Taxon: Dietes bicolor (Steud.) Sweet ex Klatt **Family:** Iridaceae

Common Name(s): African iris
butterfly flag
fortnight lily
peacock flower

Synonym(s): Iris bicolor Lindl.
Moraea bicolor Steud.

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 29 Oct 2018

WRA Score: 11.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Rhizomatous Herb, Weedy, Ornamental, Fire-Resistant, Spreads Vegetatively

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)		
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	y
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)	y
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed		
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		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens	y=1, n=0	n
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	n

Qsn #	Question	Answer Option	Answer
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)	y=1, n=0	y
411	Climbing or smothering growth habit	y=1, n=0	n
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	n
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	y=1, n=-1	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	2
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	y
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal		
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	y=1, n=-1	n
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	y
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
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**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[Not domesticated] "Dietes bicolor is a valuable ornamental that is widely cultivated today . Plants may be very free flowering , and although each flower lasts only one day , plants usually produce flowers almost every day for months . Under unsuitable cultural conditions , D. bicolor may fail to bloom for years , while apparently healthy and producing foliage only ."

102	Has the species become naturalized where grown?	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	**Notes**
	WRA Specialist. 2018. 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**
	Van Kleunen, M., & Johnson, S. D. (2007). South African Iridaceae with rapid and profuse seedling emergence are more likely to become naturalized in other regions. Journal of Ecology, 95(4), 674-681	"Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London"
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 26 Oct 2018]	"Native Africa SOUTHERN AFRICA: South Africa [Cape Province (s.e.)]"

202	Quality of climate match data	High
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 26 Oct 2018]	

Qsn #	Question	Answer
203	**Broad climate suitability (environmental versatility)**	
	Source(s)	**Notes**
	Rickard, S. (2011). The New Ornamental Garden. CSIRO Publishing, Collingwood, Australia	"The South African dietes must be the unfussiest plants on earth. Any position which receives at least a few hours of sun, in any climate and any soil type suits them fine." [Generic description]
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 26 Oct 2018]	"USDA hardiness zones: 8B through 11"

204	**Native or naturalized in regions with tropical or subtropical climates**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes bicolor is native to moist habitats in the eastern Cape region of South Africa." … "Dietes bicolor grows well under most conditions in Hawai'i and may be the most frequently cultivated of the three African irises."
	Whistler, W.A. 2000. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	"Dietes bicolor, sometimes called African iris, is native to tropical southeastern Africa but is widely grown in warm regions for its conspicuous, pale yellow and brown, short-lived flowers."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Dietes bicolor, the only polyploid species of the genus , is seen a s a relict, now confined to moist situations in a limited area of the eastern Cape, South Africa." [The coastal area of the Eastern Cape Province lies directly between the subtropical conditions of KwaZulu Natal and the Mediterranean conditions of the Western Cape, while its inland area is bisected by the great escarpment resulting in the southern reaches defined by a series of rivers and corresponding wetland fauna and flora, while the northern areas are those of the altitudinous plains of the Plateau and great Karoo. These topographical differences are what cause the climatic differences and conditions experienced by the towns and cities within these areas.]

205	**Does the species have a history of repeated introductions outside its natural range?**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes bicolor grows well under most conditions in Hawai'i and may be the most frequently cultivated of the three African irises."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Dietes bicolor is a valuable ornamental that is widely cultivated today."
	Whistler, W.A. 2000. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	"Dietes bicolor, sometimes called African iris, is native to tropical southeastern Africa but is widely grown in warm regions for its conspicuous, pale yellow and brown, short-lived flowers."

