Family:	Rosaceae				
Taxon:	Rubus loganobaccus				
Synonym:	Rubus ursinus var. loganobaccus (L	. H. Baile Common Name	 boysenberry loganberry phenomenal-berry tayberry 		
Questionaire	current 20090513	Assessor:	Chuck Chimera	Designation: H	I(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 1	
01 Is the sp	ecies highly domesticated?			y=-3, n=0	n
02 Has the	species become naturalized where g	rown?		y=1, n=-1	
03 Does the	species have weedy races?			y=1, n=-1	
	uited to tropical or subtropical clir e ''wet tropical'' for ''tropical or su		y wet habitat, then	(0-low; 1-intermediate; 2- high) (See Appendix 2)	Low
202 Quality	of climate match data			(0-low; 1-intermediate; 2- high) (See Appendix 2)	Intermediate
203 Broad cl	imate suitability (environmental ve	rsatility)		y=1, n=0	У
204 Native of	4 Native or naturalized in regions with tropical or subtropical climates y=1, n=0				n
205 Does the	5 Does the species have a history of repeated introductions outside its natural range? y=-2, ?=-1, n=0				У
801 Naturali	zed beyond native range			y = 1*multiplier (see Appendix 2), n= question 205	у
302 Garden/				n=0, y = 1*multiplier (see Appendix 2)	
303 Agricult	Agricultural/forestry/horticultural weedn=0, y = 2*multiplier (see Appendix 2)			n	
804 Environ	Environmental weed n=0, y = 2*multiplier (see Appendix 2)			у	
605 Congene	ric weed			n=0, y = 1*multiplier (see Appendix 2)	у
01 Produce	s spines, thorns or burrs			y=1, n=0	
102 Allelopa	thic			y=1, n=0	
403 Parasitic				y=1, n=0	n
404 Unpalata	able to grazing animals			y=1, n=-1	n
405 Toxic to	5 Toxic to animals y=1, n=0				n
406 Host for	6 Host for recognized pests and pathogens y=1, n=0			У	
407 Causes a	llergies or is otherwise toxic to hun	nans		y=1, n=0	n
108 Creates	a fire hazard in natural ecosystems			y=1, n=0	
109 Is a shad	e tolerant plant at some stage of its	life cycle		y=1, n=0	
10 Tolerate	s a wide range of soil conditions (or	limestone conditions if not	a volcanic island)	y=1, n=0	у

411	Climbing or smothering growth habit	y=1, n=0	у
412	Forms dense thickets	y=1, n=0	У
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, cor	ms, 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	У
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	У
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	У
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	2
701	Propagules likely to be dispersed unintentionally (plants growing in h areas)	neavily trafficked y=1, n=-1	У
702	Propagules dispersed intentionally by people	y=1, n=-1	У
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	у
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	у
801	Prolific seed production (>1000/m2)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	У
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	У
805	Effective natural enemies present locally (e.g. introduced biocontrol a	ngents) y=-1, n=1	
		Designation: H(HPWRA) WRA Score 1	1

Supporting Data:

101	2012. USDA, ARS, National Genetic Resources Program. Rubus loganobaccus L. H. Bailey ROSACEAE 'Boysen' Germplasm Resources Information Network - (GRIN). [Online Database]. http://www.ars-grin.gov/cgi- bin/npgs/acc/display.pl?1448308	[Is the species highly domesticated? No] "Originated in Napa, California, by Rudolph Boysen. Introduced in 1935 by Walter Knott, Knott's Berry Farm, Buena Park, California. Parentage unknown but is of type as might be expected from a Logan x Lucretia cross; some consider Himalaya as the female parent; seedling grown about 1920; bushes transplanted to Anaheim, California, in the late 1920s. Fruit: black; flavor very fine but not as sweet as Young; size extremely large, 1.25 inches or more long; rather soft; aroma distinct; covered with a dusty bloom; bears through August in some areas, ripens 1 week before Young. Bush: trailing (dewberry type); more vigorous that Young; high yields. In California, Boysen and Nectar are different varieties Brooks and Olmo Register of Fruit and Nut Varieties. Fruit black, flavor very fine, very large. Midseason, vigorous, yields to 4Tons/Acre in Oregon." [Although this is an artificial cultivar, there does not appear to be any significant loss of competitive traits. There is not enough evidence at this time to conclude that this cultivar has lost its ability to survive without human assisted cultivation.]
