Taxon: Albizia procera (Roxb.) Benth. **Family:** Fabaceae

Common Name(s): black siris, false lebbeck, forest siris, tall albizia, white siris

Synonym(s): Mimosa procera Roxb. (basionym)

Assessor: Chuck Chimera **Status:** Approved **End Date:** 12 Jun 2025

WRA Score: 10.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Naturalized, Pasture Invader, Tropical Tree, N-Fixing, Wind-Dispersed

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)	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	y
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n = question 205	y
302	Garden/amenity/disturbance weed		
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	y
304	Environmental weed		
305	Congeneric weed	y = 1*multiplier (see Appendix 2), n = 0	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		
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	y = 1, n = 0	n

Qsn #	Question	Answer Option	Answer
409	Is a shade tolerant plant at some stage of its life cycle		
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	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		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y = -1, n = 0	n
606	Reproduction by vegetative fragmentation	y = 1, n = -1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	3
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y = 1, n = -1	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	y
705	Propagules water dispersed		
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		
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	y
803	Well controlled by herbicides	y = -1, n = 1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y = 1, n = -1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	**Is the species highly domesticated?**	**n**
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	No evidence

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). 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"**	**High**
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"A. procera occurs naturally in a wide distribution from India (Gupta, 1993; ICFRE, 1995) and Burma through South-East Asia to Papua New Guinea and northern Australia. It extends north into China, including Hainan and Taiwan (Valkenburg, 1997). Isolated populations occur in the Malay Peninsula, southern Philippines, southern Kalimantan and Sumatra (Indonesia) and New Britain (Papua New Guinea) (Nielsen, 1985; Valkenburg, 1997). In Australia, A. procera is most common in coastal areas of north-eastern Queensland. There are also disjunct occurrences in the Kimberley region in northern Western Australia (Doran and Turnbull, 1997)."
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. [Accessed 12 Jun 2025]	"Native Asia-Temperate CHINA: China [Guangdong Sheng, Guangxi Zhuangzu Zizhiqu] EASTERN ASIA: Taiwan Asia-Tropical INDIAN SUBCONTINENT: Bhutan, India, Nepal PAPUASIA: Papua New Guinea INDO-CHINA: Cambodia, Laos, Myanmar, Thailand, Vietnam MALESIA: Indonesia, [Sulawesi, Jawa, Lesser Sunda Islands, Maluku] Philippines Australasia AUSTRALIA: Australia [Queensland]"

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	

203	**Broad climate suitability (environmental versatility)**	**y**

Qsn #	Question	Answer
	Source(s)	Notes
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"A. procera is widely distributed from India and Myanmar through Southeast Asia to Papua New Guinea and northern Australia. The habitat ranges from monsoon forest, mixed deciduous forest, savannah woodlands, pyrogenic grassland, roadsides and dry gullies, to stunted, seasonal swamp forest. It is commonly found in open secondary forest and in areas with a pronounced dry season. It is susceptible to frost and has moderate light requirements. Once established, it becomes drought tolerant. Best development occurs in areas with more than 2500 mm annual rainfall and mean annual temperature of 21-32 deg. C. If the area is not burned, A. procera will colonize alang-alang (Imperata cylindrica) grassland."
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"Climatic amplitude (estimates) - Altitude range: 0 - 1500 m - Mean annual rainfall: 500 - 3000 mm - Rainfall regime: summer; bimodal - Dry season duration: 4 - 5 months - Mean annual temperature: 21 - 32ºC - Mean maximum temperature of hottest month: 31 - 34ºC - Mean minimum temperature of coldest month: 11 - 21ºC - Absolute minimum temperature: > -1ºC" [Elevation range exceeds 1000 m in tropical climates, demonstrating environmental versatility]

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Native: Australia, Brunei, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Papua New Guinea, Philippines, Taiwan, Province of China, Thailand, Vietnam. Exotic: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Netherlands Antilles, Panama, Puerto Rico, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Sudan, Tanzania, Trinidad and Tobago, Virgin Islands (US), Zimbabwe"

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"A. procera has been introduced into a number of Caribbean and Central American countries such as Cuba, Puerto Rico and Panama, where it has become a weed (Chinea-Rivera, 1995; Valkenburg, 1997). It has also been introduced in various African countries including Kenya, Nigeria, South Africa, Uganda, and Zimbabwe and in countries in the South Pacific such as Fiji and Solomon Islands (Streets, 1962)."

