

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

Instructions

Table 1. Species and Evaluator Information

Species name (Latin binomial):	Rumex crispus
Synonyms:	
Common names:	curly dock
Evaluation date (mm/dd/yy):	04/15/04
Evaluator #1 Name/Title:	Milad Sarkis
Affiliation:	Saint Mary's College of California
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Evaluator #2 Name/Title:	enter text here
Affiliation:	enter text here
Phone numbers:	enter text here
Email address:	enter text here
Address:	enter text here

Section below for list committee use—please leave blank

List committee members:	Carla Bossard, Cynthia Roye, Alison Stanton, Peter Warner, Joe DiTomaso
Committee review date:	May 14, 2004
List date:	enter text here
Re-evaluation date(s):	enter text here

Table 2. Criteria, Section, and Overall Scores

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

“Impact”

Enter four characters from Q1.1-1.4 below:

DBCD

Use matrix determine the score; enter below:

C

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

“Invasiveness”

For questions at left, recall that an A gets 3 points, a B gets 2, a C gets 1, and a D or U gets=0. Enter the sum total of all points for Q2.1-2.7 below:

10

Use matrix to determine score and enter below:

C

“Plant Score”

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

Low
No Alert

3.1	Ecological amplitude	A	Rev'd, Sci. Pub'n
3.2	Distribution	A	Doc'n level

“Distribution”

Use matrix determine the score; enter below:

A

Table 3. Documentation

Question 1.1 Impact on abiotic ecosystem processes
Identify ecosystem processes impacted: negligible impact
Rationale: found no evidence to support an abiotic ecosystem process change
Sources of information: No specific data site
Question 1.2 Impact on plant community composition, structure, and interactions
Identify type of impact or alteration: Creation of a new structural layer, and also pushes out native species once established
Rationale: Curly Dock has a deep tap root
Sources of information: Monaco, T.J., Growth and development of Curly Dock and Broadleaf Dock. Weed Science, Jan 1972. 64-67
Question 1.3 Impact on higher trophic levels
Identify type of impact or alteration: Once established, it easily takes over the habitat. But no specifics were mentioned
Rationale: Curly Dock is easily spread
Sources of information: Monaco, T.J., Growth and development of Curly Dock and Broadleaf Dock. Weed Science, Jan 1972. 64-67
Question 1.4 Impact on genetic integrity
Identify impacts: no impact
Rationale: No documentation showing impact on genetic integrity
Sources of information: no specific documentation noted
Question 2.1 Role of anthropogenic and natural disturbance in establishment
Describe role of disturbance: easily established in disturbed soils or riverbanks
Rationale: grows well with crop plants (i.e. wheat, barley, oats, peas, beans...) also grows well in pastures and

wet marshes
Sources of information: Maun, M.A. Biography of Curly Dock. Weeds Today. Feb/March 1977, 14,19
Question 2.2 Local rate of spread with no management
Describe rate of spread: Very quick rate of spread without management
Rationale: Large spread due to heavy seed propagulation (40,000 a plant) and seed dormancy
Sources of information: Monaco, T.J., Growth and development of Curly Dock and Broadleaf Dock. Weed Science, Jan 1972. 64-67
Question 2.3 Recent trend in total area infested within state
Describe trend: No specific data sited, but assuming that it is spread easily
Rationale: Assumed that spread is quick due to the large seed propagulation and seed dormancy
Sources of information: no specific sources noted
Question 2.4 Innate reproductive potential
Describe key reproductive characteristics: High reproductive potential
Rationale: Assumed that spread is quick due to the large seed propagulation and seed dormancy
Sources of information: Monaco, T.J., Growth and development of Curly Dock and Broadleaf Dock. Weed Science, Jan 1972. 64-67
Question 2.5 Potential for human-caused dispersal
Identify dispersal mechanisms: seeds transferable as manure because it is not digested
Rationale: outer seed coat is not digested by cattle, and thus it can be spread through manure
Sources of information: Foster, L. The biology and non-chemical control of dock species Rumex obtusifolios and Rumex crispus. Biological Agricultural and Horticulture: an international journal
Question 2.6 Potential for natural long-distance dispersal
Identify dispersal mechanisms: human dispersal only

Rationale: no mention of direct dispersal greater than 1km
Sources of information: no source noted
Question 2.7 Other regions invaded
Identify other regions: Lakes, ponds, rivers, streams, canals, reservoirs, grasslands, swamps.
Rationale: These were identified areas of dock infestations
Sources of information: Foster, L. The biology and non-chemical control of dock species <i>Rumex obtusifoliosus</i> and <i>Rumex crispus</i> . <i>Biological Agricultural and Horticulture: an international journal</i> and Maun, M.A. Biography of Curly Dock. <i>Weeds Today</i> . Feb/March 1977, 14,19
Question 3.1 Ecological amplitude
Describe ecological amplitude, identifying date of source information and approximate date of introduction to the state, if known: Moderate ecological amplitude
Rationale:
Sources of information: Foster, L. The biology and non-chemical control of dock species <i>Rumex obtusifoliosus</i> and <i>Rumex crispus</i> . <i>Biological Agricultural and Horticulture: an international journal</i> and Maun, M.A. Biography of Curly Dock. <i>Weeds Today</i> . Feb/March 1977, 14,19
Question 3.2 Distribution
Describe distribution: enter text here
Rationale: enter text here
Sources of information: enter text here

Worksheet A

Complete this worksheet to answer Question 2.4.

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

Worksheet C - California Ecological Types

(*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
Grasslands, Vernal Pools, Meadows, and other Herb Communities	coastal prairie	A
	valley and foothill grassland	D
	Great Basin grassland	score
	vernal pool	C
	meadow and seep	B
	alkali playa	score
	pebble plain	score
Bog and Marsh	bog and fen	score
	marsh and swamp	C
Riparian and Bottomland	riparian forest	score
	riparian woodland	D
	riparian scrub (incl. desert washes)	D
Woodland	cismontane woodland	score
	piñon and juniper woodland	score
	Sonoran thorn woodland	score
Forest	broadleaved upland forest	score
	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).