

Family: Fabaceae

Taxon: Acacia insuavis

Synonym: Acacia pennata subsp. insuavis (Lace) I.C. Ni Common Name pak la  
Cha-om

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score	5
101	Is the species highly domesticated?			y=-3, n=0	n
102	Has the species become naturalized where grown?			y=1, n=-1	
103	Does the species have weedy races?			y=1, n=-1	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"			(0-low; 1-intermediate; 2-high) (See Appendix 2)	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	n
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)	
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	y
402	Allelopathic			y=1, n=0	
403	Parasitic			y=1, n=0	n
404	Unpalatable to grazing animals			y=1, n=-1	
405	Toxic to animals			y=1, n=0	
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	
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)			y=1, n=0	
411	Climbing or smothering growth habit			y=1, n=0	y

412	Forms dense thickets	y=1, n=0	
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	
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	
704	Propagules adapted to wind dispersal	y=1, n=-1	
705	Propagules water dispersed	y=1, n=-1	
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	
801	Prolific seed production (>1000/m2)	y=1, n=-1	
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	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 5

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**Supporting Data:**

101	2011. WRA Specialist. Personal Communication.	No evidence
102	2011. WRA Specialist. Personal Communication.	NA
201	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	"Indo-China. Burma: Ani Sakan, near Maymyo, 900 m., Lace 6173. Burmese name, Subok. Occurs in many parts of Burma, in forests and near villages where it is probably sometimes cultivated."
202	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	"Indo-China. Burma: Ani Sakan, near Maymyo, 900 m., Lace 6173. Burmese name, Subok. Occurs in many parts of Burma, in forests and near villages where it is probably sometimes cultivated."
203	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	"Indo-China. Burma: Ani Sakan, near Maymyo, 900 m., Lace 6173. [probably not, tropical species with elevation range <1000 m]
204	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	"Indo-China. Burma: Ani Sakan, near Maymyo, 900 m., Lace 6173. Burmese name, Subok. Occurs in many parts of Burma, in forests and near villages where it is probably sometimes cultivated."
204	2005. CAB International. Forestry Compendium. CAB International, Wallingford, UK	"List of countries: Asia: Bhutan: natural; Cambodia: natural; [China]: Fujian: natural; Guangdong: natural; Yunnan: natural; India: natural; Indonesia: natural; Laos: natural; Myanmar: natural; Nepal: natural; Sri Lanka: natural; Thailand: natural; Vietnam: natural"
205	1979. Holm, L. G./Pancho, J.V./Herberger, J.P./Plucknett, D.L.. A Geographical Atlas of World Weeds. John Wiley and Sons, New York, NY	Acacia pennata (syn for A. insuavis) listed as a "common weed (c)" of Kenya; "Present as a weed (X)" in India, and recorded from the flora (F) of Tanzania [but information on impacts unknown]
205	1994. Hoe, W.J.. Specimen Details for Acacia insuavis Lace [BISH 638445]. <a href="http://nsdb.bishopmuseum.org/include/cpop.asp?catnum=21794172">http://nsdb.bishopmuseum.org/include/cpop.asp?catnum=21794172</a>	"Locality: USA, Polynesia, Hawaiian Islands, Oahu, & Waimanalo. Frankie Sekiya's nursery. Remarks: Apparently introduced to Hawaii by SE Asians. Young shoots eaten. First record for state." [plant collection]
205	2005. Imada, C.T./Staples, G.W./Herbst, D.R.. Annotated Checklist of Cultivated Plants of Hawai'i. The Bishop Museum, <a href="http://www2.bishopmuseum.org/HBS/botany/cultivatedplants/">http://www2.bishopmuseum.org/HBS/botany/cultivatedplants/</a>	"Locations: Waimea Arboretum & Botanical Garden"
205	2011. WRA Specialist. Personal Communication.	Limited information exists as to whether or not Acacia insuavis (syn. A. pennata) has been repeatedly introduced outside its native range. The use of synonymy in the limited literature prevents a definitive answer to this question.
301	2007. Randall, R.P.. Global Compendium of Weeds - Index [Online Database]. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	Not recorded as naturalized outside native range
302	1979. Holm, L. G./Pancho, J.V./Herberger, J.P./Plucknett, D.L.. A Geographical Atlas of World Weeds. John Wiley and Sons, New York, NY	Acacia pennata (syn for A. insuavis) listed as a "common weed (c)" of Kenya; "Present as a weed (X)" in India, and recorded from the flora (F) of Tanzania [but information on impacts unknown]
303	1979. Holm, L. G./Pancho, J.V./Herberger, J.P./Plucknett, D.L.. A Geographical Atlas of World Weeds. John Wiley and Sons, New York, NY	Acacia pennata (syn for A. insuavis) listed as a "common weed (c)" of Kenya; "Present as a weed (X)" in India, and recorded from the flora (F) of Tanzania [lack of information on weedy impacts in literature suggests that this species is not a significant weed of agriculture or forestry at this time]
304	1979. Holm, L. G./Pancho, J.V./Herberger, J.P./Plucknett, D.L.. A Geographical Atlas of World Weeds. John Wiley and Sons, New York, NY	Acacia pennata (syn for A. insuavis) listed as a "common weed (c)" of Kenya; "Present as a weed (X)" in India, and recorded from the flora (F) of Tanzania [lack of information on weedy impacts in literature suggests that this species is not a significant environmental weed at this time]
305	2003. Weber, E.. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	Acacia baileyana, A. cyclops, A. dealbata, A. longifolia, A. mearnsii, A. melanoxylon, A. nilotica, A. pyracantha, and A. saligna listed as significant environmental weeds of natural areas.
401	1968. Morton, J.F.. Tropical fruit tree and other exotic foliage as human food. Proceedings of the Florida State Horticultural Society. 81: 318-329.	"The thorny new branch tips of another legume, Acacia insuavis Laco., are very popular and sold throughout the country."

