**Advancing the Turfgrass Industry in New Jersey and the World**



Turfgrass Samples at
Rutgers Plant Diagnostic Lab



NEW JERSEY
**TURFGRASS**
ASSOCIATION

## TURF TIP TIME #1 with the NJTA:
### Data for Precision Decision Making

The days of calendar-based scheduling are over. "Saying oh it's Monday, we should do this. Or hey it's July 15, we need to do that ends up being a waste of money and resources," says Richard Buckley, Director of the Rutgers Plant Diagnostic Laboratory. He encourages today's turf managers to take advantage of the wide array of analytics now available.

When to fertilize, how much to irrigate, and what products to use are all decisions that should be made based on statistical evidence, information that is readily available. Some (but certainly not all) specific data turf managers can use include:

- **Product Data:** To avoid using ineffective materials, read university backed research on the products you purchase. One helpful resource for fungicide selection is this paper on Chemical Control of Turfgrass Diseases 2017, published by the University of Kentucky with Rutgers University.

- **Soil Fertility Tests:** To determine nutrient needs, send samples of your soil to local testing facilities. This will help you decide whether to add lime, phosphorus, potassium or other products to optimize growth or control pests. Rutgers Soil Testing Laboratory offers over 30 soil testing options.

- **Diagnostic Testing:** To confirm with scientific confidence if your turf is suffering from a disease or insect pest, send a sample to Rutgers Plant Diagnostic Laboratory or another diagnostic facility in your region.

- **Weather Data:** Tracking and predicting weather can help you to predict the life cycles of insects, diseases, and weeds. Installing a weather station on your property is a relatively inexpensive investment that will capture data, which will help you make decisions on the most effective timing of cultural practices and pesticide inputs. For example, you can use the Smith-Kerns Dollar Spot Model, which uses the five day average temperature (Celsius) and five day average relative humidity to predict the probability of a dollar spot outbreak.

- **Evapotranspiration Rates:** Evapotranspiration rates can be tracked by your weather station and hand held soil moisture meters. This data can be used together to help you make wise irrigation decisions.

- **Growing Degree Day Models:** Growing degree day models can help you control Poa seed heads, schedule plant growth regulator applications, and anticipate the emergence of insect pests.

- **Soil Temperatures:** Soil temperatures inform better scheduling of pre-herbicides or fungicides to control root diseases.

- And the list goes on and on and on!

"Bring precision to your decision making," Buckley says. "There are now ways to measure every aspect of turf maintenance and the more you measure the better decisions you can make."

For best results on your golf courses, athletic fields, and other properties, the combination of experience and data informed decision making can't be beat.

*Weather Station at Rutgers Hort Farm II*
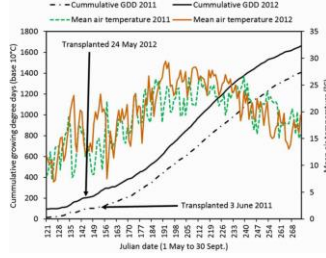

*Sample Graph of Growing Degree Days*


*Stag Beetle Under a Microscope*

**NJTA's TURF TIP TIME Brought to You By:**
## Richard Buckley

A prominent expert in turfgrass diseases and pest management, Rich Buckley runs the Rutgers Plant Diagnostic Lab and Nematode Detection Service at the Ralph Geiger Turfgrass Education Center. With decades of experience working in one of the leading diagnostic labs in the country, he is highly regarded as a leader in the field of turfgrass problem solving.