301	**Naturalized beyond native range**	**y**

Qsn #	Question	Answer
	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	"Dietes bicolor (Steud.) Sweet ex Klatt; herb; exotic; cultivated only"
	Queensland Government. (2018). Weeds of Australia. Dietes bicolor. http://keyserver.lucidcentral.org. [Accessed 25 Oct 2018]	"Not yet formally regarded to have become fully naturalised in Australia. However, it has been reported to be growing in bushland in the Sydney region." … "Yellow wild iris (Dietes bicolor) is regarded as a potential environmental weed in New South Wales and Victoria. It is of particular concern in the wider Sydney and Blue Mountains region, where it is reported to be escaping from gardens and amenity plantings into conservation areas (e.g. Lane Cove National Park)."
	Van Kleunen, M., & Johnson, S. D. (2007). South African Iridaceae with rapid and profuse seedling emergence are more likely to become naturalized in other regions. Journal of Ecology, 95(4), 674-681	"Table 1 The 30 naturalized and 30 non-naturalized congeneric species of Iridaceae used in this study" [Dietes bicolor & Dietes iridioides included in naturalized list]
	Wilton, A. D. et al. (2016). Checklist of the New Zealand Flora – Seed Plants. Manaaki Whenua-Landcare Research, Lincoln. http://dx.doi.org/10.7931/P1PP42. [Accessed]	"ζ Dietes bicolor (Lindl.) Sweet ex G.Don" [ζ = exotic, occasional ('casual')]
	Frohlich, D. & Lau, A. 2012. New plant records for the Hawaiian islands. Bishop Museum Occasional Papers 113: 27–54	[Dietes iridioides naturalizing. No evidence that Dietes bicolor has naturalized in the Hawaiian Islands to date] "Dietes iridioides, a species used often as an accent plant in landscaping, has been found naturalizing on a ridgetop on O'ahu."
	Howell, C. J., & Sawyer, J. W. (2006). New Zealand naturalised vascular plant checklist. New Zealand Plant Conservation Network, Wellington, NZ	Dietes bicolor - Casual [Casual is the name given to taxa that are: passively regenerating only in the immediate vicinity of the cultivated parent plant, or more widespread but only known as isolated or few individuals; garden escapes persisting only 2–3 years; or garden discards persisting vegetatively but not spreading sexually or asexually']
	Wagner, W.L., Herbst, D.R.& Lorence, D.H. 2018. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. http://botany.si.edu/. [Accessed 29 Oct 2018]	No evidence to date

302	Garden/amenity/disturbance weed	y
	Source(s)	**Notes**
	Dave's Garden. (2018). Dietes Species, African Iris, Butterfly Flag, Fortnight Lily, Peacock Flower - Dietes bicolor. https://davesgarden.com/guides/pf/go/1882/. [Accessed 29 Oct 2018]	"On Jun 4, 2011, BellaMB88 from Camarillo, CA wrote: These plants grow like weeds in Camarillo, California. They are tough and dependable bloomers, but self sow everywhere! Often by the time I see their stiff strap like leaves coming through the daylilies or agapanthes they are well rooted and quite a chore to dig out."
	Save Our Waterways Now. (2018). Dietes bicolor (Iridaceae) Evergreen Iris, African Iris. http://www.saveourwaterwaysnow.com.au. [Accessed 29 Oct 2018]	"Tough, fast-growing rhizomatous perennial. Wind and drought-resistance give it high weed potential." … Flower stalks are perennial – they make new flowers year after year. It self seeds freely. Commonly used in landscaping. A new and emerging weed in Ithaca Creek."

Qsn #	Question	Answer
	Queensland Government. (2018). Weeds of Australia. Dietes bicolor. http://keyserver.lucidcentral.org. [Accessed 29 Oct 2018]	"Yellow wild iris (Dietes bicolor) is regarded as a potential environmental weed in New South Wales and Victoria. It is of particular concern in the wider Sydney and Blue Mountains region, where it is reported to be escaping from gardens and amenity plantings into conservation areas (e.g. Lane Cove National Park)."
	City of Joondalup. (2011). Being WEEDwise Garden Escapees in the City of Joondalup [Flier]. https://www.joondalup.wa.gov.au/wp-content/uploads/2018/01/Garden-Escapee-Weed-Guide.pdf. [Accessed 29 Oct 2018]	[Dietes bicolor, Dietes iridioides & Dietes grandiflora regarded as weedy plants to be avoided in landscaping & gardens]
	Lady Bird Johnson Wildflower Center. (2013). Ask Mr. Smarty Plants. Monday - April 01, 2013. https://www.wildflower.org/expert/show.php?id=9163. [Accessed 26 Oct 2018]	[Regarded as a persistent garden weed by homeowner] "Question: We have dietes bicolor growing in our garden. I am changing the type of garden and cannot seem to kill it. I've dugged it out, spent too many weekends pulling out every new shoot, used poison, but to no effect. I cannot replant this garden until I can get rid of this plant. Any suggestions? ANSWER: We are at something of a disadvantage in trying to answer your question. The Lady Bird Johnson Wildflower Center (home of Mr. Smarty Plants) is committed to recommending the growth, propagation and protection of plants native to North America. Dietes bicolor (African iris) is native to, well, South Africa, and therefore to neither North America nor Australia. It is widely grown in Central Texas, though of course not at the Wildflower Center. Since we have no experience with it, we were not aware of any tendency to invasiveness. The main problem in getting rid of it is that its root are rhizomes."
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	[Regarded as weedy ornamental plants of gardens, requiring active management] "A recent addition to weed lists in Sydney, these plants need active management in all gardens. This may be as simple as actively removing spent flower stalks prior to seed set, or as comprehensive as complete removal from gardens."

