



# ***Nebraska Weed Control Association***

*“To encourage and develop better weed control practices”*

Prepared by

Nebraska Weed  
Control Association

Weed Management  
Strategy Committee

September 30, 2010

## **Assessment of the Weed Risk Potential of**

***Fallopia japonica (Japanese knotweed)***



APHIS Weed Risk  
Assessment Model



United States  
Department of  
Agriculture

Animal and Plant  
Health Inspection  
Service

### **Assisted and reviewed by:**

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**Species**  
*Fallopia japonica*

**WRA Conclusion**  
High Risk

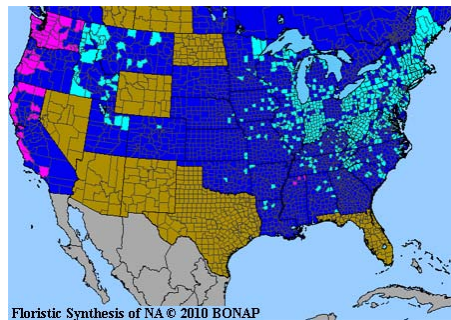
## Risk Assessment

***Fallopia japonica*** (Hout.) Ronse Decr. ( Polygonaceae ) Japanese knotweed

**Initiation:** This assessment is being prepared to support designation as a noxious weed in Nebraska while *Fallopia japonica*, its cultivars, hybrids and congeners are in their very early invasion stages and with the hope that other states could use it as support in designating it a noxious weed in their state.

**Foreign distribution:** Native to China and Eastern Asia. Introduced in Australia, New Zealand, Europe and Canada. (GRIN)

**U.S. distribution & status:**



*Fallopia japonica* has been detected in all states except AZ, FL, HI, ND, NM, NV and TX. Wild plants have only been detected in the Omaha area in Nebraska. It is a designated noxious weed in 10 states. It is particularly abundant in the eastern United States and in the coastal areas of Washington and Oregon. Several \$million have been spent to control river banks in Washington since 2004. Most states and provinces list a weed as noxious only in the late stage of the invasion process when it is a large, landscape-scale problem. Organizing by invasion stage emphasizes rapid response to new invaders which has been shown to be more cost-effective than prolonged management of widespread species.

**WRA area:** The WRA area is the state Nebraska. A template for Nebraska with adjusted Geographic Potential was used. Other states could get a ranking for their state by using a template with adjusted Geographic Potential for their state.

**Risk Element Score (Mean Uncertainty)**

### Summary

**Establishment/Spread Potential**  
22 (0.6)

*F. japonica* is naturalised in many European countries (Sukopp & Sukopp 1988), up to at least 68 degrees N latitude (Jalas & Suominen 1979, Sebold et al. 1990, Lid & Lid 2005), and also in south European countries like Croatia, Macedonia, and Bosnia and Herzegovina (Trinajstic 1990). In the U.K. *F. japonica* has spread extensively, occurring in half of the 10 km x 10 km quadrates in the national grid (Shaw & Seiger s.d.). Sexual reproduction and seed germination in the United States will increase the invasiveness. (Smith et al. 2007).

**Impact Potential**  
3.5 (0.6)

*Fallopia japonica* threatens open and riparian areas where it spreads rapidly and forms dense near monoculture stands. It dramatically reduces species diversity and alters habitat for wildlife. In raparian habitats *F. japonica* may also increase the risk of flooding and river bank erosion as it establishes monospecific stand that die back in the winter leaving banks exposed. Prolific rhizome and shoot growth can damage foundations, walls, pavements, drainage works, and flood prevention structures. (ANHP, 2006).

***Fallopia japonica*** (Hout.) Ronse Decr. ( Polygonaceae ) Japanese knotweed

**Analysis**

Model Probabilities:

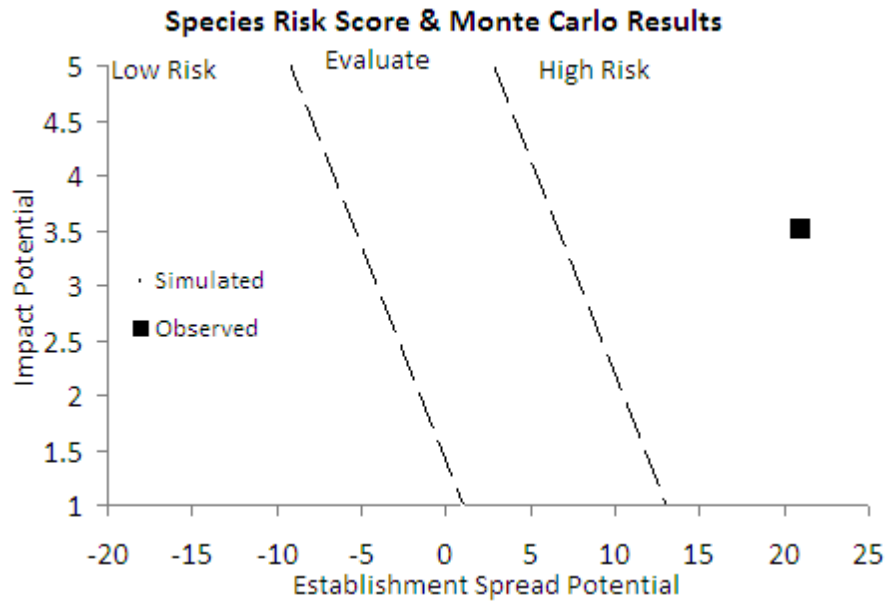
P(Maj-I) = 0.959

P(Min-I) = 0.040

P(Non-I) = 0.001

Result: High Risk

2° Screening: N/A



Risk Element Score  
(Mean Uncertainty)

Summary

Geographic Potential

It has established in 43 states and has the potential of establishing in the remaining states. It can establish in USDA hardiness zones 4 to 9 , especially in areas with 20 inches or more of rainfall and in riparian areas having less than 20 inches of rainfall.

Cold: 1.0

Climate: 1.0

Precip.: 0.5536

Entry Potential

*Fallopia japonica* is already present in the United States and Nebraska; therefore, an assessment of its entry potential was not necessary.

1.0 (0.0)

**Final Conclusion & Discussion:**

When compared with 200+ other assessments, Japanese knotweed ranked in the top five of all high risk plants based upon its reported ability to establish and spread. It has proven itself to be a relentless invader with the intentional and unintentional help from humans and assistance from its cultivars, hybrids and congeners. In the U.K., *F. japonica* has spread extensively without sexual reproduction. The spread has been by ornamental plantings, rhizomes and the movement of these rhizomes and other plant parts. In the United States there has been a joint wild invasion of Japanese knotweed and its hybrid, Bohemian knotweed. Bohemian knotweed, Japanese knotweed cultivars planted in gardens, other hybrids and congeners all contribute to seed production of Japanese knotweed. Seed production provides for long distance dispersal by wind in addition to vegetative dispersal providing potentially for a more rapid advance. It has spread all the way across eastern 1/2 United States and has entered Nebraska. In Nebraska, wild Japanese knotweed and Bohemian knotweed sites have been found in the Omaha area. There are Japanese knotweed cultivar plantings in Omaha, Lincoln and western Nebraska. Japanese knotweed in the Colorado South Platte river basin could infest western Nebraska. Required control and stopping the sale of Japanese knotweed, all its cultivars, hybrids and congeners is needed to stop the invasion. Its preferred habitat is similar to phragmites, and if not eradicated as it enters the state, it has the potential to invade the phragmites' recently controlled areas. See river infestations below.



Connecticut



Poland



Washington

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