Eucalyprus dorrigoensis (Dorrigo White Gum) -- FLORIDA		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 FL climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	n	0
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	n	-2
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	?	
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	?	
4.05	Toxic to animals		
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans		
4.08	Creates a fire hazard in natural ecosystems	?	
4.09	Is a shade tolerant plant at some stage of its life cycle	?	
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	n	0
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	n	0
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		
6.03	Hybridizes naturally	?	
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation		
6.07	Minimum generative time (years)		

Completed: July 2012

7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
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	?	
7.06	Propagules bird dispersed	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	?	
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides	?	
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05	Effective natural enemies present in U.S.		
	Total Score	**-4**	
	Implemented Pacific Second Screening	**No**	
	Risk Assessment Results	**Accept**	

	Reference	Source data
1.01		Rarely cultivated and 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%20lgnd.tif) & USDA Plant Hardiness Zone Map, 2012. Agricultural Research Service, U.S. Department of Agriculture. Accessed from http://planthardiness.ars.usda.gov. 2. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948 [Accessed: 5 December 2011]).	**No computer analysis was performed**. 1. Global plant hardiness zones 9-10; equivalent to USDA Hardiness zones 8-10 (north, central, & south zones of Florida). 2. Distributional range: Australia, northeast New South Wales.
2.02		**No computer analysis was performed**. 1. Native range is well known; refer to 2.01 source data.
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf).	1. Native distribution in New South Wales appears to be in one (Cfa) and possibly a second (Cfb) climatic group.
2.04	1. SD-Dimensions and the Agrometeorology Group of FAO's Sustainable Development Department. Text: R. Gommes. GIFs: F. Petrassi, G. Thomas. http://www.fao.org/sd/EIdirect/climate/EIsp0002.htm. 2. Commonwealth of Australia 2011, Bureau of Meteorology. http://www.bom.gov.au/climate/averages/maps.shtml. Accessed: 5 April 2012.	1. 725-1100 mm (28.5-43.3 in). 2. 800-1200 mm (31.5"-47.2")

2.05	1. Gardner, RAW. 2007. Investigating the environmental adaptability of promising subtropical and coldtolerant eucalypt species in the warm temperate climate zone of KwaZulu-Natal, South Africa. *Southern Hemisphere Forestry Journal* , 69(1): 27-38. 2. Anonymous. USDA/APHIS. Permit applications 08-011-116rm and 08- 014-101rm received from ArborGen LLC Field testing of genetically engineered *Eucalyptus grandis X Eucalyptus urophylla* Draft Environmental Assessment. May 08, 2009.	1.a. *E. dorrigoensis* is being considered a good replacement candidate for *E. grandis* or *E. dunnii* for highly frost-prone low-lying areas in the warm temperate zone, as both of the latter species have only a mild level of frost resistance (Darrow, 1996; Swain and Gardner, 2003). 1.b. The future climate changes and associated increased climatic extremes predicted for South Africa (Fairbanks and Scholes, 1999; Low, 2005) appear to further enhance the potential value of versatile eucalypt species such as *E. dorrigoensis* as replacement candidates for *E. smithii* and *E. macarthurii* in the current warm temperate forestry areas of South Africa. In the southeastern USA, *E. benthamii* is the only eucalpyt species that can be grown successfully on a commercial basis due to its ability to withstand all but the most severe of autumn freezes in the region (WJ Hammond, pers. comm., 2006). 2. There are experimental test plots of non-transgenic cold-hardy Eucalyptus species (E. *macarthurii, E. benthamii, E. viminalis, E. badjensis* , and *E. dorrigoensis*) planted at least 1000 meters from the test plot location (Bamberg County South Carolina).
3.01		No evidence.
3.02		No evidence.
3.03		No evidence.
3.04		No evidence.
3.05	1. Holm, L. et al. *A Geographical Atlas of World Weeds* . John Wiley and Sons, New York. 1979.	1. The following eucalypts are considered principal weeds in Australia (principal weed in this context is ranked according to the importance of the weed and is usually referring to about the five most troublesome species for the crop): *E. cambageana, E. ferruginea, E. gracilis, E. marginata, E. miniata, E. pilularis, E. populnea, E. tetradonta* .
4.01		Species does not possess these described morphological features.
4.02	1. Anonymous. 2009. "Focus on Eucalypts." *SAPIA NEWS No. 12* . ARC-Plant Protection Research Institute, South Africa.	1. It is likely that most *Eucalypts* are allelopathic-having the potential to suppress understory plants through chemical inhibitors that leach into the soil.
4.03		No evidence
4.04	1. United States Department of Agriculture Permit applications 08-11-106rm and 08-014-101rm received from ArborGen LLC. Field testing of genetically engineered *E. grandis X E. urophylla* (http://www.aphis.usda.gov/brs/aphisdocs/08_014101rm_ea2.pdf [Accessed: 8/19/2010]).	1. *Eucalyptus* species are known to produce chemical compounds that are required by the plant for defense against herbivores and pathogens.

