

Japanese Stiltgrass in Pastures

This invasive weed is taking over Pennsylvania pastures. Learn how to control it.



Photo from National Park Service, public domain

Japanese stiltgrass (*Microstegium vimineum*) is taking over forest understories throughout Pennsylvania, and quickly spreads into adjacent lawns and pastures. Many Pennsylvania livestock and horse owners are becoming frustrated with this weed because grazing animals rarely eat it, and it is outcompeting desired pasture forage species.

Identification

While Japanese stiltgrass has many defining characteristics, a native lookalike – Virginia cutgrass AKA whitegrass (*Leersia virginica*) – can cause misidentification. Japanese stiltgrass has a shiny, silvery midrib, or stripe down the center of the leaf, and Virginia cutgrass does not. Additionally, the round nodes along the stem of Virginia cutgrass are covered in fine hairs, while Japanese stiltgrass nodes are smooth. Japanese stiltgrass turns brown or purple in the fall, while Virginia cutgrass will stay green into the fall.

Smartweeds may also look similar to Japanese stiltgrass. They are not actually grasses but have similarly shaped leaves. Check the leaves for a dark blotch or see if there is a pink flower spike on the plant. If so, then it is a smartweed.

Control

It is difficult to eradicate Japanese stiltgrass without harming the rest of your pasture grasses since Japanese stiltgrass is also a grass. However, it is a summer annual, so it will completely die in the fall and can only return the following year from seeds it dropped.

The simplest method of control is to take advantage of its life cycle and never let seeds drop while establishing desired pasture grasses to take its place. However, this is not a matter of regular mowing. Japanese stiltgrass will simply grow lower and make seed heads lower than your mower height. Unlike crabgrass, Japanese stiltgrass flowers and sets seeds much later, from mid-September through October. The best way to use this method is to allow the grass to grow naturally until late August or September when it starts developing seed heads. When you start seeing seed heads but before they drop their seeds, mow the tops off or hand-pull the plants. This method may take several years to be effective because there may be a considerable seed bank in the soil waiting to germinate.

On many farms, it is not feasible to skip mowing for most of the grazing season. In this case, you might use an herbicide to control Japanese stiltgrass. If you are considering using herbicides, make sure to select one that is labeled for use in pastures. Many resources available online suggest certain herbicides for Japanese stiltgrass control, but these articles are not written for livestock pastures. One option for large, dense infestations is to spot spray (up to 1/10th of the total paddock) with glyphosate from mid-May through August. This non-selective herbicide will kill all plants that it contacts but does not have soil residual activity.

Another herbicide option is a pre-emergent herbicide called Prowl H2O. This herbicide can be applied to established grass forages (with at least 6 tillers) in the spring to prevent seedlings from emerging. For best results, this should be applied at the higher end of the rate spectrum and twice in the spring (see [Spring Weed Control in Grass Hay and Pasture](#) for more details), and will also control foxtail, crabgrass, and some broadleaf weeds. Keep in mind, Japanese stiltgrass can germinate in early spring a few weeks before crabgrass, therefore Prowl H2O must be applied before germination, otherwise it will not control it. One major limitation with this method is that Prowl H2O has a 10-month reseeding



restriction for pasture grasses and 6 months for alfalfa, so you might be left with areas that have limited forage until the following spring.

Regardless of which method you select, it will be essential to reseed the infested area with cool-season perennial forages in the fall (after mowing or applying glyphosate, or before applying Prowl H2O). Japanese stiltgrass grows so densely that there is often no other grass left. Leaving a bare spot after the Japanese stiltgrass is killed allows erosion of your topsoil and germination of other weed seeds. However, a thick stand of pasture grasses can shade out and out-compete the Japanese stiltgrass seedlings (and many other summer annual weeds) that emerge later in the spring. Seed with a pasture forage mix between mid-August and mid-September for the best chance of a successful establishment. Don't forget to soil test first!

Other Considerations

Consider where the Japanese stiltgrass is coming from. If a pasture is adjacent to a wooded area that is also infested, it will continue to spread into the pasture. Create a border around the pasture that you can treat, if possible.

The [New York State Office of Parks, Recreation, and Historic Preservation](#) found that a 4-6 inch layer of mulch prevents Japanese stiltgrass from emerging. This may be an option for a pasture border.

Keep in mind that your battle against Japanese stiltgrass will be a multi-year process, so be vigilant about watching for it and not letting it set seeds.

Remember that when using any herbicide, the label is the law! Read the directions carefully and follow them word for word. Contact the manufacturer or your local Extension educator if you have any questions.

For more information, check out

- [Controlling Japanese Stiltgrass in Your Garden](#)
- [Japanese Stiltgrass- An Increasingly Common Occurrence in Pennsylvania](#)
- [Invasive Species Quicksheets- Japanese Stiltgrass](#)
- [Invasive Plants in Pennsylvania- Japanese Stiltgrass](#)

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