

Japanese stiltgrass

(*Microstegium vimineum*)

Homeowners Fact Sheet

Tips for identifying, controlling, and monitoring Japanese stiltgrass on your property

Background

Japanese stiltgrass (*Microstegium vimineum*) is an annual grass considered to be one of the most aggressive invasive plants in forested areas in Illinois. It was first introduced to the United States in the 1919 in Tennessee having been included in packing material for porcelain. Since that time it has spread throughout the eastern half of the U.S. This plant threatens forested wetlands, floodplain forest, moist woodlands, riparian corridors, and grows in disturbed areas.

Why Should You Care?

Japanese stiltgrass can quickly form dense stands that shade out and compete with native understory plants thus lowering native species diversity and becoming the dominant vegetation in that habitat. With its high shade tolerance, stiltgrass has the potential to invade high-quality mature forests, once thought to be relatively resistant to invasion. Stiltgrass has no value as a wildlife food. The dense thatch of older infestations can be a fire hazard and may impede tree seedling establishment. Established infestations are very difficult to remove and spread rapidly by seed.



Mature Japanese stiltgrass plants have bamboo-like leaves with a silvery mid-vein produced by reflective hairs.



James H. Miller & Ted Bodner, Southern Weed Science Society, Bugwood.org

Identification

- Multi-stemmed growth
- Mature plant has leaves with a silver mid-rib (line of reflective hairs) on the upper surface
- Leaves resemble bamboo leaves, but stems are thin and have nodes
- Plants grow 1.5-3 feet long branching and forming dense mats
- Roots are shallow and weak and easily pulled
- Green flower spikelets that are delicate and paired
- Flowers and seeds in early-mid September
- Mats of stiltgrass become a bright, straw color in autumn



Some Suggested Control Methods

- Mow or cut plants as close to the ground as possible in late summer or early fall after flowering, but before seeds are present. Monitor the site a week after initially mowing to identify plants that were not cut and remove them before they produce seeds. Continue to monitor the site for at least seven years to ensure that the seed bank is exhausted. If plants are cut earlier than late summer it can result in cut plants re-growing and flowering earlier than they would if left undisturbed.
- Pulling is an effective treatment for individual plants or small populations throughout the year, but is usually easiest in the late summer to early fall when plants are larger. Pulling will disturb the soil and can possibly expose stiltgrass seeds in the soil. Pulling later in the growing season will provide less time for seeds in the soil to germinate and reproduce. Pulling should be repeated for at least seven years to ensure the seed bank is exhausted. Bag and dispose of material in a landfill, since plants can root from the nodes and seeds are easily spread.
- Choose a post-emergent herbicide like glyphosate and apply before the plants go to seed. A 2% solution is recommended. Many different formulations are available so please check product labels. Use a product labeled for aquatic use if the plant is growing in wetlands. Do not apply herbicide near or on water. Follow instructions on herbicide label, add dye to the solution, and spray the solution on plants on a day when there is little chance of rain washing the herbicide from the leaves and wind blowing the herbicide away from its target. Coat leaf surface lightly—not to the point of the leaf dripping with herbicide. Herbicide may take several weeks to produce visible effects (browning of leaves).



Follow Up

As stiltgrass is removed from your site fill that space with native or non-invasive plants by seeding or planting. When these plants become established they will help keep out stiltgrass and other invasive plants. Initially seeding with annual rye is recommended. Once stiltgrass no longer reappears, cut grass (*Leersia virginica*) and jewelweed (*Impatiens capensis*) can also be planted.

Precautions

- Seeds are easily transported on equipment and clothing
- Prescribed burns will actually encourage growth of Japanese stiltgrass
- Use of pre-emergent herbicides may impact native plants in addition to stiltgrass
- Applications can result in bare ground as glyphosate is not selective. Overspray or drift to desirable plants should be avoided, as even minute quantities of the spray may cause severe injury to plants.

Equipment & Supplies You May Need

Mower, work gloves, and garbage bags

Herbicide (glyphosate)

Rubber gloves and appropriate eye protection

Long pants, long sleeved shirt, closed-toe shoes

Spray bottle

Liquid dye (food coloring or Rit dye works)

Patience, persistence, and commitment (this will take several years)

Additional Resources

Midwest Invasive Plant Network Control Database <http://mipncontroldatabase.wisc.edu/>

River to River Cooperative Weed Management Area White Paper: 2010 Stiltgrass Summit <http://www.rtrcwma.org/stiltgrass/Whitepaper.pdf>

Field Guide to the Identification of Japanese stiltgrass <http://www.aces.edu/pubs/docs/A/ANR-1457/ANR-1457.pdf>

New York State Invasive Species Clearinghouse http://www.nyis.info/index.php?action=invasive_detail&id=32

