

Taxon: <i>Kennedia nigricans</i> Lindl.	Family: Fabaceae
Common Name(s): black coral-pea black-bean	Synonym(s):

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 6 Feb 2018
WRA Score: 4.0	Designation: EVALUATE	Rating: Evaluate

Keywords: Weedy Vine, Palatable, N-Fixing, Bird-Pollinated, Myrmecochorous

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)	Intermediate
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	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)	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	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
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	y

Qsn #	Question	Answer Option	Answer
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	y
412	Forms dense thickets		
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	y
708	Propagules survive passage through the gut		
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
	WRA Specialist. 2018. Personal Communication	Cultivated as an ornamental. No evidence of domestication

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2018. 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"	Intermediate
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 5 Feb 2018]	"Native Australasia Australia: Australia Western Australia"
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Preferred Climate/s: Mediterranean"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 5 Feb 2018]	

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Gardening With Angus. 2018. <i>Kennedia nigricans</i> – Black Coral Pea. http://www.gardeningwithangus.com.au/kennedia-nigricans-black-coral-pea/ . [Accessed 5 Feb 2018]	"Climate Zone: Warm temperate, Cool temperate, Mediterranean"
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 4 Feb 2018]	"Hardiness: USDA Zone 8a: to -12.2 °C (10 °F) USDA Zone 8b: to -9.4 °C (15 °F) USDA Zone 9a: to -6.6 °C (20 °F) 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)"

204	Native or naturalized in regions with tropical or subtropical climates	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[Naturalized in temperate regions of Australia] " <i>Kennedia nigricans</i> Lindl. Fabaceae - Papilionaceae Total N° of Refs:12 Global Risk Score: 1.44 Rating: Low Habit: perennial Vine Preferred Climate/s: Mediterranean Origin: Aust Major Pathway/s: Herbal, Ornamental Dispersed by: Humans, Escapee References: Australia-E-358, Australia-C- 401, Australia-N-945, Australia-N-310, Australia-N-7, Australia-N-855, Australia- N-354, Australia-N-1450, Global-CD-1611, A"ustralia-N-1902, Australia-N-1845, Australia-W-1977.

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Laidback Gardener. 2018. <i>Kennedia nigricans</i> . https://laidbackgardener.blog/tag/kennedia-nigricans/ . [Accessed 5 Feb 2018]	"I've seen this vigorous climber in tropical areas all over the world, although it's originally from Australia."
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 5 Feb 2018]	"This plant has been said to grow in the following regions: Queen Creek, Arizona Scottsdale, Arizona (2 reports) Albany, California Arroyo Grande, California Atwater, California Lompoc, California Richmond, California San Diego, California Santa Cruz, California"
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 5 Feb 2018]	Cultivated

301	Naturalized beyond native range	y
	Source(s)	Notes

Qsn #	Question	Answer
	Ecoscope. 2010. Bushland Weed Management Plan For Town of Bassendean. Ecoscope (Australia) Pty Ltd, North Fremantle WA	"Black Kennedia (<i>Kennedia nigricans</i>) ... Native to the south-coast between Albany and Esperance, widely cultivated and now naturalised within coastal and swampy sites around Perth. ... Wipe/ Cut Stump - No specific information. Suggest wiping with 1:2 glyphosate to water." ... "Spot Spray - No specific information on herbicide control."
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. Conservation Science Western Australia, 8, 259-273	"Similar issues can be noted in the south coast endemics <i>Kennedia nigricans</i> (weedy populations on the Swan Coastal Plain)," ... "NATURAL DISTRIBUTION: Esperance Sandplains IBRA Region. WEEDY DISTRIBUTION: Swan Coastal Plain IBRA Region." ... "NOTES: Self-seeding in several sites on the Swan Coastal Plain. Locally abundant along Mayfield Road verge."
	de Salas, M. F., & Baker, M. L. (2014). A census of the vascular plants of Tasmania. Tasmanian Herbarium, Tasmanian Museum and Art Gallery, Hobart.	<i>Kennedia nigricans</i> - i = introduced and naturalised in Tasmania
	Wagner, W.L., Herbst, D.R. & Lorence, D.H. 2018. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/ . [Accessed 5 Feb 2018]	No evidence to date

