

Invasive Plants in Pennsylvania

Japanese stiltgrass

Microstegium vimineum



James H. Miller, USDA Forest Service

Background:

Japanese stiltgrass was first documented in Tennessee in 1919. Its introduction into the United States was accidental, likely a result of its use as a packing material for porcelain.

Range:

Native to Asia, this successful invasive has colonized most of the eastern United States, as far west as Texas.

Habitat:

Japanese stiltgrass occurs in a variety of habitats, including moist ground of open woods, floodplain forests, wetlands, uplands, fields, thickets, road-sides, and ditches. It readily invades areas subject to regular disturbance. Stilt grass appears to prefer moist, acidic to neutral soils that are high in nitrogen.

Description:

Japanese stiltgrass is an annual that typically grows one to three feet in height. Despite its branching, sprawling, mat-like manner, it resembles a small, delicate bamboo. Leaves are narrow and lance-shaped with a distinctive, pale, silvery stripe of reflective hairs on the upper surface. Flower spikes appear in September.



James H. Miller & Ted Bodner, SWSS

Biology and Spread:

Stiltgrass reproduces exclusively by seed. One plant may produce 100 to 1,000 seeds that typically fall close to the parent plant. Seeds may be carried by water during heavy rains or move about in contaminated hay, soil or mud stuck in footwear. Stilt grass seeds remain viable in the soil for five or more years and germinate readily.

Ecological Threat:

When Japanese stiltgrass invades a site, it can quickly crowd out native plant species. Invasions can also change soil nutrient cycling processes, inhibit tree survival and growth, and reduce light availability. After it dies back in late fall, it forms a thick layer of smothering thatch that is slow to decompose. Because stilt grass is relatively unpalatable, it may encourage heavier deer browsing on native plant species.



Deric Case, DCNR - BOF

How to Control this Species:

Look-A-Likes:

Physical

Japanese stiltgrass is quite shallow-rooted and can be easily pulled by hand, especially when the soil is moist. Pulling is easiest in late summer when plants are mature. Stilt grass can also be mowed. Follow up monitoring and treatment will be necessary for years.

Hand pulling and mowing should be done in late summer when the plants are just about to flower. Performing these activities earlier in the summer months encourages flowering and early seed dispersal.

Chemical

For extensive infestations, a systemic herbicide can be used quite effectively. Using an herbicide leaves the plants and soil in place, minimizing the likelihood of additional germination of stilt grass seed.

Grass-specific herbicides, such as quizalofop, limit damage to native plants.

Be careful when treating stiltgrass in wetland sites. Make sure you use an herbicide suitable for wetlands.

The native perennial Virginia cutgrass (*Leersia virginica*) is quite similar. Japanese stilt-grass may also be confused with some smartweeds (*Persicaria* spp.).



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Left photo: Example of the persistence of the previous year's growth is shown. This is a good winter indicator.

Right photo: New growth in spring denoted by **yellow arrows**. Previous year's growth, which is also a good way to locate this plant, is marked by **red arrows**.



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