401	2007. Chiang Mai University. Lanna Food - Cha om (Acacia insuavis). <a href="http://library.cmu.ac.th/ntic/en_lannafood/detail_ingredient.php?id_ingredient=78">http://library.cmu.ac.th/ntic/en_lannafood/detail_ingredient.php?id_ingredient=78</a>	"Cultivated climbing shrub, thorny, white."
401	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Climbers, with copious, scattered prickles."
402	2011. WRA Specialist. Personal Communication.	Unknown
403	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	Not parasitic
404	2011. WRA Specialist. Personal Communication.	Unknown, but possibly unpalatable due to presence of prickles.
405	2011. WRA Specialist. Personal Communication.	Unknown, but probably not toxic to animals due to use as a human food [see 4.07]
406	2011. WRA Specialist. Personal Communication.	Unknown
407	1968. Morton, J.F.. Tropical fruit tree and other exotic foliage as human food. Proceedings of the Florida State Horticultural Society. 81: 318-329.	"The thorny new branch tips of another le gume, Acacia insuavis Laco., are very popular and sold throughout the country. They are eaten raw with chili pepper sauce, or boiled or baked; or they are chopped, added to raw eggs and the mixture fried like an omelette." [used as food with no mention of toxicity]
407	1993. Awang, K./Taylor, D.A. (eds.). Acacias for Rural, Industrial, and Environmental Development. Proceedings of the 2nd meeting of the Consultative Group for Research & Development of Acacias (COGREDA). FAO, Bangkok, Thailand	"Young leaves of A. pennata ssp. insuavis are consumed as vegetables in the countries of Indochina where it is native: Thailand, Myanmar (Burma), Laos, and Cambodia."
408	2011. WRA Specialist. Personal Communication.	Unknown, but probably does not create a fire hazard in native ecosystems
409	2011. WRA Specialist. Personal Communication.	Unknown
410	2011. WRA Specialist. Personal Communication.	Unknown
411	2007. Chiang Mai University. Lanna Food - Cha om (Acacia insuavis). <a href="http://library.cmu.ac.th/ntic/en_lannafood/detail_ingredient.php?id_ingredient=78">http://library.cmu.ac.th/ntic/en_lannafood/detail_ingredient.php?id_ingredient=78</a>	"Cultivated climbing shrub, thorny, white."
412	2011. WRA Specialist. Personal Communication.	"Thin forests, thickets." [unknown if A. insuavis is capable of forming monospecific thickets]
501	1915. Lace, J.H.. Some New Species from Burma. Bulletin of Miscellaneous Information (Royal Gardens, Kew) 1915(9): 393-407. 1915(9): 393-407.	Terrestrial
502	2011. Tropicos.org. Tropicos [Online Database]. Missouri Botanical Garden, <a href="http://www.tropicos.org/">http://www.tropicos.org/</a>	Fabaceae
503	2011. Tropicos.org. Tropicos [Online Database]. Missouri Botanical Garden, <a href="http://www.tropicos.org/">http://www.tropicos.org/</a>	Fabaceae
504	2011. Tropicos.org. Tropicos [Online Database]. Missouri Botanical Garden, <a href="http://www.tropicos.org/">http://www.tropicos.org/</a>	Fabaceae [not a geophyte]
601	1993. Awang, K./Taylor, D.A. (eds.). Acacias for Rural, Industrial, and Environmental Development. Proceedings of the 2nd meeting of the Consultative Group for Research & Development of Acacias (COGREDA). FAO, Bangkok, Thailand	No evidence