302	Garden/amenity/disturbance weed	y
	Source(s)	Notes
	Laidback Gardener. 2018. <i>Kennedia nigricans</i> . https://laidbackgardener.blog/tag/kennedia-nigricans/ . [Accessed 5 Feb 2018]	"Apparently, it escapes from culture to become weed in mild, fairly arid climates where it climbs anything it can twist its greedy little wandering stems around. Often a machete is needed to hack your way through when it takes over brushy sites."
	Adelaide Hills Council. 2009. Bushland Invasive Plants Information Sheet. http://www.ahc.sa.gov.au . [Accessed 5 Feb 2018]	"INVASIVE PLANTS IN BUSHLAND ~ Adelaide Hills Council District" [Includes <i>Kennedia nigricans</i> . Impacts unspecified]
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. Conservation Science Western Australia, 8, 259-273	" <i>Kennedia nigricans</i> (weedy populations on the Swan Coastal Plain)" ... "WEEDY DISTRIBUTION: Swan Coastal Plain IBRA Region." ... "NOTES: Self-seeding in several sites on the Swan Coastal Plain. Locally abundant along Mayfield Road verge."
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 4 Feb 2018]	"May be a noxious weed or invasive ... On Mar 21, 2016, Cheri13 from Scottsdale, AZ wrote: ... They can be considered invasive, and they have a mind of their own as far as where they want to grow." ... "On Feb 21, 2003, kennedyh from Churchill, Victoria, Australia (Zone 10a) wrote: ... Its drawback is its vigour. Our plant has spread along more than 10 metres of fence, forming a thick hedge from a single plant, and it tends to climb vigorously over any other neighbouring shrubs."
	Australian Native Plants. 2018. <i>Kennedia nigricans</i> . http://www.australianplants.com/plants.aspx?id=1551 . [Accessed 4 Feb 2018]	"Very vigorous plant, not recommended for small gardens."
	Ecoscope. 2010. Bushland Weed Management Plan For Town of Bassendean. Ecoscope (Australia) Pty Ltd, North Fremantle WA	[A low priority weed] "Black Kennedia (<i>Kennedia nigricans</i>) ... Native to the south-coast between Albany and Esperance, widely cultivated and now naturalised within coastal and swampy sites around Perth. ... Wipe/ Cut Stump - No specific information. Suggest wiping with 1:2 glyphosate to water." ... "Spot Spray - No specific information on herbicide control."

Qsn #	Question	Answer
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[Cited as a weed, or naturalized. Impacts at this point appear to be restricted to gardens, cultivated settings & landscapes] "References: Australia-E-358, Australia-C- 401, Australia-N-945, Australia-N-310, Australia-N-7, Australia-N-855, Australia- N-354, Australia-N-1450, Global-CD- 1611, Australia-N-1902, Australia-N-1845, Australia-W-1977."
	Collins, S. M. (2002). Improving rehabilitation practices for the outer batter slopes of bauxite residue disposal areas at Worsley refinery, Collie. MSc Thesis. Murdoch University, Western Australia	[Considered in a seed mix for restoration purposes and regarded as potentially weedy and too aggressive] "Diversity would be promoted by the exclusion of <i>Kennedia nigricans</i> and any other species found in future monitoring to become dominant to the detriment of other species."

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence to date

304	Environmental weed	n
	Source(s)	Notes
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. Conservation Science Western Australia, 8, 259-273	[No evidence of negative environmental impacts provided in this publication] "WEEDY DISTRIBUTION: Swan Coastal Plain IBRA Region." ... "NOTES: Self-seeding in several sites on the Swan Coastal Plain. Locally abundant along Mayfield Road verge."

