

Family: Fabaceae

Taxon: Vigna speciosa

Synonym: Phaseolus rigidus Piper

Phaseolus speciosus Kunth (basionym)

Common Name wondering cow pea

prairie vetch

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: EVALUATE
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 6
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	
103	Does the species have weedy races?		y=1, n=-1	
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"		(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
202	Quality of climate match data		(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)		y=1, n=0	y
204	Native or naturalized in regions with tropical or subtropical climates		y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?		y=-2, ?=-1, n=0	n
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		n=0, y = 1*multiplier (see Appendix 2)	y
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	
403	Parasitic		y=1, n=0	n
404	Unpalatable to grazing animals		y=1, n=-1	n
405	Toxic to animals		y=1, n=0	n
406	Host for recognized pests and pathogens		y=1, n=0	
407	Causes allergies or is otherwise toxic to humans		y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		y=1, n=0	
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	
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	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	y
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	
604	Self-compatible or apomictic	y=1, n=-1	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	y
704	Propagules adapted to wind dispersal	y=1, n=-1	n
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 6

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**Supporting Data:**

101	2011. WRA Specialist. Personal Communication.	No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"Lower Sonoran and Tropical Zones, southern Baja California and Tamaulipas south through Mexico and Central America into northern South America. Flowering after rains."
201	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"native from Mexico southward to Colombia and Ecuador"
202	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"native from Mexico southward to Colombia and Ecuador"
203	2011. Tropicos.org. <i>Vigna speciosa</i> - Tropicos [Online Database]. Missouri Botanical Garden, <a href="http://www.tropicos.org/Name/13013660">http://www.tropicos.org/Name/13013660</a>	A tropical to subtropical species, but collected from 15 m (10°55'12"N) to 1500 m (16°21'36"N). Elevation range >1000 m demonstrates potential environmental versatility.
204	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"native from Mexico southward to Colombia and Ecuador"
205	2011. WRA Specialist. Personal Communication.	Introduced to Florida & Hawaiian Islands, but otherwise, not known to be widely introduced.
301	1998. Herbst, D.R.. New Records for Hawaiian Plants. I. Bishop Museum Occasional Papers. 56: 2-4.	"Snail maunaloa or snail flower has been cultivated in Hawai'i as a lei flower since at least 1985, and has recently become naturalized on the island of O'ahu. <i>Vigna speciosa</i> is a vigorous vine, climbing up to 12 feet; its lavender-blue flowers have strongly spirally twisted keels; the pods are flat. Material examined: O'AHU: Kailua, volunteer in yard, 31 May 1996, Staples 1052 (BISH); Mānoa, volunteer in pots in garden, 28 December 1993, Kadowaki & Staples 906 (BISH); Pukele, terrestrial vine in weedy <i>Schinus/Schefflera</i> brushland, naturalized, 600 ft, 23 Dec 1985, Takeuchi 2584 (BISH)."
301	2003. Wunderlin, R.P./Hansen, B.F.. Guide to the Vascular Plants of Florida. University Press of Florida, Gainesville, FL	"Disturbed sites. Occasional; central peninsula, Miami-Dade Co. Native to tropical America. Escaped from cultivation. All year."
301	2010. Gann, G.D./Bradley, K.A./Woodmansee, S.W.. <i>Vigna speciosa</i> - The Floristic Inventory of South Florida Database Online. The Institute for Regional Conservation, Miami, FL <a href="http://www.regionalconservation.org/ircs/database/plants/PlantPage.asp?TXCODE=Vi">http://www.regionalconservation.org/ircs/database/plants/PlantPage.asp?TXCODE=Vi</a>	"Native Status: Not Native, Naturalized... <i>Vigna speciosa</i> has been found in the following county: Miami-Dade County... <i>Vigna speciosa</i> has been found in the following habitat: Disturbed Upland"
301	2010. Kennedy, B.H./James, S.A./Imada, C.T.. New Hawaiian plant records from Herbarium Pacificum for 2008. Bishop Museum Occasional Papers. 107: 19-26.	" <i>Vigna speciosa</i> (Kunth) Verdc. New island records Snail maunaloa is a vigorous cultivated climber grown for its unusual coiled, lavender pink flowers, sometimes used in lei (Staples & Herbst 2005). First noted naturalizing on O'ahu in 1985 (Herbst 1998: 3), the species is now recorded on Kaua'i and Maui. Material examined. KAUAI: Kōloa Distr, Kalāheo, south end of Papalina Road, near entrance to National Tropical Botanical Garden, naturalized, forming large patch, 140 m (459 ft), 23 May 2003, D. Lorence 9071. MAUI: East Maui, Nāhiku, near intersection at church, sparingly naturalized, 30 m (100 ft), 24 Nov 2002, F. Starr, K. Starr & L. Loope 021124-1."
302	2003. Wunderlin, R.P./Hansen, B.F.. Guide to the Vascular Plants of Florida. University Press of Florida, Gainesville, FL	"Disturbed sites. Occasional; central peninsula, Miami-Dade Co. Native to tropical America. Escaped from cultivation. All year." [established in disturbed areas, but no evidence yet that species has become a nuisance & is being controlled]
303	2007. Randall, R.P.. Global Compendium of Weeds - <i>Vigna speciosa</i> [Online Database]. <a href="http://www.hear.org/gcw/species/vigna_speciosa/">http://www.hear.org/gcw/species/vigna_speciosa/</a>	No evidence
304	2000. Staples, G.W./Herbst, D.R./Imada, C.T.. Survey of invasive or potentially invasive cultivated plants in Hawai'i. Bishop Museum Occasional Papers. 65: 1-35.	Included in a list of potentially invasive plants, but no evidence of environmental impacts reported to date.