301	Naturalized beyond native range	y
	Source(s)	Notes
	Liogier, A.H. & Martorell, L.F. (2000). Flora of Puerto Rico and adjacent islands: a systematic synopsis. Second Edition Revised. La Editorial, UPR, San Juan, Puerto Rico	"Common along roadside and fields, Puerto Rico, introduced and naturalized from tropical Asia and Australia."
	Nelson, G. (2010). The Trees of Florida. A Reference and Field Guide. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"Distribution: Disturbed sites; southern peninsula, scarcely naturalized, essentially Miami-Dade County."

Qsn #	Question	Answer
302	Garden/amenity/disturbance weed	
	Source(s)	**Notes**
	Chinea-Rivera, J.D. 1992. Invasion dynamics of the exotic legume tree Albizia procera (Roxb.) Benth. in Puerto Rico. Cornell University, Ithaca, NY	[A light-demanding, disturbance-adapted tree that invades and impacts pastures] "During the last three decades it has been invading roadsides, abandoned farms, waste places, and beef cattle pastures (Francis and Liogier 1991, Liu 1990, Chapter 3). The greatest economic impact of this species may occur in pastures, where it spreads quickly and crowds the pasture grasses. However, it is a light demanding species and is a poor competitor in dense grass vegetation or forests (Chapter 3 and 4)."
	Vozzo, J.A. (2002). Tropical Tree Seed Manual. USDA Forest Service, Washington, D.C.	[Invades disturbed habitats] "It has naturalized in Puerto Rico, where it is an aggressive colonizer of abandoned farmlands, pastures, roadsides, and other highly disturbed, moist sites at elevations below 600 m where annual rainfall exceeds 800 mm (Parrotta 1988b). It is occasionally planted in southern Florida (Little and Wadsworth 1964)."

303	Agricultural/forestry/horticultural weed	y
	Source(s)	**Notes**
	Francis, J.K. & Liogier, H.A. 1991. Naturalized Exotic Tree Species in Puerto Rico. General Technical Report SO-82. United States Department of Agriculture Forest Service, New Orleans, LA	"The naturalization of trees can result in either a negative or positive economic impact. Albizia procera (Roxb.) Bcnth. has invaded many pastures in Puerto Rico, seriously reducing productivity, and has been expensive for cattle ranchers to control." ... "Table 1 -Naturalized and escaped exotic trees in Puerto Rico ... Albizia procera ... Rate of spread = 4A ... 4 = Rapid spread and abundant reproduction; and eventual abundance: A = Abundant"

304	Environmental weed	
	Source(s)	**Notes**
	Macdonald, I.A.W., Reaser, J.K., Bright, C., Neville, L.E., Howard, G.W., Murphy, S.J. & Preston, G. (eds.) 2003. Invasive alien species in southern Africa: national reports & directory of resources. Global Invasive Species Programme, Cape Town, South Africa	"Table 1. Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983), Regulation 15" ... "Albizia procera = Category 1" [Category 1 (Declared weed): • Prohibited on any land or water surface in South Africa • Must be controlled, or eradicated where possible (except in biological control reserves)]
	Invasive Species South Africa. (2025). False lebbeck - Albizia procera. https://invasives.org.za/fact-sheet/false-lebbeck/. [Accessed 13 Jun 2025]	"Where in South Africa is it a problem? KwaZulu-Natal " ... "Why is it a problem? Competes with and replaces indigenous species. "
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	[Potentially impacts biodiversity] "Henderson (2001) classes A procera, as a transformer species, i.e. as a monospecies it can dominate or replace the canopy or subcanopy layer of a natural or semi-natural ecosystem altering its structure, integrity or functioning. In Puerto Rico, A. procera covers more than 1000 hectares in moist plains and foothills, the rate of spread has been rapid, and it is regarded as already common or abundant, widespread and competing in primary or secondary forest stands (Francis and Liogier, 1991). In the Caribbean, A. procera grows faster than many native species (World Agroforestry Centre, 2002). Henderson (2001) classifies all plant parts as poisonous, however, the tree is widely used as a fodder tree in agroforestry systems with the pods used in animal feed."

305	Congeneric weed	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Weber, E. (2017). Invasive Plant Species of the World, 2nd Edition: A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	"A. lebbeck has become invasive in Florida, where it invades tropical hammocks and pine Rockland (Langeland and Craddock Burks, 1998). In Puerto Rico, the tree is invasive in moist and dry coastal hillsides (Dunphy and Hamrick, 2005). Once established, it forms dense stands that shade out native vegetation. Seedlings appear in great numbers (Langeland and Craddock Burks, 1998)."
	Weber, E. (2003). Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	"Albizia julibrissin…forms dense stands that reduce light levels and nutrients and prevent the establishment of native plants."