Qsn #	Question	Answer
305	Congeneric weed	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	" <i>Kennedia rubicunda</i> (Schneev.) Vent. Fabaceae - Papilionaceae Total N° of Refs: 27 Global Risk Score: 1.44 Rating: Low Habit: perennial Vine Preferred Climate/s: Mediterranean Origin: Aust Major Pathway/s: Ornamental Dispersed by: Humans, Escapee References: Australia-E-72, Australia-E- 358, New Zealand-N-280, Australia-N-176, Australia-C-401, Australia-N-945, Australia-E-380, New Zealand-N-534, Australia-EN-310, New Zealand-N-919, Australia-N-354, New Zealand-E-505, Global-A-1207, Australia-E-1259, Australia-E-1261, Australia-E-1262, New Zealand-X-1311, Australia-E-1456, New Zealand-X-1542, Global-CD-1611, Australia-N-1902, Australia-N-1845, Australia-N-1959, New Zealand-N-2048, New Zealand-Q-2086, Australia-W-1977, New Zealand-W-1977."
	Queensland Government. (2018). Weeds of Australia. <i>Kennedia rubicunda</i> . http://keyserver.lucidcentral.org . [Accessed 5 Feb 2018]	"Naturalised in south-eastern Australia (i.e. in Tasmania and beyond its native range in Victoria)." ... "Dusky coral pea (<i>Kennedia rubicunda</i>) is regarded as an environmental weed in Tasmania and those parts of Victoria that are outside its native range. This species is seen as a potential threat to one or more vegetation formations in Victoria, and is currently of most concern in the southern parts of this state. For example, it is listed as an environmental weed in Knox City, has been targeted for removal from the Kananook Creek area south of Melbourne, and is listed as a potential environmental weed or "sleeper weed" in Frankston City."

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Corrick, M.G. & Fuhrer, B. (2009). Wildflowers of Southern Western Australia. Third Edition. Rosenberg Publishing, Kenthurst, Australia	"Large, vigorous climber; leaves 1 - 3-foliolate, leaflets 3 - 10 x 2-7 cm; flowers to c. 4 cm long." [No evidence]

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Corrick, M.G. & Fuhrer, B. (2009). Wildflowers of Southern Western Australia. Third Edition. Rosenberg Publishing, Kenthurst, Australia	"Large, vigorous climber; leaves 1 - 3-foliolate, leaflets 3 - 10 x 2-7 cm; flowers to c. 4 cm long." [Fabaceae (alt.Leguminosae). No evidence]

Qsn #	Question	Answer
404	Unpalatable to grazing animals	n
	Source(s)	Notes
	Future Farm Industries CRC. 2011. Perennial forage shrubs providing profitable and sustainable grazing. The University of Western Australia, Crawley WA	"Table 7. Some of the plants with a high palatability rating, averaged across grazing studies at Merredin (WA), Monarto (SA) and Condobolin (NSW)." [Includes <i>Kennedia nigricans</i>]

405	Toxic to animals	n
	Source(s)	Notes
	Bell, L. W., Bennett, R. G., Ryan, M. H., & Clarke, H. (2011). The potential of herbaceous native Australian legumes as grain crops: a review. <i>Renewable Agriculture and Food Systems</i> , 26(1), 72-91	"Although no major toxicity problems have been documented with <i>Kennedia</i> , Rivett et al.16 found <i>K. nigricans</i> and <i>K. coccinea</i> seeds to contain significant concentrations of canavanine, 8.1 and 6.0 mol%, respectively. However, the presence of canavanine in some of these seeds should not prove an obstacle to their food use since the apparent toxicity of this compound is low."
	Future Farm Industries CRC. 2011. Perennial forage shrubs providing profitable and sustainable grazing. The University of Western Australia, Crawley WA	[No evidence] "Table 7. Some of the plants with a high palatability rating, averaged across grazing studies at Merredin (WA), Monarto (SA) and Condobolin (NSW)." [Includes <i>Kennedia nigricans</i>]
	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 in genus

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	The Royal Horticultural Society. 2018. <i>Kennedia nigricans</i> - black bean. https://www.rhs.org.uk/Plants/83583/Kennedia-nigricans/Details . [Accessed 5 Feb 2018]	"Pests May be attacked by glasshouse red spider mite and glasshouse whitefly under glass Diseases Generally disease free "

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	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	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found. As a climber, could potentially act as a fuel ladder into trees

