

Family: *Fabaceae*

Taxon: *Vachellia xanthophloea* \*Dgpvj 0'R0J wt vgt

Synonym: *Acacia xanthophloea* Benth. (basionym) Common Name: fever tree

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation: L
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	<b>WRA Score 2</b>
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)	High
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)		y=1, n=0	y
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0	?
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs		y=1, n=0	y
402	Allelopathic		y=1, n=0	
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		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	
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	n
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	y
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	
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
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	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	y
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	
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: L

WRA Score 2

## Supporting Data:

101	2012. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive traits.
102	2012. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown? NA]
103	2012. WRA Specialist. Personal Communication.	[Does the species have weedy races? NA]
201	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical? 2-high] "Native range: Kenya; Tanzania; Zaire; Malawi; Mozambique; Zimbabwe; South Africa; Swaziland.
202	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Quality of climate match data? 2-high] Native range: Kenya; Tanzania; Zaire; Malawi; Mozambique; Zimbabwe; South Africa; Swaziland.
203	2012. Dave's Garden. PlantFiles: fever tree - <i>Acacia xanthophloea</i> . <a href="http://davesgarden.com/guides/pf/go/71985/">http://davesgarden.com/guides/pf/go/71985/</a>	[Broad climate suitability (environmental versatility)?] USDA Hardiness Zones: 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)
203	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Broad climate suitability (environmental versatility)? Yes] Altitude: 600-2100 m
204	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Native or naturalized in regions with tropical or subtropical climates? Yes] Native range: Kenya; Tanzania; Zaire; Malawi; Mozambique; Zimbabwe; South Africa; Swaziland.
205	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Does the species have a history of repeated introductions outside its natural range?] Introduced as a landscape tree in Taiwan, India, and California.
205	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Does the species have a history of repeated introductions outside its natural range? ] <i>Vachellia xanthophloea</i> is scarce in cultivation; although many gardeners wish to grow it, they are limited by the low availability of seeds.
301	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Naturalized beyond native range? No] No evidence.
302	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Garden/amenity/disturbance weed? No] No evidence of invasiveness in these systems.
303	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Agricultural/forestry/horticultural weed? No] No evidence of invasiveness in these systems.
304	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Environmental weed? No] No evidence of invasiveness in these systems.
305	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Congeneric weed? No] No evidence of an invasive weed in the <i>Vachellia</i> genus.
401	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Produces spines, thorns or burrs? Yes] " <i>Acacia xanthophloea</i> is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer. Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base. Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns."
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Parasitic? No] Fabaceae.

404	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Unpalatable to grazing animals? No] Foliage and pods provide food for livestock; young branches and leaves are eaten by elephants and the leaves and pods by giraffe and vervet monkeys.
405	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Toxic to animals? No] No evidence of toxicity.
405	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence of toxicity.
405	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Toxic to animals? No] Foliage and pods provide food for livestock; young branches and leaves are eaten by elephants and the leaves and pods by giraffe and vervet monkeys.
407	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Causes allergies or is otherwise toxic to humans? No] The roots and powdered bark of the stem are used as an emetic and as a prophylactic against malaria.
408	2012. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? Unknown]
409	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Is a shade tolerant plant at some stage of its life cycle? No ] <i>Vachellia</i> prefers full sun.
409	2012. Dave's Garden. PlantFiles: fever tree - <i>Acacia xanthophloea</i> . <a href="http://davesgarden.com/guides/pf/go/71985/">http://davesgarden.com/guides/pf/go/71985/</a>	[Is a shade tolerant plant at some stage of its life cycle? No ] <i>Vachellia</i> prefers full sun.
410	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? No] While preferring sandy, alluvial soils, it can tolerate a range of alluvial soil types, including poorly drained black soils.
410	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? No] <i>Vachellia xanthophloea</i> prefers sandy soils.
411	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Climbing or smothering growth habit? No] " <i>Acacia xanthophloea</i> is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer. Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base. Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns."
412	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Forms dense thickets? Yes] "In some periodically flooded areas within the African savannah, it forms dense, dominant stands. Such stands are often comprised of even-aged specimens that regenerated en masse after a flood event, with up to 85 stems per hectare recorded in South Africa. In areas of savannah woodland that are cleared for grazing, <i>A. xanthophloea</i> can be a dominant fast-growing pioneer."
412	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Forms dense thickets? Yes] " <i>A. xanthophloea</i> grows near swamps, riverine forests or at lakesides and is able to tolerate several degrees of frost. It grows in semi-evergreen bushland and woodland in areas with a high groundwater table and often forms dense stands in seasonally flooded areas."