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	[No evidence] "A. procera is typically a small tree 7-15 m tall, but it can reach 30 m with a 9-m long straight or crooked bole 35-60 cm diameter. The bark is smooth, pale grey-green, yellowish-green or brown with horizontal grooves, sometimes flaky in thin, small scales. The underbark is green, changing to orange just below the surface; inner bark pinkish or straw-coloured. It is described and illustrated in many texts, including Brandis (1972), Verdcourt (1979), Nielsen (1985), ICFRE (1995), Doran and Turnbull (1997) and Valkenburg (1997). Foliage The compound leaves have 2-5(-8) pairs of sub-opposite pinnae with a petiole 5.5-12 cm long with a large, brown, oblong gland near the base; gland narrowly elliptical, 4-10 mm long, flat and disc-like or concave with raised margins. The pinnae are 12-20 cm long, with elliptical glands below the junction of the 1-3 distal pairs of petiolules, 1 mm in diameter. Leaflets are in 5-12 pairs on each pinna, opposite, asymmetrically ovate to sub-rhomboid, 2-4.5(-6) cm x 1-2. (-3.3) cm, base asymmetrical, often emarginate, apex rounded or sub-truncate, both surfaces sparsely puberulous or finely pubescent, rarely glabrous above (Valkenburg, 1997)."

402	Allelopathic	
	Source(s)	**Notes**
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Erosion control: A. procera is widely planted for its good soil-binding capacity. Shade or shelter: Occasionally cultivated as shade for tea and coffee plantations. Also acts as a wind and firebreak. Reclamation: Popular for the rehabilitation of seasonally dry, eroded and degraded soils. Its ability to grow on dry, sandy, stony and shallow soils makes it a useful species for afforestation of difficult sites." [No evidence of allelopathy]
	Van Valkenburg, J.L.C.H., 1997. Albizia procera (Roxb.) Benth [Internet] Record from Proseabase. Faridah Hanum, I & van der Maesen, L.J.G. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia. https://prosea.prota4u.org/. [Accessed 9 Apr 2020]	"It is occasionally planted as a shade tree in tea and coffee."

Qsn #	Question	Answer
	Dhawan, S. R., Dhawan, P., & Gupta, S. K. 1998. Allelopathic potential of leguminous plant species towards Parthenium hysterophorus L. Flora and Fauna (Jhansi), 4 (1): 9-12	[Extracts may be allelopathic toward Parthenium hysterophorus] "An investigation was undertaken to identify legumes in the local flora that are allelopathic towards Parthenium and can be exploited for obtaining cost effective, ecofriendly and biodegradable herbicides for effective biocontrol/management of this serious weed. Fourteen legumes were tested. 100% aqueous leachates of all the legumes except Pithecellobium dulce, decreased the Seed Germination (SG) and Vigour Index (VI) of the seedlings significantly. The allelopathic influence on SG and VI was most marked from the leachates of Delonix regia (-83.01 and -87.06), Cassia occidentalis (-75.77 and -78.22%), Albizia procera (-67.24 and -85.22%), Tephrosia purpurea (-53.20 and -66.63%) and Moringa indica (-47.44 and -60.09%). All the aqueous extracts studied had inhibitory effects. 100% extracts of Cassia occidentalis (absolute inhibition), Tephrosia purpurea (-88.30 and -93.82%). Trifolium alexandrinum (-87.79 and -90.43%), Delonix regia (-79.26 and -82.45%) Moringa indica (-74.37 and -84.41%), Albizia procera (-73.45 and -89.11%), Bauhinia variegata (-61.82 and -69.22%) and Prosopis cineraria (-55.76 and -65.42%) showed significant inhibition of SG and VI of the seedlings. It is concluded that even the crude aqueous foliar leachates and extracts of the above mentioned plant species could be exploited as herbicides for effective low cost management of Parthenium hysterophorus without any danger of pollution. "

403	Parasitic	n
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"A. procera is typically a small tree 7-15 m tall, but it can reach 30 m with a 9-m long straight or crooked bole 35-60 cm diameter." [Fabaceae]