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

304	Environmental weed	
	Source(s)	**Notes**
	Queensland Government. (2018). Weeds of Australia. Dietes bicolor. http://keyserver.lucidcentral.org. [Accessed 29 Oct 2018]	[Potential environmental weed. Further evidence needed] "Yellow wild iris (Dietes bicolor) is regarded as a potential environmental weed in New South Wales and Victoria. It is of particular concern in the wider Sydney and Blue Mountains region, where it is reported to be escaping from gardens and amenity plantings into conservation areas (e.g. Lane Cove National Park)."

305	Congeneric weed	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Nursery & Garden Industry Australia. (2009). Grow Me Instead - Dietes species. http://www.growmeinstead.com.au/plant/dietes-species.aspx. [Accessed 29 Oct 2018]	"Dietes are spreading, strappy leaved plants native to South Africa. They belong to the Iris family, and produce an abundance of cream or white iris like flowers on long stems for most of the year. They grow extremely well in Australian conditions and have now become invasive in various regions throughout Western Australia."... "HOW IT SPREADS - Dietes produce numerous seed pods which contain an abundance of seeds. Each seed can remain viable in the soil for an extended period of time and can readily germinate under most conditions."
	Queensland Government. (2018). Weeds of Australia. Dietes grandiflora. http://keyserver.lucidcentral.org. [Accessed 29 Oct 2018]	"Large wild iris (Dietes grandiflora) is regarded as an environmental weed in Western Australia and as a potential environmental weed New South Wales (particularly in the wider Sydney and Blue Mountains region). Though it is currently not very widely naturalised, it is showing invasive tendencies and is thought to pose a threat to natural habitats. For example, it has been reported to have spread from garden plantings or dumped garden waste into Jarrah-Marri forest in south western Western Australia. Note: this species is commonly confused with wild iris (Dietes iridioides), another emerging environmental weed."
	Dave's Garden. (2018). Dietes Species, African Iris, Cape Iris, Fortnight Lily, Morea Lily, Wild Iris - Dietes iridioides. https://davesgarden.com/guides/pf/go/572/. [Accessed 29 Oct 2018]	[Dietes iridioides reported as a garden/landscaping weed] "On Jun 9, 2012, humanbackhoe from Lincoln, CA wrote: This plant is very invasive. Read rosevilles comment but I did not want to work in mud, so instead I used a 14lb. digging pry bar with a 4x4 block to work up the root ball going around the base. However there are a lot of runners. Does anyone know how to erraticate the runners, will round up do it?" ... "On May 12, 2010, CAwinediva from Anaheim, CA wrote: 2 years ago I planted a few seeds from a pod I found. Now these have invaded all our flower beds. Between roses, iris and other plants. They are very hard to remove, though we will try the methode mentioned above, using an ax. They are really pretty when they bloom, and that's fairly often here in So. Cal. But I would NEVER plant those seeds again!!!" ... "On Jul 11, 2003, astanton from Anaheim, CA (Zone 10b) wrote: In Southern California, this plant is extremely weedy; completely out of control. It evades every single bush--roses and Bird of Paradise included--and starts its growth in the middle of the bush, which makes it very difficult, if not impossible, so remove it. I have rose bushes with five or six Dietes growing through it! Very invasive plant."

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[No evidence] "Plants 80-120 cm high. Leaves 50-100 cm long, linear, pale green, with a distinct, usually double central vein, 6-12 mm wide. Stem erect, bearing short leaves on the lower nodes and short paired opposite bractlike structures on the upper nodes; stem bracts herbaceous or dry and brown, 9-20 mm long, acute, the margins free to the base."

