



Southeast Exotic Pest Plant Council Invasive Plant Manual

Common Name: Japanese Wisteria

Scientific Name: *Wisteria floribunda* (Willd.) DC.

Japanese wisteria is one of several members of its genus that are popular ornamentals. It is hardy and aggressive, capable of forming thickets so dense that little else grows. It constricts the stems of trees and kills them by girdling or over-topping. Wisteria belongs to the Fabaceae (Pea or Bean) family.

Height: Wisteria can climb trees and shrubs to 20 m (65 ft).

Stem: White-barked wisteria vines twine clockwise around its host. Stems are stout, up to 16 cm (15 in) and woody. Buds are solitary and appressed.

Leaves: Alternate, pinnately compound leaves are 20-30 cm (7.8-11.8 in) long with 13-19, ovate-elliptic to oblong, 4-8 cm (1.6-3.1 in) long leaflets.

Flowers: Very showy, fragrant pea-like flowers 1.5-2.0 cm (0.5 -0.75 in) long, grow in pendulous racemes 20-50 cm (8-20 in) in length. Flowers are purple, blue-purple, or lilac-blue in color. They have five-toothed calyxes. The two upper teeth are often more or less united and shorter than the others. The standard or banner petal is large and reflexed, while the wing petals are sickle-shaped. Blooms April-July.

Fruits: The fruits are flattened pods 10-15 cm (4-6 in) long, narrowed toward the base, and more or less constricted between the seeds. Matures July-November.



Life History

Wisteria is a perennial vine that may live for over 50 years. Vegetative reproduction is the primary means of expansion; numerous stolons develop new roots and shoots at short intervals. Wisteria can also produce abundant seeds if conditions are favorable, but flower buds produced in the fall are susceptible to winter kill. In riparian habitats, seeds may be dispersed downstream in water for great distances.

Origin and Distribution

Japanese wisteria was introduced from Japan around 1830 as an ornamental. It was popular in the southern U.S. as a decorative addition to porches, gazebos, walls, and gardens. Wisteria is hardy enough to be found in New England, and a few areas farther north.

Similar Species

There are 10 species of wisteria; only two are native to the United States while the others are native to Asia. *W. frutescens* (L.) Poir. and *W. macrostachya* (T. & G.) Small. are native to the southeastern United States. It is similar to Japanese wisteria in height, leaf, and flower structure. Japanese wisteria is hardier and more invasive than the native species. Identification must be made carefully, especially with hybrids. One distinctive quality of Japanese wisteria is its fragrant flowers. Consult detailed reference material before taking treatment action.

Habitat

Ideal habitat for wisteria is in full sun, but established vines will persist and reproduce in partial shade. Often they climb surrounding vegetation toward sunlight. Twining wisteria vines may reduce the vigor of competing vegetation by strangling the stems or shading the crown. Wisteria tolerates a variety of soil and moisture regimes but prefers loamy, deep, and well-drained soil. Populations often spread from neglected gardens but are commonly found along forest edges, roadsides, ditches, and rights-of-way.

Management Recommendations

Mechanical Control

Cutting: Cut climbing or trailing vines as close to the root collar as possible. This technique is feasible on small populations, as a pretreatment on large impenetrable sites, in areas where a herbicide cannot be used, or if labor resources are not sufficient to adequately implement herbicidal control. This treatment will prevent seed production and strangulation of surrounding woody vegetation. Wisteria will resprout unless cut so frequently that its root stores are exhausted. Treatment should begin early in the growing season and be repeated at two-week intervals until autumn.

Grubbing: This method is appropriate for small initial populations or environmentally sensitive areas where herbicides cannot be used. Using a pulaski or similar digging tool, remove the entire plant, including all roots and runners. Juvenile plants can be hand pulled depending on soil conditions and root development. Any portions of the root system not removed may resprout. All plant parts, including mature fruit, should be bagged and disposed of in a trash dumpster to prevent reestablishment.

Herbicidal Control

Cut Stump Treatment: Use this method in areas where vines are established within or around non-target plants or where vines have grown into the canopy. This treatment is effective as long as the ground is not frozen.

Glyphosate: Cut the stem 5 cm (2 in) above ground level. Immediately apply a 25% solution of glyphosate and water to the cross-section of the stem. This procedure may require a subsequent foliar application of glyphosate.

Triclopyr: Cut the stem 5 cm (2 in) above ground level. Immediately apply a 25% solution of triclopyr and water to the cross-section of the stem. A subsequent foliar application may be necessary to control new seedlings.

Foliar Spray Method: Use this method to control large populations. It may be necessary to precede foliar applications with stump treatments to reduce the risk of damaging non-target species.

Glyphosate: Apply a 2% concentration of glyphosate and water plus a 0.5% non-ionic surfactant to thoroughly wet all foliage. Do not apply so heavily that herbicide will drip off leaves. Glyphosate is a non-selective systemic herbicide that may kill non-target partially-sprayed plants. Ambient air

temperature should be above 65°F.

Triclopyr: Apply a 2% concentration of triclopyr and water to thoroughly wet all foliage. Do not apply so heavily that herbicide will drip off leaves. A 0.5% concentration of a non-ionic surfactant is recommended in order to penetrate the leaf cuticle. Ambient air temperature should be above 65°F.

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[[Home](#)] [[Contents](#)]



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