404	Unpalatable to grazing animals	n
	Source(s)	**Notes**
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Fodder: In South Asia, the Philippines and Australia, the protein-rich fodder of A. procera is eaten by cattle, buffaloes, goats, camels and elephants. Leaves contain 19.9% protein, 3.3% fat, 39.7% carbohydrates, 1.51% calcium, 0.3% phosphorus, 31.9% fibre and 6.2% ash (minerals). Using leaves for fodder is recommended only in mixtures with other species because of their high raw fibre and lignin content, which indicate poor digestibility and inadequate sodium and phosphorus content."
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"It is a useful fodder species and appears to be an ideal candidate for a combined regime of wood production and grazing (Lowry et al., 1994)."
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"protein-rich fodder"
	Van Valkenburg, J.L.C.H., 1997. Albizia procera (Roxb.) Benth [Internet] Record from Proseabase. Faridah Hanum, I & van der Maesen, L.J.G. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia. https://prosea.prota4u.org/. [Accessed 9 Apr 2020]	"The poor digestibility of its leaves make its usefulness as a fodder questionable."

405	Toxic to animals	

Qsn #	Question	Answer
	Source(s)	Notes
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 30 Jan 2015]	[No reports of toxicity to grazing animals. Possibly toxic to fish, insects & rodents] "Fodder: In South Asia, the Philippines and Australia, the protein-rich fodder of A. procera is eaten by cattle, buffaloes, goats, camels and elephants." ... "Poison: The pounded bark is used as a fish poison, and the leaves are known to have insecticidal and piscicidal properties. The seeds contain proceranin A, which is toxic to mice and rats when administered parenterally and orally; the interperitoneal LD50 for mice is 15 mg/kg body weight. Hydrocyanic acid has been identified as occurring in the tree."
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[Toxicity reported for fish and rodents] "bark can be ground with flour and eaten, cooked leaves eaten as a vegetable, protein-rich fodder" … "Pounded bark as fish poison, and leaves said to be insecticidal and piscicidal. Seeds toxic to mice and rats."

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"In India and Malaysia, A. procera trees have sometimes been defoliated by larvae of Lepidoptera species such asAscostis selenaria, Rhesala imperata, R. inconcinnalis and R. moestalis. In India, young shoots and saplings are attacked by Oxyrhachis tarandus and O. mangiferana. A caterpillar, Indarbela quadrinotata, eats the bark, and a red borer, Zeuzera coffeae, attacks the woody stems and branches of saplings. In India a beetle, Bruchus bilineatopygus, causes up to 80% damage to seeds by boring into them. The termite Coptotermes curvignathus is reported as a pest of the tree in India, while in Africa the termite Ancistrotermes amphidon is a serious pest on young trees. Another 50 insect pests of Coleoptera, Hemiptera, Homoptera and Lepidoptera feed on young shoots, leaves, roots, sap, seeds, and dead wood in Southeast Asia. The tree is also susceptible to diseases from stem cankers such as Fusarium solani and Nectria haematococca. Rusts include Sphaerophragmium acaciae and Ravenelia sessilis. Fusarium oxysporum ssp. perniciosum invades the fine roots and causes gummosis of vessels, wilt and eventual death. Root and butt rot is also a problem."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[No evidence, but bark and seeds reported to be toxic to fish and rodents] "bark can be ground with flour and eaten, cooked leaves eaten as a vegetable, protein-rich fodder" … "Pounded bark as fish poison, and leaves said to be insecticidal and piscicidal. Seeds toxic to mice and rats."
	Wagstaff, D.J. (2008). International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"A. procera is a useful tree for farm and amenity planting, light shade, firebreaks and for the rehabilitation of seasonally dry, eroded and degraded soils (Doran and Turnbull, 1997)." [No evidence, and used as a firebreak]

Qsn #	Question	Answer
	Parrotta, J.A. & Roshetko, J.M. (1997). Albizia procera - white siris for reforestation and agroforestry. FACT 97-01. Winrock International, Morrilton, Arkansas. https://www.winrock.org. [Accessed 9 Apr 2020]	"White siris is a component of tropical and subtropical moist and wet forest types where rainfall is 1000-5000 mm/yr." [No evidence, and unlikely given wet habitat]