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Species suited to tropical or subtropical climate(s) 0-Low] "Seed - requires stratification and is best sown in early autumn in a cold frame. Stored seed requires one month stratification at about 3°c and is best sown as early as possible in the year." [For the special cases of a temperate species whose seeds have been reported to require cold stratification for germination, the answer to this question is 0(low) and the answer to question 2.02 is 1 (intermediate) regardless of knowledge of the species native range. Curt Daehler, pers. comm.]
202	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Quality of climate match data? 1-intermediate] "Seed - requires stratification and is best sown in early autumn in a cold frame. Stored seed requires one month stratification at about 3°c and is best sown as early as possible in the year." [For the special cases of a temperate species whose seeds have been reported to require cold stratification for germination, the answer to this question is 0(low) and the answer to question 2.02 is 1 (intermediate) regardless of knowledge of the species native range. Curt Daehler, pers. comm.]
203	2012. Dave's Gardern. PlantFiles: Boysenberry - Rubus ursinus 'Boysen'. http://davesgarden.com/guides/pf/go/135105/	[Broad climate suitability (environmental versatility)? Yes. Although not tropical] "USDA Zone 5a: to -28.8 °C (-20 °F) USDA Zone 5b: to -26.1 °C (-15 °F) USDA Zone 6a: to -23.3 °C (-10 °F) USDA Zone 6b: to -20.5 °C (-5 °F) USDA Zone 7a: to -17.7 °C (0 °F) USDA Zone 7b: to -14.9 °C (5 °F) 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)" [Can grow in 5 hardiness zones: 5 to 10]
203	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Broad climate suitability (environmental versatility)? No] "Climate: Temperate. Mediterranean."
204	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Native or naturalized in regions with tropical or subtropical climates? No] "Climate: Temperate. Mediterranean."
204	2012. WRA Specialist. Personal Communication.	[Native or naturalized in regions with tropical or subtropical climates? No] Naturalized in regions with temperate climates. [See 3.01. May be able to naturalize in higher elevations of Hawaii and other tropical islands]
205	2012. Online Atlas of the British and Irish flora. Rubus loganobaccus (Loganberry). http://www.brc.ac.uk/plantatlas/index.php?q=plant /rubus-loganobaccus	[Does the species have a history of repeated introductions outside its natural range? Yes] "Neophyte. A hexaploid hybrid species, which was introduced into Britain in 1897 and which is popular in gardens where it is grown for its fruits. It was first recorded from the wild in Britain in 1938 (Surrey), and may be increasing."
205	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Does the species have a history of repeated introductions outside its natural range? Yes] "Origin. Only cultivated, originating from cultivar in California. History of use / introduction. Likely escapee from local hobby / berry farms. Has edible fruits. Genetic source for blackberry cultivars."

301	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Naturalized beyond native range? Yes] "It has naturalised in south-western Western Australia; Eyre Peninsula, the mid-North region and from Fleurieu Peninsula in South Australia; the Canberra region in New South Wales; the Ballarat region of Victoria and from south-eastern Tasmania."	
301	2012. Online Atlas of the British and Irish flora. Rubus loganobaccus (Loganberry). http://www.brc.ac.uk/plantatlas/index.php?q=plant /rubus-loganobaccus	[Naturalized beyond native range? Yes] "It occurs as a garden escape in hedges and on roadsides, railway banks and waste ground. It reproduces by seed, which may be bird-sown, and vegetatively by its rooting stem-tips. Lowland."	
