

May 27, 2019

Volume 20:5

Gazing in the Grass

Frank S. Rossi, Ph.D.

A stark North to South temperature gradient has become established in the Northeast US with the NYC Metro Area as the transition area. Below normal temps North and above normal to the the South. Growing degree days (GDD) exhibit this pattern as well, with Northern locations 1-2 weeks behind the long term average and Southern locales 1-2 weeks ahead. Recent warmer temperatures in the the North have led

to increased soil temperatures and a surge of top growth. Some slight drying conditions have occurred over the last few weeks in small swaths through the Hudson Valley, NY into Southeastern CT, however, rain events are dropping substantial amounts of precipitation in bursts and in daylong soakers. The above image from Ian Daniels, Class A-Golf Course Superintendent @ Teugega Country Club demonstrate the challenges faced by turfgrass managers from last Autumn now into this Spring. The persistent moisture, poor drainage, and now **warm temperatures are stimulating vigorous top growth top growth, regardless of fertilizer use, and often greater on older turf areas.**

Warm temperatures and adequate soil moisture create an ideal environment for the mineralization of Nitrogen into *soluble* forms from surface organic matter. The *soluble* nitrogen moves within the soil solution, drawn to grass roots by aboveground transpiration that is increasing as the sun rises in the sky (*last week Southern NJ had ET rates >1.1"/week).

The release of soluble N from soil organic matter is a good indication that the soil is functioning properly and this will significantly stimulate top growth over the next two to three weeks. Supplemental N should be added at this time **only** if turf is thin and prone to weed invasion, traffic stress is present and turf thinning occurs, or there is widespread yellowing and little top growth in the stand. Routine applications of Spring N must be more thoughtful as public pressure grows to reduce nutrient loading in the environment. Consider delaying application, using low rate, and using more slow release forms.

Golf and sports turf managers are regularly measuring clipping volume to improve the precision of N use for traffic stress and playing surface performance. For more info on the Twitter platform, visit [#clipvol](#).

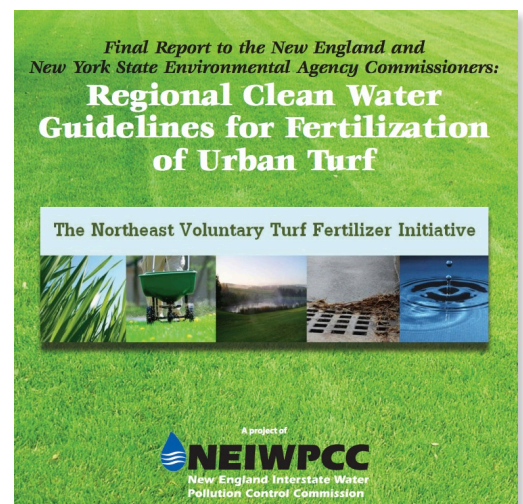


The surge of top growth in urban grasslands (lawns) often leads to excessive clipping volume that accumulates on the lawn surface. The clippings are rich with nutrients best returned to the soil (A Good BMP), however uniform dispersal without clumping is difficult. Mulch mowers are often overwhelmed with the clipping volume and leave clumps. These clumps of clippings could be dispersed further manually to maintain clippings on lawn. Finally, while not best, harvesting the clippings and incorporating into compost to avoid clumps that shade and burn spots in the lawn.



Clippings dispersed onto paved surfaces that are not collected and left to degrade is tantamount to the pollution of surface water bodies. In some communities there are fines assessed for leaving the clippings on the pavement. It is not uncommon to see the above image with a blower directing the clippings down the drain! A study from the University of MN concluded that the regular deposition of lawn clippings onto pavement in the urban environment, combined with pet waste, accounts for 11-36 percent of household waste that contributes to water quality issues.

As public pressure on fertilizer and chemical use increases, it is important to realize the challenges landscape professionals face working in heavily urbanized environments. Increasing scrutiny of fertilizer use, especially N requires the industry to recognize the environmental stewardship of nutrient use and balance this with customer satisfaction, i.e., what is viewed as the dark-blue green, dense uniform lawn. Good information is available for nutrient management on urban turf from the New England Interstate Water Pollution Control Commission @ <http://www.neiwpcc.org/turffertilizer/turf-docs/finalreport.pdf>. This publication lists 33 guidelines for proper use of fertilizer in urban areas for lawn care.



The golf turf industry in New York State published Best Management Practices for water quality protection @ <http://nysgolfbmp.cals.cornell.edu/> in 2014. These BMPs are good for all in the industry to review and incorporate into your staff training, product selection and application. Golf courses and large sports field complexes do not have pavement as in urban environments, but often have adjacent surface water bodies. In these cases, maintaining adequate buffers around water bodies is critical to avoid directly discharging fertilizer into water. Additionally, much like lawn clipping dispersal on pavement polluting water, equipment wash areas can pose significant risk to surface water if wastewater is not properly contained or discharged. Low cost wash pad installation at Locust Hill CC in Rochester, NY a good example of BEST in BMPs. 