

APPENDIX 6

ALIEN PLANTS RANKING SYSTEM

Version: 5.0 [11/16/1999]

Note: Numbers in brackets (in order) are: [Impact weight] [Pest weight] [Control weight]

I. Significance of Threat or Impact (Site Characteristics)

1. Distribution relative to disturbance regime:

A	0	found only within sites disturbed within the last 3 years or sites regularly disturbed	[0][0][0]
B	1	found in sites disturbed within the last 10 years	[1][0][0]
C	2	found in midsuccessional sites disturbed 11 to 50 years before present (BP)	[2][0][0]
D	5	found in late-successional sites disturbed 51 to 100 years BP	[5][0][0]
E	10	found in high quality natural areas with no known major disturbance for 100 years	[10][0][0]

2. Areal extent of populations (answer in per cent or hectares):

A	0	not in site, but in adjacent areas	[0][0][0]
B	2	found in less than 5% of site	[1][0][1]
C	4	found in between 5% and 10% of site	[2][0][2]
D	8	found in between 10% and 25% of site	[3][0][5]
E	15	found in more than 25% of site	[5][0][10]

3. Numerical dominance of species within a community:

A	0	not found on site	[0][0][0]
B	2	usually observed as a single individual (or fewer than 5 per 5 square meters)	[1][0][1]
C	5	usually observed in numbers less than the 2 or 3 most common native species in the community (but more than 5 per 5 square meters)	[2][0][3]
D	8	usually observed in numbers approximately equivalent to the most common native species in the community	[3][0][5]
E	15	usually observed in numbers greater than the most common native species in the community	[5][0][10]

4. Association with native community:

A	0	associated with weedy (early successional) species	[0][0][0]
B	3	associated with midsuccessional species	[3][0][0]
C	6	associated with dominant (late-successional) species	[6][0][0]
D	10	displaces native plant community	[10][0][0]

5. Hybridization with native species:

A	0	not known to hybridize with native species	[0][0][0]
B	5	known to hybridize with native species	[5][0][0]

6. Degree of threat and impact:

A	0	little or no increase in numbers of individuals and populations and no invasion of native communities	[0][0][0]
B	1	present in native communities, but static or decreasing	[1][0][0]
C	2	moderate rate of increase in numbers of individuals and populations; little or no invasion of native communities	[2][0][0]
D	5	moderate rate of increase in numbers of individuals and populations; invading native plant communities	[5][0][0]
E	10	high rate of increase of numbers of individuals and populations; invading and	[10][0][0]

replacing or highly modifying native plant communities

7. Effects on management goals

A	0	no effect	[0][0][0]
B	3	little impact on site management goals	[3][0][0]
C	5	moderate impact on site management goals	[5][0][0]
D	10	large impact on site management goals	[10][0][0]

II. Innate Ability to be a Pest (Species Characteristics)

8. Mode of reproduction

A	0	rarely, if ever, reproduces in area	[0][0][0]
B	1	reproduces almost entirely by vegetative means	[0][1][0]
C	2	reproduces only by seeds	[0][2][0]
D	4	reproduces vegetatively and by seeds	[0][4][0]

9. Vegetative reproduction

A	0	no vegetative reproduction	[0][0][0]
B	1	vegetative reproduction rate maintains population	[0][1][0]
C	2	vegetative reproduction rate results in moderate increase in population size	[0][2][0]
D	4	vegetative reproduction rate results in rapid increase in population size	[0][4][0]

10. Frequency of sexual reproduction for mature plant

A	0	almost never reproduces sexually in area	[0][0][0]
B	1	once every five or more years	[0][1][0]
C	3	every other year	[0][3][0]
D	5	one or more times a year	[0][5][0]
E	3	bursts of sexual reproduction in response to environmental stimulus, e.g., rain in the desert	[0][3][0]

11. Number of seeds per plant

A	0	rarely, if ever, produces seeds in area	[0][0][0]
B	1	few (0-10)	[0][1][0]
C	3	moderate (11-1000)	[0][3][0]
D	5	many (>1000)	[0][5][0]

12. Dispersal ability

A	0	little potential for long-distance dispersal	[0][0][0]
B	5	great potential for long-distance dispersal	[0][5][0]

13. Germination requirements

A	0	requires open soil and disturbance to germinate	[0][0][0]
B	2	can germinate in vegetated areas but in a narrow range or in special conditions	[0][2][0]
C	4	can germinate in existing vegetation in a wide range of conditions	[0][4][0]

14. Seed banks

A	0	seeds remain viable in the soil for less than 1 year	[0][0][0]
B	6	seeds remain viable in the soil for 1 to 5 years	[0][3][3]
C	10	seeds remain viable in the soil for more than 5 years	[0][5][5]