301	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Naturalized beyond native range? Yes] "Probably a hybrid between R. ursinus and the raspberry 'Red Antwerp'. Rarely naturalized in Britain."	
301	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Naturalized beyond native range? Yes] "Low, straggling, tangled shrub or climber (with almost prostrate canes), to 5 m high. Fl. white, Dec. Brown clay loam, red sandy loam, gravel, laterite, granite. Along creeklines, in disturbed ground. Distribution: South-west. JF and WAR." "Origin. Only cultivated, originating from cultivar in California. History of use / introduction. Likely escapee from local hobby/berry farms. Has edible fruits. Genetic source for blackberry cultivars. Similar exotic species. R. anglocandicans, R. ulmifolius. " "R. loganobaccus was located near Pemberton. Of hybrid origin. Is a naturalised American cultivar derived from raspberry x blackberry hybrids, presumably R. idaeus x R. ursinusls. For further information on identification refer to Barker and Barker (2005) Blackberry: an identification tool to introduced & native Rubus in Australia [CD ROM] or CSIRO (2005) Field guide for the identification of WA blackberry."	
302	2009. NSW Department of Primary Industries Weed Management Unit. Blackberry control manual: Management and control options for blackberry (Rubus spp.) in Australia. Department of Primary Industries, Victoria	[Garden/amenity/disturbance weed? Environmental Weed. See 3.04] "Recorded as a weed in south-western WA across the mid-north region of SA, on Kangaroo Island, in the Canberra region, in the Ballarat area of Vic. and in southern-eastern Tas. A hybrid between North American R. ursinus and Eurasian R. idaeus. Can be distinguished by its pinnate leaves and its oblong fruit, which is dark red to dull black."	
302	2012. Dave's Gardern. PlantFiles: Boysenberry - Rubus ursinus 'Boysen'. http://davesgarden.com/guides/pf/go/135105/	[Garden/amenity/disturbance weed? Environmental Weed. See 3.04] "May be a noxious weed or invasive"	
302	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Garden/amenity/disturbance weed? Environmental Weed. See 3.04] "Suggested method of management and control. Hand pull small plants. Cut and paint with 20-50% glyphosate or slash canes. Spray regrowth at 0.5 m with metsulfuron methyl 1 g/10 L + the wetting agent Endose® at label rates, in summer to autumn. Will require follow up for a number of years." [Controlled with herbicides. Requires several years of treatment]	
303	2007. Randall, R.P Global Compendium of Weeds - Rubus loganobaccus [Online Database]. http://www.hear.org/gcw/species/rubus_loganoba ccus/	[Agricultural/forestry/horticultural weed? No] "garden thug, naturalised, weed" [No evidence]	
304	2009. Gremmen, N./Halbertsma, R.L Alien plants and their impact on Tristan da Cunha - Part 1: General account. Data-analyse Ecologie, Diever, The Netherlands	[Environmental weed? Yes] "More urgent is the eradication of Loganberry (Rubus loganobaccus), as this species strongly affects the invaded areas, not only changing the vegetation completely, but also making these areas unsuitable as a nesting ground for albatrosses. An eradication program for this species at Sandy Point is presently underway and we suggest to continue the eradication of the Loganberry in all areas outside the Settlement."	
304	2011. Wolfaardt, A Final report on Defra funded invasive aliens and climate change work in the UK's South Atlantic Overseas Territories. Joint Nature Conservation Committee, Peterborough, UK jncc.defra.gov.uk/pdf/Tristan_Final_Report.pdf	[Environmental weed? Yes] "Invasive alien plant management and biosecurity work, February 2010-March 2011 A total of £5,000 was used to continue efforts to control Loganberry Rubus loganobaccus at Sandy Point, on the main island of Tristan da Cunha. Areas at Sandy Point had become completely overgrown by f Loganberry, transforming the structure of the vegetation. Although it is not clear what the impact is on the botanical biodiversity of the invaded areas, what is clear is that invasion by Loganberry has displaced several albatrosses from their nesting sites. The funds were also used to complete the erection of a field hut at Sandy Point to facilitate ongoing work at the site."	
