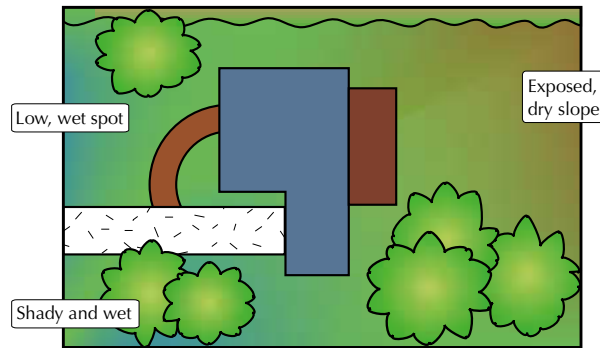


Know Your Lawn

Before making any weed management decisions, sketch a map of your property and locate any problem areas.



What weeds are present?

Is there evidence of a drainage problem, such as puddles that remain after a rain?

Where is the turf thin or damaged?

Are there trees and shrubs competing with turf for water and sunlight?

Are there compacted areas, such as footpaths, where a brick or stone walkway could be placed?



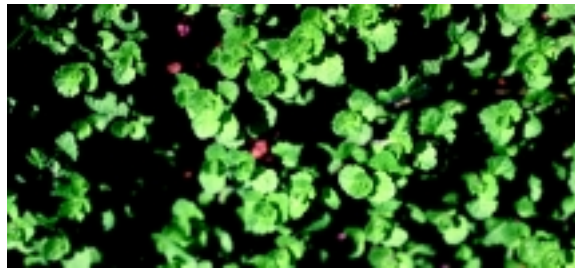
Smooth crabgrass—an annual warm-season weed found throughout the United States and Canada. Flowers resemble the digits on a hand. Germinates in several flushes throughout the late spring and summer.



Ground ivy—a perennial weed with long, creeping square stems that root at the nodes. Rounded leaves have toothed margins. Forms dense prostrate patches, especially in damp, shady areas.

Plant the Proper Grasses

Base your selection of turfgrass mixture on intended use of the turf, climate, and availability of light and irrigation. In New York State, cool-season grasses generally grow best, such as Kentucky bluegrass, fine and tall fescues, and perennial ryegrass. Choose a good quality seed mixture of species that are well adapted to the soil conditions at your site. In shady, moist, or acid conditions, other groundcover perennials might be a better choice than grass.



Slender speedwell—a creeping perennial weed with attractive blue flowers in the spring and small round leaves with scalloped margins. Reproduces in New York primarily by underground stems. Plants remain green year-round.



Prostrate knotweed—a summer annual weed that trails along the ground with branching stems and small leaves. Reproduces by seed, and is one of the first summer annuals to emerge. Plants form a tough, wiry mat in areas of low fertility and in compacted or other stressed sites.

Determine Your Weed Tolerance

Personal values, uses of the site, and level of maintenance will dictate the quantity of weeds you permit at a specific site. Focus your management strategy on weeds that you cannot tolerate. Some homeowners enjoy wildflowers in their lawns. You can purchase low-maintenance blends of grasses, violets, clovers, yarrows, and other flowers that thrive on biweekly mowing from a variety of seed sources (see Resources).



White clover—a common perennial weed that reproduces by creeping stolons and seeds. Stems are prostrate, leaves are in threes, and flowers are pinkish white and fragrant.

Mow, Fertilize, Irrigate

Mow regularly at the appropriate height to minimize weed pressure. In New York State, an ideal mowing height for most grasses is 3 inches. Mowing often and at the optimal height encourages healthy growth and deep rooting of grasses. Most weeds cannot tolerate frequent mowing.

Apply a balanced fertilizer two weeks after the last mowing in the fall to optimize hardiness and spring greening. Never apply fertilizer after the ground is frozen; it is likely to run off. Around Memorial Day, you can apply a smaller amount of fertilizer, if it is needed. Before you select a fertilizer, have your soil tested to determine your lawn's specific fertilization needs. Also, test the pH of your soil; most grasses do best in neutral to slightly acid soil (with a pH of 6.5-7.0).

Most lawns do not need to be watered regularly. Cool season grasses can survive with as little as $\frac{1}{4}$ inch of water every three weeks. Inappropriate watering—either too much or too little—weakens the grass and makes it more susceptible to weed problems.



Broadleaf plantain—a perennial weed found in all turf conditions. Has broad oval leaves with parallel venation. Reproduces by seed and forms a short taproot.

**Maintaining a healthy lawn
is your best defense against weed infestations**

Managing Weeds

Identify which weed species are present before selecting a management strategy. Most weeds are not problematic, while others can be invasive. Your best strategy to prevent a weed invasion is to maintain a healthy lawn.



In areas where the turf is thin, overseeding (planting new seed on an existing lawn) will help grasses out-compete weeds. Prepare the area to be seeded with close mowing or aerification to expose or loosen soil, and ensure that seeds and soil make contact. Irrigate to aid early development. Consider fertilizing once grasses are established.

Remove sources of weed seeds. Many weed problems occur as a result of seeds drifting from adjacent sites as well as from weeds already present in the lawn. Thistle and millet seed bird feeders are a frequent source of these weeds.

Many weeds can be controlled with herbicides during early development, while some are more easily pulled by hand. Many hand tools exist for removing specific weeds.

Susceptibility to herbicides varies considerably and most weeds are better managed by spring and fall applications. Check the Cornell Guidelines for management strategies or the names of herbicides that will be effective for the weed species present at your site. Time, money, and product will be wasted if herbicides are used improperly.

Dandelion—a perennial composite weed that reproduces by wind-blown seed and is easily recognized by its bright yellow flowers in late spring and summer.

Are Herbicides Really Necessary?

Before using herbicides consider the following:

Effectiveness—

- Are weeds at the right growth stage? Most herbicides are designed to work within a specific time frame. For example, preemergence products are effective only before germination. They are not effective on established weeds.
- Do you have the proper equipment? Is it calibrated to deliver the correct amount of product? Is the product appropriate for your weeds? Be sure to check the label.

Environment—

- Are sensitive plant species nearby? Valuable plants can be harmed or killed if they come into contact with nonselective herbicides.
- What are the possibilities for off-site movement? Soil erosion, water, and wind can carry herbicides off-site, making them less effective and a source of pollution.
- Are weather conditions appropriate? Avoid applying herbicides during windy conditions or just before a heavy rain; drifting herbicides can cause injury to valuable plants or contamination.

Economics—

- What will the cost be? How many applications will be necessary? Many persistent weed problems can be solved more efficiently by using different management strategies (e.g., choosing better-adapted grass varieties and planting ground covers that suppress weeds).

If you decide herbicides are necessary, reduce your risk of exposure by wearing protective equipment, as indicated on the label. Your local Cornell Cooperative Extension office can help you with information on particular products and how to use them safely and effectively.

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Resources

- Nichols Garden Nursery, 1190 N. Pacific Hwy., Albany, OR 97321 (541-928-9280). Offers "Ecology Lawn Mixtures."
- Prairie Nursery, PO Box 306, Westfield, WI 53964 (800-476-9453). Offers low maintenance and "no-mow" lawn mixes.

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The New York State IPM Program



We encourage people to adopt a sustainable approach to managing pests, using methods that minimize environmental, health, and economic risks. For more information: NYS Integrated Pest Management Program, 1-800-635-8356; NYSAES, Geneva, NY 14456; <<http://www.nysaes.cornell.edu/ipmnet/ny>>. For additional copies of this brochure (IPM No. 608) contact your local Cooperative Extension office or the NYS IPM Program.

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