Invasive Species Update

Garlic Mustard (*Alliaria petiolata*)

Garlic mustard is a high priority invasive species in Illinois. Large infestations of this low-growing herbaceous flowering plant limit growth and productivity of native plants and threaten the long-term health of forests limiting how we enjoy them now and in the future.

- **Status: Highly invasive.**
- Produces many seeds and spreads quickly.
- Grows densely and crowds out native plants.
- Monitor forests yearly to prevent infestations.
- Management options: Hand pulling, prescribed burns, herbicide.

Garlic mustard harms Illinois forests

Garlic mustard's early spring growth can quickly cover the forest understory. Infestations take away light, water, and nutrients from wildflowers and tree seedlings, threatening insects, wildlife, and future forests. Large infestations of garlic mustard reduce our ability to enjoy beautiful wildflowers, watch birds, harvest timber, hunt, and spend quality time in lush, diverse forests.

Stop the spread of invasive species

Keep garlic mustard out of your forest: If visiting other properties, stay on established roads and trails and clean boots, tires, and horse hooves before returning to your property.

Monitor for invasive species regularly: Make it a habit to watch for invasive species at least once a year in woodlands. Look for garlic mustard along forest edges, creeks, trails, and in disturbed areas. Mark the location of plants using an app or flag.

Work with neighbors: Discuss your concerns about invasives with neighboring property owners and plan to work together to manage them.

Report sightings: Learn what invasive species are in your area and report sightings with the EDDMaps app or online at www.eddmaps.org.

Garlic mustard spreads easily and is hard to remove. Photo: Chris Evans.

How to identify garlic mustard

Garlic mustard has a two-year growth cycle, see page 2. First- and second-year plants will grow together and rotate dominance every other year. It is easiest to identify in spring when plants flower.

How to manage garlic mustard

In Illinois, there is a 6- to 8-week window in spring to control second-year plants. Removing garlic mustard is a multi-year process focused on preventing seed production. Consult with an Extension educator to develop a strategic plan.

Mechanical removal

Remove plants after stalks are produced and before it flowers. Do not attempt removal if the plants are dry and seeds are falling out.

Hand pulling: This is the most common method, but is labor intensive. These shallow-rooted plants are easy to pull out when they bolt. Pulling works for small infestations, or for a lot of people, such as a volunteer event. Grasp stalks at the base and tug to remove the root. Plants with flowers or fruit should be put in bags and thrown away.

Mowing/Cutting: Works for large infestations. Cutting stalks at ground level eliminates seed production, unless stalks have formed seedpods.

YEAR 1

DORMANCY
Fall - Spring

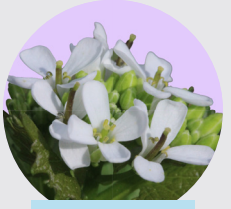
SEEDS GERMINATE
February - April

BASAL ROSETTES FORM
May - June

BASAL ROSETTES GROW
September - March

YEAR 2

STALKS BOLT
March - April



FLOWERING
April - July

SEEDS FORM
May - June

SEEDS RELEASED
May - July

PLANTS DIE BACK
July - August

YEAR 1: Seeds need a cold dormancy of at least 8 months. Most seeds germinate in spring, as early as February, with some going until fall. Seeds can survive in the soil up to 10 years. Plants grow into multi-stalked clusters of low-growing basal rosettes. Leaves are kidney-shaped with rounded scalloped edges that smell like garlic. **YEAR 2:** In the spring, basal rosettes bolt and bloom. The flowering stalk is 1-to-4 feet tall with triangular, toothed edged leaves. Its flowers have four white petals. Plants form seeds in slender pods. As plants die, they dry and release an average of 360 small black seeds in early summer.

Prescribed fire

In forests adapted to fire, a mid-intensity prescribed burn in spring can control large infestations and stimulate native plant growth. Always follow regulations and safety protocols. Explore resources at go.illinois.edu/PrescribedFire. Use a handheld propane torch for spot treatments; fire will prompt germination. Treat new seedlings with herbicide.

Chemical control

Herbicide is a low-cost, low-labor option for large infestations. Always read and follow product labels before use. Avoid impacting desirable native plants; apply enough herbicide to wet the foliage, but not so much that it drips off. Those who apply pesticide on public lands must be licensed. Learn more at extension.illinois.edu/psep. Glyphosate or Triclopyr can treat seedlings, rosettes, and bolting plants.

Applications during or after flowering reduce viable seed production but are not 100% effective.

- **Glyphosate,** 1% to 3% v/v diluted in water.
- **Triclopyr,** 1.5% v/v diluted in water.

More resources

Explore more about garlic mustard at go.illinois.edu/GarlicMustard.

Contact your local Extension expert at go.illinois.edu/ExtensionOffice.

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