

Taxon: <i>Dioclea sericea</i> Kunth	Family: Fabaceae
Common Name(s): dioclea	Synonym(s): <i>Hymenospron sericeum</i> Spreng.

Assessor: Chuck Chimera	Status: Approved	End Date: 19 Sep 2024
WRA Score: 4.0	Designation: L	Rating: Low Risk

Keywords: Tropical, Liana, Naturalized, Fodder, Water-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	n
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n = question 205	y
302	Garden/amenity/disturbance weed	y = 1*multiplier (see Appendix 2), n = 0	n
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	n
304	Environmental weed	y = 2*multiplier (see Appendix 2), n = 0	n
305	Congeneric weed		
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		
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)		
411	Climbing or smothering growth habit	y = 1, n = 0	y

Qsn #	Question	Answer Option	Answer
412	Forms dense thickets		
501	Aquatic	y = 5, n = 0	n
502	Grass	y = 1, n = 0	n
503	Nitrogen fixing woody plant	y = 1, n = 0	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		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y = 1, n = -1	n
702	Propagules dispersed intentionally by people	y = 1, n = -1	y
703	Propagules likely to disperse as a produce contaminant		
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		
801	Prolific seed production (>1000/m ²)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[No evidence of domestication in the genus] "A Colombian species found in the lowlands, but also found at higher altitudes. The species occurs as a semi-erect shrub of one to three meters."
102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	NA
103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2024). 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
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes."
202	Quality of climate match data	High
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes."
203	Broad climate suitability (environmental versatility)	y
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes."
	Tropicos.org. (2024). Tropicos v3.4.2. Missouri Botanical Garden. http://www.tropicos.org/ . [Accessed 18 Sep 2024]	Collected from 200 m to 1300 m elevation, exceeding a range of 1000 m
204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes."

Qsn #	Question	Answer
205	Does the species have a history of repeated introductions outside its natural range?	n
	Source(s)	Notes
	GBIF Secretariat (2024). <i>Dioclea sericea</i> Kunth GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/5359628 . [Accessed 18 Sep 2024]	No evidence
301	Naturalized beyond native range	y
	Source(s)	Notes
	Murphy, M., Yogi, D. & Faccenda, K. (2024). BIISC Plant Pono Specialist - Invasive Plant Prevention & UH Botany. personal communication. 05 September	[Newly naturalized population reported on Hawaii Island] "While conducting palm surveys in Keaukaha, the silvery foliage of this plant species caught our attention. We found two large patches, each about 35 feet in diameter, across the street and down the way from each other. The vines, reaching up to 25 feet into the canopy, were laden with numerous fruits and obvious regeneration in the understory. The substrate was a bed of lava rocks."
302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	CABI. (2024). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi . [Accessed 18 Sep 2024]	No evidence
304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	CABI. (2024). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi . [Accessed 18 Sep 2024]	No evidence
305	Congeneric weed	
	Source(s)	Notes
	Chong, K.Y., Tan, H.T.W. & Corlett, R.T. (2009). A Checklist of the Total Vascular Plant Flora of Singapore: Native, Naturalized and Cultivated Species. Raffles Museum of Biodiversity Research, National University of Singapore, Singapore	" <i>Dioclea hexandra</i> (Ralph) Mabberley var. <i>javanica</i> (Benth.) den Hengst; Fabaceae; weed of uncertain origin"

