

Assessment date 2 May 2017

<i>Cestrum nocturnum</i> All Zones		Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	y	2
3.02	Garden/amenity/disturbance weed	y	2
3.03	Weed of agriculture	n	0
3.04	Environmental weed	y	4
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals		
4.05	Toxic to animals	y	1
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	y	1
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	y	1
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0

6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	unk	-1
6.04	Self-compatible or apomictic	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)	1.5	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed	y	1
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	y	1
8.03	Well controlled by herbicides	y	-1
8.04	Tolerates, or benefits from, mutilation or cultivation	unk	-1
8.05		?	
Total Score			16
Implemented Pacific Second Screening			no
Risk Assessment Results			High

section	# questions answered	satisfy minimum?
A		11 yes
B		8 yes
C		18 yes
total		37 yes

	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		Skip to 2.01
1.03		Skip to 2.01
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgn.d.tif). 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (0-00-0000).	No computer analysis was performed. 1. Global hardiness zone: 9, 10, 11, 12, 13; equivalent to USDA Hardiness zones: USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11a: to USDA Zone (40 °F) USDA Zone 11b: to (45 °F) USDA Zone 12a: to (50 °F) USDA Zone 12b: to (55 °F). 2. Native to Northern America: Mexico, Southern America, Caribbean: Cuba Central America: Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf).	1. Distribution in the native/cultivated range occurs in Aw, Am, Af
2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (8-19-2015)	1. native to areas with annual rainfall from 29 inches to 196 inches
2.05	1. PIER http://www.hear.org/pier/species/cestrum_nocturnum.htm (4-3-2017) 2. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017)	1. Introduced to China, French Polynesia, Fiji, Cook Islands, and Guam. 2. Native to the Americas but introduced across the tropics
3.01	1. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017) 2. PIER http://www.hear.org/pier/species/cestrum_nocturnum.htm (4-4-2017) 3. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	Naturalised in the coastal districts of central and northern New South Wales and sparingly naturalised in south-eastern Queensland. Also naturalised in southern USA, New Zealand and on several Pacific islands (i.e. Hawaii, Fiji, Tahiti, Samoa, the Cook Islands, Tonga and Guam). 2. Invasive on many Pacific islands 3. Naturalized throughout the tropics and Hawaii
3.02	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017)	1. The species is known as an aggressive colonizer of disturbed areas, and is capable of forming dense impenetrable thickets in the undergrowth of some forest systems, possibly displacing other plant species and altering natural successional processes
3.03		no evidence
3.04	1. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017) 2. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017)	1. Night jessamine (<i>Cestrum nocturnum</i>) has a negative impact on native ecosystems because it can form dense, shady thickets that outcompete the native flora and thus it prevents natural regeneration. It grows quickly and reproduces by both cuttings and seeds. In Auckland (New Zealand) the species is considered a seriously invasive weed. <i>Cestrum nocturnum</i> has also invaded areas of some of the Pacific Islands where it has formed dense and virtually impenetrable thickets. 2. The species is known as an aggressive colonizer of disturbed areas, and is capable of forming dense impenetrable thickets in the undergrowth of some forest systems, possibly displacing other plant species and altering natural successional processes
3.05	1. Holm, LeRoy G. A Geographical Atlas of World Weeds. Malabar, FL: Krieger Pub., 1991. Print.	1. <i>Cestrum parqui</i> is a principle weed in Argentina
4.01	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. no evidence of these features
4.02		

