

Family: *Ericaceae*

Taxon: *Erica lusitanica*

Synonym: NA

Common Name: Spanish heath
Portuguese heath
spear heath

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 20.5
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	
103	Does the species have weedy races?		y=1, n=-1	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
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	n
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		n=0, y = 2*multiplier (see Appendix 2)	y
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	y
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		y=1, n=0	n
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	y
405	Toxic to animals		y=1, n=0	n
406	Host for recognized pests and pathogens		y=1, n=0	
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	y
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)		y=1, n=0	

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	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	3
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	y
705	Propagules water dispersed	y=1, n=-1	y
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/m2)	y=1, n=-1	y
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)	y=-1, n=1	

Designation: H(HPWRA)

WRA Score **20.5**

Supporting Data:

101	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Is the species highly domesticated? No] No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Species suited to tropical or subtropical climate(s) 1-Intermediate] "Spanish heath is native to Mediterranean Europe...Worldwide, most occur within a Mediterranean or temperate climatic regime in soils of relatively low fertility."
202	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Quality of climate match data 1-intermediate] "Naturalized in high elevation and Mediterranean climates" [marginally subtropical in Hawaii]
203	2005. McIndoe, A.. The Horticulture gardener's guides: Shrubs. David & Charles, Devon, UK	[Broad climate suitability (environmental versatility)? No] "zone 7-9"
203	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Broad climate suitability (environmental versatility)? No] "This species has a fairly wide geographic and climatic range, from Sydney to southern Tasmania and has been reported to be sensitive to frost." [Primarily Mediterranean climates]
204	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Native or naturalized in regions with tropical or subtropical climates? No] "Naturalized in high elevation and Mediterranean climates" [marginally subtropical in Hawaii]
205	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Does the species have a history of repeated introductions outside its natural range? Yes] "Naturalized in the British Isles, Australia, New Zealand and Western USA."
301	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Naturalized beyond native range? Yes] "Naturalized in the British Isles, Australia, New Zealand and Western USA."
301	2008. Starr, F./Starr, K./Loope, Lloyd L.. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers. 100: 44-49.	[Naturalized beyond native range? Yes] "On Maui, <i>E. lusitanica</i> , which looks similar to <i>Leptocophylla tameiameiae</i> (pukiawe), was found as scattered plants in Haleakala Ranch pastures below Crater Road, just above a large eucalyptus grove...Material examined: MAUI: East Maui, Wai'ale Gulch, Haleakala Ranch, scattered plants in pasture, in association with <i>Eucalyptus</i> sp. and <i>Leptocophylla tameiameiae</i> (pukiawe), 1767 m (5800 ft), 16 Aug 2005, Starr & Starr 050816-01."
302	2003. Weedbusters. <i>Erica lusitanica</i> (Spanish Heath) - December 2003 - Weed of the Month. http://ecan.govt.nz/publications/General/Spanish_heath_December_2003_web.pdf	[Garden/amenity/disturbance weed? Yes] "Spanish heath forms dense stands, inhibiting the recruitment of other plant species, especially in disturbed areas, fernlands, tussock grasslands, roadsides and forestry sites. It produces many well-dispersed seeds."
302	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Garden/amenity/disturbance weed? Yes] "Both species establish on roadsides and require expensive control to maintain sight lines. Spanish heath is also capable of invading unimproved pasture...Disturbed, open situations such as roadsides and edges of bushland provide favourable conditions for establishment and the weeds spread from there into the bush."
302	2011. Victorian Resources Online. Land and Water Management > Invasive Plants - Spanish heath (<i>Erica lusitanica</i>). http://vro.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/weeds_shrubs_spanish_heath	[Garden/amenity/disturbance weed? Yes] "Can invade coastal woodland, grassland, heathland, forests and riparian vegetation, as well as disturbed areas, roadsides and weak pasture (Blood 2001; Muyt 2001 and Weber 2003). In California it has invaded damp heaths and wetlands (Picart 1998)."
303	2003. Weedbusters. <i>Erica lusitanica</i> (Spanish Heath) - December 2003 - Weed of the Month. http://ecan.govt.nz/publications/General/Spanish_heath_December_2003_web.pdf	[Agricultural/forestry/horticultural weed? Yes] "Spanish heath forms dense stands, inhibiting the recruitment of other plant species, especially in disturbed areas, fernlands, tussock grasslands, roadsides and forestry sites. It produces many well-dispersed seeds."
303	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Agricultural/forestry/horticultural weed? Yes] "Both species establish on roadsides and require expensive control to maintain sight lines. Spanish heath is also capable of invading unimproved pasture...Pastures: when controlling Spanish heath in non-native pastures, ensure management options limit the risk of soil erosion."

