

Part IV. Plant Assessment Form

For use with “Criteria for Categorizing Invasive Non-Native Plants that Threaten Wildlands”
by the California Exotic Pest Plant Council and the Southwest Vegetation Management Association

Electronic version, February 28, 2003

Table 1. Species and Evaluator Information

Species name (Latin binomial):	Dactylis glomerata L.
Synonyms:	n/a
Common names:	Orchard grass
Evaluation date (mm/dd/yy):	4/4/05
Evaluator #1 Name/Title:	Jeffrey Corbin
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Evaluator #2 Name/Title:	Joseph DiTomaso
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Section below for list committee use—please leave blank

List committee members:	Carla Bossard, John Randall, Carri Pirosko, Dan Gluesenkamp, Gina Skurka, Brianna Richardson
Committee review date:	7/8/05
List date:	enter text here
Re-evaluation date(s):	enter text here

General comments on this assessment:

Joe: Check scores for 1.2, 3.1, and 3.2

Table 2. Criteria, Section, and Overall Scores

1.1	Impact on abiotic ecosystem processes	D	Observational
1.2	Impact on plant community	C	Rev'd, Sci. Pub'n
1.3	Impact on higher trophic levels	D	No Information
1.4	Impact on genetic integrity	D	Other Pub. Mat'l

Impact

Enter four characters from Q1.1-1.4 below:

DCDD

Using matrix, determine score and enter below:

C

2.1	Role of anthropogenic and natural disturbance	B (2 pts)	Rev'd, Sci. Pub'n
2.2	Local rate of spread with no management	B (2 pts)	Rev'd, Sci. Pub'n
2.3	Recent trend in total area infested within state	C (1 pt)	Observational
2.4	Innate reproductive potential Wksht A	B (2 pts)	Other Pub. Mat'l
2.5	Potential for human-caused dispersal	A (3 pts)	Rev'd, Sci. Pub'n
2.6	Potential for natural long-distance dispersal	C (1 pt)	Other Pub. Mat'l
2.7	Other regions invaded	C (1 pt)	Rev'd, Sci. Pub'n

Invasiveness

Enter the sum total of all points for Q2.1-2.7 below:

12

Use matrix to determine score and enter below:

B

Plant Score

Using matrix, determine Overall Score and Alert Status from the three section scores and enter below:

Low
No Alert

3.1	Ecological amplitude/Range	A	Other Pub. Mat'l
3.2	Distribution/Peak frequency Wksht C	D	Observational

Distribution

Using matrix, determine score and enter below:

B

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes	D Observational back
Identify ecosystem processes impacted: Not well-studied, but likely no impacts	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
Question 1.2 Impact on plant community composition, structure, and interactions	C Rev'd, Sci. Pub'n back
Identify type of impact or alteration: Can in infrequent circumstances displace native perennial grasses. <i>Dactylis</i> has been shown to invade oak woodlands (Williamson and Harrison 2002), serpentine habitats (Williamson and Harrison 2002), and also appears to be an emerging threat in coastal prairie grasslands (Corbin and D'Antonio in prep). Not usually a problem and seldom in high densities.	
Rationale: enter text here	
Sources of information: Williamson, J. and S. Harrison (2002). "Biotic and abiotic limits to the spread of exotic revegetation species." <i>Ecological Applications</i> 12(1): 40-51. Corbin and D'Antonio in prep - unpublished paper, to be submitted to Madrono. Corbin, J. 2004. Out of the frying pan: Invasion of exotic perennial grasses in coastal prairies. Jeffrey D. Corbin, Department of Integrative Biology, UC Berkeley. Presentation at the California Invasive Plant Council Symposium. Available: http://groups.ucanr.org/ceppc/Symposia/2004_Presentations.htm	
Question 1.3 Impact on higher trophic levels	D No Information back
Identify type of impact or alteration: Not known. The thatch may be poor forage, but not known. Fresh grass considered good forage and is commonly used in pastures.	
Rationale: enter text here	
Sources of information: Very little info.	
Question 1.4 Impact on genetic integrity	D Other Pub. Mat'l back
Identify impacts: None known and no native <i>Dactylis</i> in California.	
Rationale: enter text here	
Sources of information: Hickman. 1993. <i>The Jepson Manual</i> .	

Question 2.1 Role of anthropogenic and natural disturbance in establishment	B Rev'd, Sci. Pub'n back
Describe role of disturbance: Disturbed areas at McLaughlin Reserve saw great invasion of Dactylis (Williamson and Harrison). It has also invaded an undisturbed coastal prairie grassland (Corbin and D'Antonio in prep)	
Rationale: enter text here	
Sources of information: See above	
Question 2.2 Local rate of spread with no management	B Rev'd, Sci. Pub'n back
Describe rate of spread: Significant increase in its cover during 4 year sampling at Tom's Point Preserve (Corbin and D'Antonio in prep). Likely not spreading fast enough to warrant an "A".	
Rationale: enter text here	
Sources of information: Williamson, J. and S. Harrison (2002). "Biotic and abiotic limits to the spread of exotic revegetation species." Ecological Applications 12(1): 40-51. Corbin and D'Antonio in prep - unpublished paper, to be submitted to Madrono. .	
Question 2.3 Recent trend in total area infested within state	C Observational back
Describe trend: This invasion may be relatively recent - within the last 30 years or so, but infestations in the state seem to be static.	
Rationale: enter text here	
Sources of information: DiTomaso, observational	
Question 2.4 Innate reproductive potential	B Other Pub. Mat'l back
Describe key reproductive characteristics: Reaches maturity quickly, and spreads via rhizomes.	
Rationale: enter text here	
Sources of information: Corbin, J. personal observations DiTomaso and Healy. 2006. Weeds of California. UC DANR Pub. #3488.	
Question 2.5 Potential for human-caused dispersal	A Rev'd, Sci. Pub'n back
Identify dispersal mechanisms: Along roadways - e.g. McLaughlin reserve (Williamson and Harrison 2002). It is likely a component of forage as well.	

