



## VEGETATION MANAGEMENT GUIDELINE

### Japanese Honeysuckle (*Lonicera japonica* Thunb.)

#### SPECIES CHARACTER

##### DESCRIPTION

Japanese honeysuckle is a semi-evergreen vine in Illinois, often holding its leaves late into winter. In the southern parts of Illinois in mild winters the Japanese honeysuckle may be evergreen, however it is completely deciduous in Northern Illinois. Leaves are ovate and 1.5-3.2 inches (4-8 cm) long. Stems are rusty to light brown. Older stems become semi-brittle, with the bark often easily peeled off. The vines reach an average of 6'-10' (1.8-3m), but have been documented up to 40' (12m) in length. White to yellow tubular flowers form in pairs in the leaf axils and occur from May-June. The 2-3 seeded fruits are small, black berries.

##### SIMILAR SPECIES

Japanese honeysuckle is separated easily from the native honeysuckle vines by its leaves. Leaves near the tip of native honeysuckles (3 species) are united at the base (perfoliate), whereas in Japanese honeysuckle the leaves are not united throughout the vine. Japanese honeysuckle should be accurately identified before attempting any control measures. If identification of the species is in doubt, the plant's identity should be confirmed by a knowledgeable individual and/or by consulting appropriate books.

##### DISTRIBUTION

Japanese honeysuckle is native to Japan and other areas of eastern Asia, introduced to the U.S. in 1806 for horticultural ground-cover purposes. It was slow to escape and did not become widely established over the eastern U.S. until the early 1900's. It presently occurs as far north as Illinois and Michigan. It has rapidly spread into many open natural communities in the southern 2/3 of Illinois. It has not been found to be a serious pest north of Peoria, although it is recorded from 10 northern Illinois counties. Bitter cold winter temperatures appear to limit this species somewhat. Nonetheless, this vine is becoming increasingly common in central Illinois.

##### HABITAT

Since Japanese honeysuckle is tolerant to a fairly wide range of soil conditions, from somewhat dry to mesic, it will grow in a variety of natural communities. It readily invades open natural communities, often from seed spread by birds. An aggressive colonizer of successional fields, this vine also will invade mature forest and open woodlands such as post oak flatwoods and pin oak flatwoods. Forests with either natural or unnatural openings are often invaded by Japanese honeysuckle when birds drop seeds into these light gap areas. Deep shading reduces the amount of invasion.



## LIFE HISTORY

Japanese honeysuckle climbs and drapes over native vegetation, shading it out. It is capable of completely covering herbaceous and understory plants, and climbing trees to the canopy. The semi-evergreen condition of this honeysuckle allows for growth both prior to and after dormancy of other deciduous plants. The prolific growth covers and smothers vegetation present including understory shrubs and trees in forested communities. Although this prolonged growth period is beneficial to the plant, it is also beneficial in controlling the plant. Vegetative runners are most prolific in the open sun and will resprout where touching the soil, forming mats of new plants. This honeysuckle will display little growth under moderate shade. In deep shade, runners develop but often die back. However these shade suppressed colonies will quickly respond to increased light resulting from natural disturbances (tree death, or storm damage) or unnatural disturbances (timber removal) forming a dense impenetrable tangle of downed limbs and vines. Flowering and seed development are heaviest in open-sun areas. Seedling establishment and growth is slow in the first 2 years of development of a new honeysuckle colony.

## EFFECT UPON NATURAL AREAS

This aggressive vine seriously alters or destroys the understory and herbaceous layers of the communities it invades, including prairies, barrens, glades, flatwoods, savannas, floodplain and upland forests. Japanese honeysuckle heavily competes with native plants both above and below the ground. The vine's ability to form thick mats by sending out lengthy runners, and its ability to completely cover woody species makes it a serious competitor for light resources. In addition, roots have been known to reach lengths of 15' (4.5m) horizontally and 3'-4' (1-1.5m) deep, creating serious competition for soil resources. Japanese honeysuckle not only damages the existing community it invades but in the case of forested habitats it prevents future recruitment by smothering or preventing germination of young seedlings. Japanese honeysuckle also may alter understory bird populations in forest communities.

## CURRENT STATUS

Japanese honeysuckle is categorized as an exotic weed under the Illinois Exotic Weed Control Act of 1987. As such, its commercial sale in Illinois is prohibited.

## CONTROL RECOMMENDATIONS

### RECOMMENDED PRACTICES IN HIGH-QUALITY NATURAL COMMUNITIES, BUFFER, AND SEVERELY DISTURBED SITES

#### Initial effort in areas of heavy and light infestation

Efforts to control Japanese honeysuckle infestations have included the following methods: mowing, grazing, hand-pulling, cutting near the crown, prescribed burning and herbicide treatment. While grazing and mowing can reduce the spread of vegetative stems, prescribed burning or a combination of prescribed burning and herbicide spraying appears to be the best way

to eradicate this vine. Hand-pulling or hand-pulling in combination with herbicides and/or prescribed burning may be used on small patches of Japanese honeysuckle. Cutting, too may be used on small infestations.