501	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Aquatic? No] " <i>Acacia xanthophloea</i> is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer. Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base. Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns."
502	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Grass? No] " <i>Acacia xanthophloea</i> is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer. Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base. Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns."
503	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Nitrogen fixing woody plant? Yes] <i>Vachellia xanthophloea</i> fixes atmospheric nitrogen
504	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] " <i>Acacia xanthophloea</i> is a large tree, 15-25 m tall, with a crown that is somewhat spreading, branching fairly up the trunk. Bark smooth, slightly flaking, yellow to greenish-yellow. New twigs purple tinged but flaking later to reveal the yellow underlayer. Leaves 4 (max. 10) cm long with a hairy midrib. Pinnae 4-7 pairs, about 10-17 pairs of small leaflets. Stipules spinescent, spines white, straight, up to 7-10 cm in length, paired, often slender and conical at the base. Buds pink; flowers fragrant, in round golden balls on slender stalks; several borne together with a tuft of leaves, in the axils of the thorns."
601	2012. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Produces viable seed? Yes] Reproduction is generally by seeds.
602	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Produces viable seed? Yes] <i>Vachellia xanthophloea</i> is easily grown from seed, but seeds are scarce as few pods develop from the flowers.
603	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Hybridizes naturally? Unknown]
604	2012. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Requires specialist pollinators? No] Flowers are pollinated by insects.
605	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Requires specialist pollinators? No] After pollination by insects, the development of the fruit takes 4-6 months. In southern Africa, flowering occurs from September to November while fruiting is from January to April. Despite the production of a large number of flowers, often only a few pods develop.
606	2012. WRA Specialist. Personal Communication.	[Reproduction by vegetative fragmentation? Unknown]
607	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Minimum generative time (years)? Unknown] <i>Vachellia xanthophloea</i> is one of the fastest-growing thorn-tree species in southern Africa, with a growth rate of 1-1.5 m/year. It can withstand lopping.
701	2012. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] No evidence of accidental dispersal.
702	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Propagules dispersed intentionally by people? Yes] Introduced as a landscape tree in Taiwan, India, and California.

702	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Propagules dispersed intentionally by people? Yes] <i>Vachellia xanthophloea</i> is scarce in cultivation; although many gardeners wish to grow it, they are limited by the low availability of seeds.
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence
704	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Propagules adapted to wind dispersal? No] "Fruit are flat, papery, light brown pods, 5–19 cm long, containing 5–10 seeds per pod. Seeds are elliptical, flattened, dark brown and released when the pod bursts open.
705	2007. Mduma, S.A.R./Sinclair, A.R.E./Turkington, R.. The role of rainfall and predators in determining synchrony in reproduction of savanna trees in Serengeti National Park, Tanzania. <i>Journal of Ecology</i> . 95: 184–196.	[Propagules water dispersed? Yes] <i>Vachellia xanthophloea</i> ( <i>Acacia xanthophloea</i> ) is found along large rivers in silty soils.
705	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Propagules water dispersed? Yes] " <i>A. xanthophloea</i> grows near swamps, riverine forests or at lakesides and is able to tolerate several degrees of frost. It grows in semi-evergreen bushland and woodland in areas with a high groundwater table and often forms dense stands in seasonally flooded areas."
706	2007. Mduma, S.A.R./Sinclair, A.R.E./Turkington, R.. The role of rainfall and predators in determining synchrony in reproduction of savanna trees in Serengeti National Park, Tanzania. <i>Journal of Ecology</i> . 95: 184–196.	[Propagules bird dispersed? No] In this study on reproductive synchrony of savanna trees in Serengeti National Park, Tanzania, <i>Vachellia xanthophloea</i> ( <i>Acacia xanthophloea</i> ) seeds were dispersed by primates, elephants and giraffes.
707	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Propagules dispersed by other animals (externally)? No] "Fruit are flat, papery, light brown pods, 5–19 cm long, containing 5–10 seeds per pod. Seeds are elliptical, flattened, dark brown and released when the pod bursts open." [no means of external attachment]
708	2007. Mduma, S.A.R./Sinclair, A.R.E./Turkington, R.. The role of rainfall and predators in determining synchrony in reproduction of savanna trees in Serengeti National Park, Tanzania. <i>Journal of Ecology</i> . 95: 184–196.	[Propagules survive passage through the gut? Yes] In this study on reproductive synchrony of savanna trees in Serengeti National Park, Tanzania, <i>Vachellia xanthophloea</i> ( <i>Acacia xanthophloea</i> ) seeds were dispersed by primates, elephants and giraffes.
801	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Prolific seed production (>1000/m <sup>2</sup> )? No] After pollination by insects, the development of the fruit takes 4-6 months. In southern Africa, flowering occurs from September to November while fruiting is from January to April. Despite the production of a large number of flowers, often only a few pods develop.
802	2012. Csurhes, S.. Weed risk assessment - <i>Acacia xanthophloea</i> . Department of Employment, Economic Development and Innovation Biosecurity Queensland, Brisbane	[Evidence that a persistent propagule bank is formed (>1 yr)?] Like most <i>Acacias</i> ( <i>Vachellia</i> ) it is expected to form a long-lived seedbank.
802	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Evidence that a persistent propagule bank is formed (>1 yr)?] Seed storage behaviour is orthodox. Mature and properly dried seeds can be stored in airtight containers at room temperature for at least 1 year, and for several years at 10 deg. C with 4.5-9% mc.
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	2012. World Agroforestry Centre. Agroforestry tree database - <i>Acacia xanthophloea</i> . PROSEA, <a href="http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125">http://www.worldagroforestrycentre.org/sea/products/afdbases/af/asp/SpeciesInfo.asp?SpID=125</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] <i>Vachellia xanthophloea</i> is one of the fastest-growing thorn-tree species in southern Africa, with a growth rate of 1-1.5 m/year. It can withstand lopping.
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## Risk Trait Summary

### Low Risk:

- Not a weed elsewhere
- Not parasitic
- Palatable to grazing animals (makes control easier)
- Not toxic to humans or animals
- Shade intolerant
- Limited dispersal mechanisms (water, large mammals and primates – an African evolved species)
- Limited seed production

### High Risk:

- Native to tropical regions
- Tolerates broad climates
- Has thorns (complicates management)
- Forms dense thickets (crowds out native species)
- Nitrogen-fixing species (changes soil nutrients)
- Seeds survive gut passage (dispersal to new area)
- Tolerates pruning (lopping)