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	[Light-demanding] "A. procera is a fast-growing, semi-deciduous, light-demanding and fairly drought-tolerant species." ... "The tree is classed as a light demander but will tolerate moderate shade in the pole stage (ICFRE, 1995)."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"According to Valkenburg (1997), A. procera grows well on shallow soils with a pH of 5.5-7.5. In India, this species prefers well-drained sandy to sandy loam soils in moist places along streams and even in swampy situations and low-lying areas, but is also capable of growing in poor soils (Gupta, 1993). In Western Australia, A. procera occurs on sandstone plateaux overlying basalt. Eastern Australian occurrences are mainly in the foothills and coastal lowlands on shallow sandy or loamy soils of low to medium fertility derived from basalts, granite or shales. Other soil types include acid and neutral yellow earths, acid red friable earths and solodized solonetz and solodics."
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Soil type: Survives on a variety of soils; grows best on moist alluvial soils, well-drained loams or clay soils with a pH of 5.5-7.5. Tolerates shallow soils and acidity."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"A. procera is typically a small tree 7-15 m tall, but it can reach 30 m with a 9-m long straight or crooked bole 35-60 cm diameter. "

412	Forms dense thickets	y
	Source(s)	**Notes**
	Parrotta, J.A. & Roshetko, J.M. (1997). Albizia procera - white siris for reforestation and agroforestry. FACT 97-01. Winrock International, Morrilton, Arkansas. https://www.winrock.org. [Accessed 2 Feb 2015]	"In Puerto Rico, white siris is an aggressive pioneer, forming pure stands on abandoned farms and other disturbed sites."
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 2 Feb 2015]	[Cultivated in pure stands] "A. procera is a large, fast-growing tree, with a mean annual increment in diameter of 1-4 cm; it attains a dbh of 40-60 cm in 30 years. Spacing of 2-3 x 0.5 m in pure stands results in canopy closure in about 3 years. Trees that are suppressed in dense stands will die from lack of light."

Qsn #	Question	Answer
501	Aquatic	n
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	[Terrestrial tree] "Vegetation types: riparian forests; deciduous forests; dry forests; moist forests; rain forests; savannas; savanna woodlands; secondary forests"

502	Grass	n
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	Fabaceae

503	Nitrogen fixing woody plant	y
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"It is nitrogen-fixing and will grow in areas with a long dry season and on degraded soils such as seasonally waterlogged and shallow soils (Valkenburg, 1997)." ... "A. procera fixes nitrogen after nodulating with certain native strains of Rhizobia (Halliday, 1984; MacDicken, 1994). Artificial inoculation in the nursery either by pelleting the seeds with lignite based culture, or drenching the seedlings with broth culture, improves growth and development of seedlings, as does application of nitrogen (10-20 kg N/ha) and phosphorus (20-40 kg P/ha) (ICFRE, 1995). Tolerance of seedlings to drought is enhanced through application of VAM culture (ICFRE, 1995)."

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Albizia procera is a tree with an open canopy, up to 30 m tall and trunk of 35 (60 max.) cm in diameter; bole straight or crooked, up to 9 m. Bark smooth, pale grey-green, yellowish-green, yellowish-brown or brown with horizontal ridges; underbark green, changing to orange just below the surface; inner bark pink or straw coloured; branches terete, glabrous."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	[No evidence] "In Australia, flowering occurs about March to May and the fruits mature from July to October. In India flowering begins in June after the monsoon has started; the pods are formed soon after flowering and mature in 8 months (January-March in northern states; February-May elsewhere); elsewhere it is reported to flower and fruit throughout the year (ICFRE, 1995; Valkenburg, 1997)."

Qsn #	Question	Answer
602	Produces viable seed	y
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"In Australia, A. procera has about 16,600 viable seeds per kilogram, with an average germination rate of 63% (Doran and Turnbull, 1997), but in Indonesia and Bangladesh there are 20,000-24,000 seeds per kilogram (Mohiuddin, 1997; Roshetko, 1997). The seeds germinate readily without pre treatment when fresh (Campbell, 1980; Matin and Rashid, 1992; Valkenburg, 1997), but seedcoat dormancy develops in the first few months of storage."