409	Is a shade tolerant plant at some stage of its life cycle	y
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Qsn #	Question	Answer
	Source(s)	Notes
	Australian Native Plants. 2018. <i>Kennedia nigricans</i> . http://www.australianplants.com/plants.aspx?id=1551 . [Accessed 4 Feb 2018]	"Exposure: Full Sun to Partial Shade"
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 4 Feb 2018]	"Sun Exposure: Sun to Partial Shade Light Shade"
	Australian Outback Plantation. 2018. <i>Kennedia nigricans</i> - Black Coral Pea. https://www.australianoutbackplants.com/our-plant-list/kennedia-nigricans-black-coral-pea . [Accessed 5 Feb 2018]	"Tolerates shade."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Gardening With Angus. 2018. <i>Kennedia nigricans</i> – Black Coral Pea. http://www.gardeningwithangus.com.au/kennedia-nigricans-black-coral-pea/ . [Accessed 5 Feb 2018]	"Ph Level: Acid, Neutral, Alkaline Soil Type: Loamy, Sandy loam, Clay loam, Poor soil"
	Royal Botanic Gardens Kew. (2018) Seed Information Database (SID). Version 7.1. Available from: http://data.kew.org/sid/ . [Accessed 5 Feb 2018]	"Soil Loam, Chalk, Sand pH Acid, Alkaline, Neutral"

411	Climbing or smothering growth habit	y
	Source(s)	Notes
	Corrick, M.G. & Fuhrer, B. (2009). <i>Wildflowers of Southern Western Australia</i> . Third Edition. Rosenberg Publishing, Kenthurst, Australia	"Large, vigorous climber; leaves 1 - 3-foliolate, leaflets 3 - 10 x 2-7 cm; flowers to c. 4 cm long."
	Burke's Backyard. 2018. <i>Kennedia nigricans</i> . https://www.burkesbackyard.com.au . [Accessed 5 Feb 2018]	"This is a vigorous Australia native climber or fast spreading ground cover with lobed dark green leaves and attractive black and yellow pea flowers. It is a very rampant plant which needs room to grow and is probably best kept away from buildings and trees, however it is useful for quick coverage of ugly fences or banks."

412	Forms dense thickets	
	Source(s)	Notes
	Laidback Gardener. 2018. <i>Kennedia nigricans</i> . https://laidbackgardener.blog/tag/kennedia-nigricans/ . [Accessed 5 Feb 2018]	[May impede movement. Unknown if it excludes other vegetation] "Apparently, it escapes from culture to become weed in mild, fairly arid climates where it climbs anything it can twist its greedy little wandering stems around. Often a machete is needed to hack your way through when it takes over brushy sites."

501	Aquatic	n
	Source(s)	Notes

Qsn #	Question	Answer
	Corrick, M.G. & Fuhrer, B. (2009). Wildflowers of Southern Western Australia. Third Edition. Rosenberg Publishing, Kenthurst, Australia	[Terrestrial climber] "Habitat: woodland or shrubland in sandy soil, usually near-coastal."
502	Grass	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 5 Feb 2018]	Family: Fabaceae (alt.Leguminosae) Subfamily: Faboideae Tribe: Phaseoleae Subtribe: Kennediinae
503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Bell, L. W., Bennett, R. G., Ryan, M. H., & Clarke, H. (2011). The potential of herbaceous native Australian legumes as grain crops: a review. <i>Renewable Agriculture and Food Systems</i> , 26(1), 72-91	"All <i>Kennedia</i> are evergreen prostrate or climbing perennials. They are herbaceous but often have woody stems at their base."
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Corrick, M.G. & Fuhrer, B. (2009). Wildflowers of Southern Western Australia. Third Edition. Rosenberg Publishing, Kenthurst, Australia	"Large, vigorous climber; leaves 1 - 3-foliolate, leaflets 3 - 10 x 2-7 cm; flowers to c. 4 cm long." [No evidence]
601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. <i>Conservation Science Western Australia</i> , 8, 259-273	[No evidence. Actually weedy in native range] " <i>Kennedia nigricans</i> Labill. (black kennedia) NATURAL DISTRIBUTION: Esperance Sandplains IBRA Region. WEEDY DISTRIBUTION: Swan Coastal Plain IBRA Region." ... "NOTES: Self seeding in several sites on the Swan Coastal Plain. Locally abundant along Mayfield Road verge."
602	Produces viable seed	y
	Source(s)	Notes
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. <i>Conservation Science Western Australia</i> , 8, 259-273	" <i>Kennedia nigricans</i> ... NOTES: Self-seeding in several sites on the Swan Coastal Plain. Locally abundant along Mayfield Road verge."
	Australian Native Plants. 2018. <i>Kennedia nigricans</i> . http://www.australianplants.com/plants.aspx?id=1551 . [Accessed 4 Feb 2018]	"Propagation Information: Pour boiling water over seed and soak overnight prior to sowing. Drench seed with a fungicide to prevent "damping off" Seed usually germinates 10-50 days after sowing."
603	Hybridizes naturally	