4.05		
4.06		
4.07		
4.08	1. Gill, A.M. "Eucalypts and fires: interdependent or independent?" In: *Eucalypt ecology: individuals to ecosystems* . Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997. 2. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. Eucalypts often are the major source of fuel for fires, but not always. 2. Accumulated litter in dense stands of eucalypt stands are extremely flammable.
4.09	1. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. Shade-tolerant sub-canopy species are not known.
4.10	1. Hill. K. 1991. *Eucalyptus dorrigoensis* (Blakely) L.A.S.Johnson & K.D.Hill. *New South Wales Flora Online* . Accessed: 19 December 2011.	1. Scattered and sometimes locally abundant…on moderately to highly fertile soils.
4.11	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Family: *Myrtaceae* . Tree to 30 m high.
4.12	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Scattered and sometimes locally abundant.
5.01	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au. 2. Hill. K. 1991. *Eucalyptus dorrigoensis* (Blakely) L.A.S.Johnson & K.D.Hill. *New South Wales Flora Online* . Accessed: 19 December 2011.	1. In grassy or shrubby woodland or forest. Tree to 30 m high.
5.02	1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948 [Accessed: 5 December 2011]).	1. Family: *Myrtaceae* .
5.03	1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?15948 [Accessed: 5 December 2011]).	1. Family: *Myrtaceae* .

5.04	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. Tree to 30 m high.
6.01		
6.02		
6.03	1. NSW National Parks and Wildlife Service. *Threatened Eucalypt Draft Recovery Plan for Eucalyptus benthamii, Eucalyptus copuland, Eucalyptus* sp. 55 (Howes Swamp). NSW, Australia; June 1999	1. Due to the genetic closeness of the *E. dorrigoensis* and *E. benthamii* , and the tendency of *Eucalypts* to hybridize, *E. dorrgoensis* could endanger the genetic integrity of *E. benthamii* if planted together. Reproductively compatible species are able to hybridize where they come into contact (Eldridge et al 1998), this includes *E. dorrigoensis* or possibly *E. benthamii* from different populations (i.e., Kedumba Valley and Bents Basin).
6.04		
6.05	1. House, S.M. Reproductive biology of eucalypts. In: *Eucalypt ecology: individuals to ecosystems* . Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997.	1. The majority of *Eucalypts* produce small, white or cream flowers grouped into large conflorescences, which are visited primarily by insects, a range of birds, and bats.
6.06		
6.07		
7.01		
7.02	1. NSW National Parks and Wildlife Service. *Threatened Eucalypt Draft Recovery Plan for Eucalyptus benthamii, Eucalyptus copuland, Eucalyptus* sp. 55 (Howes Swamp). NSW, Australia; June 1999	This species is under review for its use as biomass/biofuel, and therefore would be intentionally planted. 1. *E. dorrigoensis* was planted at the site ("Penrith Lakes"). 2. There are experimental test plots of non-transgenic cold-hardy Eucalyptus species (*E. macarthurii, E. benthamii, E. viminalis, E. badjensis,* and *E. dorrigoensis*) planted at least 1000 meters from the test plot location (Bamberg County South Carolina).
7.03		No evidence of *E. dorrigoensis* occurring (naturally or cultivated) near produce.