305	1975. Rawal, K.M.. Natural hybridization among wild, weedy and cultivated <i>Vigna unguiculata</i> (L.) Walp.. <i>Euphytica</i> . 24(3): 699-707.	"As is the case with many cultivated species, <i>Vigna unguiculata</i> (L.) Walp. has a wild form growing in secondary forests and derived savannahs and a companion weed form adapted to disturbed habitats such as roadside ditches and fields. Evidence of introgressive hybridization between weedy and cultivated forms has been presented. The zone of extensive natural hybridization corresponds to the cultivation area in northern Nigeria and Niger and may well extend to Upper Volta and Senegal. The pattern of distribution of wild and weedy forms, the extent of introgression and ethnobotanical evidence strongly suggest West Africa as the center of domestication for <i>V. unguiculata</i> ."
305	1979. Holm, L. G./Pancho, J.V./Herberger, J.P./Plucknett, D.L.. <i>A Geographical Atlas of World Weeds</i> . John Wiley and Sons, New York, NY	<i>Vigna luteola</i> , <i>V. marina</i> , and <i>V. repens</i> listed as weeds "Present as a weed"
305	1984. Murphy, T.R./Gossett, B.J.. Control of Cowpea ( <i>Vigna unguiculata</i> ) in Soybean ( <i>Glycine max</i> ) with Acifluorfen. <i>Weed Science</i> . 32(4): 427-431.	"Due to similarities in size, their seed are often a contaminant in soybean seed, which has assisted in their spread. In a recent South Carolina survey, cowpea ranked as the ninth most troublesome weed in soybean production"
401	2005. Staples, G.W./Herbst, D.R.. <i>A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places</i> . Bishop Museum Press, Honolulu, HI	"A vigorous climber up to 20' long, its leaves have 3 ovate leaflets 2-3.25" long, the lateral ones unequal-sided." [no spines, thorns or burrs]
402	2002. Suman, A./Shahi, H.N./Singh, P./Gaur, A.. Allelopathic influence of <i>Vigna mungo</i> (black gram) seeds on germination and radical growth of some crop plants. <i>Plant Growth Regulation</i> . 38: 69-74.	"Intercropping of <i>Vigna mungo</i> (black gram) is prevalent for varied crop regimes in subtropical northern plains of India. In sugarcane, the negative impacts of a black gram intercrop on crop yields, rhizosphere soil properties and benefit: cost ratio have been reported. The possible allelopathic potential of black gram seeds on the germination, seedling emergence and root elongation of other commercial crops is reported here. The effects of imbibed seeds of black gram, their aqueous leachate and seed extracts on the germination and root elongation of seeds of four test crops viz. wheat, maize, gram and lentil, both under aseptic and soil conditions, were investigated. Inhibitory effects were evident in all the bioassays of seeds of these crops. The black gram seeds directly and leachates were highly inhibitory but the aqueous seed extract was less so. The observations indicate a release of inhibitory substances from black gram seeds leading to the observed inhibitory effects."
402	2007. Hill, E.C./Ngouajio, M./Nair, M.G.. Allelopathic Potential of Hairy Vetch ( <i>Vicia villosa</i> ) and Cowpea ( <i>Vigna unguiculata</i> ) Methanol and Ethyl Acetate Extracts on Weeds and Vegetables. <i>Weed Technology</i> . 21: 437-444.	"This study demonstrated that methanol and ethyl acetate extracts of hairy vetch and cowpea contained allelopathic compounds and that their phytotoxicity is likely species specific. Future studies should focus on the identification and isolation of the allelochemical(s) found in the methanol and ethyl acetate extracts of the hairy vetch and cowpea residues."
402	2011. WRA Specialist. Personal Communication.	Allelopathic potential documented in other, well-studied <i>Vigna</i> species, but unknown for <i>Vigna speciosa</i> .
403	2005. Staples, G.W./Herbst, D.R.. <i>A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places</i> . Bishop Museum Press, Honolulu, HI	Fabaceae. No evidence of being parasitic
404	1999. Wiersema, J.H./León, B.. <i>World Economic Plants: A Standard Reference</i> . CRC Press, Boca Raton, FL	Probably palatable to animals. Most <i>Vigna</i> species are palatable, and several are used as fodder for animals.
405	1999. Wiersema, J.H./León, B.. <i>World Economic Plants: A Standard Reference</i> . CRC Press, Boca Raton, FL	No evidence that any <i>Vigna</i> species are toxic to animals
406	2011. WRA Specialist. Personal Communication.	Unknown. No information found on pests or pathogens associated with <i>Vigna speciosa</i>
407	2003. Wunderlin, R.P./Hansen, B.F.. <i>Guide to the Vascular Plants of Florida</i> . University Press of Florida, Gainesville, FL	No evidence of toxicity or allergenicity to humans for any species of <i>Vigna</i> .
408	2011. WRA Specialist. Personal Communication.	Unknown. As a vine, could possibly act as a fuel ladder to carry fire into trees.
409	2011. WRA Specialist. Personal Communication.	Shade tolerance unknown
410	2011. WRA Specialist. Personal Communication.	Unknown. No information found on soil requirements or conditions.