305	2003. Weber, E Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Congeneric weed? Yes] "Rubus argutus forms impenetrable thickets Rubus cuneifolius plant coppices vigorously and forms dense thickets Rubus ellipticus shrub forms impenetrable thickets that displace native vegetation and affect wildlife by impeding movement and reducing habitats Rubus fruticosusforms extensive and dense impenetrable thickets, shading out all other vegetation, displacing it and affecting wildlife habitats Rubus niveus displaces native vegetation, impedes regeneration of native shrubs and trees and affect wildlife habitats Rubus ulmifolius grows in dense patches that displace native vegetation"	
Print D	ate: 1/26/2012 R	ubus loganobaccus (Rosaceae) Pa	ge 4 of 9

401	1985. Langridgem D.F./Goodman, R.D Honeybee pollination of loganberries (Rubus loganobaccus L.H. Bailey). Australian Journal of Experimental Agriculture. 25: 224–226.	[Produces spines, thorns or burrs? Possibly] "Thornless loganberries are a crop which, in recent years, has aroused interest in Victoria both as a fresh fruit and as a jam berry." [But varieties with prickles also occur. See Hussey et al. 2007]
401	2007. Hussey, B.M.J./Keighery, G. J./Dodd, J./Lloyd, S.G./Cousens, R.D Western Weeds. A Guide to the Weeds of Western Australia. The Weed Society of Western Australia, Victoria Park, WA	[Produces spines, thorns or burrs? Possibly] "easily distinguished as it has pinnate leaves and narrow, straight spines on its stems, unlike the curved prickles found on blackberries/brambles."
401	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Produces spines, thorns or burrs? Possibly] "Loganberry is probably a hybrid of Rubus ursinus and Rubus idaeus, the Red Raspberry. A number of varieties exist including one that is thornless."
402	1988. Coté, JF./Thibault, JR Allelopathic Potential of Raspberry Foliar Leachates on Growth of Ectomycorrhizal Fungi Associated with Black Spruce. American Journal of Botany 75(7): 966-970. 75(7): 966-970.	[Allelopathic? Unknown] "In vitro bioassays on seven species of ectomycorrhizal fungi associated with black spruce (Picea mariana (Mill.) BSP) were tested under allelopathic action of raspberry (Rubus idaeus L.). Radial growth inhibitions were observed when fungi were confronted with increasing concentrations (0%/0.1% 0.5%/o2.5%) of foliar leachates made from May, July, and September material (1986). For the 2.5% treatments, species Paxillus involutus, Laccaria proxima, Laccaria bicolor, Thelephora terrestris and Cortinarius pseudonapus grew only 6, 8, 32, 42, and 46% of their control, whereas Hebeloma cylindrosporum and Cenococcum geophilum were stimulated. Tree seedlings from raspberry invaded plantation showed mycorrhizal infection rate over 75%, with fine roots mainly colonized by C. geophilum. In combination with efforts of tree improvement and based on the results of this study, it seems important to select a well-adapted mycorrhizae, when interference by raspberry is involved." [Some Rubus species can exhibit allelopathic properties, but no evidence exists to suggest that Rubus 'Boysen' is allelopathic]
403	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Parasitic? No] "Low, straggling, tangled shrub or climber (with almost prostrate canes), to 5 m high." [Rubus genus is not parasitic]
404	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Unpalatable to grazing animals? No] "Goats provide a method of non-chemical control. Infested areas are grazed with 7.5 goats per ha in the first year, then 1.25 goats per ha in subsequent years."
405	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Toxic to animals? No] "Toxicity: Not recorded as toxic."
