

Bronx Green-Up • THE NEW YORK BOTANICAL GARDEN



Bronx Green-Up, the outreach program of The New York Botanical Garden, provides horticultural advice, technical assistance, and training to community gardeners, school groups, and other organizations interested in improving urban neighborhoods through greening projects. At the heart of Bronx Green-Up are the community gardens of the Bronx and a compost education program.

Maintaining a Lawn Area

Basic Lawn Maintenance

Maintaining a quality lawn area involves more than irrigation, fertilization, and pesticide applications. Healthy grass demands proper mowing techniques, occasional de-thatching, and aeration, in addition to fertilization and pest management. Knowing when and how to apply these cultural practices will lead to a dense, vigorous grass area.

Mowing Height

Proper mowing has many benefits. Mowing height depends on the grass species, for example:

- **Kentucky Bluegrass** or any mix containing Kentucky bluegrass, should be mowed at 2.5”–3.5”
- **Perennial Ryegrass and Fine Fescue** should be mowed at 2.5”–3.5”
- **Tall Fescue** should be mowed at 3”–4”
- **Zoysia** should be mowed at 1”

Mowing below the optimum height restricts root growth and increases susceptibility to damage from weeds, insects, disease, drought, and traffic. Shady areas should be mowed at .5”–1” higher than the recommended height.

Mowing Frequency

- Mowing frequency depends on how fast the grass is growing. Some lawns need mowing twice a week during spring and fall and only once every two weeks during summer. Mow frequently enough so as not to remove more than 1/3 of the leaf blade during a single mowing.
- Avoid mowing during midday when the temperature is above 90°F and the soil is too dry, because you may damage the grass. We recommend mowing the grass in the morning or in the evening when the temperature is lower.
- Remove grass clippings if they are thick enough to shade the grass underneath; otherwise leave them on the lawn to decompose, as the clippings will add nutrients.

Mower Maintenance

Clean the mower after each use and sharpen the blades at least two to three times a year. Cutting the grass with sharp blades results in a cleaner and healthier cut, leaving a more attractive and vigorous lawn.

Thatch Control

- Thatch is a tightly intermingled organic layer of dead and living shoots, stems, and roots that accumulate just above the soil surface. Thatch accumulation is due to over-fertilization, over-watering and/or soil compaction.
- A small amount of thatch is desirable because it moderates soil temperatures and provides a cushion on the soil surface. Too much thatch interferes with water and air movement, reduces fertilizer and pesticide response, and increases disease and insect activity.
- You can help prevent thatch build-up by watering properly, careful aeration, and avoiding over-fertilization.

Aeration

- Aeration is the mechanical removal of soil cores to a depth of two to three inches. Aeration relieves soil compaction, improves water and air movement in the soil, increases root growth, and greatly improves overall grass health. Aeration is especially important for compacted areas.
- Aeration is most effective when larger cores are removed and when 20 to 30 holes are punched per square foot. For large areas you can rent a machine called an aerator; smaller areas can be done with a garden fork.

Watering

- Most cool season lawn grasses can survive drought conditions by going into summer dormancy.
- In early summer, lawns should be watered when signs of moisture stress appear: this includes change in color to pale gray-green or yellow green.
- Water the lawn thoroughly with about one inch of water. Deep watering encourages healthier root growth. The best time to water a lawn is in the early morning, avoid watering later in the evening (after dew develops) as this will favor disease development.

Fertilization

- The proper fertilizer should be selected based on soil test results. A properly fertilized lawn will need fewer pesticides. Soil pH and fertility, especially nitrogen and potassium, influences a lawn's ability to resist grass pests.
- **Soil testing** is the first step in determining fertilizer requirements of a lawn. The soil pH should be maintained between 6 and 7. Plant nutrients are more available and beneficial microorganisms more active within this range. Apply lime or sulfur according to soil test recommendations to modify the pH. Apply fertilizer according to what key nutrients may be lacking.
- The best time to fertilize you lawn is in the fall. If fertilized twice, it should be done in the spring and early fall. Do not fertilize during a drought.
- Compost spread evenly and in small amounts is also a beneficial fertilization practice. Grass clippings add nutrients too.

Pest Management

The best way to reduce damage from lawn pests is to keep grass healthy. Still, weeds, diseases, and insects may occasionally become pests in your lawn.

- **Weeds:** To prevent weeds use a balanced fertilizer program and proper mowing techniques so lawn grasses will out compete weeds.
- **Diseases** can be minimized through the use of resistant varieties and proper cultural practices. Any practice that encourages deeper rooting will make the lawn more tolerant to diseases, including proper pH and fertilization, proper mowing and watering during the day.
- **Insects** may feed on grass blades or on the roots of lawn grasses. The surface feeders include chinch bugs and sod webworm. Root feeding insects include several different white grub species. Maintain proper soil moisture and fertility levels, reduce thatch build-up, and also use resistant cultivars to manage these insects. Adding perennial borders and reducing or eliminating pesticide use will welcome beneficial insects (such as lady beetles, praying mantids, parasitic wasps) as well as birds, which prey on insect pests.

Integrated Pest Management (IPM)

Integrated Pest Management (IPM) is a mix of ecologically based pest control practices that seek to reduce reliance on chemical pesticides. IPM involves:

- Managing pests rather than eradicating them.
- Relying on non-chemical measures to keep pest populations low.
- Selecting and applying pesticides in a way that minimizes adverse effects on beneficial organisms, humans, and the environment.

We strongly recommend an IPM approach in maintaining a healthy and vigorous lawn area.