Qsn #	Question	Answer
402	**Allelopathic**	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found

403	**Parasitic**	**n**
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Plants 80-120 cm high. Leaves 50-100 cm long, linear, pale green, with a distinct, usually double central vein, 6-12 mm wide." [No evidence. Iridaceae]

404	**Unpalatable to grazing animals**	
	Source(s)	**Notes**
	Boething Treeland Farms. (2018). Dietes bicolor (Moraea) Fortnight Lily. http://www.boethingtreeland.com/special-features/deer-resistant/dietes-bicolor-moraea.html. [Accessed 29 Oct 2018]	"Special Features: Deer Resistant"
	Keinath, A. (2014). Oh, deer ... they have the munchies. Jun 20, 2014. The Post and Courier, Charleston, SC. https://www.postandcourier.com. [Accessed 29 Oct 2018]	"The plants I recommend in this article are those that deer have never eaten and those that deer “tasted” once or twice in my yard." [African iris (Dietes) listed among deer resistant plants]
	Dave's Garden. (2018). Dietes Species, African Iris, Butterfly Flag, Fortnight Lily, Peacock Flower - Dietes bicolor. https://davesgarden.com/guides/pf/go/1882/. [Accessed 29 Oct 2018]	[Reported to be unaffected by deer] "On May 13, 2004, poozak from New Braunfels, TX wrote: In our south Texas heat, this one survived neglect (no water/feeding/weeding) and no attention for six months in a deer infested location when we went West. I love it. Good survival skills."
	WRA Specialist. 2018. Personal Communication	May be unpalatable to deer. Palatability to other browsing or grazing animals unknown.

405	**Toxic to animals**	**n**
	Source(s)	**Notes**
	Fuller, T.C. & McClintock, E.M. 1986. Poisonous plants of California: Issue 53 of California natural history guides. University of California Press, Berkeley and Los Angeles, CA	"Plants related to Moraea, with clumps of narrow iris-like leaves and with flowers like a small Japanese Iris, are cultivated in California. They are species of Dietes, Butterfly Iris or Natal Lily, but are not recorded as being toxic to humans or to animals. Dietes bicolor has light yellow flowers to 2 in. across with six spreading segments to the perianth; each of the outer three segments has a basal dark brown blotch."
	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

406	**Host for recognized pests and pathogens**	**n**
	Source(s)	**Notes**

Qsn #	Question	Answer
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 28 Oct 2018]	"Nematodes are the main pest problem. Scales can cover the foliage and cause a severe problem. No diseases are of major concern."
	Missouri Botanical Garden. (2018). Dietes bicolor. http://www.missouribotanicalgarden.org. [Accessed 29 Oct 2018]	"No serious insect or disease problems. Crown root, root rot and rust may occur. Scale and nematodes."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Fuller, T.C. & McClintock, E.M. 1986. Poisonous plants of California: Issue 53 of California natural history guides. University of California Press, Berkeley and Los Angeles, CA	"Plants related to Moraea, with clumps of narrow iris-like leaves and with flowers like a small Japanese Iris, are cultivated in California. They are species of Dietes, Butterfly Iris or Natal Lily, but are not recorded as being toxic to humans or to animals. Dietes bicolor has light yellow flowers to 2 in. across with six spreading segments to the perianth; each of the outer three segments has a basal dark brown blotch."
	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	n
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London" [No evidence from native range]
	FIRESafe MARIN. (2018). African Iris. https://www.firesafemarin.org/plants/fire-resistant/item/african-iris. [Accessed 29 Oct 2018]	"Fire Resistance: Very Good" [This website, & a number of similar sites, recommend Dietes bicolor as a fire resistant landscaping plant, suggesting it will not increase fire risk in fire prone habitats]

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes is easily grown in Hawai'i and thrives in any reasonably fertile, well-drained soil in partly shady sites; full sun is suitable only if ample moisture and protection from drying wind are available."
	Missouri Botanical Garden. (2018). Dietes bicolor. http://www.missouribotanicalgarden.org. [Accessed 28 Oct 2018]	"Sun: Full sun to part shade" … "Winter hardy to USDA Zones 9-11 where plants may easily be grown in moist, moderately fertile, well-drained soils in full sun to part shade."
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 28 Oct 2018]	"Winter hardy to USDA Zones 9-11 where plants may easily be grown in moist, moderately fertile, well-drained soils in full sun to part shade."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes is easily grown in Hawai'i and thrives in any reasonably fertile, well-drained soil in partly shady sites"
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 26 Oct 2018]	"Soil tolerances: extended flooding; slightly alkaline; clay; sand; acidic; loam" ... "Iris will bloom best on rich, moist soil but will tolerate moderately dry soil conditions, growing in nearly full sun to partial shade."
	Rickard, S. (2011). The New Ornamental Garden. CSIRO Publishing, Collingwood, Australia	"The South African dietes must be the unfussiest plants on earth. Any position which receives at least a few hours of sun, in any climate and any soil type suits them fine." [Generic description]

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Plants 80-120 cm high. Leaves 50-100 cm long, linear, pale green, with a distinct, usually double central vein, 6-12 mm wide."