411	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"Mostly scrambling over dry to moist thickets..."
411	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"A vigorous climber up to 20' long, its leaves have 3 ovate leaflets 2-3.25" long, the lateral ones unequal-sided."
412	2011. WRA Specialist. Personal Communication.	No, but climbing & potentially smothering. See 4.11
501	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"A vigorous climber up to 20' long, its leaves have 3 ovate leaflets 2-3.25" long, the lateral ones unequal-sided." [Terrestrial]
502	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	Fabaceae
503	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"A vigorous climber up to 20' long, its leaves have 3 ovate leaflets 2-3.25" long, the lateral ones unequal-sided." [Fabaceae]
504	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"A vigorous climber up to 20' long, its leaves have 3 ovate leaflets 2-3.25" long, the lateral ones unequal-sided." [Fabaceae, not a geophyte]
601	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	No evidence of substantial reproductive failure in native habitat
602	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"The pods are almost linear, 5-7" long, flattened, the 2 valves twisting when the pod opens and releasing numerous dark brown, compressed kidney-shaped seeds about 0.2" long. The vine reseeds itself freely and may be naturalizing on Oahu."
603	1983. Chen, N. C./Baker, L.R./Honma, S.. Interspecific crossability among four species of Vigna food legumes. Euphytica. 32(3): 925-937.	"Interspecific crossability among four species of Vigna, namely, <i>V. radiata</i> (mungbean), <i>V. mungo</i> (black gram), <i>V. umbellata</i> (rice bean) and <i>V. angularis</i> (adzuki bean), was investigated. Pod-set and percentages of pods harvested varied with the combinations of two parental cultivars of each species for most of the interspecific hybrid crosses. The use of intraspecific hybrids as parents was slightly superior to cultivars for interspecific hybridization. A remarkable increase in viable seed production was found for the interspecific cross, <i>V. radiata</i> x <i>V. umbellata</i> , by using intraspecific hybrid as parents. Furthermore, a successful interspecific hybrid of <i>V. mungo</i> x <i>V. angularis</i> was accomplished through the use of intraspecific hybrid parents. Reciprocal cross differences were common in all the interspecific combinations. Except for the cross between <i>V. umbellata</i> and <i>V. angularis</i> , all other reciprocal interspecific crosses were unsuccessful. Viable seeds were obtained from the interspecific crosses of <i>V. radiata</i> x <i>V. mungo</i> , <i>V. radiata</i> x <i>V. umbellata</i> and <i>V. mungo</i> x <i>V. angularis</i> . Hybrid plants were obtained from cultured embryos for the interspecific crosses of <i>V. radiata</i> x <i>V. angularis</i> , <i>V. umbellata</i> x <i>V. angularis</i> and <i>V. angularis</i> x <i>V. umbellata</i> . The reciprocal hybrid of the interspecific cross between <i>V. umbellata</i> and <i>V. angularis</i> was successfully made for the first reported time. Growth and lethality of the interspecific hybrid seedlings were influenced by the genotypes of both parental species. Parental genotypes also affected the fertility of interspecific hybrids. Complete hybrid sterility was found in the interspecific crosses of <i>V. radiata</i> x <i>V. umbellata</i> , <i>V. radiata</i> x <i>V. angularis</i> and <i>V. mungo</i> x <i>V. angularis</i> ; while reduced fertility was observed for the interspecific hybrids of <i>V. radiata</i> x <i>V. mungo</i> , <i>V. umbellata</i> x <i>V. angularis</i> and <i>V. angularis</i> x <i>V. umbellata</i> ." [interspecific hybrids possible between species of Vigna, but unknown for <i>Vigna speciosa</i> ]
604	2008. Etcheverry, A.V./Alemán, M.M./Fleming, T.F.. Flower Morphology, Pollination Biology and Mating System of the Complex Flower of <i>Vigna caracalla</i> (Fabaceae: Papilionoideae). Annals of Botany. 102: 305-316.	" <i>Vigna caracalla</i> is self-compatible, but depends on pollinators to set seeds." [other species of <i>Vigna</i> are self-compatible, but unknown for <i>V. speciosa</i> ]

