



# Managing Japanese Knotweed

Japanese knotweed (*Polygonum cuspidatum*) is an imposing herbaceous perennial that is commonly called 'bamboo'. It grows in dense patches to heights of 10 feet, on sites ranging from strip mine spoil to shaded streambanks. It is native to Asia, and was originally introduced to the U.S. as an ornamental in the late 1800's. In CREP plantings, knotweed will overrun riparian buffer tree plantings as well as grassland areas. Knotweed offers little habitat value other than cover, and greatly degrades the wildlife habitat value of your plantings.

## Unique Among Weeds

There is no mistaking a well-established stand of Japanese knotweed for any other plant in PA except for its close kin, giant knotweed (*Polygonum sachalinense*). Both knotweeds grow in tall, dense stands that shade out other vegetation. Both have large, hand-sized, heart-shaped



Figure 2. Knotweed will grow almost anywhere, but it is an acute problem in riparian settings. Knotweed prevents establishment of native trees and shrubs, reduces access to the water, and its coarse rhizomes do not stabilize the banks as well as the finer roots of trees or grasses.

leaves, and jointed, hollow stems that look like bamboo. Knotweed is not a true bamboo (a woody, evergreen grass), but is a relative of plants such as buckwheat, smartweed, and the PA Noxious Weed mile-a-minute vine.

Knotweed stems emerge in late-March to mid-April, depending on soil temperatures, and begin a burst of rapid growth. In a warm spring, knotweed can be 6 feet tall before May 1. Flowering usually occurs in July, and the seeds mature in August and September.

As frightening as the above ground growth of knotweed is, it is the rhizome system that is the real problem. A rhizome is an underground stem that gives rise to roots, aerial stems, and more rhizomes (Figure 1). Knotweed rhizomes spread vigorously, expanding the size of the knotweed stand. Rhizomes are also very durable. A very small piece of rhizome that is moved to another site will give rise to a new plant. Knotweed on streambanks spreads downstream as the bank erodes and pieces of rhizome break off and float downstream to take root elsewhere (Figure 2).

## Knotweed Control Measures

To control knotweed, you have to control the rhizome system. To bring a knotweed infestation to a manageable level, you need to start with multiple treatments, and it will take at least two years.

The multiple treatment approach relies on depletion of the reserves stored in the rhizomes in the late spring, and



Figure 1. The root of the problem - the rhizomatous crown of Japanese knotweed. The primary rhizome is shown extending out of the bottom of the crown and is almost 2 inches in diameter. Several new rhizomes that will extend horizontally and form new crowns are visible. Swollen buds that will become this year's stems are emerging from the mat of fine roots at the base of last year's stems (clipped).



This publication is available at <http://www.pgc.state.pa.us/crep>

This publication's development and printing was supported in part by a grant from the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Harrisburg, PA. This work was sponsored by the Pennsylvania Association of Resource Conservation & Development (RC&D) Councils and U.S. Department of Agriculture, Farm Services Agency (USDA-FSA) Harrisburg, PA.

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