601	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	No evidence of substantial reproductive failure in native habitat
602	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Legume strap-shaped, 9–20 × 2–3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8–12, narrowly elliptic, 6–10 × 4.5–7 mm, flat."
603	2011. WRA Specialist. Personal Communication.	Unknown
604	2011. WRA Specialist. Personal Communication.	Unknown
605	2007. Chiang Mai University. Lanna Food - Cha om (Acacia insuavis). <a href="http://library.cmu.ac.th/ntic/en_lannafood/detail_in_gredient.php?id_ingredient=78">http://library.cmu.ac.th/ntic/en_lannafood/detail_in_gredient.php?id_ingredient=78</a>	"Flowers are also similar to those of the lead tree, inflorescence of capitula, axillary or terminal with solitary or pairs of heads, pedunculate, small white. (Kanchana Diwiset et al., 2005, p. 52)" [probably does not require specialist pollinators; Acacia flowers unspecialized]
606	2011. WRA Specialist. Personal Communication.	Unknown
607	2011. WRA Specialist. Personal Communication.	Unknown
701	2011. WRA Specialist. Personal Communication.	Unknown
702	1967. K�uchler, A.W./Sawyer, Jr., J.O.. A Study of the Vegetation near Chiangmai, Thailand. Transactions of the Kansas Academy of Science 70(3): 281-348. 70(3): 281-348.	"For the plants grown around the houses are by no means used exclusively for food. Native trees and shrubs are, of course, the most common and among these, the following are the more prominent ones as sources of food, supplying leaves, stems or fruits: Acacia insuavis,..." [cultivated for food]
702	1994. Hoe, W.J.. Specimen Details for Acacia insuavis Lace [BISH 638445]. <a href="http://nsdb.bishopmuseum.org/include/cpop.asp?catnum=21794172">http://nsdb.bishopmuseum.org/include/cpop.asp?catnum=21794172</a>	"Apparently introduced to Hawaii by SE Asians. Young shoots eaten."
703	2011. WRA Specialist. Personal Communication.	Unknown, but cultivated as an edible food source, so potential exists to contaminate other produce
704	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Legume strap-shaped, 9–20 × 2–3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8–12, narrowly elliptic, 6–10 × 4.5–7 mm, flat." [possibly wind dispersed over short distances, but no direct evidence found]
705	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Legume strap-shaped, 9–20 × 2–3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8–12, narrowly elliptic, 6–10 × 4.5–7 mm, flat." [ability for pods or seeds to float unknown]
706	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Legume strap-shaped, 9-20 × 2-3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8-12, narrowly elliptic, 6-10 × 4.5-7 mm, flat." [description for A. pennata, syn. For A. insuavis; probably not bird-dispersed, not fleshy fruited]
707	2010. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 10 (Fabaceae). Science Press Beijing, and Missouri Botanical Garden Press, St. Louis.,	"Legume strap-shaped, 9–20 × 2–3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8–12, narrowly elliptic, 6–10 × 4.5–7 mm, flat." [unlikely for seeds or fruits to be dispersed externally by animals. No means of external attachment]
708	2011. WRA Specialist. Personal Communication.	Unknown
801	2011. WRA Specialist. Personal Communication.	Unknown
802	2011. WRA Specialist. Personal Communication.	Unknown
803	2011. WRA Specialist. Personal Communication.	Unknown. No information found on control of this species.
804	2011. WRA Specialist. Personal Communication.	Unknown
805	2011. WRA Specialist. Personal Communication.	Unknown

