



Seeds

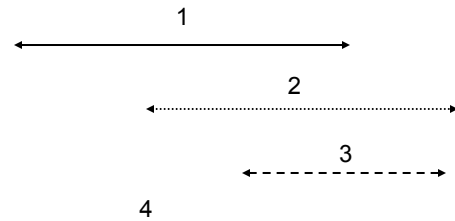


Seedling



Inflorescence

Jan Feb March April May June July Aug Sept Oct Nov Dec



Management Techniques

1. (Summer) Herbicide. Herbicide application was found to be most effective when enacted with one or more of the management techniques listed below. Consider the following herbicides:
 - a. Imazapic. Most commonly used herbicide for Stiltgrass. Will target grasses but allow growth of native broadleaf plants. Apply at 6 ounces per acre.
 - b. Glyphosate. Since glyphosate is non-selective, it should only be used when there is no risk of contact with native plants. Apply at 2% solution and a 0.5% surfactant.
 - c. Sethoxydim. Good for use around native vegetation since it will selectively target grasses. Apply at 1.5% solution with a 1% vegetable based oil.
2. (July-September) Hand pulling. Best done mid to late summer after current seed bank has germinated to prevent unintentional spreading but before plant goes to seed. Care must be taken to remove rhizomes as well.
3. (Late Summer) Mowing. Should be done just prior to seeding to prevent establishment of seed bank, while minimizing damage to native vegetation. Mowing too early will allow the plant to regenerate.
4. (Year round) Prevention. Japanese Stiltgrass most easily establishes itself on disturbed sites, so it is most important that any sites it is removed from be quickly replaced by healthy, native vegetation.

*****All treatment must be continued for 3-5 years until seed bank is exhausted*****

For More Information Visit:

<http://www.HawkeyeCWMA.org>

ALWAYS READ AND FOLLOW PESTICIDE LABELS.

Proper training for prescribed fires is highly recommended.

Basic training can be found online at <http://training.nwcg.gov/courses/s130.html> and <http://training.nwcg.gov/courses/s190.html>

Related Websites:

<http://www.iowadnr.com/forestry/invasive.html>
<http://plants.usda.gov>
www.invasivespecies.gov
www.nps.gov/plants/alien

Credits:

Photographs: Rebekah D. Wallace, University of Georgia, Bugwood.org. James H. Miller & Ted Bodner, Southern Weed Science Society, Bugwood.org. James H. Miller, USDA Forest Service, Bugwood.org. Arthur Haines, gobotany.newenglandwild.org. David K. Apsley, The Ohio State University. Steve Hurst, USDA-NRCS PLANTS. Ted Bodner, Forest Plants of the Southeast and Their Uses. Greg Spyras, eddmaps.org. Chad Cullen, Clippix ETC. KG Naturephotography.com. Robin R. Buckallew, plants.usda.gov. Joseph C. Neal | Caren A. Judge, NC State University.

Brochure Created By: Ken Wilson and Amanda Ross



The **Hawkeye Cooperative Weed Management Area (HCWMA)** is a collective group of county, state, and federal agencies, nonprofit organizations and community associations who have come together to **combat the invasive species problem in Eastern Iowa**. The HCWMA serves Benton, Cedar, Iowa, Johnson, Jones, Linn, and Louisa Counties and is open to all interested parties. The Term CWMA, or Cooperative Weed Management Area, refers to a local organization that integrates invasive species management resources across jurisdictional boundaries in order to benefit entire regions.

All Hawkeye CWMA members (agencies, organizations, and individuals) are equal opportunity providers and employers.

Japanese Stiltgrass

Microstegium vimineum



A SERIOUS THREAT To Iowa's Prairie/Grassland

What is Japanese Stiltgrass?

- Also known as Nepalese browntop and Asian stiltgrass
- Native to eastern Asia
- Accidentally introduced in 1919 as a packing material



Japanese Stiltgrass foliage and flower spikes

What is the threat to Iowa?

- Readily grows in any light conditions
- Quickly invades disturbed areas
- Does not respond to controlled burns
- Each plant produces up to 1,000 seeds which are viable up to three years
- Crowds out native vegetation
- No natural controls exist to manage spread

What does Japanese Stiltgrass Look Like?

Identifying traits: Annual grass growing 2-3.5 feet in height, leaves are pale green, lance shaped, asymmetrical, and about 3 inches in length. Flower spikes appear on the top of the plant in late summer to fall. Stems are hairless. Young plants may be confused with crab grass.

Stems:

Stems grow 2-3.5 feet high, branched, thin and wiry. Covered in overlapping leaf sheaths; nodes and internodes are hairless. Color changes from pale green to



brown and purple in fall. Rootlets may form from lower nodes.



Leaves:

Flat, alternate, and asymmetrically lance shaped with a silvery off-center mid-rib. Covered with a sheath collar with fine hairs that encircle the stem.



Inflorescence: Spike-like seed-heads, up to 3 inches long, develop at the top of the stem or in the axils of leaves in later

summer to fall. One plant may produce 100-1,000 seeds.

Rhizomes:

Stiltgrass roots are thin, weak, and sprawl outward, forming dense networks of interconnected roots. Roots are shallow and easily pulled by hand. Capable of producing rootlets from lower nodes of the stem, allowing even rootless cuttings to establish themselves.



Native Alternatives:

Buffalo Grass (*Bouteloua dactyloides*)

A native of shortgrass prairies, this grass grows best in full sun and disturbed areas. Commonly used as a lawn grass, it is very drought tolerant and can survive well in harsh conditions but is not shade tolerant. Generally grows to about 3-6 inches and provides excellent forage for browsing animals.



Pennsylvania Sedge (*Carex pensylvanica*)

A shade loving perennial that prefers dry soil but will grow in a variety of habitats. Commonly found in the understory of oak forests, this sedge grows up to 6 inches and is commonly non-invasive. Provides a ready food source for browsing wildlife.



What's the difference between Japanese Stiltgrass and Whitegrass?

Japanese Stiltgrass (*Microstegium vimineum*):

An annual grass that roots shallower than whitegrass. Stiltgrass lacks the hairy stem of whitegrass and its seeds possess an awn which whitegrass does not. The plant begins to go to seed in September to November while whitegrass seeds earlier from July to September.

Whitegrass (*Leersia virginica*):

A perennial grass possessing a thicker and more developed root system than stiltgrass. Leaves are longer and thinner, lacking the mid-rib stripe. Often occupies moist woods and similar habitat to stiltgrass. Does not form dense monospecific stands and is readily browsed by deer and livestock.



Whitegrass (*Leersia virginica*)