

HOME GROUNDS FACT SHEET



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Fertilization and Care of Long Island Lawns

The success of sustainable turf quality depends on excellent growing conditions, good soil, and use of cultural controls to reduce many turf pests. Sustainable lawn care begins with proper nutrition. Too much or too little fertilizer can result in poor turf that is susceptible to pests or fertilizer components that contaminate the environment. To insure that your lawn can use the fertilizer applied to it, your pH should be in the right range. A pH between 6.0-7.0 means that almost all nutrients in the soil will be available for uptake by your turf.

1. Most home lawns on Long Island require 2-3 pounds of nitrogen per 1000 square feet/year.

This will have minimal impact on the environment and water quality, and will still provide sufficient nitrogen to preserve turf density. Because turf does provide a buffer for the environment and slows down the movement of water and nitrates, a loss in density due to under or over fertilization or to pest problems can have an adverse impact on the environment.

The nitrogen recommended is 50-70% slow release and should be delivered as applications of 0.5-1 pound of actual nitrogen/1000 square feet between April and October. For sample application programs see table below:

APRIL	MAY	SEPTEMBER	OCTOBER
0.5 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.
0.5 lb/1000 sq. ft.	1 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.
0.5 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.	1 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.
0 lb/1000 sq. ft.	1 lb/1000 sq. ft.	1 lb/1000 sq. ft.	0.5 lb/1000 sq. ft.

- a. Some soil types and some turfgrass types require up to three pounds of actual nitrogen per 1000 square feet/year, particularly if the clippings are collected. We do not recommend collection of clippings. Newly seeded or sodded areas may require up to three pounds of nitrogen per year in order to prevent failure.
- b. In addition, Best Management Practices should always be used such as leaving clippings on the lawn, testing soil pH, organic matter and nutrient levels, and proper water management. Shallow, frequent irrigation leads to poor turf quality and to nutrient leaching. Lack of organic matter makes it difficult for soils to hold on to nutrients and to maintain structure. Deep, infrequent irrigation to a

depth of 6 inches is best for turf. This means watering (or rainfall or a combination of rainfall and irrigation) 1-2 inches of water per week on average depending on season and soil type. This water should be delivered as a single irrigation or on very sandy soils split into two irrigation events of 0.75 inches each. Every irrigation system is different. To determine how long you must run an individual irrigation system to attain the required amount of water, place 1" deep cans (tuna or cat food cans work well) in individual zones and time how long it takes the system to fill them. A difference of 30% in the time it takes to fill the cans among zones indicates a serious need for a system overhaul.

C-1-25 TSY revised RT 2/10

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2. Rates of actual nitrogen required on mature turf depend on the following:

- a. **Clippings:** After 7-10 years of leaving clippings, you will be able to count on the nitrogen from the clippings supplying about a third of the turf's nitrogen needs per year.
- b. **Irrigation and water management:** Water has a critical role in leaching; when water is supplied to keep grass growing actively through a period of natural dormancy during summer stress, more nitrogen will be required for growth and repair. Additionally, excessive irrigation leads to leaching.
- c. **Mowing height:** We suggest a 3" minimum mowing height to improve health and quality of the lawn; constant low mowing removes stored nitrogen and stimulates grass growth from the crown and cut tip, therefore increasing nitrogen needs.
- d. **Compaction and drainage:** These limit nitrogen uptake by roots and so contribute to wasted nitrogen that cannot be taken up by the grass plants and ends up washing through the soil and into groundwater.
- e. **Visual inspection:** Rely on visual clues such as color to decide if fertilizer is necessary.
- f. **Grass type:** Generally, the most maintenance free types of grass for Long Island are tall fescue and fine fescue. If you have dry, acid soil, shady conditions, and little foot traffic, fine fescue is a good choice. It does well with only 1 pound of actual nitrogen/1000 square feet each year, and if soil quality and pH are maintained properly, may thrive on less. It also dislikes excessive irrigation and is extremely drought tolerant due to its narrow leaves. Fine fescue forms dense turf that can exclude gaps for weed growth. Tall fescue is another good choice for Long Island because its deep, massive root system allows it extra drought tolerance, extra tolerance to feeding by grubs, and extra ability to access and absorb nutrients in the soil. This means less water and fertilizer are necessary and pest damage from root feeding grubs is less obvious. Kentucky bluegrass and perennial ryegrass require more fertilizer and water than tall and fine fescues. However, small amounts of Kentucky bluegrass are useful in lawn mixes because they will spread to patch holes and gaps. Ryegrass is useful for patching areas in sun.

3. Calculating how much of the nitrogen is slow release.

- a. Every bag of fertilizer has a hyphenated set of three numbers on the label, ex., 20-5-10. These numbers represent nitrogen, phosphorous and potassium (in that order) present in the fertilizer.
- b. It is simple to know whether your fertilizer releases its nitrogen slowly. Look on the label for the language "slowly available nitrogen" or "water insoluble nitrogen" (WIN), or something similar. There is also a number associated with this.

- c. Divide the first number of the three hyphenated numbers (nitrogen) that you found in "a" above by the water insoluble nitrogen (or equivalent language) number you found in "b" above.
- d. An answer above 0.29 is a slow release product, 0.29-0.15 a moderate release product, 0.15 or below a quick release product.
- e. A good quality *slow release* fertilizer has a calculation of 0.35 or more.

4. Soil Nutrient Testing

Always use a registered soil lab. Sometimes labs use different types of tests to determine the level of a nutrient so results can vary depending on the type of test, or the form of the nutrient the lab is testing for. Just because a nutrient is in the soil does not mean it is available to the plant. That availability may depend on other factors such as maintaining the correct pH. If you change soil test labs, ask the lab manager how soil test values and recommendations may vary from your previous reports. Try to stick with one lab to avoid confusion and variability in testing and test results.

5. Mature turf needs no additional phosphorous.

Look for the lowest amount or no phosphorous formulation of turf fertilizer. Seedling turf or newly sodded turf requires phosphorous.

6. When spreading fertilizer, keep away it from impervious surfaces such as sidewalks and asphalt.

- a. If fertilizer lands on such surfaces sweep it up and remove it.
- b. Many spreaders come with side shields to direct the flow or they can be purchased inexpensively.
- c. Grass clippings blown or swept into storm drains contain nitrogen which can pollute water. Keep clippings away from drains, sumps and sewer pipes.

Both Nassau and Suffolk County have legislation regulating the times of year that fertilizer can be applied by professionals and homeowners in an effort to reduce groundwater nitrate pollution. Both the Nassau County Law and the Suffolk County Law prohibit lawn fertilization at certain times of the year. In Nassau, this period is November 15–April 1 and in Suffolk, November 1–April 1. There are other provisions, restrictions and exceptions in these laws. For complete information, visit the sites listed below.

◆ <http://legis.suffolkcountyny.gov/>
Local laws Chapter 289

◆ www.nassaucountyny.gov/agencies/Legis
Local law 11 (2009)

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