603	Hybridizes naturally	
	Source(s)	Notes
	Louppe, D., Oteng-Amoako, A.A. & Brink, M. (2008). Plant Resources of Tropical Africa 7(1). Timbers 1. PROTA Foundation, Wageningen, Netherlands	[Unknown for A. procera. Other Albizia species are known to hybridize] "Albizia adianthifolia is frequently confused with Albizia gummifera, which differs in its almost glabrous leaflets usually auricled at base, and glabrous pods. However, almost glabrous types of Albizia adianthifolia have also been recorded, and more research is needed to confirm the separation of the two species, the more so since hybrids have been recorded from Malawi and Mozambique."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Van Valkenburg, J.L.C.H., 1997. Albizia procera (Roxb.) Benth [Internet] Record from Proseabase. Faridah Hanum, I & van der Maesen, L.J.G. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia. https://prosea.prota4u.org/. [Accessed 13 Jun 2025]	[Bisexual flowers] "flowers 15–30 per glomerule, sessile, uniform (central flowers usually larger than marginal ones), bisexual, pentamerous; calyx tubular to narrowly funnel-shaped, 2.5–3 mm, glabrous, light green, teeth triangular, 0.75–1.2 mm, acute; corolla funnel-shaped, 6–6.5 mm long, greenish-white, tube glabrous, with elliptical lobes of 2–2.5 mm, acute, puberulous at the apex; stamens numerous, united at the base into a tube that is longer than the corolla tube; ovary glabrous."

605	Requires specialist pollinators	n
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	[No evidence from floral morphology] "The inflorescence is a large terminal panicle, to 30 cm long, with sessile, white or greenish-white, sessile flowers in small 15-30 flowered heads, 13 mm in diameter on stalks 8-30 mm long; the corolla funnel-shaped, 6-6.5 mm long, with elliptical lobes."
	Louppe, D., Oteng-Amoako, A.A. & Brink, M. (2008). Plant Resources of Tropical Africa 7(1). Timbers 1. PROTA Foundation, Wageningen, Netherlands	[Other Albizia species are bee-pollinated] "Insects such as bees are the main pollinators."

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	[No evidence] "Vegetative propagation of A. procera may be successfully achieved by stumps and stem or root cuttings (NAS, 1979; Valkenburg, 1997)."

607	Minimum generative time (years)	3

Qsn #	Question	Answer
	Source(s)	**Notes**
	Chinea-Rivera, J. D. (1995). Production, dispersal and dormancy of seeds of Albizia procera (Roxb.) Bench., a woody weed of pastures in Puerto Rico. The Journal of Agriculture of the University of Puerto Rico, 79(3-4), 163-171	"At a dbh increment rate as high as 4 cm/yr (Chinea-Rivera, 1992) the age of first reproduction may be as early as the third year."
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"In Puerto Rico, A. procera was reported to be reproductively mature after approximately three years and medium-sized trees growing in the open produced 3500 pods in one year, and most pods and seeds fell within the extent of the crown (Chinea-Rivera, 1995)."

701	**Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)**	**n**
	Source(s)	**Notes**
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"The fruit is a flat, papery pod, dark red-brown, linear-oblong, 10-25 cm long by 2-3 cm broad with distinctive long points at both ends and distinctive marks over each seed. It contains 6-12 brown, ellipsoid seeds, 7.5-8 mm x 4.5-6.5 mm and 1.5 mm thick that are arranged more or less transversely in the pod (Valkenburg, 1997). At maturity the pod splits open to release the seeds which are smooth, greenish brown with a leathery testa." ... "Seeds may be released from mature dehiscent pods still attached to the tree or from wind-blown pods that later dehisce or decompose (World Agroforestry Centre, 2002). Seeds may also be spread by livestock as pods are often fed to animals. This species has been widely cultivated for use in agroforestry systems, soil rehabilitation and as an ornamental and intentional introduction is therefore one of the primary routes of spread." [No means of external attachment, and unlikely given relatively large size of pods and seeds]

702	**Propagules dispersed intentionally by people**	**y**
	Source(s)	**Notes**
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Ornamental: A useful tree for farm and amenity planting. Trees are often planted along avenues and in gardens to beautify them."

703	**Propagules likely to disperse as a produce contaminant**	**n**
	Source(s)	**Notes**
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"The fruit is a flat, papery pod, dark red-brown, linear-oblong, 10-25 cm long by 2-3 cm broad with distinctive long points at both ends and distinctive marks over each seed. It contains 6-12 brown, ellipsoid seeds, 7.5-8 mm x 4.5-6.5 mm and 1.5 mm thick that are arranged more or less transversely in the pod (Valkenburg, 1997)." ... "Seeds may be released from mature dehiscent pods still attached to the tree or from wind-blown pods that later dehisce or decompose (World Agroforestry Centre, 2002). Seeds may also be spread by livestock as pods are often fed to animals. This species has been widely cultivated for use in agroforestry systems, soil rehabilitation and as an ornamental and intentional introduction is therefore one of the primary routes of spread." [Unlikely, pods and seeds relatively large]

704	**Propagules adapted to wind dispersal**	**y**

Qsn #	Question	Answer
	Source(s)	Notes
	Chinea-Rivera, J.D. 1992. Invasion dynamics of the exotic legume tree Albizia procera (Roxb.) Benth. in Puerto Rico. Cornell University, Ithaca, NY	"At another location, I witnessed the dispersal potential of a spring wind gust that blew about a hundred pods twice as high as the parent tree and deposited most of the pods at much more than 100 m away from the tree."
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"Seeds may be released from the mature dehiscent pods still attached to the tree or from windblown pods that later dehisce or decompose."

