

Australia/New Zealand Weed Risk Assessment adapted for United States.

Data used for analysis published in: Gordon, D.R. and C.A. Gantz. 2008. Potential impacts on the horticultural industry of screening new plants for invasiveness. Conservation Letters 1: 227-235. Available at: <http://www3.interscience.wiley.com/cgi-bin/fulltext/121448369/PDFSTART>

<i>Ficus destruens</i>			
Question number	Question	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 U.S. 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)	?	
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	n	0
2.05	Does the species have a history of repeated introductions outside its natural range?	?	
3.01	Naturalized beyond native range	n	-1
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	n	0
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans	n	0
4.08	Creates a fire hazard in natural ecosystems		
4.09	Is a shade tolerant plant at some stage of its life cycle		
4.1	Grows on one or more of the following soil types: alfisols, entisols, or mollisols	y	1
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets		
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	y	-1
6.06	Reproduction by vegetative fragmentation		
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people	n	-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		
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)		
8.01	Prolific seed production		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)		
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			-2

Outcome	Accept
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section	# questions answered	satisfy minimum?
A	9	Yes
B	6	Yes
C	10	Yes
total	25	yes

Data collected 2008

Question number	Reference	Source data
1.01		used horticulturally, but no evidence of significant modification
1.02		
1.03		
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20Igd.tif). 2. Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : Moraceae). <i>Telopea</i> 10(1): 125-153. 3. White, CT (1933) <i>Ligneous Plants Collected for the Arnold Arboretum in North Queensland by S.F. Kajewski in 1929. Contributions from the Arnold Arboretum of Harvard University IV. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts</i> . 4. George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. <i>Flora of Australia</i> . Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	1. Global hardiness zones (9?-)10-12. 2. " <i>Ficus destruens</i> is found mainly in upland areas of the wet tropic rainforests of north-east Queensland...It extends from the Atherton Tablelands, south to Eungella Range west of Mackay." 3. Gadgarra, Atherton Tableland. 4. "Endemic in north-eastern Qld, disjunctly from the Atherton Tableland S to near the Eungella Ra., W of Mackay".
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : Moraceae). <i>Telopea</i> 10(1): 125-153. 3. White, CT (1933) <i>Ligneous Plants Collected for the Arnold Arboretum in North Queensland by S.F. Kajewski in 1929. Contributions from the Arnold Arboretum of Harvard University IV. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts</i> . 4. George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. <i>Flora of Australia</i> . Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	1. Distribution range is uncertain -- possibly three climatic regions. 2. " <i>Ficus destruens</i> is found mainly in upland areas of the wet tropic rainforests of north-east Queensland...It extends from the Atherton Tablelands, south to Eungella Range west of Mackay." 3. Gadgarra, Atherton Tableland. 4. "Endemic in north-eastern Qld, disjunctly from the Atherton Tableland S to near the Eungella Ra., W of Mackay".
2.04	Microsoft Encarta World Precipitation and Average Rainfall (http://uk.encarta.msn.com/encnet/RefPages/RefMedia.aspx?refid=461530746&artrefid=761554737&pn=3&sec=-1).	For Queensland, the average annual precipitation is over 80 inches/year.

2.05		no evidence
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	1. Weber, E (2003) Invasive Plant Species of the World. CAB International, Oxon, United Kingdom. 2. Holm, L, JV Pancho, JP Herberger, and DL Plucknett (1979) A Geographical Atlas of World Weeds. John Wiley and Sons, New York.	1. <i>Ficus carica</i> is invasive in Australia and the western United States; <i>Ficus microcarpa</i> is invasive in the southeastern United States and Hawaii. 2. Three species are common weeds in 2 countries and Hawaii; 3 species are present as weeds in two countries [not enough evidence to be considered congeneric weeds].
4.01	Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : Moraceae). <i>Telopea</i> 10(1): 125-153.	no description of these traits
4.02		
4.03	1. Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : Moraceae). <i>Telopea</i> 10(1): 125-153. 2. White, CT (1933) Ligneous Plants Collected for the Arnold Arboretum in North Queensland by S.F. Kajewski in 1929. Contributions from the Arnold Arboretum of Harvard University IV. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts. 3. George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. Flora of Australia. Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	no evidence
4.04		
4.05	Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : Moraceae). <i>Telopea</i> 10(1): 125-153.	no evidence
4.06		
4.07	Food Standards Australia New Zealand (http://www.foodstandards.gov.au/monitoringandsurv)	"Wild harvested Australian indigenous food". [no evidence of