412	Forms dense thickets	
	Source(s)	**Notes**
	Goldblatt, P. & Manning, J. C. 2008. The Iris Family: Natural History & Classification. Timber Press, Portland, OR	"Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London" [Unknown. No evidence from native range]
	Victorian Resources Online. (2018). Fortnight lily (Dietes bicolor). http://vro.agriculture.vic.gov.au. [Accessed 29 Oct 2018]	"Self seed into dense clumps (Macoboy 1986). High nuisance value" [Potentially excludes other vegetation. Impacts on other plants not documented]

501	Aquatic	n
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[Terrestrial] "Plants 80-120 cm high." ... "Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London"

502	Grass	n
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 25 Oct 2018]	Family: Iridaceae Subfamily: Iridoideae Tribe: Irideae

Qsn #	Question	Answer
503	**Nitrogen fixing woody plant**	**n**
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 25 Oct 2018]	Family: Iridaceae Subfamily: Iridoideae Tribe: Irideae

504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	**n**
	Source(s)	**Notes**
	Stern, M. (2002). Dietes bicolor. PlantZAfrica. SANBI. http://pza.sanbi.org/dietes-bicolor. [Accessed 29 Oct 2018]	"Dietes do not have corms as are found in Moraea, but have a rhizome."
	Gordon, D. R., Mitterdorfer, B., Pheloung, P. C., Ansari, S., Buddenhagen, C., Chimera, C., ... & Williams, P. A. 2010). Guidance for addressing the Australian Weed Risk Assessment questions. Plant Protection Quarterly, 25(2): 56-74	"This question addresses taxa that have specialized organs and should not include plants with just rhizomes/ stolons (see 6.06). Answer 'yes' only for perennial taxa with tubers, corms, or bulbs. Answer 'no' for non-geophytes, including those with rhizomes or stolons only"

601	**Evidence of substantial reproductive failure in native habitat**	**n**
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[Limited native distribution, but no evidence of widespread reproductive failure] "Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London … Dietes bicolor, the only polyploid species of the genus , i s seen a s a relict, now confined to moist situations in a limited area of the eastern Cape , South Africa." … "Dietes bicolor is a valuable ornamental that is widely cultivated today . Plants may be very free flowering , and although each flower lasts only one day , plants usually produce flowers almost every day for months . Under unsuitable cultural conditions , D. bicolor may fail to bloom for years , while apparently healthy and producing foliage only ."

Qsn #	Question	Answer
602	**Produces viable seed**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes is easily propagated by division of rhizome clumps or from seed."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"In D. robinsoniana and D. bicolor the capsules are erect, globose, with a flat truncated apex and partially dehiscent from the apex to about the middle." … "Seeds of all species of Dietes are large, somewhat irregular in shape, and distinctly flattened."
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 26 Oct 2018]	"Propagation is by seed or division of the matted clumps. Whole plants are lifted, and the rhizomes divided every three years or when new plants are needed."
	Stern, M. (2002). Dietes bicolor. PlantZAfrica. SANBI. http://pza.sanbi.org/dietes-bicolor. [Accessed 26 Oct 2018]	"The fruit is a club-shaped capsule approximately 25mm in diameter which partially splits to release the seeds."

603	**Hybridizes naturally**	
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[Unknown. Hybridization documented in genus] "Dietes robinsoniana, counted from unvouchered seed obtained from the Royal Botanic Gardens, Kew, also has 2n = 20, as does a hybrid D. robinsoniana x D. iridioides raised by M. Boussard, Verdun, France (Goldblatt, 1979)."