7.04	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au. 2. Potts, B. 1990. The response of eucalypt populations to a changing environment. *Tasforests* , December: 179-193. 3. Cremer, K.W. 1977. Distance of seed dispersal in Eucalypts estimated from seed weights. *Australian Forest Research* , 7(4): 225-228. 4. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). *In* : D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. No adaptions for wind dispersal (i.e., lacks wings). Fruit hemispherical or conical, 4-5 mm long; disc flat or raised. 2. Seed dispersal in most eucalypt species is mainly by wind and gravity. 3. Wind is probably the only important agent of seed dispersal in the eucalypts, except possibly in species growing on river margins or flood plains where water could also transport the seed. 4. Relatively limited seed dispersal; planted eucalypts are very small and have no adaptions for dispersal (wings or fleshy). The passive release of seeds is undoubtedly aided by wind; however all rigorous studies of eucalypt seed dispersal and seedling spatial distribution show that in general seeds are dispersed over quite short distances that are in agreement with measurement of terminal descent velocity.
7.05	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au. 2. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. In grassy or shrubby woodland or forest. 2. Eucalypts should not be planted near rivers/streams. Temporarily flooded or eroded river/stream banks are suitable habitat for spontaneous establishment of seedlings. Additionally, their seeds can be dispersed for long distances by running water.
7.06	1. Carr, S.G.M. 1974. Problems of the geography of the tropical eucalypts. In D. Walker, ed. *Bridge and barrier; The Natural and Cultural History of Torres Strait* . Canberra, Australian National University. 2. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. *Australian Forestry* , 67(1): 44-53.	1. It is thought that seeds that do not survive passage through the gut of animals, especially birds. 2. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).
7.07	1. The Royal Botanic Gardens and Domain Trust (19 December 2011). PlantNET - The Plant Information Network System of The Royal Botanic Gardens and Domain Trust, Sydney, Australia (version 2.0). http://plantnet.rbgsyd.nsw.gov.au.	1. No adaptations that would suggest that it could attach itself externally to animals. Fruit hemispherical or conical, 4-5 mm long; disc flat or raised.
7.08	1. Carr, S.G.M. 1974. Problems of the geography of the tropical eucalypts. In D. Walker, ed. *Bridge and barrier; The Natural and Cultural History of Torres Strait* . Canberra, Australian National University. 2. Southern, S.G. et al. 2004. Review of gene movement by bats and birds and its potential significance for eucalypt plantation forestry. *Australian Forestry* , 67(1): 44-53.	1. It is thought that seeds that do not survive passage through the gut of animals, especially birds. 2. Dispersal in animal droppings does not occur, although many birds eat eucalypt seed, because the seed does not survive passage through the alimentary canal of mammals and birds (Joseph 1986).

8.01	1. House, S.M. Reproductive biology of eucalypts. In: *Eucalypt ecology: individuals to ecosystems* . Ed. J.E. Williams & J. Woinarski. Cambridge, New York: Cambridge University Press, 1997.	1. The genus *Eucalyptus* is characterized by the frequent production of large numbers of flowers and fruits, many ovules, and relatively high seed numbers.
8.02	1. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. Eucalypt seeds do not have dormancy and seed storage in the soil lasts less than a year.
8.03	1. Rejmánek, M. & D.M. Richardson. 2011. Eucalypts (203-209). In D. Simberloff & M. Rejmánek, eds. *Encyclopedia of Biological Invasions* . Berkeley: University of California Press.	1. Triclopyr or glyphosate applied to freshly cut stumps can greatly reduce resprouting.
8.04		
8.05		