304	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Environmental weed? Yes] "The shrub may completely dominate the shrub canopy, thereby eliminating all native vegetation and preventing the regeneration of native plants." [weed of natural areas in Australia and New Zealand]
304	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Environmental weed? Yes] "Although it is only a declared weed in Tasmania, Spanish heath still rated for consideration in the recent Weeds of National Significance assessment. In 2005 tree heath in Tasmania and Spanish heath in Victoria were nominated amongst the 10 most serious weedy garden plants currently for sale. They form dense populations in bushland, dominate the understorey, and have the potential to alter the composition and diversity of native plant communities."
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Congeneric weed? Yes] " <i>Erica arborea</i> L. is a weed of natural areas in Australia, where its "dense growth habit leads to extensive thickets that crowd out native vegetation."
305	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Congeneric weed? Yes] "Fourteen species of <i>Erica</i> are listed in A global compendium of weeds (Randall 2007), because they have been recorded as naturalised or weedy somewhere in the world and three of these species were only cited as weedy in Australia."
401	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Produces spines, thorns or burrs? No] "An erect and heathy shrub of 1-3 m height. Leaves are crowded and arranged in whorls of 3-4, glabrous and 3-7 mm long. Pink to white flowers of 4-5 mm diameter are borne in small racemes that are usually densely crowded. Fruits are capsules of c. 3 mm length, glabrous, broad-ellipsoid, containing numerous minute seeds of c. 0.4 mm length."
402	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Allelopathic? No] No evidence
403	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Parasitic? No] No evidence
404	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Unpalatable to grazing animals? Yes] "Apart from seedlings, the foliage is not palatable to stock."
405	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Toxic to animals? No] No evidence
405	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Toxic to animals? No] No evidence
406	2011. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? Unknown]
407	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Creates a fire hazard in natural ecosystems? Yes] "The shrub may completely dominate the shrub canopy, thereby eliminating all native vegetation and preventing the regeneration of native plants." [dense thickets and tolerance to fire will likely increase fire risk in invaded natural ecosystems]
408	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Creates a fire hazard in natural ecosystems? Yes] "They form dense populations in bushland, dominate the understorey, and have the potential to alter the composition and diversity of native plant communities."
409	1990. Mather, L.J./Williams, P.A.. Phenology, seed ecology, and age structure of Spanish heath (<i>Erica lusitanica</i>) in Canterbury, New Zealand. <i>New Zealand Journal of Botany</i> . 28: 207-215.	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Seedlings are able to withstand considerable shade and repeated simulated grazing (L. Mather, unpublished data) so that only heavy grazing will control heath."

