



He's Ready To Fight Those Turfgrass Pathogens

By Lori Ward Bocher

And in this corner, fighting for golf course superintendents and other turf professionals with turfgrass pathogen challenges, is Steve Abler. Weighing in with a brand new Master of Science degree from Virginia Tech, where his advisor was the renowned Dr. Houston Couch, Steve is the new director of the Turf Diagnostic Laboratory at the O.J. Noer Research Facility.

"I really look forward to working with the golf course superintendents and turfgrass professionals in Wisconsin," says Steve, who began his new duties on May 1. "While working in Dr. Couch's lab at Virginia Tech, we received turfgrass samples from throughout the U.S. Analyzing a sample is like working on a puzzle. I enjoy the challenge of trying to figure out what's causing the problem.

"We realize that when you send a sample to the lab, it's not an easy case and you could be getting pretty desperate," he continues. "We really have to be sensitive to that. Jobs could be on the line. I've heard of

superintendents being fired because of something that's not their fault."

Steve has plans for making the TDL as responsive to the needs of its users as he possibly can. But before we get into that, let's get to know Steve a little better. Five years ago he didn't even know there was such a thing as a turfgrass pathologist. Now he's donned his boxing gloves and is ready to help knock out those nasty pathogens. How did he end up in the ring?

Native of Fond du Lac...

Steve is a native of Fond du Lac where his father was a mason and his mother is a secretary. He graduated from L.P. Goodrich High School in 1994 and then attended the UW-Oshkosh where he majored in biology. Why biology? "Mostly because of the classes I took in high school in the conservation area," he answers. "Those classes really interested me. I've always liked the outdoors and thought this might be a

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way to have work related to the outdoors.”

Upon graduating from UW-Oshkosh in January 1999, Steve was quite sure that he wanted to go on to graduate school. “My girlfriend (now his wife) was thinking about a graduate career, too,” Steve explains. “She was looking at Virginia Tech for mycology, the study of fungi. Just by chance her advisor, Dr. Orson Miller, mentioned to her that there was such a thing as turfgrass pathology and that they had one of the best people in the country at Virginia Tech.

“I thought about that,” Steve continues. “That field really seemed to encompass all of my interests in plants, soil, and the environment. And I really love to golf. So I looked up Dr. Couch and discovered that, Wow! he really was one of the experts in the field. I contacted him and he agreed to take me on as a graduate student. And the rest is history. Before Dr. Miller’s suggestion, I didn’t even know there was such a thing as turfgrass pathology. I knew I wanted to earn a Masters degree, but I didn’t quite know in what field.”

Steve was honored to be able to work with Dr. Couch. Why was he chosen over other candidates? “I really don’t know,” he answers. “It might have been that I came from Wisconsin. He always talks about how strong Wisconsin is in plant pathology. And maybe because of my grades; I graduated with honors from UW-Oshkosh. And I did a research project on prairie grass. That might have been another reason.”

At Virginia Tech...

Steve moved to Virginia in January of 1999, started working for Dr. Couch in May, and began as a graduate student in September. He worked as a research assistant all through his four years at Virginia Tech.

The main reason it took him a little longer than usual to get his masters degree is because he ran into a dead end with his first research project. “Originally I started studying Septoria leaf spot,” Steve explains. “That’s a disease that comes and goes every two or three years. There aren’t a whole lot of isolates of it available. After about a year and a half of looking for isolates on turfgrasses - I found it on other things, but not turfgrass - we decided I’d best go in a different direction. The funny thing is, that next spring after I had decided to switch over to a different project, there was *Septoria* everywhere.

“My next project was with *Leptosphaerulina*,” Steve continues. “I worked on that fungus because, Number 1, the experts disagreed on how many species there are in the genus. And, Number 2, they disagreed on whether or not it was pathogenic to turfgrass. Those were the two focuses of my masters project and thesis.”

For the first part of his study, using molecular biology, Steve sided with previous researchers who split the genus *Leptosphaerulina* into several

species. For the second part of the study, he inoculated both healthy plants and plants that had been artificially stressed. “The fungus was not able to infect and colonize even the plants that were stressed to the point that they were senescent (dying). That indicated that *Leptosphaerulina* isn’t even a senectophyte of turf,” Steve points out.

“Dr. Couch coined the term ‘senectophyte,’” Steve explains. “This is a pathogen that can only attack leaves that are in the process of senescence. The plant is suppressed to the point where things that are normally not a problem become a problem. *Leptosphaerulina* isn’t even that. Because it is often found on dead grass, many have assumed that it was causing the death, but it wasn’t.”

How does it feel to discover you’ve been working on a pathogen that doesn’t even affect turfgrass? “At first I felt negatively about it,” Steve answers. “But then I looked at it again. If superintendents are spraying because they think *Leptosphaerulina* is a problem, they’re wasting their labor and money. And now that they know it isn’t causing turfgrass disease, they can look further for the real cause of their problems. So it is a positive outcome.”

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If you've never heard of *Leptosphaerulina*, don't feel bad. "To tell the truth, a lot of people haven't heard of it," Steve admits. "It's something that pathologists talk about more than turf growers. They've always wondered about it because they see it on dead grass. It was a genus that hadn't really been worked on, which is one of the reasons Dr. Couch chose it for me to study."