405	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Toxic to animals? No] "Known Hazards - None known" [Commercial cultivar created for human consumption with no reported evidence of toxic or allergenic effects]
406	2010. Sundheim, L./Sletten, A./Rafoss, T./Stensvand, A Pest risk assessment of Phytophthora fragariae in Norway. Opinion of the Plant Health Panel of the Scientific Committee for Food Safety. VKM, Oslo, Norway	[Host for recognized pests and pathogens? Yes] "The main host of the pathogen is cultivated strawberry. The pathogen can cause disease in other Fragaria species, and incidentally in loganberry (Rubus loganobaccus Duch.) (EPPO 2010)." "In addition, infection with P. fragariae does not produce symptoms in other host plants than Fragaria spp., except incidentally in R. loganobaccus."
407	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Causes allergies or is otherwise toxic to humans? No] "Toxicity: Not recorded as toxic."
407	2012. Plants For A Future Database. Rubus loganobaccus.	[Causes allergies or is otherwise toxic to humans? No] "Known Hazards - None known" "Edible Parts: Fruit. Fruit - raw or cooked[1, 3, 34, 61, 171]. A pleasant acid flavour, it usually crops heavily[K]. The fruit is up to 4cm in diameter[200]." [Commercial cultivar created for human consumption with no reported evidence of toxic or allergenic effects]
408	2009. NSW Department of Primary Industries Weed Management Unit. Blackberry control manual: Management and control options for blackberry (Rubus spp.) in Australia. Department of Primary Industries, Victoria	[Creates a fire hazard in natural ecosystems? Potentially] "Fire hazard. Dead blackberry material is a fire hazard. Blackberry infestations can also obstruct fire trails and access to water for controlling fires." [If able to form thickets, this cultivar could potentially increase fire hazards in drier areas, but no direct evidence at this time.]

409	2012. Dave's Gardern. PlantFiles: Boysenberry - Rubus ursinus 'Boysen'. http://davesgarden.com/guides/pf/go/135105/	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "Sun Exposure: Full Sun Sun to Partial Shade"
409	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Is a shade tolerant plant at some stage of its life cycle? Possibly] "Easily grown in a good well-drained loamy soil in sun or semi-shade[1, 11, 200]."
410	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Tolerates a wide range of soil conditions? Yes] "Soil: Grows on wide range of soils."
410	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Tolerates a wide range of soil conditions? Yes] "Tolerates all but the most alkaline soils"
411	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Climbing or smothering growth habit? Yes] "Low, straggling, tangled shrub or climber (with almost prostrate canes), to 5 m high."
412	2009. Gremmen, N./Halbertsma, R.L Alien plants and their impact on Tristan da Cunha - Part 1: General account. Data-analyse Ecologie, Diever, The Netherlands	[Forms dense thickets? Yes] "At several sites in and around the Settlement and in the 1961 lava area; some very large, dense colonies at Sandy Point. Spreading apparently mostly vegetatively."
412	2011. Wolfaardt, A Final report on Defra funded invasive aliens and climate change work in the UK's South Atlantic Overseas Territories. Joint Nature Conservation Committee, Peterborough, UK jncc.defra.gov.uk/pdf/Tristan_Final_Report.pdf	[Forms dense thickets? Yes] "Invasive alien plant management and biosecurity work, February 2010-March 2011 A total of £5,000 was used to continue efforts to control Loganberry Rubus loganobaccus at Sandy Point, on the main island of Tristan da Cunha. Areas at Sandy Point had become completely overgrown by Loganberry, transforming the structure of the vegetation. Although it is not clear what the impact is on the botanical biodiversity of the invaded areas, what is clear is that invasion by Loganberry has displaced several albatrosses from their nesting sites." [Exclusion of albatross suggests thicket formation may be occurring]
501	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Aquatic? No] "Low, straggling, tangled shrub or climber (with almost prostrate canes), to 5 m high."
502	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Grass? No] Rosaceae
503	2012. USDA, ARS, National Genetic Resources Program. Rubus loganobaccus L. H. Bailey ROSACEAE 'Boysen' Germplasm Resources Information Network - (GRIN). [Online Database]. http://www.ars-grin.gov/cgi- bin/npgs/acc/display.pl?1448308	[Nitrogen fixing woody plant? No] Rubus [Although some Rosaceae are nitrogen fixing, there is no evidence that members of the genus Rubus are nitrogen fixers]
504	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Geophyte (herbaceous with underground storage organs bulbs, corms, or tubers)? No] "Low, straggling, tangled shrub or climber (with almost prostrate canes), to 5 m high."
