

Japanese Knotweed (*Polygonum cuspidatum*) Management & Control

Chuck O'Neill

Senior Extension Associate

Cornell Cooperative Extension Invasive Species Program

New York State Invasive Species Clearinghouse

NY Sea Grant Extension AIS Team Leader

CCE Invasive Species In-service

November 11, 2009



Japanese Knotweed (*Polygonum cuspidatum*)

- Origin:** A.K.A. Japanese bamboo
Member of buckwheat family
Native to eastern Asia
Introduced as an ornamental on estates in the 1870s
Also promoted by SCS as an erosion control plant



Japanese Knotweed (*Polygonum cuspidatum*)

Habitat: Along streams and rivers, in moist low-lying and disturbed areas such as rights-of-way, and around old home and farmsteads

Can tolerate deep shade, high temperatures, high soil salinity and drought

Grows in silt, loam, and sand

Tolerates pH of 4.5 to 7.4



Japanese Knotweed (*Polygonum cuspidatum*)

- Annual Cycle:** Herbaceous Perennial
- Propagates through extensive rhizomes up to 15-20 m (49-66 ft.) long
 - Spreads by rhizome fragments
 - Rhizomes can regenerate when buried up to 1 m (3.3 ft.) deep
 - Has been observed growing through 5 cm (2 in.) of asphalt
 - Requires high light environments
 - Out competes for light by emerging early in spring, using extensive rhizome reserves for rapid growth
 - Shoots emerge in April; growth rates > 8 cm (/day)
 - Flowers in August and September
 - Seeds appear about two weeks after flowering (very poor recruitment rates)





How can we fight
Japanese knotweed?

Longterm management required.

- Single young plants can be pulled by hand depending on soil conditions and root development
- Re-sprouting can occur if all of the root system and runners aren't removed
- Cut stem or foliar treatment with systemic herbicide is most effective (APIPP 2009)
- Chemical controls include application of glyphosate and triclopyr herbicides to freshly cut stems or to foliage



Japanese Knotweed BMPs



Cutting



Digging



Hand Pulling



Herbicide



Disposal



Biological Control

Japanese Knotweed (*Polygonum cuspidatum*)



July

Rt 30, Saranac Lake
Herbicide-Foliar / Hand-cutting



September



Herbicide – Cut/Swab



Hand-cutting

Japanese Knotweed Management

Need for Restoration Strategies

Japanese knotweed,
Saranac Lake



Pre-control



Post-control

Japanese Knotweed Management



July
Rt 30, Saranac Lake
Herbicide-Foliar

September



Japanese Knotweed Management

Before herbicide treatment



Japanese Knotweed Management

After herbicide treatment



