

Scientific Name: *Berberis thunbergii*.

Common Name: Japanese Barberry

Updated: 5/5/2016

A. Priority: D

Description – Japanese barberry is a spiny, deciduous shrub, with arching branches. Typically, it is about 2-3 ft. tall, although it can reach 6 ft. in height. It has small oval to spoon shaped leaves with smooth margins. They are arranged in clusters along the stem and turn red in fall. Barberry's arching stems are deeply grooved, with single spines at each node. Its twigs and young stems turn reddish brown in winter and the older stems are gray. The inner bark and wood are yellow. Japanese barberry has tiny, pale yellow, dangling flowers with six petal-like sepals and 6 smaller petals. They hang singly or in clusters of 2 to 4 blossoms from the nodes. They are insect pollinated and bloom in April and May. Its fruits are small, bright red, egg-shaped berries with dry flesh that are about 0.4 in. long. They ripen in midsummer but remain on stems into winter. Fruits are dispersed by deer and birds.

B. Damage and threats – Barberry can create large thickets and crowd out native wildlife. Recently, barberry has been implicated in the spread of Lyme disease. Researchers have noted higher densities of adult deer ticks and white-footed deer mice under barberry than under native shrubs. Deer mice, the larval host, have higher levels of larval tick infestation and more of the adult ticks are infected with Lyme disease. When barberry is controlled, fewer mice and ticks are present and infection rates drop.

C. Management Options

Mechanical Control: Because Japanese barberry has shallow roots, pulling seedlings and small plants provides effective control of small infestations. Gloves are needed for protection from the plant's sharp spines. It is easiest to pull when the soil is moist; remove the root crown and as much of the roots as possible. If portions of the root crown are left, they may be able to resprout. Pull steadily and slowly to minimize soil disturbance and tamp down the soil afterwards. Larger plants can also be removed with a spade. The disturbed soil should be tamped down thoroughly and covered with leaves if they are available.

Chemical Control: Use of a systematic herbicide is the best option to control Japanese Barberry. We recommend using aquatic formulations of herbicides in this region to limit potentially unwanted effects to the surrounding environment. More details provided in the management techniques below.

- a. Foliar Spray** – This method involves spraying a dilute herbicide directly onto the plants leaves. Application needs to occur when foliage is present, sometime between full leaf and the onset of fall for full effectiveness. Caution should be taken when applying herbicide with this method as non-target plants can easily be killed by drift or overspray. Application should cover at least 80% of the leaves.

To treat Barberry, use a 2-4% solution of aquatic triclopyr in water with a 0.5% non-ionic surfactant and apply directly to leaves until just before runoff. Air temperatures must be above 65 degrees and winds should be lower than 5 mph.

- b. Cut Stump** – This method involves cutting the stump as close to the ground as possible (no more than 5in.) and immediately applying a systematic herbicide. It is best to use this method between summer and fall, but it may be used as long as the ground is not frozen. To treat using this method, apply a 50% formulation of aquatic glyphosate or triclopyr directly to the cut stump. Bag or burn all cut material as it may resprout if left on site!

D. Recommended Management Strategy

- a.** We recommend treating this species via the cut stump strategy as described above. Smaller infestations and resprouts can be hand pulled as necessary. Resprouts should be foliar sprayed if there is no risk of harm to nearby non-target species.
- b.** Repeat applications should be conducted at least yearly to ensure control and minimize spread.

E. Additional and Updated Information

For additional information including photographs and the most up to date control recommendations please visit www.wachng.org/Plants.