15. Competitive ability

A	0	poor competitor	[0][0][0]
B	2	moderately successful competitor	[0][2][0]
C	4	highly successful competitor	[0][4][0]

16. Ecological effects (select all that apply)

A	3	produces persistent litter or shade that affects germination or growth of native	[0][3][0]
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		species	
B	3	produces allelochemicals	[0][3][0]
C	3	affects availability of soil nutrients, e.g., a nitrogen fixer	[0][3][0]
D	4	affects water availability to native plants	[0][4][0]
E	4	changes natural fire regime	[0][4][0]
F	0	none of the above	[0][0][0]
17. Known level of impact in natural areas			
A	0	not known to cause impacts in any other natural area	[0][0][0]
B	1	known to cause impacts in natural areas, but with different habitats and climate zones	[0][1][0]
C	3	known to cause low impact in natural areas with similar habitats and climate zones	[0][3][0]
D	5	known to cause moderate impact in natural areas with similar habitats and climate zones	[0][5][0]
E	10	known to cause high impact in natural areas with similar habitats and climate zones and/or on the list of most invasive alien plants for the region	[0][10][0]
III. Difficulty of Control			
18. Likelihood of successful control			
A	0	this species has been eradicated in a natural area	[0][0][0]
B	3	control (populations declining) of this species has been achieved in a natural area	[0][0][3]
C	6	limited control (species is no longer spreading, but persists near pre-control levels) of this species has been achieved in a natural area	[0][0][6]
D	10	control of this species has never been achieved in a natural area	[0][0][10]
19. Saturation in surrounding region			
A	0	not present in areas surrounding the site	[0][0][0]
B	1	present in few areas surrounding the site	[0][0][1]
C	3	present in several areas but not entirely surrounding the site	[0][0][3]
D	5	present in most areas surrounding the site	[0][0][5]
20. Effectiveness of community management			
A	0	protection from disturbance effectively controls target species	[0][0][0]
B	2	cultural techniques (burning, flooding) can be used to control target species	[0][0][2]
C	5	restoration or preservation practices effectively control target species	[0][0][5]
D	10	the above options are not effective	[0][0][10]
21. Vegetative regeneration			
A	0	no resprouting following removal of aboveground growth	[0][0][0]
B	5	sprouts from roots or stumps	[0][0][5]
C	10	any plant part is a viable propagule	[0][0][10]
22. Biological control			
A	0	biological control feasible	[0][0][0]
B	5	potential may exist for biological control	[0][0][5]
C	10	biological control not feasible (not practical, possible, or probable)	[0][0][10]
23. Side effects of control measures			
A	0	control measures have little potential to affect native communities	[0][0][0]
B	3	control measures are likely to cause moderate impacts on community	[0][0][3]
C	5	control measures are likely to cause major impacts on community	[0][0][5]
D	5	side effects of control unknown	[0][0][5]

DRAFT: Alien Plants Ranking System default answers.

Note: This table will be revised and updated in 2000. Check www.ag.state.co.us/dpi/weeds on the Colorado Department of Agriculture, Division of Plant Industry web page for further information.