705	Propagules water dispersed	
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"According to Valkenburg (1997), A. procera grows well on shallow soils with a pH of 5.5-7.5. In India, this species prefers well-drained sandy to sandy loam soils in moist places along streams and even in swampy situations and low-lying areas" [Possible that seed pods may be carried by water if growing near streams]

706	Propagules bird dispersed	n
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"The fruit is a flat, papery pod, dark red-brown, linear-oblong, 10-25 cm long by 2-3 cm broad with distinctive long points at both ends and distinctive marks over each seed. It contains 6-12 brown, ellipsoid seeds, 7.5-8 mm x 4.5-6.5 mm and 1.5 mm thick that are arranged more or less transversely in the pod (Valkenburg, 1997). At maturity the pod splits open to release the seeds which are smooth, greenish brown with a leathery testa." ... "Seeds may be released from mature dehiscent pods still attached to the tree or from wind-blown pods that later dehisce or decompose (World Agroforestry Centre, 2002). Seeds may also be spread by livestock as pods are often fed to animals. This species has been widely cultivated for use in agroforestry systems, soil rehabilitation and as an ornamental and intentional introduction is therefore one of the primary routes of spread." [No evidence, and not fleshy-fruited]

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"Seeds may be released from mature dehiscent pods still attached to the tree or from wind blown pods that later dehisce or decompose (World Agroforestry Centre, 2002). Seeds may also be spread by livestock as pods are often fed to animals. This species has been widely cultivated for use in agroforestry systems, soil rehabilitation and as an ornamental and intentional introduction is therefore one of the primary routes of spread." [No evidence, and no means of external attachment]

708	Propagules survive passage through the gut	
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	[Possibly] "Seeds may also be spread by livestock as pods are often fed to animals."

Qsn #	Question	Answer
	Chinea-Rivera, J.D. 1992. Invasion dynamics of the exotic legume tree Albizia procera (Roxb.) Benth. in Puerto Rico. Cornell University, Ithaca, NY	[Possibly] "There is also the possibility that domestic grazers may act as seed dispersal agents. I observed that cattle would readily feed on immature pods when these were made available to them. Cattle may pass other legume seeds intact through their digestive tracts (e. g., Enterolobium cyclocarpum, Janzen 1982). Although I did not consciously search for them, I never observed A procera seedlings germinating on cattle dung."

801	Prolific seed production (>1000/m2)	n
	Source(s)	**Notes**
	Chinea-Rivera, J.D. 1992. Invasion dynamics of the exotic legume tree Albizia procera (Roxb.) Benth. in Puerto Rico. Cornell University, Ithaca, NY	"I found 90 seeds/m2 (±55 se) on the soil surface, 215 seeds/m2 (±69 se) between 0 and 3 cm, and 100 seeds/m2 (±70 se) between 3 and 6 cm of the soil surface in the 15 yr-old stand at Rio Piedras. In other words, the soil of this stand stored 4.05 million seeds/ha (±1.13 se) within the first 6 cm of the surface. I did not test for viability of these seeds but they all looked as good as other viable seeds tested elsewhere in this study."