Qsn #	Question	Answer
	Mitja, D., & Miranda, I. S. (2010). Weed community dynamics in two pastures grown after clearing Brazilian Amazonian rainforest. <i>Weed Research</i> , 50(2), 163-173	"Table 2 Main species found in the 22 sites (only the 108 species whose frequency in the 22 sites was superior to 3) of two Amazonian pastures of variable age after clearing of the rainforest" [Dioclea cf. guianensis and Dioclea melanocarpa are included in a list of pasture weeds. Discriminate impacts of individual species have not been described]
	Silva, M. D., Gurgel, E. S. C., Souza Filho, A. D. S., & Carmo, M. D. N. D. (2013). Leguminosae invasive species in cultures in the northeast of Pará, Brazil. <i>Boletim do Museu Paraense Emílio Goeldi. Ciências Naturais</i> 8(1): 63-74	[Dioclea guianensis listed among the invasive plants, but the impacts have not been explicitly described] "Invasive plants are any plants found in places where their presence is not desired for causing numerous direct and indirect effects on agricultural activities of man, but they may have important ecological functions. Taxonomic works with invasive Leguminosae in the Amazon are rare and the lack of literature difficult to identify these plants. The work aims to provide an identification key to the invasive species of Leguminosae of cultures, in Terra Alta and the metropolitan region of Belém, northeast of Pará, Brazil, for which all species were collected in areas. During the collections, ten species and eight genera were found. Mimosa L. and Stylosanthes Sw. were the most representative genera of them, each one with two species. Regarding the growth habit, most species were herb to subshrub (3 spp.) and only one tree species (Senna reticulata (Willd.) H.S. Irwin & Barneby) was recorded in the studied areas. In relation to life cycle, most taxa are perennial, and the collected species reproduce mainly by seeds. Descriptions, comments, illustrations and common names of the recorded species are also provided."
	Rodríguez, A. M., & Agüero, R. (2000). Identificación de malezas trepadoras del banano (Musa sp.) en la zona caribe de Costa Rica. <i>Agronomía Mesoamericana</i> , 11(1): 123-125	[Dioclea malacocarpa included in a list of weeds in banana plantations] "Cuadro 1. Especies de malezas trepadoras del banano, recolectadas en la región Caribe de Costa Rica."
	Canizales, S. A., Celemín, J. S., & Mora-Delgado, J. (2010). Diversity and uses of weeds on pastures of livestock farms in the department of Tolima (Colombia). <i>Zootecnia Tropical</i> , 28(3), 427-437	[Dioclea sericea is listed as a pasture weed of unspecified impacts] "This study was aimed to identify and recognize the main uses of weeds in pastures of livestock farm located in the high watershed of Magdalena River, Department of Tolima (Colombia), where 8 farms were analyzed. The farms were located in six municipalities of Tolima: Ibagué, Piedras, Armero, Guamo, Alvarado and Suárez, under a dry tropical forest zone (bs-T) and pre-wet forest (bh-PM). The fieldwork was conducted during 5 months on rainy season and 4 months on dry season of 2007. We evaluated 2 transects with 10 sampling sites distributed over 100 m of each transect, using a one meter square for sampling. The samples collected were identified at the TOLI Herbarium. We found 113 species belonging to 30 families and 82 genera, were the predominant families Fabaceae with 24 species (20,5%) and Asteraceae with 20 species (17,1%). The most abundant species throughout the area were Senna obtusifolia and Achyranthes indica. Found 22 species (18,8%) are of interest beekeeping; 20 species (17,1%) have some medical use, 12 species (10,3%) are conservative and 11 species of soil (9,4%) are used especially in food summer where forage is scarce."

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus Dioclea (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[No evidence] "Stems canescent-tomentose to substrigose; stipules apparently caducous, ca 1 mm long; leaflets coriaceous, broadly ovate to obovate, ca 6 cm long, ca 4 cm wide, apices obtuse to emarginate, bases cordate, upper surface of the lamina pubescent, lower densely flexuous-sericeous, argenteous to canescent; rachis and petiole canaliculate, the rachis ca 3 mm long, canescent, tomentose-sericeous; stipels setiform, ca 1 mm long, pubescent, semi-persistent; inflorescence axillary, single, ca 30 cm long; peduncle terete below, slightly ridged distally,