604	**Self-compatible or apomictic**	
	Source(s)	**Notes**
	Victorian Resources Online. (2018). Fortnight lily (Dietes bicolor). http://vro.agriculture.vic.gov.au. [Accessed 29 Oct 2018]	"With the exception of D. bicolor, their flowers are strongly self fertile, producing copious numbers of seeds from hard, oblong capsules (GAMA 2009)." [Suggests D. bicolor is not self-fertile, but unknown if D. bicolor is self-incompatible]

605	**Requires specialist pollinators**	**n**
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 1998. The Families and genera of vascular plants. Volume III. Flowering plants, Monocotyledons: Lilianae (except Orchidaceae). Springer-Verlag, Berlin, Heidelberg, New York	"Although the pollination ecology of Iridaceae is extremely diverse (e.g. V ogeI1954), it seems likely that pollination by bees is ancestral." … "The radially symmetric flowers of most Iridoideae are pollinated by bees." [Dietes bicolor in Subfamily Iridoideae]
	Dave's Garden. (2018). Dietes Species, African Iris, Butterfly Flag, Fortnight Lily, Peacock Flower - Dietes bicolor. https://davesgarden.com/guides/pf/go/1882/. [Accessed 29 Oct 2018]	"Bloom Characteristics: This plant is attractive to bees, butterflies and/or birds"
	Goldblatt, P. & Manning, J. C. 2008. The Iris Family: Natural History & Classification. Timber Press, Portland, OR	"Pollination of Dietes is unknown. The flowers lack nectar and may be pollinated by deceit, by bees visiting flowers vainly searching for nectar." [In contrast, Stern (2002) reports that D. bicolor produces nectar that may attract bees]

Qsn #	Question	Answer
	Stern, M. (2002). Dietes bicolor. PlantZAfrica. SANBI. http://pza.sanbi.org/dietes-bicolor. [Accessed 29 Oct 2018]	[Bee pollinated] "The flower of Dietes bicolor is made up of three functional units, each consisting of an outer tepal and a style branch. Each of these units must be entered separately by the pollinating insect (probably a bee). Nectar is secreted at the base of each of the outer tepals. When the insect pollinator pushes itself between the outer tepal and style branch in search of nectar, the pollen is deposited on its back and as it moves from plant to plant it spreads pollen from one flower to the other resulting in pollination. The insects, in turn, attract various insectivorous birds to the garden."

606	Reproduction by vegetative fragmentation	y
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Dietes has a thick, tough, fibrous to woody creeping rhizome which persists for several years. It bears a fan of equitant leaves at its apex. Side branches are produced from lateral buds which grow eventually to form new plants, initially grouped in a clump with the original plant." [Generic description]
	Gilman, E. F. (1999). Dietes bicolor. Fact Sheet FPS-178. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu. [Accessed 26 Oct 2018]	"Propagation is by seed or division of the matted clumps. Whole plants are lifted, and the rhizomes divided every three years or when new plants are needed."
	Stern, M. (2002). Dietes bicolor. PlantZAfrica. SANBI. http://pza.sanbi.org/dietes-bicolor. [Accessed 26 Oct 2018]	"The plant spreads by means of its modified stems (rhizomes), which are located below the soil surface."

607	Minimum generative time (years)	2
	Source(s)	**Notes**
	Victorian Resources Online. (2018). Fortnight lily (Dietes bicolor). http://vro.agriculture.vic.gov.au. [Accessed 29 Oct 2018]	"In the 2nd or 3rd year they flower (ONSE 2009). Long lived (GAMA 2009). Likely to be at least 3 years. 3-10 years"

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Seed is spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping."

Qsn #	Question	Answer
702	**Propagules dispersed intentionally by people**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes bicolor grows well under most conditions in Hawai'i and may be the most frequently cultivated of the three African irises."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Dietes bicolor is a valuable ornamental that is widely cultivated today."
	Whistler, W.A. 2000. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	"Dietes bicolor is a valuable ornamental that is widely cultivated today."

703	**Propagules likely to disperse as a produce contaminant**	**n**
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Seed is spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping."

704	**Propagules adapted to wind dispersal**	
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Seed is spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	[Wind may facilitate dispersal of flattened seeds, but plants are relatively low growing & unlikely to be dispersed long distances by wind] "Seeds of all species of Dietes are large, somewhat irregular in shape, and distinctly flattened." "In D. robinsoniana and D. bicolor the capsules are erect, globose, with a flat truncated apex and partially dehiscent from the apex to about the middle." … "Plants 80-120 cm high."

705	**Propagules water dispersed**	**y**
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Capsule to 25 mm long, globose-truncate, dehiscing only in the upper half." … "Distribution : along streams and vleis , the eastern Cape between Grahamstown and East London" [Distribution along streams suggests seeds and/or rhizome fragments may be moved by water]
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Dispersal Seed is spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping."