Question:	8	9	10	11	12	13	14	15	16	17	18	20	21
Common name	(a,b,c,d)	(a,b,c,d)	(a,b,c,d,e)	(a,b,c,d)	(a or b)	(a,b,c)	(a,b,c)	(a,b,c)	(a - f)	(a,b,c,d,e)	(a,b,c,d)	(a,b,c,d)	(a,b,c)
African rue	D	B	D	C	B	A	B	B	B,D	C	B	D	B
Black henbane	C	A	D	D	A	B	B	B	A,D	C	B	B	B
Black knapweed	D	B	D	D	B	A	C	B	C,D	C	B	A	B
Black nightshade	C	A	D	D	A	A	C	B	C,D	C	B	C	B
Blue mustard	C	A	D	D	A	B	C	B	C,D	C	B	A	A
Bouncingbet	D	C	D	C	A	B	B	C	C,D	D	C	B	B
Bull thistle	C	A	C	D	A	A	B	B	A,C,D	D	B	B	A
Camelthorn	B	D	D	C	A	A	B	C	A,C,D	D	C	D	B
Canada thistle	D	D	D	D	B	B	B	C	A,C,D	E	B	D	B
Chicory	C	A	C	C	B	A	B	B	C,D	C	B	C	B
Coast tarweed	C	A	D	D	A	A	?	B	D	C	B	B	B
Common burdock	C	A	C	D	B	B	?	B	D	C	B	B	B
Common groundsel	C	A	D	D	B	A	C	A	C,D	C	B	A	B
Common mullein	C	A	C	D	A	B	C	B	A,C,D	C	B	B	B
Common St. Johnswort	D	C	D	D	B	B	C	C	A,C,D	E	B	D	B
Common tansy	D	C	D	D	A	A	B	B	C,D	C	B	B	B
Common teasel	C	A	C	D	B	A	B	C	A,D	C	B	B	B
Cypress spurge	D	C	D	C	A	B	C	C	A,D	C	B	D	B
Dalmation toadflax	D	D	D	D	B	C	C	C	A,D	E	C	D	B
Dame's rocket	C	A	D	D	A	A	B	A	D	C	B	B	A
Diffuse knapweed	C	A	D	D	B	C	B	C	B,C,D	E	B	D	B
Downy brome	C	A	D	C	B	C	B	C	A,C,D,E	E	C	D	B
Dyer's woad	C	A	C	C	B	C	C	C	B,C,D	D	B	D	B
Field bindweed	D	B	D	C	A	B	C	C	A,D	E	B	D	B
Flixweed	C	A	D	D	B	A	B	B	D	D	B	D	B
Green foxtail	C	A	D	D	A	A	C	B	B	C	B	D	B
Hairy nightshade	C	A	D	D	B	A	?	B	D	C	B	B	B
Halogeton	C	A	D	C	B	A	B	A	C	D	B	D	B
Hoary cress	D	D	D	D	B	A	B	C	A,D	E	C	D	B
Johnsongrass	D	D	D	D	B	B	B	C	A,D	D	C	D	B
Jointed goatgrass	C	A	D	D	A	A	B	B	A,D	E	B	A	B
Kochia	C	A	D	D	A	A	A	B	A,D	E	B	C	B
Leafy spurge	D	D	D	D	B	C	C	C	A,C,D	E	C	D	B
Longspine sandbur	C	A	D	C	B	A	B	B	D	D	B	B	B
Mayweed chamomile	C	A	D	D	A	A	C	B	D	C	B	B	B
Mediterranean sage	C	A	C	D	B	A	B	B	D	D	B	B	B
Musk thistle	C	A	C	D	B	A	C	C	A,B,D	E	B	D	B
Myrtle spurge	C	A	D	C	A	A	C	A	A,D	C	B	B	B
Oxeye daisy	D	C	D	C	A	A	B	A	C,D	D	B	B	B
Perennial pepperweed	D	D	D	D	B	A	C	C	D	E	B	D	B
Plumeless thistle	C	A	D	D	B	B	C	C	D	D	B	B	A
Poison hemlock	C	A	C	D	B	B	B	B	A,D	D	B	B	A
Puncturevine	C	A	D	C	B	B	B	B	A,D	D	B	D	A
Purple loosestrife	D	C	D	D	B	B	B	C	A	E	C	D	B
Quackgrass	D	C	D	C	A	A	C	B	B,D	D	C	D	B
Rudstem filaree	C	A	D	C	A	A	C	A	D	C	B	B	A
Rush skeletonweed	D	C	D	D	A	A	B	B	A,D	D	B	D	B
Russian knapweed	D	D	D	D	B	A	C	C	A,B,D	E	B	D	B
Russian thistle	C	A	D	D	B	A	A	B	A,D	D	B	B	A

Question:	8	9	10	11	12	13	14	15	16	17	18	20	21
Common name	(a,b,c,d)	(a,b,c,d)	(a,b,c,d,e)	(a,b,c,d)	(a or b)	(a,b,c)	(a,b,c)	(a,b,c)	(a - f)	(a,b,c,d,e)	(a,b,c,d)	(a,b,c,d)	(a,b,c)
Saltcedar	C	A	D	D	B	B	A	C	A,C,D	E	C	D	B
Scentless chamomile	D	B	D	D	A	A	C	B	D	C	B	B	B
Scotch thistle	C	A	C	D	B	B	C	C	A,D	E	B	D	B
Spotted knapweed	C	A	D	D	B	B	C	C	A,B,D	E	B	D	B
Squarrose knapweed	C	A	D	D	B	B	B	C	A,B,D	D	B	D	B
Sulfur cinquefoil	D	B	D	C	A	B	B	B	D	D	B	D	C
Velvetleaf	C	A	D	D	A	A	C	B	D	C	B	B	A
Wild caraway	C	A	C	C	A	B	B	B	D	C	B	B	A
Wild mustard	C	A	D	C	A	A	B	B	D	C	B	D	A
Wild proso millet	C	A	D	D	A	B	C	C	D	C	C	C	B
Yellow foxtail	C	A	D	D	A	A	C	B	D	C	C	D	B
Yellow nutsedge	D	D	C	C	A	B	C	C	A	C	C	D	B
Yellow starthistle	C	A	D	D	B	B	C	B	A,B,D	E	B	B	A
Yellow toadflax	C	D	D	D	B	C	C	C	D	E	B	D	B

