NEW JERSEY NON-NATIVE PLANTS

Japanese Stiltgrass

(*Microstegium vimineum*)

Description

Japanese stiltgrass grows as an annual grass with a sprawling habit, and can reach heights of up to 3 feet. Plants are found in a range of habitats, from wetlands to early successional fields and forested uplands. Although it is a shade adapted species, it also grows in full sunlight, especially in disturbed habitats such as roadsides, powerline right-of ways, ditches, agricultural lands, lawns and gardens. It appears to favor soils that are moist, acidic to neutral, and high in nitrogen. It reaches its greatest abundance in floodplain forests and moist soils over shale, diabase, and glauconite. It has thin, pale green, lance-shaped leaves, about 3 inches in length, that grow alternately along a branched stalk. The leaves have a silvery stripe of reflective hairs down the center of the upper leaf surface. The stalk is distinctly divided by nodes, with the segments between the nodes flattened and widening toward the upper end. The flowers bloom along a delicate spike that emerges from the stalk tips in late summer and early fall. The seeds mature in mid to late fall, and can remain viable for more than five years in the soil. Plants spread locally by rooting at the nodes.

Why is Japanese stiltgrass bad for New Jersey?

Japanese stiltgrass alters the structure of natural plant communities and reduces biodiversity by displacing indigenous herbaceous vegetation through its dense growth, which rapidly forms monocultures that are sometimes acres in extent. Because of its rapid and dense growth, it alters light and moisture regimes and likely affects seed germination. Kourtev, et al. (1998) speculated that Japanese stiltgrass in association with Japanese barrberry (Berberis thunbergii) raises pH and reduces the organic horizons in soils.

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Control:

How can you get rid of Japanese stiltgrass?

The most effective control method for Japanese stilt grass is to prevent its spread into natural plant communities by avoiding disturbance to the vegetation and soils of these areas. Early control of new infestations will greatly reduce the likelihood of establishment. Small populations are fairly easy to eradicate by hand pulling or cutting. Large populations may require herbicide treatment.

Mechanical - Small populations can be controlled and often eliminated by hand pulling or cutting. Hand removal is best done in August or early September when plants are in full bloom, but before seeds are produced. Pulling earlier in the summer disturbs the soil and allows for germination of new plants from the seed bank. For larger stands, a more effective method is to cut the plants in late summer using a mower or weed whacker. Being an annual, Japanese stilt grass cut late in the season will die back and not produce new shoots. Seeds remain viable in the soil for at least three years and germinate readily when the soil is disturbed.

Chemical - Herbicides can be effective, and should be applied before plants set seed. Extensive populations can be controlled by applying a systemic herbicide like glyphosate (e.g., RoundupTM or RodeoTM), an herbicidal soap, or herbicides specific to grasses. If applying glyphosate and plants are in or near wetlands, only RodeoTM should be used. Glyphosate is a non-selective herbicide that will kill all vegetation. Thus, managers should be cautious not to spray so heavily that the herbicide drips off the leaves.

Biological - There are no known methods of biological control.