Qsn #	Question	Answer
706	**Propagules bird dispersed**	**n**
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Capsule to 25 mm long, globose-truncate, dehiscing only in the upper half."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Seed is spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping."
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"Seeds of all species of Dietes are large, somewhat irregular in shape, and distinctly flattened." [Possible but unlikely. Seeds lack means of external attachment]

708	Propagules survive passage through the gut	n
	Source(s)	**Notes**
	Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of Dietes (Iridaceae). Annals of the Missouri Botanical Garden, 68(1), 132-153	"In D. robinsoniana and D. bicolor the capsules are erect, globose, with a flat truncated apex and partially dehiscent from the apex to about the middle." [Seeds not adapted for consumption & unlikely to be internally dispersed]

801	Prolific seed production (>1000/m2)	
	Source(s)	**Notes**
	Whistler, W.A. 2000. Tropical Ornamentals: A Guide. Timber Press, Portland, OR	"FRUIT an obovoid many-seeded capsule. PROPAGATE by division or seeds ." [Seed densities unknown]

802	Evidence that a persistent propagule bank is formed (>1 yr)	y
	Source(s)	**Notes**
	Nursery & Garden Industry Australia. (2009). Grow Me Instead - Dietes species. http://www.growmeinstead.com.au/plant/dietes-species.aspx. [Accessed 29 Oct 2018]	"Dietes produce numerous seed pods which contain an abundance of seeds. Each seed can remain viable in the soil for an extended period of time and can readily germinate under most conditions." [Generic description]
	Victorian Resources Online. (2018). Fortnight lily (Dietes bicolor). http://vro.agriculture.vic.gov.au. [Accessed 29 Oct 2018]	"Taking one to four or more years to weather away before germination takes place"

803	Well controlled by herbicides	
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Control Hand pull/dig, Foliar spray." [Specifics on herbicide type & efficacy not provided]

Qsn #	Question	Answer
	Lady Bird Johnson Wildflower Center. (2013). Ask Mr. Smarty Plants. Monday - April 01, 2013. https://www.wildflower.org/expert/show.php?id=9163. [Accessed 29 Oct 2018]	[Grower reports that herbicide is ineffective at control. Type of herbicide & application method unspecified] "Question: We have dietes bicolor growing in our garden. I am changing the type of garden and cannot seem to kill it. I've dugged it out, spent too many weekends pulling out every new shoot, used poison, but to no effect. I cannot replant this garden until I can get rid of this plant.

804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	**y**
	Source(s)	**Notes**
	Sydney Weeds Committees. (2018). Wild Iris - Dietes bicolor, Dietes iridioides. http://sydneyweeds.org.au/wp-cms/weed/wild-iris/. [Accessed 29 Oct 2018]	"Rhizomatous and fibrous, will re-shoot from any rootstock left in soil."
	Lady Bird Johnson Wildflower Center. (2013). Ask Mr. Smarty Plants. Monday - April 01, 2013. https://www.wildflower.org/expert/show.php?id=9163. [Accessed 29 Oct 2018]	[Reported by gardener as difficult to control manually] "Question: We have dietes bicolor growing in our garden. I am changing the type of garden and cannot seem to kill it. I've dugged it out, spent too many weekends pulling out every new shoot, used poison, but to no effect. I cannot replant this garden until I can get rid of this plant."

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Dietes bicolor grows well under most conditions in Hawai'i and may be the most frequently cultivated of the three African irises." [Unknown. No information on pests of pathogens provided, but widespread cultivation suggests natural enemies are of negligible impact]

Summary of Risk Traits:

High Risk / Undesirable Traits
• Able to grow in tropical and subtropical climates
• Naturalized or naturalizing in Australia and New Zealand
• Regarded as a persistent garden and landscaping weed, and a potential environmental weed in Australia
• Other Dietes species are weedy and invasive
• May be unpalatable to deer and other browsing animals
• Tolerates many soil types
• Reproduces by seeds and vegetatively by rhizomes
• Reaches maturity in 2-3 years
• Seed dispersed by water, humans, contaminated soil and garden refuse dumping
• Seeds may persist for one to four years before germination
• Able to resprout after cutting

Low Risk Traits
• No reports of invasiveness or naturalization in the Hawaiian Islands, despite widespread cultivation as an ornamental and landscaping plant
• Unarmed (no spines, thorns, or burrs)
• Non-toxic
• Fire-resistant (may reduce fire risk in fire prone areas)