Working with a legend...

Steve knows that he was fortunate to be able to work with the legendary Houston Couch. "I cannot say enough good things about him," Steve says. "He is **the man** in turfgrass pathology. I'll go anywhere in the country and mention his name and superintendents will know him because they've heard him talk at a seminar or they've read one of his textbooks. He's been an authority in the turfgrass industry for almost 50 years, and he's still working.

"He's not just a great scientist," Steve continues. "When he talks, he makes it interesting. He tells all kinds of stories. And there are about 50 things he'll say at just about any talk. 'Death eating a cracker' to refer to something that doesn't look good. 'Katie, bar up the door.' 'The greatest thing since sliced bread.' 'Toodle-oo, caribou.'"

"He relates well to superintendents," Steve adds. "He understands that scientists sometimes overload superintendents with information that's contrary to how they have to grow grass. For example, we tell them not to cut the grass too short while their clientele is telling them to cut it shorter.

"Dr. Couch is a great mentor. He's almost like a dad to me," Steve admits. "He has a genuine concern for all of his students. He takes it personally if a student isn't doing well in his class; he asks himself how he can be a better teacher for that student."

Steve defended his thesis in January 2003. He continued to work in Dr. Couch's lab until he moved to Madison and began working at the TDL on May 1. His official graduation date is in May of this year.

"The hardest part about me moving to Madison is that my wife, Rebecca, will be staying at Virginia Tech until at least December," Steve points out, adding that she is working toward her Ph.D. in mycology. "It will be tight money-wise and tough on us personally, but we both realize it's the best thing for both of our careers. Once she finishes at Virginia Tech she has some post-doc opportunities here in Madison."

Steve is quick to sing his wife's praises. "She would like to teach and do research, and she's very strong in



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both. There are many times I wish I had her talents. She's just the best. She just won a university-wide award for graduate teaching. And she will be teaching a class this fall at Virginia Tech because her advisor is retired."

Plans for the TDL...

At the time Steve is interviewed for this article, he has not yet moved to Madison. But he does know a few things about the O.J. Noer Research Center. And he has plans for his new job at the TDL. "I've been to the TDL a couple of times. It's a top-rate facility. It's set up really well. The TDL has everything I need to make diagnoses," Steve says.

Steve has hit the ground running this May by timing his arrival with the beginning of the growing season. "The best thing I can do at first is to do a really great job with diagnosis and be really responsive to the needs of golf course superintendents, other turf professionals, and home owners," he says. "That's my Number 1 goal. Then I'll start worrying about taking on more goals."

To be responsive to his clientele, Steve wants to communicate aggressively. "I realize that there are jobs hanging on a diagnosis," he says. "If I get a sample that can't be diagnosed the first day, I'm going to definitely give the superintendent a call and let him know why it's delayed - like when we have to incubate it. I'll also tell him what I think the problem might be."

There are different ways to pay for the services of the TDL. One way is to pay a fee for each sample — \$50 for a telephone report and \$75 for a written report. Another way is to sign a contract, pay a fee early in the year, and be able to send in a set number of samples during the year. The highest contract level is \$1,000 per year which includes an on-site visit, and ten diagnoses. Contract holders also receive several extra benefits, first of which is a report of all of the turfgrass research that is performed at the university. The report includes plant breeding, cultivar evaluations, turfgrass management research, as well as fungicide, herbicide, and insecticide efficacy trials.

For the contract holders, Steve would like to develop an e-mail list serve whereby he can send out disease alerts. These alerts would come when the lab gets a lot of samples with the same problem from one area of the state, or when the conditions are just right for a disease to crop up.

"I'd also like to update the web site because it hasn't been done for a while," Steve points out. "I'd put the disease alerts here, too, for those who aren't contract holders. I will be holding disease workshops on an annual basis at which all of the contracted superintendents and turf professionals can hear about the most important diseases, how to control them, how to manage spraying problems such as resistance - things like that. And I'd like to give them a chance to actually look under the microscope to see what it is we do here.

"And in the fall I'll be working with Dr. Jung to set up research projects that are pertinent to Wisconsin," Steve

adds. "We'll listen to what the superintendents are saying about problems they're having and hopefully be able to initiate a research project to work on those problems."

As director of the TDL, Steve is an employee of the University. His position is partially supported by grants through Dr. Jung and partially through the fees that the lab receives. "That's another goal of the TDL - to become self sufficient," Steve points out. "We want to get our name out there, get enough clients so that we can fund the whole operation. I'm looking into the possibility of generating more revenue by expanding our services to nearby states such as Minnesota, which doesn't have a turfgrass pathologist right now."

Having worked with golf course superintendents in the past, Steve has great respect for them. "Superintendents have a very stressful job," he believes. "Most people think it's easy to grow grass. But they have to manage a crew and always be in contact with the greens committee which rarely is happy. Plus they have to grow the grass and deal with problems associated with that. They have to be very professional in many different aspects. A lot of people don't give them enough credit.

"I don't know if I'm cut out to be a superintendent," he adds. "I think I'll stick with the disease aspect of growing grass."

Good idea, Steve. Turfgrass professionals in the state are glad to have you in their corner! ♣

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