

Cut Costs with Better Turf Management

Global Soil Survey for Sustainable Turf Gives Superintendents Terrific Tools to Use



Dr. Wendy Gelernter asks turf managers from around the world to take the Global Soil Survey.

Turf managers from around the world are being asked to take part in the Global Soil Survey for Sustainable Turf.

It builds off the introduction last year of Minimum Levels for Sustainable Nutrition (MLSN) guidelines by PACE Turf and the Asian Turfgrass Center. The guidelines for turf soils allow turf managers to reduce fertilizer inputs and costs, while still maintaining the desired levels of turf quality and playability.

Now lead scientists Dr. Larry Stowell and Dr. Wendy Gelernter, both of PACE Turf in San Diego, and Dr. Micah Woods, of Asian Turfgrass Center in Bangkok, Thailand, have launched the Global Soil Survey, a citizen science-style initiative that invites turf managers from around the world to participate in further refining the

MLSN sustainability guidelines.

"Superintendents who tried out the MLSN guidelines were ending up reducing the amount of some of the key nutrients like nitrogen, phosphorous and potassium by 50 percent or even more and still supporting some good turf growth," said Gelernter. "We had superintendents sort of sprinkled all around the globe trying them out. That helped us validate the guidelines a bit and get some reassurance that no one was going to suffer as a result."

"After we got convinced of that we thought now is the time to introduce those on a larger scale and have more people involved in assessing those guidelines and getting further data to validate these things and make them robust so that they will be effective for

all turf types, all climate areas, all kind of soil types, etc.," Gelernter said. "One of the things that spurred us to do this Global Soil Survey was to kind of go mainstream with this and look at hundreds if not thousands of turf managers to validate the guidelines."

Turf managers who participate in the survey gain invaluable information about their own soil nutritional status and where it fits on the sustainability spectrum, while also taking leadership to help their industry become more sustainable.

But the goal of more sustainable turf management has been a double-edged sword for many. While almost everyone agrees in principle that efforts to reduce energy, fertilizer and pesticide inputs is a good idea, there has been too little concrete information on how exactly one goes about practically applying sustainability concepts. That's where the survey, and its goal of helping turf managers to fine-tune their nutritional programs, comes in.

"When we introduced the MLSN guidelines in 2012," Stowell said, "turf managers were surprised to find how low they could go without sacrificing turf quality or playability. We came up with the idea of the Global Soil Survey, because we wanted to expand the use of this low input concept by making it easier and also more fun to implement."

Participants in the soil survey will receive a kit that contains all of the materials needed to package and ship three soil samples from good performing areas of their facility. The samples will be analyzed for about 21 different parameters by Brookside Laboratories, and the data interpreted by Woods and Stowell. The \$250 fee provides a comprehensive report that will also calculate a sustainability index for each major nutrient.

"We will first analyze that data and give people a report for each golf course and facility and tell them what their nutrient levels are right now," Gelernter said. "We are also going to calculate their sustainability index, which is a numerical rating that looks at how close is their current level of soil nutrition to these minimum MLSN guidelines. And obviously the closer they are to that minimum level the better the sustainability index. The further away they are the more distance they have to go to get



How to Take Part

For more information on the Global Soil Survey for Sustainable Turf or to order the \$250 Global Survey Kit, visit the Global Soil Survey webpage at www.paceturf.org/journal/global_soil_survey or the Global Soil Survey Facebook page at www.facebook.com/globalsoilsurvey.

to those minimum levels.”

“Turf managers have really found the index to be useful, because it gives them a numerical way to monitor where they are now and to track how they are improving over time,” Stowell said.

Besides receiving their own personal report, each participant’s data will be added to the already sizable database assembled by the Asian Turfgrass Center and PACE Turf from turf soils sampled from all over the world, thus helping to refine the MLSN guidelines and make them more and more robust. Available on the Global Soil Survey webpage, the guidelines and methods for implementing them will be updated periodically and will be accessible, free of charge, to turf managers, researchers and the public.

“We see the guidelines and the data they are based on as an incredibly powerful resource for turf managers, researchers and students from all regions of the world,” said Woods. “We hope that the Global Soil Survey and the soil nutritional guidelines that it helps to produce is just the first in many participatory efforts that focus on the nuts and bolts of implementing sustainable practices.”

“We see the survey going on in perpetuity,” said Gelernter, “and we will constantly be improving the MLSN guidelines based on the data we receive. It’s a tool to let superintendents know where they are now and then come back six months or a year later and do the same soil tests again to find out how much they have progressed.”

The collective data base has about 17,000 soil samples now, she said. The bulk of the samples in San Diego are from California, Arizona and Nevada. Accumulating several thousands more samples will lead to refining guidelines for turf types in different climates so people can feel safe implementing them wherever they are.”

“We have both always been impressed by the desire of turf managers to be good stewards of the land that they manage,” Gelernter said, “and we’ve also always admired the industry for its emphasis on sharing information for the betterment of all. The Global Soil Survey gives both of those leadership qualities an outlet, and we’re excited to be part of it.” **WT**



Dr. Larry Stowell, of PACE Turf in San Diego, is one of the lead scientists behind the Global Soil Survey initiative.

The advertisement features a large red EarthWay EV-N-SPRED broadcast spreader on a green lawn. A person's legs and hands are visible, pushing the spreader. The spreader has a large red hopper and two large black wheels. The background shows tall grass and a tree. The text "EarthWay EV-N-SPRED" is written in a large, stylized red font at the top left. To the right, the text "The NEW F130 Adaptable Broadcast Spreader System with interchangeable trays" is written in a bold, black font. At the bottom, the text "For information call 1-800-294-0671 or visit www.earthway.com" is written in a bold, black font. In the bottom left corner, the text "patents pending" is written in a bold, black font. In the bottom right corner, there is a logo for EarthWay with the text "MADE IN THE USA" below it.

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