Qsn #	Question	Answer
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found.

604	Self-compatible or apomictic	
	Source(s)	Notes
	Corrick, M.G. & Fuhrer, B. (2009). Wildflowers of Southern Western Australia. Third Edition. Rosenberg Publishing, Kenthurst, Australia	"Flowers bisexual, pea-like, stalked. floral bracts absent: calyx 5-lobed and 2-lipped. the lobes of the upper lip joined higher, the lobes more or less equal to or shorter than the tube; petals 5; stamens 10 (9 fused and 1 free), anthers uniform." [Unknown if self-compatible]
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. Conservation Science Western Australia, 8, 259-273	"Self-seeding in several sites on the Swan Coastal Plain." [Unknown if self-seeding results from self-pollination or cross-pollination between vines in close proximity]

605	Requires specialist pollinators	n
	Source(s)	Notes
	Bell, L. W., Bennett, R. G., Ryan, M. H., & Clarke, H. (2011). The potential of herbaceous native Australian legumes as grain crops: a review. Renewable Agriculture and Food Systems, 26(1), 72-91	"Flowers are open pollinated by insects or birds."
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 4 Feb 2018]	"On Feb 21, 2003, kennedyh from Churchill, Victoria, Australia (Zone 10a) wrote: This West Australian climbing pea, is very unusual in having black flowers (well black and yellow). The large pea flowers are borne over a long period through the spring and summer, and are attractive to nectar-feeding birds."

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Dave's Garden. 2018. Black Coral Pea - <i>Kennedia nigricans</i> . https://davesgarden.com/guides/pf/go/54270/ . [Accessed 5 Feb 2018]	[Unknown if vine can spread vegetatively from fragments] "Propagation Methods: From woody stem cuttings From hardwood cuttings From seed; stratify if sowing indoors Scarify seed before sowing"

607	Minimum generative time (years)	
	Source(s)	Notes
	Plantmark. 2018. Native Climbers. http://www.plantmark.com.au/native-climbers-profile-sheet . [Accessed 5 Feb 2018]	[Fast growth rate. Time to maturity unspecified, but probably within <1-2 years of growth] "Black Coral Pea can be grown as a climber or a ground cover. This plant is quite vigorous, so consider that when planting as it may need regular pruning to maintain its habit. For this reason its fast growth rate makes it good for screening and for covering embankments."

Qsn #	Question	Answer
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Wheeler, J.R., Marchant, N.G.& Lewington, M. 2002. Flora of the South West: Dicotyledons. UWA Publishing, Crawley, Western Australia	"Fruit an almost stalkless, turgid or compressed pod, the seeds separated by pithy divisions."
	Berg, R. Y. (1975). Myrmecochorous plants in Australia and their dispersal by ants. Australian Journal of Botany, 23(3), 475-508	"In the Phaseoleae (Fabaceae), all species of the Australian genera Kennedia and Hardenbergia are myrmecochorous"
	Woodger, T. A. (2011). The Pictorial Guide to Seeds of the World: An Introduction Into the Collection, Cleaning, and Storage of Seeds.	Picture of seed shows no means of external attachment

