



Pest Watch: Knotweed

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS153E

WSU Extension *Pest Watch* fact sheets identify new agricultural pests in or near Washington State that pose environmental and economic threats. In the event of a severe pest outbreak, a *Pest Alert* will be issued with emergency pest management and control information.

Introduction

Knotweeds are aggressive noxious weeds that invade and degrade streams and riverbanks, causing erosion, bank collapse, and disruption of local ecosystems. There are four species of knotweed on the noxious weed list in Washington State: Japanese (*Polygonum cuspidatum*, = *Fallopia cuspidatum*); giant (*P. sachalinense*, = *F. sachalinensis*); Bohemian (*P. x bohemicum*, = *F. x bohemicum*), which is a hybrid of Japanese and giant; and Himalayan (*P. polystachyum*, = *Persicaria polystachya*).

Typically found growing along waterways, these perennial plants negatively impact native plants and salmon-spawning habitat, as well as birds and other wildlife. Knotweeds are also found in disturbed areas (areas subjected to such things as tilling, mowing, grading, or erosion) and home landscapes where they can damage foundations, driveways, and roads.

Identification

Growth

Knotweed is a fast-growing plant, reaching 6–12 feet tall or more (Figure 1). It dies back to the ground in winter, leaving dead, reddish-brown stems. Thick, aggressive rhizomes spread extensively, allowing plants to form large stands.

Stems and leaves

Knotweed stems are bamboo-like, hollow, and reddish or green (Figure 2) during the growing season and reddish-brown in the winter (Figure 3).

Knotweed produces four types of leaves depending on the species. Leaves are alternate on the stem (Figure 4) and are either heart-shaped with a rounded or squared base or lance-shaped (Figure 5), all have smooth edges.



Figure 1. Knotweed can reach 6–12 feet or more.

Flowers

Knotweed produces small, white flowers in clusters, which are present in late summer (Figure 6). Seeds are small (1/8 inch), brown, and triangular.

Management

All four knotweed species are listed as Class B noxious weeds in Washington State under WAC 16-750. Class B noxious weeds are nonnative plants that are widespread in some regions of the state, but are either absent or limited in other regions. Preventing the spread of knotweeds into new areas and containing or reducing existing infestations



Figure 2.
Knotweed stems during the growing season.



Figure 5. *There are four types of knotweed leaves, three of which are shown above: (a) Himalayan, (b) giant, and (c) Japanese, with a stem shown on the right. Bohemian knotweed (not shown) is a hybrid of giant and Japanese knotweed with leaves that are a blend of both parents. (Skamania CNWCB)*



Figure 3.
Knotweed stems in winter.



Figure 4. *Alternate heart-shaped leaves.*



Figure 6. *Flower clusters in late summer.*

are the primary priorities. Knotweeds are designated for control in some areas of the state as described in the WAC 16-750-011. To find out whether you are required to control knotweed in your area, contact your county noxious weed control board.

Knotweed spreads by roots, stem and root fragments, and seeds, making control a multiple-year project that must include the proper disposal of plant parts. Herbicide use is typically the most effective option for controlling knotweed.

Herbicide control

Both spray and non-spray methods can be used and are typically best applied in late summer to early fall. Stems of

tall plants can be cut or bent in early summer and sprayed when plants regrow to waist height. For non-spray methods, herbicides can be injected into the stem or wiped directly onto the outside of the stem. Some limitations apply and are indicated on the herbicide label. Multiple-year treatments will likely be required.

Read and follow all label directions when using herbicides. A permit and license are required for herbicide use near water. Refer to the Pacific Northwest Weed Management Handbook <http://pnwhandbooks.org/weed/>, or contact your local county noxious weed board for possible assistance in treating knotweed near water and for herbicide recommendations and information about their proper, safe, and legal use.

Manual control

Pulling or digging plants can be done to control knotweed if infestations are small and isolated. All new growth must be controlled frequently. Cutting plants back to the base once every two weeks is also an option.

Properly remove and dispose of all roots and stems in a landfill to avoid spreading plants. Contact your local noxious weed control board for information and assistance with county-specific disposal requirements for noxious weeds.

Once the above-ground plant material is removed, cut plants can be covered with landscape fabric or heavy tarps and weighed down with large rocks or bricks. Extend the fabric beyond the infestation to avoid having knotweed grow laterally beyond the edge. Keep the fabric slightly loose to prevent new sprouts from puncturing the material, and repair any holes that develop. Regularly flatten new growth that shifts the fabric throughout the growing season. This removal method will take a minimum of 3–5 years and will leave the ground underneath the material devoid of all vegetation.

Follow up by frequently checking the treated site for regrowth, and repeat treatments when necessary. Replant bare ground with appropriate plants. Knotweed can sprout again from even the smallest plant fragment (Figure 7). Never dispose of knotweed in yard waste or compost bins.

Resources

Contact your local county noxious weed control board, WSU Extension office, conservation district, or the Washington State Department of Agriculture (WSDA) to learn more about knotweed control efforts in your area. Visit www.nwcb.wa.gov for information on Washington State's noxious weed laws (RCW 17.10).

This publication is available as a convenient door-hanger for easy reference and distribution and was developed in partnership with the Washington State Noxious Weed Control Board, Washington Department of Agriculture, and the United States Forest Service. Contact the Washington State Noxious Weed Control Board, your county noxious



Figure 7. Knotweed sprouting from plant fragment. (Tim Miller, WSU)

weed board, or WSU's Integrated Weed Control Project for complimentary copies.

For additional knotweed information, please see:

- PNW 610 Knotweed Shrubs: Identification, Biology, and Management <http://www.cals.uidaho.edu/edcomm/pdf/PNW/PNW0610.pdf>.
- King County Noxious Weed Control Board <http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/weed-control-board.aspx>.
- Washington State Department of Agriculture: Knotweed Program <http://agr.wa.gov/PlantsInsects/Weeds/Knotweed/Knotweed.aspx>.



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Agriculture



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Use pesticides with care. Apply them only to plants, animals, or sites as listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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