Rationale: enter text here	
Sources of information: Williams and Harrison 2002.	
Question 2.6 Potential for natural long-distance dispersal	C Other Pub. Mat'l back
Identify dispersal mechanisms: Very light seeds, that likely easily attach to animals in mud, but vast majority of seed fall directly to soil surface below parent plant.	
Rationale: enter text here	
Sources of information: DiTomaso and Healy. 2006. Weeds of California. UC DANR Pub. #3488.	
Question 2.7 Other regions invaded	C Rev'd, Sci. Pub'n back
Identify other regions: British Columbia and Spain	
Rationale: enter text here	
Sources of information: Lumaret R. 1990. "25. Invasion of Natural Pastures by a Cultivated Grass (<i>Dactylis glomerata</i> L.) in Galicia, Spain: Process and Consequence on Plant-Cattle Interactions." In: F. di Castri, Hansen A.J., Debussche M. [Eds.] <i>Biological Invasions in Europe and the Mediterranean Basin</i> . Kluwer Academic Publishers, Dordrecht. Pgs. 391-397. MacDougall, A. S. and R. Turkington (2004). "Relative importance of suppression-based and tolerance-based competition in an invaded oak savanna." <i>Journal of Ecology</i> 92(3): 422-434.	
Question 3.1 Ecological amplitude/Range	A Other Pub. Mat'l back
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: <i>Dactylis</i> has been shown to invade oak woodlands (Williamson and Harrison 2002), serpentine habitats (Williamson and Harrison 2002), and also appears to be an emerging threat in coastal prairie grasslands (Corbin and D'Antonio in prep)	
Rationale: enter text here	
Sources of information: CalFlora: Information on California plants for education, research and conservation. [web application]. 2004. Albany, California: The CalFlora Database [a non-profit organization]. Available: http://www.calflora.org/ . Williamson and Harrison 2002. Jeff Corbin, personal observations	

Question 3.2 Distribution/Peak frequency	D Observational back
Describe distribution: Grassland, oak woodland.	
Rationale: enter text here	
Sources of information: Very little data about the range of potential habitats. It is widespread in the state (CALFLORA).	

Worksheet A[back](#)

Reaches reproductive maturity in 2 years or less	Yes: 1 pt
Dense infestations produce >1,000 viable seed per square meter	No: 0 pts
Populations of this species produce seeds every year.	Yes: 1 pt
Seed production sustained over 3 or more months within a population annually	No: 0 pt
Seeds remain viable in soil for three or more years	No: 0 pts
Viable seed produced with <i>both</i> self-pollination and cross-pollination	No: 0 pt
Has quickly spreading vegetative structures (rhizomes, roots, etc.) that may root at nodes	Yes: 1 pt
Fragments easily and fragments can become established elsewhere	No: 0 pts
Resprouts readily when cut, grazed, or burned	Yes: 1 pt
	4 pts Total Unknowns
	B (4-5 pts)
Note any related traits: enter text here	

Worksheet C - California Ecological Types

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(*sensu* Holland 1986)

Major Ecological Types	Minor Ecological Types	Code*
Marine Systems	marine systems	score
Freshwater and Estuarine Aquatic Systems	lakes, ponds, reservoirs	score
	rivers, streams, canals	score
	estuaries	score
Dunes	coastal	score
	desert	score
	interior	score
Scrub and Chaparral	coastal bluff scrub	score
	coastal scrub	score
	Sonoran desert scrub	score
	Mojavean desert scrub (incl. Joshua tree woodland)	score
	Great Basin scrub	score
	chenopod scrub	score
	montane dwarf scrub	score
	Upper Sonoran subshrub scrub	score
	chaparral	score
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	D. presen
	valley and foothill grassland	D. presen
	Great Basin grassland	score
	vernal pool	score
	meadow and seep	score
	alkali playa	score
	pebble plain	score
Bog and Marsh	bog and fen	score
	marsh and swamp	score
Riparian and Bottomland	riparian forest	score
	riparian woodland	score
	riparian scrub (incl. desert washes)	score
Woodland	cismontane woodland	D. presen
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
Forest	broadleaved upland forest	D. presen
	North Coast coniferous forest	score
	closed cone coniferous forest	score
	lower montane coniferous forest	score
	upper montane coniferous forest	score
	subalpine coniferous forest	score
Alpine Habitats	alpine boulder and rock field	score
	alpine dwarf scrub	score

* A. means >50% of type occurrences are invaded; B means >20% to 50%; C. means >5% to 20%; D. means present but ≤5%; U. means unknown (unable to estimate percentage of occurrences invaded).