



WNY PRISM

Partnering to Protect Western New York from Invasive Species

Best Management Practices: Japanese, Giant and Bohemian Knotweed

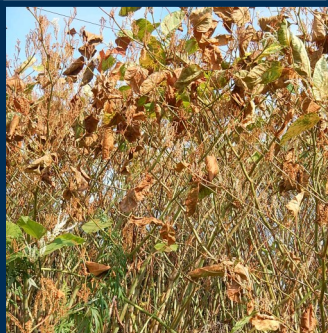
Knotweed (*Reynoutria japonica*, *R. sachalinensis*, and *R. x bohemica*) is a fast-growing herbaceous perennial with jointed, hollow stems and alternate, leathery leaves. Young stems and leaves often have a reddish color, and greenish-white flowers bloom along racemes in late summer. Knotweed will invade most soils and habitat types, but is most often found along streams, right-of-ways and other human disturbed areas.

Knotweed primarily spreads vegetatively, through rhizomes and fragmentation of roots and stems. Fragments as small as ¼" can establish a new population. Knotweed spreads quickly, forming dense monocultures, displacing native plants and communities. Their strong roots may cause damage to infrastructure as it grows through asphalt and foundations. Roots extend up to 9 feet down and 16-40 feet out, which when combined with fragmentation concerns, makes manual or mechanical removal problematic and mostly ineffective.

Management

WNY PRISM recommends use of an Integrated Pest Management (IPM) strategy, an adaptive approach that involves the selection of multiple control methods and appropriate timing to match the management needs of each specific site and species. The goal is to maximize effective control and to minimize any potential negative impacts.

Management efforts should begin with an invasive species survey and site assessment. This allows for the development of a management plan and selection of appropriate removal methods. Management for most well-established species and/or infestations will require dedication over a number of years, often 3-5. Once initial control is achieved, restoration and continued monitoring and management will likely be required to maintain success.



Best Management Practices: Knotweed (*Reynoutria spp.*)

Best Management Practices: *Reynoutria* spp. Japanese, Giant and Bohemian Knotweed

Management

Manual

Small infestations and individual plants may be removed using manual methods, but care must be taken to remove the entire root mass. Use of biotech fabric, tarps or asphalt will provide suppression, but no long-term control.

Mechanical

Mechanical methods such as mowing are recommended when used in tandem with chemical removal. Mechanical methods alone provide suppression only and increase likelihood of spread. Excavation is not recommended due to the amount of material that must be removed in order to ensure the entire root mass is removed.

Chemical

Herbicides, such as glyphosate, are very effective for knotweed control and may be applied using stem injection or foliar methods. Foliar spraying may be combined with mowing. Mow in the spring after all of the plants have emerged, and spray after plants regrow to 2-3 feet tall. Chemical management should be planned for at least 3-5 years.

Spread Prevention

Clean mowers before and after use. Mow non-infested areas before those infested with knotweed. Care should be taken near water to limit the number of fragments being flung into the water.

Disposal

Plant material should be disposed of in landfill-bound trash. Plant material may be bagged (black plastic) and placed in the sun (solarize) for no less than 3 weeks to ensure it's no longer viable.

Restoration

Restoration is recommended for areas where knotweed has been removed. Native species can be planted using seed, plugs or live stakes, and restoration should begin 1 or 2 years after initial successful treatments.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully and follow all instructions. Pesticide regulations can vary widely between regions; please contact local authorities for additional pesticide use requirements, restrictions or recommendations. Mention of pesticide products by WNY PRISM does not constitute endorsement of any material.



Photos Front: Top - knotweed infestation; Middle - knotweed starting to flower; Bottom (left to right) - stem injection, four weeks after stem injection, and foliar spraying. Photos Back: treatment before and after (top - mowed, pre-herbicide; Bottom - post herbicide, following spring).

Additional Resources:

www.invadingspecies.com/japanese-knotweed



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