Species Dataform and Scoresheet for *Ophiopogon japonicus* Ker-Gawl. and *Liriope* species (Mondo grass, lily turf, liriope)

Species Dataform and Scoresheet		
***Ophiopogon japonicus* Ker-Gawl. and *Liriope* species (Mondo grass, lily turf, liriope)**		
Native range: Japan Date evaluated: March 10, 2009		
	Answer Choices	**Response**
Introductory Questions		
1. Current federal and state regulations	Y/N	N
Comments:		
2. Occurrence in the horticultural trade	Y/N	Y
Comments: Popular ornamental ground cover.		
3. North Carolina nativity	Y/N	N
Comments: Native to Japan (Shimomura and Kondo 2000).		
4. Presence in natural areas	Y/N	N
Comments: Not known to invade natural areas in North Carolina.		
5. Non-invasive cultivars	Y/N	Y
Comments: Assessment indicates that *O. japonicus* and *Liriope* species are noninvasive in North Carolina.		
	Maximum Point Value	Number of Points Assigned
Section 1. Ecological Impact		
1a. Impact on abiotic ecosystem processes	10	4
Comments: *Ophiopogon japonicus* produces plant growth inhibitors and has potential allelopathic activity (Iqbal et al. 2004).		
1b. Impact on plant community structure	20	0
Comments: No known impact on plant community structure.		
1c. Impact on species of special concern	5	0
Comments: No known impact on species of special concern or threatened or endangered plants.		
1d. Impact on higher trophic levels	5	0
Comments: No known impact on higher trophic levels.		
Section 1. Subrank	***40***	***4***
Section 2. Current Distribution and Potential for Expansion		
2a. Local range expansion	7	0
Comments:		
2b. Long-distance dispersal potential	13	0
Comments: Not known to naturally disperse long distances.		
2c. Reproductive characteristics	8	2
Comments: Propagates vegetatively (Shimomura and Kondo, 2000).		
2d. Range of communities	6	0
Comments:		

2e. Similar habitats invaded elsewhere	6	0
Comments:		
Section 2. Subrank	***40***	***2***
Section 3. Management Difficulty		
3a. Herbicidal control	5	0
Comments:		
3b. Nonchemical control methods	2	0
Comments:		
3c. Necessity of individual treatments	2	0
Comments:		
3d. Average distribution	2	0
Comments: Groundcover (Shimomura and Kondo, 2000) may be controlled broadly		
3e. Likelihood for reestablishment	2	0
Comments:		
3f. Accessibility of invaded areas	2	0
Comments:		
3g. Impact on native species and environment	5	0
Comments:		
Section 3. Subrank	***20***	***0***
Section 4. Benefits and Value		
4a. Estimated wholesale value	-7	-7
Comments: The estimated state-wide wholesale value attributed to this species is approximately $41,208,400 (Trueblood 2009).		
4b. Percentage of total sales	-5	-4
Comments: The highest percentage of total sales attributed to this species from any one grower in North Carolina is estimated to be 26-50% (Trueblood 2009).		
4d. Ecosystem services	-1	0
Comments:		
4e. Wildlife habitat	-1	0
Comments:		
4f. Cultural and social benefits	-1	0
Comments:		
Section 4. Subrank	***-15***	***-11***
Overall Score	**100**	**-5**
Overall Recommendation: Noninvasive and recommended for use – These species have limited ecological impact, distribution and invasive potential, and management difficulty in relation to economic value. They may be locally problematic but their reproductive biology and other traits limit their rate of invasion to natural areas. (Overall Score: 0 – 33)		
Summary: *Ophiopogon japonicus* and *Liriope* species are noninvasive in North Carolina and may be recommended for horticultural use by the North Carolina Nursery and Landscape Association. These species are not known to invade natural areas in North		

Carolina. These species have little to no negative ecosystem impacts, low potential for long-distance dispersal, and may be easily removed from the landscape. They have extremely high economic value to the North Carolina nursery industry.

References:

Iqbal, Z., Hiradate, S., Araya, H. and Y. Fujii. (2004) Plant growth inhibitory activity of Ophiopogon japonicus Ker-Gawler and role of phenolic acids and their analogues: a comparative study. Plant Growth Regulation 43: 245-250.

Shimomura, T. and T. Kondo. (2000) Seed germination and polyembryony of some Liliaceae ground covers native to Japan. Acta Hort. 517: 73-80.

Trueblood, C.E. (2009) Chapter 3. An estimate of the commercial value of potentially invasive ornamental nursery crops grown in North Carolina. In An Invasive Species Assessment System for the North Carolina Horticultural Industry, a thesis submitted to the Graduate Faculty of North Carolina State University. North Carolina State University, Raleigh, NC.

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