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Herbal, Ornamental Dispersed by: Humans, Escapee"
	Australian Seed. 2018. Kennedia nigricans. https://australianseed.com/shop/item/kennedia-nigricans . [Accessed 5 Feb 2018]	"Seed per packet: 15" [Sold commercially]
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html . [Accessed 5 Feb 2018]	Cultivated

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[No evidence to date] "Major Pathway/s: Herbal, Ornamental Dispersed by: Humans, Escapee"

704	Propagules adapted to wind dispersal	n
	Source(s)	Notes
	Berg, R. Y. (1975). Myrmecochorous plants in Australia and their dispersal by ants. Australian Journal of Botany, 23(3), 475-508	"In the Phaseoleae (Fabaceae), all species of the Australian genera Kennedia and Hardenbergia are myrmecochorous"
	Auld, T. D. (1996). Ecology of the Fabaceae in the Sydney region: fire, ants and the soil seedbank. Cunninghamia, 4 (4), 531-551	[Generic description. May be dispersed explosively, but otherwise not dispersed by wind] "Within the Fabaceae, initial seed release from the parent may be passive, ballistic or explosive (Berg 1975). In some legume species, seeds may be ejected a small distance from the fruits. The species involved generally have pods that twist spirally upon dehiscence (Berg 1975, 1979; pers observ.). Species known to have such a release mechanism include species of Acacia (e.g. Acacia myrtifolia), Daviesia, Kennedia and Hardenbergia."

705	Propagules water dispersed	
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Qsn #	Question	Answer
	Source(s)	Notes
	Keighery, G. (2013). Weedy native plants in Western Australia: an annotated checklist. Conservation Science Western Australia, 8, 259-273	" <i>Kennedia nigricans</i> Labill. (black kennedia) NATURAL DISTRIBUTION: Esperance Sandplains IBRA Region. WEEDY DISTRIBUTION: Swan Coastal Plain IBRA Region. HABITATS: Swamps, coastal sands, damplands." [Distribution in swamps & coastal areas suggests movement by water. Buoyancy of seeds unknown]

706	Propagules bird dispersed	n
	Source(s)	Notes
	Berg, R. Y. (1975). Myrmecochorous plants in Australia and their dispersal by ants. Australian Journal of Botany, 23(3), 475-508	"In the Phaseoleae (Fabaceae), all species of the Australian genera <i>Kennedia</i> and <i>Hardenbergia</i> are myrmecochorous,"

707	Propagules dispersed by other animals (externally)	y
	Source(s)	Notes
	Berg, R. Y. (1975). Myrmecochorous plants in Australia and their dispersal by ants. Australian Journal of Botany, 23(3), 475-508	"In the Phaseoleae (Fabaceae), all species of the Australian genera <i>Kennedia</i> and <i>Hardenbergia</i> are myrmecochorous"
	Groom, P. K., & Lamont, B. (2015). Plant life of southwestern Australia: adaptations for survival. De Gruyter Open Ltd, Warsaw/Berlin	"Table 10.2: List of SouthWest plant families and genera that are recorded as possessing ant dispersed species. Boldface type indicates genera with more than 50% of their species displaying myrmecochory." [Includes <i>Kennedia</i>]
	Lengyel, S., Gove, A. D., Latimer, A. M., Majer, J. D., & Dunn, R. R. (2010). Convergent evolution of seed dispersal by ants, and phylogeny and biogeography in flowering plants: a global survey. Perspectives in Plant Ecology, Evolution and Systematics, 12(1), 43-55	"Table1 Myrmecochorous genera in monophyletic lineages, with biogeographic distribution and diversity. Boldface type indicates lineages in which more than 50% of all species are myrmecochorous (n=101 lineages)." [Genera with myrmecochory = <i>Hardenbergia</i> , <i>Kennedia</i>]

708	Propagules survive passage through the gut	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown. Hard seeds may survive gut passage if intentionally or inadvertently ingested by browsing animals

801	Prolific seed production (>1000/m2)	
	Source(s)	Notes
	Bell, L. W., Bennett, R. G., Ryan, M. H., & Clarke, H. (2011). The potential of herbaceous native Australian legumes as grain crops: a review. Renewable Agriculture and Food Systems, 26(1), 72-91	[Unknown] "Elongated pea-like pods contain 4–50 seeds. Mature pods are dehiscent, but valves do not twist at maturity. One study has reported seed production of 200 kg ha ⁻¹ from <i>K. prostrata</i> at the onset of November at Merredin in the Western Australian wheatbelt 82. This was about 10% of the total shoot biomass at this time. However, flowering and seed production did not occur until the second growing season for <i>K. prostrata</i> 82."