Qsn #	Question	Answer
402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras Nº 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	"Lianas usualmente de hasta 5 m de altura. Tallos teretes, beige a café, huecos, de indumento nítido, sericeo, argénteo." [Lianas usually up to 5 m high. [No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras Nº 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	"A pesar de que este uso aún no está registrado en la literatura, ni fue escrito en ninguna de las etiquetas de los ejemplares, es probable que <i>D. sericea</i> sea consumida por cabras y equinos, pues en algunas localidades es conocida como hierba de mula, bejuco de caballo, bejuco de burro, etc. (véase el apartado de nombres vernáculos de <i>D. sericea</i>)." [Although this use is not yet recorded in the literature, nor was it written in no labels on the specimens, it is likely that <i>D. sericea</i> was consumed by goats and horses, since in some localities it is known as mule grass, horse vine, donkey vine, etc. (see the section on vernacular names of <i>D. sericea</i>).]
	Rosales M, M., & Rosales M, M. (1996). In vitro assessment of the nutritive value of mixtures of leaves from tropical fodder trees. PhD Dissertation, University of Oxford	"Table 3.1 : List of the selected forage plants from Colombia for this study." [Includes <i>Dioclea sericea</i> , which is palatable to livestock]

405	Toxic to animals	
	Source(s)	Notes
	D'Mello, J. F. (1991). Toxic amino acids. Pp. 22-48 in Toxic Substances in Crop Plants. The Royal Society of Chemistry, Cambridge, UK	[Unknown. Toxins reported in seeds of other species] "Legumes contain higher concentrations and a more diverse array of toxic non-protein amino acids than any other plant species, and the seed is generally the most concentrated source of these compounds. As shown in Table 2, canavanine is ubiquitous among leguminous with concentrations of up to 127 g kg ⁻¹ dry weight in the seed of <i>Dioclea megacarpa</i> ."

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes

Qsn #	Question	Answer
	D'Mello, J. F. (1991). Toxic amino acids. Pp. 22-48 in Toxic Substances in Crop Plants. The Royal Society of Chemistry, Cambridge, UK	[Toxins reported in seeds of other species. Unlikely to be consumed by people] "Legumes contain higher concentrations and a more diverse array of toxic non-protein amino acids than any other plant species, and the seed is generally the most concentrated source of these compounds. As shown in Table 2, canavanine is ubiquitous among leguminous with concentrations of up to 127 g kg ⁻¹ dry weight in the seed of <i>Dioclea megacarpa</i> ."
	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

408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes." [No evidence, but could act as a possible fuel ladder]

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Light requirements unknown

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes
	Selina Wamucii. (2024). <i>Dioclea sericea</i> - Uses, Benefits & Care. https://www.selinawamucii.com/plants/fabaceae/dioclea-sericea/ . [Accessed 19 Sep 2024]	"Seeds should be sown in a well-draining soil mix and kept moist until germination. Cuttings should be taken from semi-hardwood stems and placed in a rooting medium."

411	Climbing or smothering growth habit	y
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras N° 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	"Lianas usualmente de hasta 5 m de altura." [Lianas usually up to 5 m high]

412	Forms dense thickets	
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"A Colombian species found in the lowlands, but also found at higher altitudes. The species occurs as a semi-erect shrub of one to three meters." [Unknown. No evidence, but information information from its natural environment and from cultivation is limited]

501	Aquatic	n
	Source(s)	Notes

Qsn #	Question	Answer
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras Nº 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	[Terrestrial] "Dioclea sericea es endémica de Colombia y está presente en los valles interandinos, en el sur de la cordillera Occidental, en el Caribe y en la Orinoquia, entre los 0-1500 m de altitud; crece en los bordes de carretera, arbustales secos, zonas erodadas, enclaves xerofíticos y bordes de quebradas" [Dioclea sericea is endemic to Colombia and is present in the inter-Andean valleys, in the south of the Western mountain range, in the Caribbean and in the Orinoquia, between 0-1500 m altitude; grows on roadsides, bushes dry areas, eroded areas, xerophytic enclaves and edges of streams]

502	Grass	n
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	Fabaceae (alt. Leguminosae)

503	Nitrogen fixing woody plant	y
	Source(s)	Notes
	Pongslip, N. (2012). Phenotypic and Genotypic Diversity of Rhizobia. Bentham Science Publishers	Host of rhizobia

