Species Dataform and Scoresheet for *Lonicera japonica* Thunberg (Japanese honeysuckle)

Species Dataform and Scoresheet		
***Lonicera japonica* Thunberg (Japanese honeysuckle)**		
Native range: Eastern Asia Date evaluated: February 20, 2009		
	Answer Choices	**Response**
Introductory Questions		
1. Current federal and state regulations	Y/N	N
Comments:		
2. Occurrence in the horticultural trade	Y/N	N
Comments:		
3. North Carolina nativity	Y/N	N
Comments: Native to Japan, Korea, and eastern China (Larson et al. 2007)		
4. Presence in natural areas	Y/N	Y
Comments: In North Carolina, *L. japonica* extends further into forest interior than other non-native species (Larson et al., 2007).		
5. Non-invasive cultivars	Y/N	NN
Comments:		
	Maximum Point Value	Number of Points Assigned
Section 1. Ecological Impact		
1a. Impact on abiotic ecosystem processes	10	10
Comments: Changes the structure of woodlands by outcompeting native vegetation for light and below-ground resources (Larson et al. 2007). Vines overtop existing vegetation and produce a more open habitat (Larson et al. 2007). Serious infestations that suppress dominant species may convert part of a forest to an open vine-dominated community (Larson et al. 2007). Allelopathic effect on trees and herbs may contribute to rapid development of *L. japonica* populations (Larson et al. 2007).		
1b. Impact on plant community structure	20	20
Comments: Shade and drought tolerant, most aggressive when growing in fertile soils and full sunlight, and may smother young trees (Regehr and Frey 1988). Grows up and past saplings, blocking light, and killing herbs, shrubs, and saplings (Hardt 1986). In severe infestations, it can produce a dense mat of vines and prevent regrowth of forest stands (Hardt 1986). Overtops existing vegetation, topples shrubs and small trees (Larson et al. 2007). Understory of vines can suppress growth of canopy trees (Larson et al. 2007). *Lonicera japonica* forms a new ground layer that may suppress the reproduction of overstory dominant trees and kill saplings and shrubs (Larson et al. 1997).		
1c. Impact on species of special concern	5	2
Comments: Outcompetes native vegetation by vigorous above and below-ground competition and prevents nearly all plants from surviving beneath its dense canopy (Nuzzo 1997).		
1d. Impact on higher trophic levels	5	3
Comments: Forest understory bird populations can be affected in forest communities		

disturbed by Japanese honeysuckle (Yates et al. 2004, Nuzzo 1997). May act as host for insect pests and contribute to over-wintering populations of crop-damaging larvae, including two-spotted spider mite (*Tetranychus urticae* Koch) that re-invade corn and peanut in the spring in North Carolina (Larson et al. 2007).		
Section 1. Subrank	***40***	***35***
Section 2. Current Distribution and Potential for Expansion		
2a. Local range expansion	7	4
Comments: Rate of spread across North Carolina suspected to be highest among non-native species (Merriam, 2003). Now nearly ubiquitous in North Carolina (Weakley 2008).		
2b. Long-distance dispersal potential	13	13
Comments: Fruit is a pulpy berry dispersed by birds and small mammals (Larson et al. 2007).		
2c. Reproductive characteristics	8	6
Comments: Japanese honeysuckle reproduces rapidly both vegetatively and sexually. Lateral branches that spread along the ground can root at nodes and sprout (Hardt 1986). Spreads extensively vegetatively by above-ground runners and below ground rhizomes (Larson et al. 2007). Semi-evergreen in the Southeastern U.S. and able to photosynthesize during early spring and late fall (Larson et al. 2007). Fruit is a pulpy berry dispersed by birds and small mammals (Larson et al. 2007).		
2d. Range of communities	6	6
Comments: Common in the Piedmont, Coastal Plain, and in mesic habitats (Weakley 2008). Found in range of habitats, including old fields, thickets, open woodlands, mature woodlands, bottomlands, maple and oak forests (Larson et al. 2007), dry-mesic to wet-mesic upland forest areas and floodplain forests (Nuzzo 1997). Does not survive well in coastal pine barrens and spruce and fir-dominated communities (Larson et al. 2007). These systems may correspond to the natural communities of North Carolina (Shafale and Weakley 1990): Low elevation mesic forests, low elevation dry and dry-mesic forest and woodlands, river floodplains, wet nonalluvial forests of the Coastal Plain.		
2e. Similar habitats invaded elsewhere	6	0
Comments: Has already invaded a large proportion of the state and multiple primary systems in North Carolina.		
Section 2. Subrank	***40***	***29***
Section 3. Management Difficulty		
3a. Herbicidal control	5	3
Comments: Controlled with 1.5% glyphosate applied in December or 1.5% dichlorprop plus 2,4-D applied after the first freezing temperatures in the fall (Regehr and Frey 1988).		
3b. Nonchemical control methods	2	2
Comments: Removal of the above ground portions of a *L. japonica* plant stimulates dense regrowth, and cut material can easily take root on or off site (Nuzzo 1997). Mowing may slow vegetative spread but increase stem density (Nuzzo 1997). Disking is effective but environmentally damaging, and hand-pulling has limited effectiveness for controlling *L. japonica* (Nuzzo 1997).		
3c. Necessity of individual treatments	2	0