802	Evidence that a persistent propagule bank is formed (>1 yr)	

Qsn #	Question	Answer
	Source(s)	Notes
	Perry, D. (1999). How to collect seed from native trees and shrubs. Landcare Notes TG0005. Natural Resources and Environment, Victoria	"Pods split along two edges when dry and the seed usually has a hard coating when ripe, allowing it to remain viable for many years. Pods are found on plants in the following genera: Acacia, Cassia, Hardenbergia, Daviesia, Indigofera and Kennedia."
	Royal Botanic Gardens Kew. (2018) Seed Information Database (SID). Version 7.1. Available from: http://data.kew.org/sid/ . [Accessed 6 Feb 2018]	"Storage Behaviour: Orthodox?"
	Australian Seed. 2018. <i>Kennedia nigricans</i> . https://australianseed.com/shop/item/kennedia-nigricans . [Accessed 5 Feb 2018]	[Potentially Yes] " <i>Kennedia</i> seeds germinate readily, however they do have a hard outer coating which is impervious to water. To assist in the uptake of moisture for germination to occur seed best scarified by pre-treating with hot water first."

803	Well controlled by herbicides	
	Source(s)	Notes
	Ecoscope. 2010. Bushland Weed Management Plan For Town of Bassendean. Ecoscope (Australia) Pty Ltd, North Fremantle WA	[Efficacy of herbicides unknown] "Black <i>Kennedia</i> (<i>Kennedia nigricans</i>) ... Native to the south-coast between Albany and Esperance, widely cultivated and now naturalised within coastal and swampy sites around Perth. ... Wipe/ Cut Stump - No specific information. Suggest wiping with 1:2 glyphosate to water." ... "Spot Spray - No specific information on herbicide control."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Australian Native Plants. 2018. <i>Kennedia nigricans</i> . http://www.australianplants.com/plants.aspx?id=1551 . [Accessed 4 Feb 2018]	"Foliage damaged by moderate frost but foliage will return in spring. Pruning extends the life of the plant. Very vigorous plant, not recommended for small gardens. Great bird attracting vine. Good for covering an embankment."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown

Summary of Risk Traits:

Summary of Risk Traits

High Risk / Undesirable Traits

- Naturalized outside native range within Australia
- Regarded as weedy & aggressive where naturalized & cultivated in Australia
- Related species have become invasive
- Shade-tolerant
- Tolerates many soil types
- Smothering growth habit
- Reproduces by seeds
- Seeds dispersed by ants, possibly water & intentionally by people
- Seeds able to be stored for extended periods; May form a persistent seed bank
- May be able to resprout after cutting or pruning
- Limited ecological information reduces accuracy of risk prediction

Low Risk Traits

- Unarmed (no spines, thorns, or burrs)
- Palatable to browsing animals
- Non-toxic
- Ornamental

Second Screening Results for Vines

- (A) Shade tolerant or known to form dense stands?> Yes. Shade tolerant. Unknown if smothering habit forms dense stands that exclude other vegetation or impede movement
- (B) Bird or clearly Wind-dispersed?> No. Dispersed by ants & people
- (C) Life cycle <4 years? Unknown, but probably yes
- (D) Reported as a weed of cultivated lands? Yes. A weedy, aggressive plant in landscaping.
- (E) Unpalatable to grazers or known to form dense stands? Palatable, but Unknown if smothering habit forms dense stands that exclude other vegetation or impede movement
- Outcome = Evaluate Further (Unable to answer all question in second screening)

