



# TIMING FERTILIZER APPLICATION ON LONG ISLAND

## Green Practices for Green Grass

### Overview

Grass can only absorb fertilizer when it is actively growing. Turfgrass plants stop growing - become dormant - when the soil temperature is below 55°F or in the heat of the summer. Cooler soil temperatures also slow the bacterial action that makes some fertilizer nutrients available to the plants. Fertilizer not absorbed by grass leaches into the subsoil and makes its way into groundwater or runs off into surface water, where it acts as a pollutant, contributing to algal blooms and poor water quality.

### Spring Application

The University of Connecticut Turfgrass Nutrient Management Bulletin of 2017<sup>1</sup> describes why the timing of nitrogen applications is important to reducing nitrogen losses: *Allow turfgrasses to come out of dormancy in the spring before applying fertilizers. Soils should be allowed to warm and dry out before fertilization. Application of nitrogen fertilizers to dormant or semi-dormant turf in the spring ... increases the risk of nitrogen loss.*

In the spring, soil temperatures on Long Island typically reach 55°F by April 1<sup>2</sup>. In the absence of measuring soil temperature, mid-April is a good start date if fertilizer is found to be necessary.

### Summer Application

Fertilizer application is not recommended during the summer when heat and drought stress turfgrass leading to low or no growth and minimal if any need for fertilizer.<sup>3</sup>

### Fall Application

The University of Connecticut Turfgrass Nutrient Management Bulletin referenced above also speaks to fall applications: *There is evidence to show that fall fertilization constitutes a high risk for nitrate leaching and that this risk*

#### KEY POINTS

**Careful fertilizer use is important to protect Long Island's water.**

- Pay attention to soil temperatures – grass must be active to benefit from fertilizer.
- When using slow release fertilizer allow adequate time for grass to absorb the fertilizer before going dormant in the fall.
- Apply fertilizer only within dates set by state and local regulations.

<sup>1</sup> New England Regional Nitrogen and Phosphorus Fertilizer and Associated Management Practice Recommendations for Lawns Based on Water Quality Considerations (Vol. B, Ser. 0100, pp. 1-10, Rep.). (2006). CT: University of Connecticut.

<sup>2</sup> Suffolk County Cornell Cooperative Extension Soil Temperature Reports 2010-2016

<sup>3</sup> Portmess, R., Petrovic, A.M. *Nitrogen Fertilizer Management of Turfgrass in Suffolk County*, Cornell University, College of Agriculture and Life Sciences. Available at: [http://healthylawns.suffolkcountyny.gov/bmps/FinalReport\\_Edited\\_01\\_19\\_11.pdf](http://healthylawns.suffolkcountyny.gov/bmps/FinalReport_Edited_01_19_11.pdf)

*increases with later fall applications.* This is because lawns become dormant and stop absorbing fertilizer and microbial activity is reduced when soil temperature drops below 55°F in the fall.

On Long Island, soil temperatures typically do not drop below 55°F until sometime in November<sup>4</sup>. Plant growth, however, slows down earlier in the fall. Consequently, fall fertilizer applications, especially slow release fertilizers, must be applied early enough for the plants to absorb and utilize it before they go dormant. Suffolk County's Healthy Lawns Clean Water guidance suggests early September for fall fertilizer application.

## Application Timing Restrictions

New York and Long Island counties have restrictions on fertilizer application timing designed to make sure the fertilizer is absorbed by the grass and does not end up polluting the environment.

- New York State – no application between December 1 and April 1
- Nassau County - no application between November 15 and April 1
- Suffolk County - no application between November 1 and April 1

## Apply Fertilizer Carefully

- Grass must be actively growing to benefit from fertilizer. In the absence of measuring soil temperature, mid-April is a good start date if fertilizer is found to be necessary.
- Application in early September should allow adequate time for grass to absorb the fertilizer before going dormant.
- Apply fertilizer only within dates set by state and local regulations.

## Workgroup Survey Responses

A workgroup of stakeholders was convened by the NYS DEC. The group met and was surveyed by DEC about current fertilizer use and ways to improve proper fertilizer use on Long Island. Survey respondents agreed that fertilizer application is most effective when attention is paid to plant and soil science (i.e., requirements and soil temperature). Work group responses are available at NYS DEC's website here: <https://www.dec.ny.gov/lands/108654.html#Fertilizer>.

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<sup>4</sup> Suffolk County Cornell Cooperative Extension Soil Temperature Reports 2010-2016