In fire-adapted communities, prescribed burns greatly reduced Japanese honeysuckle coverage and crown volume. Studies have shown that fire reduced honeysuckle coverage by as much as 80-90% over a single burn, depending on the season of the burn. Fall burns appear to be most effective, although winter and spring burns are also productive. Prescribed burning, however, doesn't generally kill Japanese honeysuckle roots and a previously burned population of honeysuckle will almost completely recover after 2-3 years if fire is excluded during this time. By reducing honeysuckle coverage with fire, refined herbicide treatments may be applied, if considered necessary, using less chemical. Herbicide should be used when the resprouts begin to appear after a burn. Before commencing any prescribed burns, open burning permits must be obtained from the Illinois Environmental Protection Agency and often the appropriate local agencies, too. Burns should be administered by persons trained or experienced in conducting prescribed burns, and proper safety precautions should be followed.

Because Japanese honeysuckle is semi-evergreen, it will continue to photosynthesize after surrounding deciduous vegetation is dormant. This condition allows managers to detect the amount of infestation, and allows for treatment of the infestation with herbicides without damage to the dormant vegetation.

Glyphosate herbicide (trade name Roundup) is the recommended treatment for honeysuckle. A 1.5-2% solution (2-2.6 oz of Roundup/gallon water) applied as a spray to the foliage will effectively eradicate Japanese honeysuckle. The herbicide should be applied after surrounding vegetation has become dormant in autumn and before a hard freeze (25<sup>0</sup>F). Roundup should be applied carefully by hand sprayer, and spray coverage should be uniform and complete. **Do not spray so heavily that herbicide drips off the target species.** Retreatment may be necessary for plants that are missed because of dense growth. Although glyphosate is effective when used during the growing season, use at this time is not recommended in natural areas because of the potential harm to nontarget plants. Glyphosate is non-selective, so care should be taken to avoid contacting nontarget species. Nontarget plants will be important in recolonizing the site after Japanese honeysuckle is controlled.

A 25% solution of Garlon 4 (an ester formation of triclopyr) in plant-based or mineral carrier oil is also an effective herbicide that controls Japanese honeysuckle. Garlon 4 may be preferred for honeysuckle control in the dormant season if freezing temperatures may cause glyphosate in water to freeze. Garlon should be mixed according to label instructions for foliar application and applied as a foliar spray. It should be applied only in dormant season to prevent harm to non-target species. **Do not spray so heavily that herbicide drips off the target species.** Both Garlon 4 and Roundup should be applied while backing away from the treated area to avoid walking through the wet herbicide. Do not use Garlon 4 if snow, ice, or water is present on the ground. By law, herbicides only may be applied according to label instructions and by licensed herbicide applicators or operators when working on public properties.

Hand-pulling may be effective in controlling small infestations of Japanese honeysuckle. However, since the vine can have lengthy underground root systems, any root left in the ground will usually resprout. Repeated hand-pulling over time can deplete root reserves and eventually

eliminate the plant. One source suggests that hand-pulling is most effective from the time of fruiting until early spring, when root reserves are at their lowest. As with prescribed fire, hand-pulling will reduce honeysuckle coverage and refined herbicide treatments may be applied, using less chemical. Herbicide should be applied when the resprouts begin to appear.

Japanese honeysuckle may also be cut, especially in situations where the vines have grown vertically into the canopy. Vines should be cut just above the crown (approximately 2 inches). Cutting may be followed by an herbicide treatment to the cut surface using a 20-25% solution of Roundup in water or a 25-50% solution of Garlon 3A in water. Cutting may be effective without using herbicide if the vines and resprouts are repeatedly cut over several weeks until the root reserves are depleted. Since this is labor intensive it is generally only useful on small colonies of Japanese honeysuckle.

#### Maintenance control

\_\_\_\_\_ In fire-adapted communities, periodic spring or fall burning should control this species. In areas where fire is not used or is infrequently used, periodic scouting for newly-established colonies of Japanese honeysuckle is important. Hand-pulling is most effective with young seedlings; any new colonies of the vine should be immediately pulled out to prevent further establishment.

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### **FAILED OR INEFFECTIVE PRACTICES**

Mowing limits the length of Japanese honeysuckle vines, but will increase the number of stems produced.

Grazing may have the same effects as mowing, but is less predictable due to uneven treatment given by browsing animals.

Prescribed burning, by itself, unless performed repeatedly for several consecutive years, will not completely eliminate Japanese honeysuckle.

Hand-pulling may not completely eliminate Japanese honeysuckle in well-established populations.

Herbicides that have given poor control results or that are more persistent in the environment than other types are picloram, annitrole, aminotriazole, atrazine, dicamba, dicamba & 2,4-D, 2,4-D, DPX 5648, fenac, fenuron, simazine, dichlorprop & 2, 4-D, tebuthiuron, sulfometuron, hexazinone, and oryzalin.

### **UPDATED REFERENCES**

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### PERSONAL COMMUNICATIONS

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