



Wavyleaf Grass

Wavyleaf grass (*Oplismenus undulatifolius*) is a highly invasive species. It thrives in deep shade and threatens forest understory habitat. This fact sheet focuses on management of wavyleaf. For identification and distribution information, visit www.dcr.virginia.gov/natural-heritage.

Mapping and Reporting

Report locations of wavyleaf using the free mobile apps listed below or email photos and GPS coordinates to kevin.heffernan@dcr.virginia.gov. Photograph close-ups of the leaves and stem to assist proper identification of the species.

Recommended Apps for Recording and Reporting Wavyleaf Populations

Available on Google Play and Apple App Store, these apps are free but require registration. They are useful for many species.

- Mid-Atlantic Early Detection Network (MAEDN) – This is one of a family of apps created by EDDMapS (Early Detection and Distribution Mapping System) that focus on invasive species data collection. Reports are verified by a small group of experts. Some reports may not appear on the mapping interface until verified.
- iNaturalist – This app includes all living things (native and non-native). Reports are verified by other users. Reports are immediately visible on the map.

Control

Hand-pulling and herbicide treatment are the two control methods recommended. At this time, there are no known biological control agents. Effects of fire management have not been studied.

The methods described below should be conducted before the plant has gone to seed. Wavyleaf grass produces a small sticky seed that is easily transported. Seeds have a very high rate of germination.

New seedlings can germinate and produce seed following treatment of established plants. In addition, seeds may germinate over at least a few months in the spring and summer. Thus, a second treatment during the same growing season is strongly recommended. A third treatment is ideal. Because seedlings emerge at various times, and plants are never as tall as Japanese stiltgrass, it is recommended that land managers treat stiltgrass in

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areas where wavyleaf is known or suspected. In mid to late summer, the stiltgrass will be much taller than the wavyleaf, which makes seeing wavyleaf difficult.

Treatments must be repeated at each site for at least three consecutive years. No study has been conducted on seed bank viability. Field observations suggest that wavyleaf seeds survive at least three years. Conduct monitoring for several years after treatment to ensure eradication.

If resources for conducting control are limited, focus management efforts on eradicating wavyleaf patches near trails or roads.

Hand-pulling

Hand-pulling has been shown to be somewhat effective in controlling small patches of less than a few hundred square feet. Remove as much of the root system as possible, as wavyleaf can re-sprout from root fragments. If you have a few plants, they can be draped over branches or logs and left to dry out and die. Large quantities of plants in seed should be bagged and removed from the site. Bags can be placed in the sun for a few hours to ensure that the plants die and to prevent regrowth from plant fragments. The site should be revisited for several years to ensure that all plants have been removed. Only hand-pull plants in seed if absolutely necessary.

Herbicide Treatment

Spray herbicide onto the leaves using a 2 percent solution of glyphosate (the active ingredient in commercial brands such as Roundup or Rodeo).

Treatments should be applied during the early growing season before the plants have gone to seed. A second treatment later in the growing season ensures that newly germinated seed and plants that were missed in the first treatment are sprayed.

At some sites, wavyleaf and Japanese stilt-grass (*Microstegium vimineum*) are mixed together. If a treatment goal is to not waste herbicide on stiltgrass, treat the wavyleaf early in the growing season. Stiltgrass matures later in the growing season. If treatment occurs before the stiltgrass has matured, wavyleaf will receive more of the herbicide.

If two treatments are being applied during the season, the first treatment should be from the end of May to early June. The second treatment may be applied six weeks later, from late June to early July.

Wavyleaf may begin producing seed between mid-July and early August. Avoid contact with the plants during this time. Wavyleaf spreads readily from seed.

Preventing Spread

Decontamination should be done on-site to prevent the spread of seed. Clean soil from boots and shoes. Remove seeds from clothing using lint-rollers or duct tape. Clean any equipment and gear, including tires, which may have come in contact with plants in seed or soil in a wavyleaf grass patch. If you must work within a patch that has gone to seed, consider wearing rain gear or Tyvek to reduce the chance of moving seeds.

SOURCES

Invasive Plant Alert: Wavyleaf Grass
<http://www.dcr.virginia.gov/natural-heritage/document/fswavy.pdf>

Wavyleaf Grass Public Map
<http://vdcr.maps.arcgis.com/apps/webappviewer/index.html?id=ff016c3dcd1c4926bec2644ab2c19816>

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