410	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Tolerates a wide range of soil conditions? Unknown] "they are hardy, fast growing, long lived and will grow in infertile native soils ... Correspondingly, most of the cultivated ericas prefer acid to neutral soils although some will tolerate a wider range of soil pH". [not particularly wide range in soils where it is found naturally]
411	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Climbing or smothering growth habit? No] "An erect and heathy shrub of 1-3 m height."
412	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Forms dense thickets? Yes] "The shrub may completely dominate the shrub canopy, thereby eliminating all native vegetation and preventing the regeneration of native plants...The shrub vigorously resprouts after damage such as fire. Seedling establishment is often enhanced after fires. "
412	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Forms dense thickets? Yes] "They form dense populations in bushland, dominate the understorey, and have the potential to alter the composition and diversity of native plant communities...Burning is likely to favour these weeds due to their rapid regrowth so it is not recommended as a means of control."
501	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Aquatic? No] Terrestrial
502	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Grass? No] Ericaceae
503	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Nitrogen fixing woody plant? No] No evidence
504	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "An erect and heathy shrub of 1-3 m height."
601	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Evidence of substantial reproductive failure in native habitat? No] No evidence
602	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Produces viable seed? Yes] "Seed production is prolific, and seeds are dispersed by wind and water."
602	2011. Williams, P.A.. Secondary succession through non-native dicotyledonous woody plants in New Zealand. <i>New Zealand Natural Sciences</i> . 36: 73-91.	[Produces viable seed? Yes] "This wind dispersed nanophyllous small shrub was recorded in 1926 (Webb et al. 1988). It is common in wetter areas with acidic soils of both the North and South Islands. It commonly forms early successional vegetation with manuka and because of a long-term seed bank; it can persist for longer than the former in the presence of repeated fires (Mather & Williams 1990). Spanish heath has a shorter life span than manuka, however, and in the absence of fire disturbance it is replaced by it and other native species in less than 30 years (Wassilieff 1982; McQueen 1991). Druce (1957) predicted mixed stands of Spanish heath and gorse would be replaced by kamahi (<i>Weinmannia racemosa</i>) forest in about 50 years, a similar period to that through manuka."
603	2005. McIndoe, A.. <i>The Horticulture gardener's guides: Shrubs</i> . David & Charles, Devon, UK	[Hybridizes naturally? Unknown] " <i>Erica x veitchii</i> (zone 7-9) is a hybrid between <i>Erica arborea</i> and <i>Erica lusitanica</i> ." [unknown if natural hybridization occurs]
603	2011. Speedylook.com. Heather. http://www.speedylook.com/Heather.html	[Hybridizes naturally? Unknown] " <i>Erica X veitchii</i> Bean, an hybrid between <i>Erica arborea</i> and <i>Erica lusitanica</i> obtained by R. Veitch & Sounds, Exeter about 1905, with abundant flowering of white flowers in April - May. This hybrid is frost susceptible." [unknown if natural hybridization occurs]
604	1995. Aparicio, A.. Seed germination of <i>Erica andevalensis</i> Cabezudo and Rivera (<i>Ericaceae</i>), an endangered edaphic endemic in southwestern Spain. <i>Seed science and technology</i> . 23(3): 705-713.	[Self-compatible or apomictic? Unknown] "From a biological point of view, inbreeding depression in the self-compatible and mostly selfing <i>E. andevalensis</i> if there is any, does not seem to be related to germination capability of the seeds." [related species self-compatible, but unknown for <i>E. lusitanica</i>]
605	1994. Zomlefer, W.B.. <i>Guide to Flowering Plant Families</i> . The University of North Carolina Press, Chapel Hill & London	[Requires specialist pollinators? No] "Various insects are attracted to the conspicuous white or brightly colored corollas, as well as to the scent and concealed nectar." [family description]

605	2008. Aparicio, A./Albaladejo, R.G./Olalla-Tarraga, M.A./Carrillo, L.F./Rodriguez, M.A.. Dispersal potentials determine responses of woody plant species richness to environmental factors in fragmented Mediterranean landscapes. Forest Ecology and Management	[Requires specialist pollinators? No] "short distance dispersal is common among non sclerophyllous, insect-pollinated, dry-fruited, seeder species, typical of pioneer woody Mediterranean communities (e.g. Cistus, Halimium, Thymus, Lavandula, Erica, Calluna)"
605	2008. Pajuelo, A.G./Torres, C./Bermejo, F.J.O.. Colony losses: a double blind trial on the influence of supplementary protein nutrition and preventative treatment with fumagillin against <i>Nosema ceranae</i> . Journal of Apicultural Research and Bee World. 47(1)	[Requires specialist pollinators? No] "The winter of 2006 was mild, and early 2007 was very suitable for honey bees in this area, there being good availability of nectar and pollen, especially the latter, with the presence of heather, <i>Erica lusitanica</i> ."
606	2011. Nursery and Garden Industry Australia. Grow Me Instead - A Guide for Gardeners in ACT & High Country. http://www.ngia.com.au/	[Reproduction by vegetative fragmentation? Yes] "Roots readily sucker and spread"
607	1990. Mather, L.J./Williams, P.A.. Phenology, seed ecology, and age structure of Spanish heath (<i>Erica lusitanica</i>) in Canterbury, New Zealand. New Zealand Journal of Botany. 28: 207-215.	[Minimum generative time (years)? 3+] "When isolated plants are 3-4 years old they begin flowering and producing vast numbers of seeds."
701	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Yes] "Erica seeds are small and generally borne in dry capsules. The millions of tiny seeds that Spanish heath plants produce are dispersed short distances by gravity, water, wind, vehicle draught and slashing or soil movement. Long distance dispersal is generally a result of human activity—planting in gardens, commercial cultivation, or inadvertent transport of soil containing seeds to new locations."
702	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Propagules dispersed intentionally by people? Yes] "Shrubs in the genus <i>Erica</i> (heaths, heathers or ericas) originate from Europe and Africa and are widely grown in gardens and for the cut flower industry."
703	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Propagules likely to disperse as a produce contaminant? Yes] "Shrubs in the genus <i>Erica</i> (heaths, heathers or ericas) originate from Europe and Africa and are widely grown in gardens and for the cut flower industry." [cut flowers could contaminate floral arrangements with tiny seeds]
704	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Propagules adapted to wind dispersal? Yes] "Seed production is prolific, and seeds are dispersed by wind and water."
705	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Propagules water dispersed? Yes] "Seed production is prolific, and seeds are dispersed by wind and water."
706	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Propagules bird dispersed? No] "Fruits are capsules of c. 3 mm length, glabrous, broad ellipsoid...Seed production is prolific, and seeds are dispersed by wind and water." [not fleshy fruited]
707	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Propagules dispersed by other animals (externally)? No] "Erica seeds are small and generally borne in dry capsules. The millions of tiny seeds that Spanish heath plants produce are dispersed short distances by gravity, water, wind, vehicle draught and slashing or soil movement. Long distance dispersal is generally a result of human activity—planting in gardens, commercial cultivation, or inadvertent transport of soil containing seeds to new locations." [no evidence of animal dispersal, and no means of external attachment, although small seeds could possibly stick to mud on hooves or be dispersed in wool or hair]
708	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Propagules survive passage through the gut? No] No evidence that seeds will survive passage through the gut, or are internally dispersed by animals
801	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Prolific seed production (>1000/m ²)? Yes] "Seed production is prolific, and seeds are dispersed by wind and water."
801	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>) and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Prolific seed production (>1000/m ²)? Yes] "A mature bush can produce millions of tiny seeds each year and many of these persist in the soil seedbank for 4 years or more."