601	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Evidence of substantial reproductive failure in native habitat? No] "Origin. Only cultivated, originating from cultivar in California. History of use/introduction. Likely escapee from local hobby/berry farms. Has edible fruits. Genetic source for blackberry cultivars."

602	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Produces viable seed? Yes] "Reproduction. Seed, stem layering, suckering."
603	2012. USDA, ARS, National Genetic Resources Program. Rubus loganobaccus L. H. Bailey ROSACEAE 'Boysen' Germplasm Resources Information Network - (GRIN). [Online Database]. http://www.ars-grin.gov/cgi- bin/npgs/acc/display.pl?1448308	[Hybridizes naturally? Unknown] "of hybrid origin, presumably R. idaeus × R. ursinus" [Of hybrid origin. Unknown if natural hybridization can occur]
604	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Self-compatible or apomictic? Yes] "The flowers are hermaphrodite (have both male and female organs) and are pollinated by Apomictic. The plant is self-fertile. " "The plant produces apomictic flowers, these produce fruit and viable seed without fertilization, each seedling is a genetic copy of the parent[200]."
605	1985. Langridgem D.F./Goodman, R.D Honeybee pollination of loganberries (Rubus loganobaccus L.H. Bailey). Australian Journal of Experimental Agriculture. 25: 224–226.	[Requires specialist pollinators? No] "Summary. The role of honeybees (Apis mellifera) in the pollination of loganberries was studied in an experimental planting at Knoxfield, Victoria. When plants were enclosed in cages to exclude bees and larger insects, there was no difference in the total numbers and weight of fruit harvested. Quality rather than quantity of fruit benefited from honeybee activity. The number of reject fruit on enclosed plants was 49.9% of the total as compared with 7.8% on open plants, corresponding respectively to 35.5% and 3.30/o by weight. The farm gate value of fruit harvested per plant was \$A2.39 on open plants and \$A1.28 on enclosed plants. After deducting cost of hiring bees this was computed to net an extra return to the grower of \$A1876 per hectare. Honeybees comprised 98.6% of all insect visitors to the flowers. Concentrations of airborne pollen 'were greater inside the cages than outside." "The large proportion of honeybees among the insect visitors indicates their importance as pollinators. The activity of the bees moving from flower to flower and from plant to plant should ensure adequate cross-pollination."
606	2009. Gremmen, N./Halbertsma, R.L Alien plants and their impact on Tristan da Cunha - Part 1: General account. Data-analyse Ecologie, Diever, The Netherlands	[Reproduction by vegetative fragmentation? Yes] "Spreading locally. Spreading vegetatively, and rarely, if at all, by seed."
606	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Reproduction by vegetative fragmentation? Yes] "Reproduction. Seed, stem layering, suckering." "Vegetative regeneration strategy. Resprouts, produces root suckers, stem layering."
607	2012. Plants For A Future Database. Rubus loganobaccus. http://www.pfaf.org/user/Plant.aspx?LatinName=R ubus+loganobaccus	[Minimum generative time (years)? 2] "This species has fast-growing biennial stems[202], it produces a number of new stems each year from the perennial rootstock, these stems fruit in their second year and then die[200]."
701	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Yes] "Dispersal. Birds, foxes, other mammals, garden refuse."
702	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Propagules dispersed intentionally by people? Yes] "Mainly spread by intentional planting. Grows from cuttings and stem fragments."
702	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules dispersed intentionally by people? Yes] "Origin. Only cultivated, originating from cultivar in California. History of use / introduction. Likely escapee from local hobby / berry farms. Has edible fruits. Genetic source for blackberry cultivars."