802	Evidence that a persistent propagule bank is formed (>1 yr)	y
	Source(s)	**Notes**
	Chinea-Rivera, J.D. 1992. Invasion dynamics of the exotic legume tree Albizia procera (Roxb.) Benth. in Puerto Rico. Cornell University, Ithaca, NY	"A procera is also capable of dispersing in time. It can produce a large pool of dormant seeds as shallow in the soil profile as 0 to 6 cm deep, lasting for more than 2 yr. Seeds buried deeper would be expected to remain dormant for a longer period (Froud-Williams 1987)."
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"Mature seed is orthodox and robust in storage, retaining excellent germinative capacity for more than two years when stored in sacks in a dry well-ventilated room and occasionally spread out to air, although by 15 years germinative capacity had dropped to 20% (ICFRE, 1995). Valkenburg (1997) recommended immersing the seed in boiling water for 5 seconds, removing the container from direct heat and then soaking the seed in tap water overnight, as a successful pre-sowing treatment. Several workers have shown that in addition to the presence of an impermeable seed coat and micropylar plug, dormancy in this species, as well as in the closely related A. lebbeck, is due to a water-soluble inhibitor present in the seed coat (Sajeevukumar et al., 1995; Kannan et al., 1996). Sajeevukumar et al. (1995) reported that the most effective and practical method of pre treatment was physical scarification followed by soaking in flowing water for 24 hours, while Kannan et al. (1996) recommended scarification with concentrated sulphuric acid for 10 or 20 minutes."
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 13 Jun 2025]	"Seed storage behaviour is orthodox. Clean seed can be stored at room temperature for 10 months with minimal loss of viability. However, germination can drop to below 50% after storage. Seeds survive 10 years or more at room temperature. Viability is maintained for more than 3 years in hermetic storage at room temperature with 13 + or - 2% mc. There are about 17 000 viable seeds/kg."

803	Well controlled by herbicides	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Liu, L. C. 1990. Chemical control of Albizia and mesquite in two selected pastures in southwestern Puerto Rico. Journal of Agriculture of the University of Puerto Rico, 74(4): 433-439	"Field trials were conducted on 2 sites in Lajas during 1988-89 to evaluate the use of imazapyr (Chopper at approx. 6.2 and 9.3% v/v in diesel oil) and picloram (undiluted Tordon RTU), applied by 4 methods (basal bark, cut stump, injection or frill treatments), for the control of Albizia procera in Panicum maximum pastures on clay soil and of mesquite (Prosopis juliflora [P. glandulosa]) in Cenchrus ciliaris on loam. Imazapyr and picloram resulted in 10-40 and 70 100% mortality of A. procera, resp., for up to 1 year, the most effective control being a result of basal bark or injection treatments (100 and 90% control, resp.) with picloram. Imazapyr applied by these 2 methods was totally ineffective and most other treatments were marginally successful against P. juliflora, but 100% mortality after 1 year was achieved by use of picloram applied to cut stumps."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	y
	Source(s)	**Notes**
	Orwa C,et al. (2009). Agroforestree Database: a tree reference and selection guide version 4.0. https://apps.worldagroforestry.org/treedb/. [Accessed 9 Apr 2020]	"A. procera seedlings, saplings and larger trees all coppice vigorously when damaged." ... "Natural forests are managed for timber production by coppicing on a 40-year rotation."
	CAB International. (2005). Forestry Compendium. CAB International, Wallingford, UK	"The tree can be heavily pruned or pollarded to give a bushy crown (Hearne, 1975). A. procera root suckers after damage (Troup, 1921) and coppices readily (Ryan and Bell, 1989)."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	Unknown

Summary of Risk Traits:

Albizia procera (white siris, karoi tree) is a fast growing semi-deciduous tree native to Southeast Asia and India. The tree is used for timber and fuels in Asia, Africa and the Americas. It is also used for light shade and firebreaks. Its wood can be used for cabinet, general furniture, construction, paper pup and much more.

It is reported to be naturalized in Puerto Rico and possibly Florida, and is potentially naturalizing on the island of O'ahu. In Cuba, the Dominican Republic, Puerto Rico, and the Virgin Islands, it aggressively invades abandoned farmlands, pastures, roadsides, and other heavily disturbed areas. Due to its aggressive growth, high drought tolerance, ability to tolerate many soil types and thrive in tropical climates, this plant is considered high risk.

High Risk / Undesirable Traits
• Elevation range exceeds 1000 m, demonstrating environmental versatility
• Thrives in tropical climates
• Naturalized in Puerto Rico & possibly Florida
• Invades pastures & reduces productivity in Puerto Rico
• A potential environmental weed
• Other Albizia species have become invasive
• Tolerates many soil types
• Able to form pure stands in abandoned farms & pastures (Puerto Rico)
• Seeds dispersed by wind, possibly internally by animals feeding on pods & intentionally by people
• Seeds may persist in the soil & form a persistent seed bank
• Able to coppice & resprout after cutting

Low Risk Traits
• Unarmed (no spines, thorns or burrs)
• Provides fodder for livestock
• Light-demanding (may not be able to invade intact forests)
• Not reported to spread vegetatively
• Will not produce seed densities in excess of 1000 seeds/m2
• Herbicides may provide effective control