Comments: Herbicides may be applied broadly to *L. japonica* infestations (Regehr and Frey 1988).		
3d. Average distribution	2	1
Comments: Japanese honeysuckle growth is "loose and rangy," reaching in all directions (Hardt 1986). Vines spread horizontally and vertically, and each vine has numerous long vegetative runners (Nuzzo 1997).		
3e. Likelihood for reestablishment	2	1
Comments: Regrowth depends on time of herbicide application. 30 MAT with 1.5% glyphosate applied in December, most plots showed excellent control (Regehr and Frey 1988). Honeysuckle treated with dichlorprop plus 2,4-D in October showed occasional regrowth, but honeysuckle treated with the same chemical combination in December largely recovered due to bud regrowth and was not well-controlled in the long-term (Regehr and Frey 1988). Responds rapidly to disturbance and may be present for long periods of time in the understory of closed-canopy forests (Larson et al. 2007). Young small plants are difficult to locate and may go unnoticed (Nuzzo 1997). Treated areas must be reassessed at the end of the second growing season (Nuzz 1997).		
3f. Accessibility of invaded areas	2	2
Comments: In North Carolina, *L. japonica* extends further into forest interior than other non-native species (Larson et al., 2007).		
3g. Impact on native species and environment	5	2
Comments: Glyphosate or dichlorprop plus 2,4-D resulted in minor to moderate injury of trees in management area (Regehr and Frey, 1988). Easily distinguished from other North America *Lonicera* spp. by its leaves and berries (Larson et al., 2007)		
Section 3. Subrank	***20***	***11***
Section 4. Benefits and Value		
4a. Estimated wholesale value	-7	0
Comments:		
4b. Percentage of total sales	-5	0
Comments:		
4d. Ecosystem services	-1	0
Comments:		
4e. Wildlife habitat	-1	0
Comments:		
4f. Cultural and social benefits	-1	0
Comments:		
Section 4. Subrank	***-15***	***0***
Overall Score	**100**	**75**
Overall Recommendation: Highly invasive and not recommended for horticultural use – These species present relatively high ecological impact, distribution and invasive potential, and management difficulty in relation to economic value. (Overall Score: 67 – 100)		
Summary: *Lonicera japonica* (Japanese honeysuckle) is highly invasive in North Carolina and may not be recommended for horticultural use by the North Carolina Nursery and Landscape Association. Japanese honeysuckle seriously impacts ecosystem processes and		

plant community structure. There is great potential for the natural dispersion of Japanese honeysuckle throughout North Carolina. The difficulty of managing Japanese honeysuckle is moderate considering the availability of control methods, but management may be costly considering the time and labor required to effectively treat stands of Japanese honeysuckle. Japanese honeysuckle has little to no economic value for the nursery industry.

References:

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