	eillance/nuttab2006/onlineversionintroduction/onlineversion.cfm?&action=getFood&foodID=15A10307).	toxicity]
4.08		
4.09		
4.1	USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources (http://soils.usda.gov/use/worldsoils/mapindex/order.html).	Australia, Queensland (NE): The region of origin contains aridisols, entisols, and ultisols (and also oxisols).
4.11	1. Dixon, DJ (2003) A taxonomic revision of the Australian Ficus species in the section Malvanthera (Ficus subg. Urostigma: Moraceae). <i>Telopea</i> 10(1): 125-153. 2. White, CT (1933) Ligneous Plants Collected for the Arnold Arboretum in North Queensland by S.F. Kajewski in 1929. Contributions from the Arnold Arboretum of Harvard University IV. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts. 3. George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. Flora of Australia. Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	1. "Hemi-epiphyte to 32 m." 2. "Large tree up to 30 m. high". 3. "Strangler to 30 m".
4.12		
5.01		terrestrial
5.02	Dixon, DJ (2003) A taxonomic revision of the Australian Ficus species in the section Malvanthera (Ficus subg. Urostigma: Moraceae). <i>Telopea</i> 10(1): 125-153.	Moraceae
5.03	Dixon, DJ (2003) A taxonomic revision of the Australian Ficus species in the section Malvanthera (Ficus subg. Urostigma: Moraceae). <i>Telopea</i> 10(1): 125-153.	Moraceae
5.04	1. Dixon, DJ (2003) A taxonomic revision of the Australian Ficus species in the section Malvanthera (Ficus subg. Urostigma: Moraceae). <i>Telopea</i> 10(1): 125-153. 2. White, CT (1933) Ligneous Plants Collected for the Arnold Arboretum in North Queensland by S.F. Kajewski in 1929. Contributions from the Arnold Arboretum of Harvard University IV. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts. 3. George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. Flora of Australia. Bureau of Flora and Fauna, Australian Government Publication	1. "Hemi-epiphyte to 32 m." 2. "Large tree up to 30 m. high". 3. "Strangler to 30 m".

	Service, Canberra.	
6.01	Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : <i>Moraceae</i>). <i>Telopea</i> 10(1): 125-153.	no evidence
6.02		
6.03		
6.04		
6.05	Dixon, DJ (2003) A taxonomic revision of the Australian <i>Ficus</i> species in the section <i>Malvanthera</i> (<i>Ficus</i> subg. <i>Urostigma</i> : <i>Moraceae</i>). <i>Telopea</i> 10(1): 125-153.	"The pollinator wasp of <i>F. destruens</i> is <i>Pleistodontes rigisamos</i> Wiebes".
6.06		
6.07		
7.01		
7.02		no evidence
7.03		no evidence
7.04	George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. Flora of Australia. Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	"Figs paired, globose, 1-1.7 cm diam.". [no evidence of adaptations to wind dispersal]
7.05		
7.06		
7.07	George, AS and Robertson, R (1981) <i>Ficus destruens</i> . Volume 3 Hamamelidales to Casuarinales. Flora of Australia. Bureau of Flora and Fauna, Australian Government Publication Service, Canberra.	"Figs paired, globose, 1-1.7 cm diam.". [no evidence of adaptations to external dispersal]
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		