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras Nº 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	"Lianas usualmente de hasta 5 m de altura."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). Estudios en Leguminosas Colombianas IV. Biblioteca Jorge Álvarez Lleras Nº 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	"Estado de conservación. El EOO obtuvo un área de 156 332,157 km ² y el AOO de 260 km ² . <i>Dioclea sericea</i> cumple con los requisitos del criterio B para especies amenazadas (AOO <500 km ²) y sus poblaciones probablemente están disminuyendo ya que la mayoría de las colecciones se realizaron en el siglo pasado. Sin embargo, se ha encontrado en más de 50 localidades y crece en sucesiones primarias y secundarias. Por lo tanto, se le asigna la categoría Casi Amenazada (NT) (IUCN, 2021)." [The EOO obtained an area of 156,332,157 km ² and the AOO of 260 km ² . <i>Dioclea sericea</i> meets the requirements of criterion B for species threatened (AOO <500 km ²) and their populations are probably declining since most of the collections were made in the last century. However, it has been found in more than 50 locations and grows in primary and secondary successions. Therefore, it is assigned the Near Threatened (NT) category (IUCN, 2021).]

602	Produces viable seed	y
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Qsn #	Question	Answer
	Source(s)	Notes
	Selina Wamucii. (2024). <i>Dioclea sericea</i> - Uses, Benefits & Care. https://www.selinawamucii.com/plants/fabaceae/dioclea-sericea/ . [Accessed 19 Sep 2024]	" <i>Dioclea sericea</i> is a perennial herb native to South America. It can be propagated from seed or cuttings. Seeds should be sown in a well-draining soil mix and kept moist until germination. Cuttings should be taken from semi-hardwood stems and placed in a rooting medium. Keep the cuttings moist and in a warm, humid environment until they have rooted."
	Faccenda, K. (2024). UH Botany Dept. Pers. Comm. 05 Sep	"I found seeds on the specimens, and there are plenty of seedlings so yes, definitely making seeds. Interestingly, the pods on this don't appear to split like normal pea pods so the seeds either germinate from the pod or fall out as the pod rots."
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long."

603	Hybridizes naturally	
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[Unknown] "Since environmental plasticity, as well as hybridization, introgression, and polyploidy, may usually only be inferred from conventional herbarium study and could be occurring within the genus, in this study species are based on several characters which do not overlap."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[Possibly Yes] "To my knowledge, all species of <i>Dioclea</i> , with the possible exceptions of <i>D. macrantha</i> and <i>D. fimbriata</i> , have a reflexed standard. The color of the standard generally ranges from purpureus (reddish-purple, magenta) to caeruleus (bluish) with the unexposed portions becoming lighter colored to the white of the claw. The reflexed standard exposes the bright yellowish, bicarlose "target" area for pollinators. Certain species of subgenus <i>Pachylobium</i> with dimorphic stamens may be self-pollinated. Pollen is frequently seen in unopened bud dissections upon the stigma. Whether the stigma is receptive or not is unknown, but I feel that if pollen tubes were observed in the styles of pistils from unopened buds, this would be sufficient proof of self-pollination. Material has been collected from <i>D. latifolia</i> , a species, with dimorphic anthers, in Brazil for this study, and the results will be reported later."