703	2003. Starr, F./Starr, K./Loope, L.L Rubus ellipticus - Yellow Himalayan raspberry - Rosaceae. USGS - Biological Resources Haleakala Field Station Maui, http://www.hear.org/starr/hiplants/reports/pdf/rubu s_ellipticus.pdf	[Propagules likely to disperse as a produce contaminant? Potentially] "On Maui, R. ellipticus is not yet established in the wild. However, plants have been observed on hapu'u (Cibotium spp.) tree ferns and parts that are shipped from infested areas of Hawai'i These ferns appear "clean" during transport, then seeds sprout some time later in their new locations. There are likely more locations on Maui where Rubus ellipticus will be found in the future. Rubus ellipticus is a noxious weed and strategies for preventing inter-island transport are needed." [Unknown for Rubus 'Boysen', but potential exists for inadvertent seed contamination of tree fern trunks, or other produce, as has been documented with Rubus ellipticus]
704	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules adapted to wind dispersal? No] "Dispersal. Birds, foxes, other mammals, garden refuse."
705	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules water dispersed? No] "Dispersal. Birds, foxes, other mammals, garden refuse." [No adaptations for water dispersal]
706	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules bird dispersed? Yes] "Dispersal. Birds, foxes, other mammals, garden refuse."
707	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules dispersed by other animals (externally)? No] "Dispersal. Birds, foxes, other mammals, garden refuse." [Unlikely. Rubus fruits are adapted for internal bird and vertebrate dissemination & lack means of external attachment]
708	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Propagules survive passage through the gut? Yes] "Dispersal. Birds, foxes, other mammals, garden refuse."
801	2009. Gremmen, N./Halbertsma, R.L Alien plants and their impact on Tristan da Cunha - Part 1: General account. Data-analyse Ecologie, Diever, The Netherlands	[Prolific seed production (>1000/m2)? Apparently No] "Spreading locally. Spreading vegetatively, and rarely, if at all, by seed."
802	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] "Seedbank persistence. Unknown for this species, however seed dormancy and vaiblility is highly variable within Rubus, all species have some dormancy."
803	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Well controlled by herbicides? Yes] "Control with herbicides is usually the most cost effective. Metsulfuron (Brush Off®) and triclopyr (Garlon®) or triclopyr plus picloram (Grazon®) have provided the best results. Glyphosate can be used in home garden or other sensitive areas. Apply herbicides when the plant is actively growing and has good leaf area. Basal bark applications using Access® plus diesel can be used where canes are removed mechanically."
803	2012. Western Australian Herbarium. FloraBase — The Western Australian Flora - Rubus loganobaccus L.H.Bailey. Department of Environment and Conservation, http://florabase.dec.wa.gov.au/browse/profile/204 95	[Well controlled by herbicides? Yes] "Suggested method of management and control. Hand pull small plants. Cut and paint with 20-50% glyphosate or slash canes. Spray regrowth at 0.5 m with metsulfuron methyl 1 g/10 L + the wetting agent Endose® at label rates, in summer to autumn. Will require follow up for a number of years."

804	2012. HerbiGuide. Loganberry - Rubus loganobaccus L. Bailey. http://www.herbiguide.com.au/Descriptions/hg_Lo ganberry.htm	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Slashing alone is generally ineffective. Multiple cultivations provide control but may lead to erosion and soil structure problems. Scalping to 30 cm and root raking can be effective but may require a follow up with other control measures to control re-shooting root and stem fragments and seedlings. " "Mechanical removal, or slashing and burning followed by cultivation, can provide control if repeated regularly and then followed by planting of competitive, preferably perennial, pastures species that is grazed." "Fire provides little control alone but assists access for herbicide application or other control." "Follow up treatments are essential for high levels of control." "Mechanical control." [Requires repeated and consistent treatment. Otherwise, plants will grow back]
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unlikely] Several naturalized species of Rubus have become highly invasive in the Hawaiian Islands, suggesting that natural enemies of Rubus are not present or ineffective at preventing their spread.