4.03	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. no evidence of these features
4.04		Likely but no direct evidence, see 4.05
4.05	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017) 3. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	It is known to be toxic to both humans and animals; all parts of Cestrum species, including C. nocturnum, have been reported as poisonous and capable of resulting in the death of livestock in New Zealand 2. All parts of Cestrum nocturnum are highly toxic and there are reports of livestock deaths in New Zealand through this species. There is a report of a child who ingested the green berries over several weeks, however although the symptoms were considerable with vomiting and bleeding, the child recovered. So far there are no reports of human deaths. 3. poisonous to humans and animals
4.06		no evidence
4.07	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017) 3. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	It is known to be toxic to both humans and animals 2.All parts of Cestrum nocturnum are highly toxic and there are reports of livestock deaths in New Zealand through this species. There is a report of a child who ingested the green berries over several weeks, however although the symptoms were considerable with vomiting and bleeding, the child recovered. So far there are no reports of human deaths. 3. poisonous to humans and animals
4.08		no evidence
4.09	Dave's Garden (http://davesgarden.com/guides/pf/go/2128/#b accessed 5/3/2017)	Sun to partial shade
4.10	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Global Soil Map https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/?cid=nr cs142p2_054013 (4-4-2016)	1. C. nocturnum thrives in light, sandy soil and can adapt to a variety of soil types and conditions 2. Native to regions with similar soil compositions to all three zones in Florida
4.11	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. [shrub, no evidence of these features]
4.12	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017)	1. The species is known as an aggressive colonizer of disturbed areas, and is capable of forming dense impenetrable thickets in the undergrowth of some forest systems, possibly displacing other plant species and altering natural successional processes 2. Cestrum nocturnum has already invaded wet forests and open areas on several islands in the Pacific region. In New Zealand, the species is able to form dense stands in the forest understory, but it has also invaded open forests, forest margins, the sides of streams and shrublands.
5.01	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	Family: Solanaceae
5.02	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	Family: Solanaceae
5.03	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	No evidence
5.04	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. no evidence of these features (Family: Solanaceae)

6.01		no evidence
6.02	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. reproduces by seed
6.03		no evidence
6.04	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. self-compatible
6.05		no evidence
6.06	1. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017)	1. This species reproduces by abundantly produced seeds which can remain dormant in the soil for many years. However it can also reproduce through accidental damage which has resulted in dispersed stem or root sections.
6.07	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	1. Seeds are produced after 18 months of establishment and can remain dormant in the soil for many years 2. seeds are produced within 18 months of establishment
7.01		no evidence
7.02	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	it is repeatedly introduced outside of its native range due to its continued popularity as an ornamental. 2. spread by human plantings
7.03		no evidence
7.04	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	1. produces 8-10mm hard or juicy berries [wind dispersal unlikely]
7.05	1. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	1. seeds dispersed by water
7.06	1. PIER http://www.hear.org/pier/species/cestrum_nocturnum.htm (4-4-2016) 2. Global Invasive Species Database http://www.iucngisd.org/gisd/species.php?sc=851 (4-4-2017) 3. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	bird-dispersed fruits 2. Having bird-dispersed seeds and the ability to reproduce vegetatively has resulted in escapes from cultivation 3. seeds dispersed by birds
7.07	1. Wagner, W. L., D.R. Herbst, and S.H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. University of Hawaii Press, Bishop Museum Press, Honolulu.	no evidence of mechanism for attachment
7.08		no evidence, see 7.06
8.01		no evidence
8.02	1. Invasive Species Compendium http://www.cabi.org/isc/datasheet/12031 (4-4-2017) 2. Queensland Government https://keyserver.lucidcentral.org/weeds/data/media/Html/cestrum_nocturnum.htm (4-4-2017) 3. Williams, P. A., & Zealand, N. N. (2008). Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research, New Zealand.	Seeds are produced after 18 months of establishment and can remain dormant in the soil for many years 2. This species reproduces by abundantly produced seeds which can remain dormant in the soil for many years. However it can also reproduce through accidental damage which has resulted in dispersed stem or root sections. 3. Seeds viable for years in soil
8.03	1. Motooka P, Castro L, Nelson D, Nagai G, Ching L, 2003. Weeds of Hawaii's Pastures and Natural Areas; an identification and management guide. Manoa, Hawaii, USA: College of Tropical Agriculture and Human Resources, University of Hawaii.	1. Kōkeʻe Museum staff have reported good control of the species with triclopyr ester at 20% in crop oil applied to basal bark, and the species may be sensitive to foliar applications of triclopyr
8.04		no evidence

8.05

no evidence