605	Requires specialist pollinators	n
	Source(s)	Notes

Qsn #	Question	Answer
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"My observations of <i>D. sericea</i> in Colombia show the same ant activity on the peduncle, but two large bee-like pollinators were also photographed (Figure 7, p. 82). The large size and activity of these pollinators might be associated with the almost 180° reflexed attitude of the standard in the specimens observed. The tubercular head is assumed to be a reduced element of the inflorescence and, although portions are of waxy appearance, I do not believe they are nectiferous. To my knowledge, all species of <i>Dioclea</i> , with the possible exceptions of <i>D. macrantha</i> and <i>D. fimbriata</i> , have a reflexed standard. The color of the standard generally ranges from purpureus (reddish-purple, magenta) to caeruleus (bluish) with the unexposed portions becoming lighter colored to the white of the claw. The reflexed standard exposes the bright yellowish, bicallose "target" area for pollinators. Certain species of subgenus <i>Pachylobium</i> with dimorphic stamens may be self-pollinated."
	de Queiroz, L. P., & Snak, C. (2020). Revisiting the taxonomy of <i>Dioclea</i> and related genera (Leguminosae, Papilionoideae), with new generic circumscriptions. <i>PhytoKeys</i> , 164: 67-114	"Their large flowers are mostly pollinated by large carpenter bees, but some species are adapted for bird pollination (Arroyo 1981; Franco 1995; Peçanha 2014). Most species have large fruits and large seeds with long and linear (or short and oblong) hilum (Lackey 1981; Maxwell and Taylor 2003; Queiroz et al. 2003) and disperse their seeds through autochory, but some species have buoyant sea-drifted seeds (Muir 1933; Armstrong 2001)."

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Selina Wamucii. (2024). <i>Dioclea sericea</i> - Uses, Benefits & Care. https://www.selinawamucii.com/plants/fabaceae/dioclea-sericea/ . [Accessed 19 Sep 2024]	[Unknown] " <i>Dioclea sericea</i> is a perennial herb native to South America. It can be propagated from seed or cuttings. Seeds should be sown in a well-draining soil mix and kept moist until germination. Cuttings should be taken from semi-hardwood stems and placed in a rooting medium. Keep the cuttings moist and in a warm, humid environment until they have rooted."

607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Faccenda, K. (2024). UH Botany Dept. Pers. Comm. 05 Sep	"I found seeds on the specimens, and there are plenty of seedlings so yes, definitely making seeds. Interestingly, the pods on this don't appear to split like normal pea pods so the seeds either germinate from the pod or fall out as the pod rots."
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	"legumes oblong, obtuse at the base, with a naviculate apex, subtomentose-velutinous, canescent, frequently turning fuscous, the legumes ca 8.0 cm long, ca 1.5 cm wide, ca 0.5 cm thick, with a thick rib to either side of the upper suture, the lower suture slightly swollen; seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long." [No means of external attachment]

Qsn #	Question	Answer
702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Selina Wamucii. (2024). <i>Dioclea sericea</i> - Uses, Benefits & Care. https://www.selinawamucii.com/plants/fabaceae/dioclea-sericea/ . [Accessed 19 Sep 2024]	" <i>Dioclea sericea</i> is used as an ornamental plant in gardens and as a medicinal plant for treating various ailments."
703	Propagules likely to disperse as a produce contaminant	
	Source(s)	Notes
	Faccenda, K. (2024). UH Botany Dept. Pers. Comm. 05 Sep	"Interestingly, the pods on this don't appear to split like normal pea pods so the seeds either germinate from the pod or fall out as the pod rots." [Unknown, but unlikely to become a produce contaminant]
704	Propagules adapted to wind dispersal	n
	Source(s)	Notes
	Faccenda, K. (2024). UH Botany Dept. Pers. Comm. 05 Sep	"Interestingly, the pods on this don't appear to split like normal pea pods so the seeds either germinate from the pod or fall out as the pod rots."
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[No adaptations for wind dispersal] "the legumes ca 8.0 cm long, ca 1.5 cm wide, ca 0.5 cm thick, with a thick rib to either side of the upper suture, the lower suture slightly swollen; seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long."
705	Propagules water dispersed	y
	Source(s)	Notes
	Forero, E. & Castellanos, C. (eds.). (2022). <i>Estudios en Leguminosas Colombianas IV</i> . Biblioteca Jorge Álvarez Lleras N° 43. Academia Colombiana de Ciencias Exactas, Físicas y Naturales & Fundación Universitaria de San Gil - UNISANGIL, Colombia	[Water likely facilitates dispersal, as has been documented in other species in the genus] "grows on roadsides, bushes dry areas, eroded areas, xerophytic enclaves and edges of streams" [Translation from Spanish]
706	Propagules bird dispersed	n
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[No evidence of or adaptations for bird dispersal] "the legumes ca 8.0 cm long, ca 1.5 cm wide, ca 0.5 cm thick, with a thick rib to either side of the upper suture, the lower suture slightly swollen; seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long."
707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[No adaptations for external attachment] "the legumes ca 8.0 cm long, ca 1.5 cm wide, ca 0.5 cm thick, with a thick rib to either side of the upper suture, the lower suture slightly swollen; seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long."

