavior could be attributed to after-ripening (Atia et al., 2011; El-Keblawy, 2017). Germination of fresh seeds was present but low (10%–20%) for three species, indicating a cautious germination strategy (Gutterman, 2002; Bhatt et al., 2016a)."

803	Well controlled by herbicides	y
	<b>Source(s)</b>	<b>Notes</b>
	Parsons, W.T. & Cuthbertson, E.G. (2001). Noxious Weeds of Australia. Second Edition. CSIRO Publishing, Collingwood, Australia	"[Herbicides used to control <i>Eragrostis curvula</i> would likely be effective if needed] African lovegrass may also be controlled with herbicides. Spotspray with amitrole T, a flowable amitrole + atrazine mixture, or glyphosate, boomspraying the larger colonies. As these herbicides give total weed control, it is essential to replace the killed weed as soon as practicably by oversowing with a suitable perennial pasture, and topdressing as required to maintain a vigorous cover."
	USDA Forest Service. (2014). Field Guide for Managing Lehmann and Weeping Lovegrasses in the Southwest. TP-R3-16-21. USDA Forest Service Southwestern Region, Albuquerque, NM	[Herbicides used to control other <i>Eragrostis</i> species would presumably be effective if needed] "The primary herbicides used for Lehmann and weeping lovegrass control in the United States are glyphosate and imazapyr. All herbicides listed in table 2 will provide lovegrass control when properly applied."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. (2022). Personal Communication	Unknown. An annual, so mechanical methods may be effective at controlling existing plants

Qsn #	Question	Answer
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

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**Summary of Risk Traits:**

## High Risk / Undesirable Traits

- Broad climate suitability (can grow in Mediterranean, subtropical and tropical climates)
- Naturalized in North and South America
- A weed of disturbed ground, cultivated land, sandy soil, gardens, road verges, gravelly roadsides, floodplains
- May impact agriculture
- Other *Eragrostis* species are invasive weeds
- Tolerates many soil types (not substrate limited)
- Reproduces by seeds
- Self-fertile
- An annual, reaching maturity in <1 year
- Seeds reported to be dispersed by humans, animals, vehicles and as a seed contaminant (although seeds lack any specific dispersal adaptations)

## Low Risk Traits

- Despite reports of weediness, negative impacts have generally not been quantified
- Unarmed (no spines, thorns, or burrs)
- Palatable pasture grass
- Non-toxic
- Grows best in high light environments (dense shade may inhibit spread)
- Herbicides may provide effective control