NORTH CAROLINA FOREST SERVICE N C

Invasive Species Leaflet

Excerpted with permission from "Invasive Exotic Plants of North Carolina"
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Microstegium vimineum (Japanese Stilt Grass, Japanese Grass, Nepalese Browntop)

Initial Introduction and Expansion in Range

Native to Asia, *Microstegium vimineum* was first identified in the United States in the first part of the 20th century. It was collected from the western portion of North Carolina in the 1930s. Since that time, *M. vimineum* has spread to states east of the Mississippi River and from New York, south to Florida. It is now ubiquitous in North Carolina.

There is no documentation that *M. vimineum* was ever intentionally planted as an ornamental or for erosion control or forage. It is suspected that the widespread use of *M. vimineum* for packing material for Chinese porcelain is responsible for the introduction of this plant into the United States.

An individual *M. vimineum* plant produces 100 to 1,000 seeds that can remain viable for up to 5 years. Seeds are readily dispersed by flooding, deposition with fill dirt, contaminated hay, footwear and animals. Deer avoid *M. vimineum* giving it a competitive advantage in areas that are overly grazed. On fertile moist sites, this grass can form dense monotypic stands within 3 to 5 years.

Description and Biology

- Bright green grass growing up to 2 to 3 feet by late summer.
- Long, thin, alternate, lance-shaped leaves. Blades are flat and sparsely hairy on both surfaces. Mid-vein whitish and off center.
- Stalk of this grass is distinctly divided by nodes.
- Delicate spikes of flowers emerge from slender tips from August to September. Spikes may be either terminal or arising from leaf axils.

Habitats Susceptible to Invasion
The spread of *M. vimineum* poses a particularly severe threat to natural areas because this plant is adapted to low light conditions and is able to grow and produce seeds underneath a closed forest canopy. It is most prevalent in disturbed shaded floodplains that are prone to scouring and those areas subject to mowing, tilling, and other soil disturbing activities such as utility corridors, lawns, gardens and roadside ditches. It is most commonly associated with moist, acidic to neutral soils that are high in nitrogen content, but this grass can also tolerate drier sites with full sunlight.

Prevention and Control
Because of the seriousness of its threat to natural areas, preventing the introduction of *M. vimineum* and early control of new infestations should be the utmost priority for land managers. *Microstegium vimineum* can be hand pulled or mowed when the plant is flowering but before it sets seed.

These methods are ineffective earlier in the growing season since new seeds will be able to germinate and may still set seed by the end of the growing season. In addition, mowing earlier may result in plants producing new seed heads in the axils of the lower leaves.

Similarly, herbicide treatments should be made late in the growing season but before the plants set seed. Apply a 0.25 to 0.5 percent solution of glyphosate plus a 0.5 percent non-ionic surfactant to thoroughly wet all foliage. Land managers have found that *M. vimineum* is sensitive to this relatively low concentration of glyphosate that often will not harm adjacent plant species. When working in wetland sites and sites in proximity to surface waters, use an aquatic formulation of glyphosate. All treatments will require follow up in successive years until the seed bank is exhausted.

Herbicides specific to grasses are effective and selective. A grass-specific chemical called fluazifop can be applied at a rate of 12 to 24 ounces per acre plus a 0.5 percent non-ionic surfactant. To achieve excellent control over a longer period of time, add pendimethalin (pre-emergent) at a rate of 2 to 4 quarts per acre to the chemical mix.

THE LABEL IS THE LAW!
WHEN USING ANY PESTICIDE, FOLLOW ALL LABEL INSTRUCTIONS

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