

Gazing in the Grass

Frank S. Rossi, Ph.D.

Cooler temperatures did not entirely bring relief to persistent heat stress. This was the fourth consecutive week this season where the heat stress along the I-95 corridor has been high risk, i.e., greater than four consecutive days with the sum of temps and humidity in excess of 150. Moisture stress conditions are improving slightly and expected to improve dramatically for the 33 percent of the Northeast identified in some form of drought. Additionally, the USDA Topsoil Moisture Map at our [FORECAST](#) website indicates 70-85 percent of topsoil in the Northeast is short/very short on moisture compared to the 10 year average of 20-30 percent. Of course to the south end of the



Stress exposes weakness:
Irrigation System Function

region, excess moisture is the stress exposing weaknesses in turfgrass management systems such as drainage, excessive surface organic matter accumulation, focused traffic, soil compaction, etc. This is all leading to significant abiotic stress that further complicates resistance to pest issues and recovery from existing injury and traffic.

Excess moisture is on the way for many this week with some expected to receive 2-4" of precipitation. High humidity and warm conditions will increase risk of foliar pathogen issues due to persistent leaf wetness periods. Wet soil conditions will lead to higher soil temperatures that will further challenge root function and overall plant growth. Soil management is more vital now that it remains somewhat under our control relative to traffic. Consider limiting maintenance traffic to wet soils as well as play on saturated recreational surfaces for golf and sports. Raise heights of cut to extend mowing intervals when wet soils will not sustain mower weight, leading to rutting and soil compaction issues.

Reports from the Central Midwest eastward to the MD coast confirm what is coming to the Northern areas over the next few weeks with persistent warm, wet soils and warm humid air. Turf will begin to struggle with black layer (typically metal ions such as iron that are in a reduced form under anaerobic conditions) as well as root pathogens that are normally weak, but now will exploit plants weakened from abiotic stress. Consider all possible means to reduce turf stress over the next three weeks while summer stress conditions prevail. For sports turf professionals expected to prepare playing surface for August training camps consider delaying aggressive surface renovation under wet conditions. Consider rolling instead of mowing. Keep in mind that returning height of cut to playing surface height will require more frequent mowing as weather conditions permit. Time to play defense again!



Frequently Asked Questions (FAQ):

My sports fields have responded slightly to the recent rains and I now have a “Water-Wheel”. What is best preparation program for fields that get used only Spring and Fall with August training camps starting in two weeks?

Normally it would be good to have gotten some rainfall to loosen up the dry soil that might help water applied from the water cannon to penetrate more deeply. However it appears heavy rains are expected for much of the Northeast this week. Regardless the key point is wetting the soil deeply at this time so it will allow for surface drying for play but also enhance fertilizer effectiveness and even seed germination. Be sure to monitor soil moisture as heavy rainfall often runs off more than it replenishes soil moisture.

Cultivation practices for use *between* playing seasons

Adapted from Dave Minner, Iowa State University

Match cultivation goal (below) with the tool (right)	Hollow tine 4-inch	Solid tine 4-inch	Hydro-jet	Shatter tine 4-inch	Shatter blade	Verti-drain	Drill & fill	Slicing	Small slicing/spiking	Vertical mower
Change soil type in top 4 inches by removing soil and back filling with amendment	X							X		
Create large and deep holes or channels that can be back filled with a soil amendment								X		
Remove surface soil layer that was attached to sand-sod during sand-based field construction	X							X		
Promote deep rooting, 8 inches or more			X		X	X	X	X		
Maximum removal of water puddles					X	X	X			
Aggressive fracturing of hard ground (surface to 6 inches deep)				X	X	X				

As soon as the soil is moist or dry enough—not too wet and not too dry, consider some form of cultivation; or more info see (<http://safesportsfields.cals.cornell.edu/cultivating>). Ideally, bringing up some soil that can serve as both a topdressing and seedbed for overseeding. At this point the best seeding option with play in the next two weeks is perennial ryegrass. It is best to select gray leaf spot resistant varieties, but even the resistant varieties can be susceptible to GLS in the seedling stage so if pesticide use is allowed consider treating.

Fertilization is best with products that can supply between 50-75% of the Nitrogen in slow release form to avoid excessive growth at this time, but still encourage the seedlings and existing turf to become more dense. Water then cultivate, seed and feed. When fertilizer begins to release increase mowing frequency. If the ground is able to sustain mower traffic then mow two to three times per week depending on desired height of cut. Generally there is little need to cut below 2” for most scholastic fields. Some collegiate fields can be as low as 1” but use at heights below one inch should consider synthetic surfaces. Consider topdressing and rolling the field if these tool are available as they offer excellent surface stability with little impact on compaction.

The New Normal: Ticks and Mosquitos!

Ticks and mosquitos are widely present in the managed landscapes of the Northeast US. An increasing percentage of these ticks and mosquitos are transmitting serious diseases and require regular personal monitoring and prevention. This is a “New Normal” for those who work in the landscape as well as those who enjoy and recreate. An important educational program is being offered by the New York State IPM Program on Tuesday August 7th at their 4th Annual IPM Conference. Speakers from the Cornell University will discuss reports of new ticks species and global efforts underway with new pests to prevent widespread epidemics. Sessions will focus on implementation of Integrated Tick Management in CT and Mosquito Control Programs in NJ in addition to reports from the NYS Dept. of Health. It is a critical time to be informed about this important topic facing our workforce and marketplace. More information about this program is available at <https://nysipm.cornell.edu/resources/nys-ipm-conferences/breaking-cycle-ipm-ticks-and-mosquitoes/>



Save the Date!

The NY State IPM Program Hosts the 4th Annual IPM Conference:

“Break the Cycle: Integrated Management of Ticks and Mosquitoes”

Tuesday, August 7th 8:30 am-4:30 pm

At the Westchester County Center, 198 Central Ave., White Plains, NY

Admission: \$40, including coffee and boxed lunch.

Come learn about the latest efforts in managing ticks and mosquitoes and preventing vector-borne disease.

Keynote Speaker: Dr. Laura Harrington, Medical Entomologist, Department of Entomology, Cornell University

Plus speakers from NYSDOH, WCSU, CAES and Rutgers University

For more information, contact Jody Gangloff-Kaufmann at jlg23@cornell.edu