Qsn #	Question	Answer
708	Propagules survive passage through the gut	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Plants reported to be consumed by livestock. Unknown if seeds are ingested or survive gut passage
801	Prolific seed production (>1000/m ²)	
	Source(s)	Notes
	Maxwell, R. H. (1969). The genus <i>Dioclea</i> (Fabaceae) in the new world. PhD Dissertation. Southern Illinois University, Carbondale, IL	[Densities unknown] "the legumes ca 8.0 cm long, ca 1.5 cm wide, ca 0.5 cm thick, with a thick rib to either side of the upper suture, the lower suture slightly swollen; seeds 7-10, dark ferruginous, ca 7 mm long, .ca 4 mm wide, ca 2 mm thick, with a hilum ca 6.5 mm long."
802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	Gómez Santamaría, D. (2021). Caracterización del Banco de Semillas Germinable (BSG) en diferentes coberturas de la formación bosque seco tropical, Huila-Colombia. Universidad Distrital Francisco José de Caldas	[Collected in seed bank. Longevity unknown] "Anexo 1. Listado de especies encontradas en el banco de semillas germinable (BGS) en diferentes coberturas de la formación de bosque seco tropical (bs-T) Huila, Colombia. Se muestra la abundancia de las especies por cobertura y la frecuencia absoluta (Fr-A) expresada como el número de parcelas en que cada una de las especies se presentó." [Annex 1. List of species found in the germinable seed bank (BGS) in different covers of the tropical dry forest formation (bs-T) Huila, Colombia. The abundance of the species by cover and the absolute frequency (Fr-A) expressed as the number of plots in which each of the species occurred are shown.]
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species
804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2024). Personal Communication	Unknown

Summary of Risk Traits:

Dioclea sericea is typically a climbing or trailing liana endemic to Colombia and is present in the inter-Andean valleys, in the south of the Western mountain range, in the Caribbean and in the Orinoquia, between 0-1500 m altitude. In its native range, it grows on roadsides, dry shrublands, eroded areas, xerophytic enclaves and the edges of streams. The pods and seeds may be dispersed by water, but otherwise lack adaptations for long distance dispersal. It is reported to be naturalized on Hawaii island, where it could potentially climb over and smother other desirable vegetation.

High Risk / Undesirable Traits

- Elevation range exceeds 1000 m, demonstrating environmental versatility
- Thrives in tropical climates
- Reported to be naturalized on Hawaii Islands
- Other species may be agricultural weeds
- Seeds may contain chemicals toxic to animals
- Climbing and potentially smothering growth form
- Reproduces by seeds
- Potentially self-fertile
- Seeds dispersed by gravity, water, and intentional cultivation
- Gaps in biology and ecology may limit accuracy of risk prediction

Low Risk Traits

- Unarmed (no spines, thorns or burrs)
- Provides fodder for livestock
- Seeds and pods appear to be indehiscent, and may limit risk of long distance or accidental dispersal

Second Screening Results for Vines & Lianas

- (A) Reported as a weed of cultivated lands?> No evidence
- (B) Unpalatable to grazers Or known to form dense stands?> No
- (C) Shade tolerant or known to form dense stands?> Shade tolerance unknown.
- (D) Bird- Or clearly wind- dispersed?> No

Outcome = Low Risk