605	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"peduncles 1-2.5 dm long, bearing 1-6 flowers clustered at or near apex; flowers short-pedicellate; calyx broadly bowl-shaped, 5-7 mm long, obtuse, upper lip slightly shorter, often nearly twice as broad as long; corolla lavender to pale purple, 3-4 cm long; keel strongly sigmoid-coiled, tubular" [typical <i>Vigna</i> flower does not require specialized pollinators]
606	2011. WRA Specialist. Personal Communication.	Unknown
607	2011. Sagebud. Wondering Cowpea ( <i>Vigna speciosa</i> ). <a href="http://www.sagebud.com/wondering-cowpea-vigna-speciosa/">http://www.sagebud.com/wondering-cowpea-vigna-speciosa/</a>	"It's duration is perennial which means it will grow year after year." [time to reproductive maturity unknown]
701	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"pods 4-5 mm wide, 9-11 cm long, compressed, attenuate at both ends, few-to many-seeded, strigose to glabrate; seeds purplish brown with minute tawny flecks, 2-2.8 mm wide, 3-4 mm long, smooth and somewhat shining, squarish at ends; hilum elliptic, 0.7-1 mm long, whitish." [no evidence of unintentional dispersal, and no means of external attachment]
702	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"A species whose flowers are sometimes sold in an attractive maunaloa-style lei..."
703	1998. Herbst, D.R.. New Records for Hawaiian Plants. I. Bishop Museum Occasional Papers. 56: 2-4.	"volunteer in pots in garden, 28 December 1993, Kadowaki & Staples 906 (BISH);" [may be inadvertently transported in other potted plants]
704	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"pods 4-5 mm wide, 9-11 cm long, compressed, attenuate at both ends, few-to many-seeded, strigose to glabrate; seeds purplish brown with minute tawny flecks, 2-2.8 mm wide, 3-4 mm long, smooth and somewhat shining, squarish at ends; hilum elliptic, 0.7-1 mm long, whitish." [no adaptations for wind dispersal]
705	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"pods 4-5 mm wide, 9-11 cm long, compressed, attenuate at both ends, few-to many-seeded, strigose to glabrate; seeds purplish brown with minute tawny flecks, 2-2.8 mm wide, 3-4 mm long, smooth and somewhat shining, squarish at ends; hilum elliptic, 0.7-1 mm long, whitish." [unlikely to be water dispersed, but unknown if seed pods or seeds are buoyant]
706	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"pods 4-5 mm wide, 9-11 cm long, compressed, attenuate at both ends, few-to many-seeded, strigose to glabrate; seeds purplish brown with minute tawny flecks, 2-2.8 mm wide, 3-4 mm long, smooth and somewhat shining, squarish at ends; hilum elliptic, 0.7-1 mm long, whitish." [not fleshy-fruited, no adaptations for bird dispersal]
707	1964. Shreve, F./Wiggins, I.L.. Vegetation and Flora of the Sonoran Desert, Volume 1. Stanford University Press, Stanford, CA	"pods 4-5 mm wide, 9-11 cm long, compressed, attenuate at both ends, few-to many-seeded, strigose to glabrate; seeds purplish brown with minute tawny flecks, 2-2.8 mm wide, 3-4 mm long, smooth and somewhat shining, squarish at ends; hilum elliptic, 0.7-1 mm long, whitish." [no evidence of external dispersal by animals, and no means of external attachment]
708	1984. Janzen, D.H.. Dispersal of Small Seeds by Big Herbivores: Foliage is the Fruit. The American Naturalist. 123(3): 338-353.	Unknown, but if consumed by animals, some hard-seeded legumes are able to pass through the guts of herbivores.
801	2011. WRA Specialist. Personal Communication.	Seed production unknown
802	2011. WRA Specialist. Personal Communication.	Soil seed bank longevity unknown
803	2011. WRA Specialist. Personal Communication.	Unknown. No information found on control of this species with herbicides.
804	2011. WRA Specialist. Personal Communication.	Unknown. Minimal information on cultivation of this species was found in the literature.
805	2011. WRA Specialist. Personal Communication.	Unknown