802	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Evidence that a persistent propagule bank is formed (>1 yr)? Yes] "Seed production is prolific, and seeds are dispersed by wind and water. They accumulate in a soil seed bank."
802	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>)and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Evidence that a persistent propagule bank is formed (>1 yr)? Yes] "A mature bush can produce millions of tiny seeds each year and many of these persist in the soil seedbank for 4 years or more."
803	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Well controlled by herbicides? Yes] "Seedling and small plants are easy to hand pull, roots must be removed to prevent regrowth. If cut, the stumps should be treated with herbicide."
803	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>)and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Well controlled by herbicides? Yes] "Chemical control Herbicide can be highly effective, providing it is carefully chosen and selectively applied to minimise regrowth, off target damage and disturbance. The main herbicide treatments for ericas are cut stump and frill, stem injection and foliar spray. All of these methods are most effective if the plants are actively growing at the time of application and must be followed up. Foliar spray For spraying to be effective, all erica foliage must be wetted and the plants. In native vegetation, careful spot spraying using hand held equipment (knapsack or handgun and hose) is required to avoid off-target damage. In this situation, foliar spraying is generally limited to small plants and regrowth under conditions when spray drift will not occur. Where possible, native plants should be shielded. equipment suited to the size of the Cut stump application Suitable for all basal stem sizes Cut all stems horizontally with secateurs, bush saw, brush cutter or a chainsaw as close as possible to ground level and frill the stump by peeling the bark away to increase the area through which herbicide can be absorbed. Paint the herbicide on the cut and exposed surfaces immediately (within 10 seconds), using a hand-held spray bottle or a brush. Use a dye in the mixture to show that stems have been treated. Stem injection For basal stem diameter larger than 5 cm This method has the advantage that it does not create gaps in vegetation that encourage weed growth. Drill holes at approximately 5 cm intervals around the stem, angled downwards and sideways. Holes need only be as deep as the living wood just under the bark. Inject immediately with herbicide using a squirt bottle or plastic syringe."
804	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "The shrub vigorously resprouts after damage such as fire. Seedling establishment is often enhanced after fires."
804	2007. CRC Weed Management. Weed Management Guide - Spanish heath (<i>Erica lusitanica</i>)and other <i>Erica</i> species. http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/347159/awmg_spanish-heath.pdf	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Plants have a well developed woody crown or lignotuber at the base, from which new stems will grow if the top is damaged by fire or slashing."
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]