

# From Forage to Turf, He Loves Grass

By Lori Ward Bocher

It may seem strange that the son of an accounting professor would end up in agronomy - plant breeding and genetics, to be more specific. It also seems unusual for an agronomist to teach statistics.

And how many University of Minnesota hockey fans have the misfortune of beginning their career at the University of Wisconsin-Madison just as the Badger hockey team upsets the Gophers to win its first national title? And, while we're at it, why would someone who researches forage plants that are grown for animal consumption end up researching snow mold on golf courses?

"I'm definitely a nonconformist. I do things my own way," answers Mike Casler, a professor of agronomy at the UW-Madison since 1980 who, just a few years ago, started working in the turf breeding arena on a part-time basis. Once you get to know him, once you hear his life story, career doesn't seem so strange. Throughout his life he's had a knack for following his own instincts and being persuaded by the enthusiasm of others. The result? A

career that makes perfect sense for him.

OK, let's start with the most recent. Why is Mike, a forage plant breeder, spending about 20 percent of his time working on turf projects? "To be honest, what got me involved in turf breeding here at the university was John Stier (UW turfgrass specialist since 1997)," Mike answers. "His enthusiasm was so infectious. When he found out I was interested in turf breeding, he was interested in doing some collaborative research."

Mike had done some turf breeding in the early 1990's. "I was a consultant for a company outside of Madison. I started a turfgrass breeding program for them," Mike recalls. "But that ended in a few years because they became disinterested in the project."

## ***The forage-turf connection...***

The connection between turfgrass and forage grass for animal consumption is stronger than one might think, according to Mike. "Turfgrass breeding really got started in the mid 1950's as an offshoot of forage breeding," he explains. "Forage breeders would go out in their nurseries and see some dwarf-type plants and they'd start thinking, 'This might make a real nice turf plant.' So they'd make some selections and, pretty soon some forage breeders were also turf breeders. Turf breeding made some really big advancements in the 1950's and 1960's.

"The other logical part of the connection is that the grasses that are used for turf originated in pastures and meadows - bentgrass, bluegrass, fine fescue, ryegrass" he continues. "And most of them came from Europe. We use very few native species."

Because of this historical connection, Mike has known turf breeders and kept abreast of their research for years. "Our two professional groups, the forage grass breeders and the turfgrass breeders in the U.S., meet together every other year," he explains. "Even though we don't have overlapping research, it's interesting to know what each group is doing and to keep track of that."

## ***Snow mold resistance...***

What kind of turfgrass breeding is he doing now? "One of the biggest problems in the upper Midwest is the snow mold fungi on bentgrass at golf courses," he answers. "People spray in late fall or early winter, and a lot of times the fungicide applications run out during the winter. Even if they've tried, they may not be able to control it.

"So we started a project to try to identify and develop genetic resistance to those fungi," he continues. "The answer to our first question, 'Can we find resistance?'



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appears to be 'Yes.' We're 99 percent certain that we've found resistance."

Mike and his colleagues found resistant grass on collecting trips at lower-budget golf courses north of Highway 10 in Wisconsin. "We went north because, the longer the snow cover, the greater the problem with snow mold fungi," Mike explains. "We would go up in late April or early May, right after the snow is gone. And we would collect on golf courses where the superintendent does not spray fungicides for snow mold - some of the lower budget courses since it's pretty expensive to apply these fungicides.

"We'd just walk up and down all the fairways," he continues. "A lot of these fairways would be 99.9 percent brown coming out of the winter. That's how devastating this disease is. We'd walk along until we found patches of green. If it was bentgrass, we'd take a little piece out of it, put it in a plastic bag, and keep it in a cooler until we could get home and pot it in the greenhouse.

"At that point we had plants that we thought were resistant," Mike explains. "But we weren't sure. So we inoculated them artificially with a real hot strain of the pathogen. We had plants that came through that inoculation very, very nicely. So that's why we're confident that we have some resistant plants."

#### **More work to come...**

"In the next two or three years we hope to learn about the genetic nature of that resistance - how it's inherited, how easy it's going to be to work with, whether the resistance we found is a general resistance to all races and types of snow mold or whether it's very specific," he adds. "Within six or seven years, we hope to have a variety that has resistance in it and is ready to go out to the seed industry."

Mike is working on a few other smaller turf projects, including one to develop a new grass for athletic fields. "We're trying to develop a more cold hardy relative of tall fescue, a grass that's used a lot on athletic fields south of here," he points out. "Before I retire, it would be my ultimate goal to see this grass at Lambeau Field."

But he doesn't think he'll ever see turfgrass at Camp Randall. "Coach Alvarez and Pat Richter (athletic director) are pretty adamant about that," Mike says. "I see three reasons why they want the artificial turf. They want something that looks good. They want something that's fast, and artificial turf is a faster surface than natural grass.

"And a third reason, I think, has to do with the marching band," he continues. "The university is really proud of its band. If you put natural grass on the field, the band is going to destroy it. You can't believe what they do to their practice field."

Has he ever thought of developing a "band resistant" turf? "Maybe I should put some of my plots out on the band practice field. The band would be rougher on it than a herd of cows. That's something to think about," he jokes.

#### **Former Gopher fan...**

OK, so now we know it's not so strange for a forage plant breeder to become a part-time turfgrass breeder. But what's that bit about being a Gopher fan amidst a sea of Badger fans when he first came to the UW in 1980? "I moved here from Minnesota where I did my graduate work," Mike explains. "As a child, I also spent a lot of summer vacations in Minnesota.

"Hockey is real big in Minnesota," he continues. "I kind of grew up with high school hockey, college hockey. I left Minnesota thinking that it was the place in the world for hockey. When I came to Madison in 1980, the University of Minnesota hockey team was the best in the country. They had an awesome record and made it all the way to the NCAA title game in March of 1981.

"And guess who their opponent was in that game? The Badgers," Mike points out. "The Badgers were just a so-so team that year. They got the last bid to get into the playoffs. They were a surprise to get into the title game. They had never won the national championship at that point. And the game wasn't even close. I think the Badgers won 8 to 3. For me to go to work the next day was just unbearable! It was terrible! That morning at work I became a Badger fan, and I've never looked back."

#### **Back to the beginning...**

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So now that we know where his loyalties lie, let's go back a little further to find out how this son of an accounting professor (who moved numerous times in his career) became a statistics-teaching agronomy professor at the UW for 19 years and counting.

"I was born in Green Bay," Mike says. "But I only lived there for two years, so I have no memory of it. As a child I lived all around - in the Midwest mostly, and a couple of years in Wyoming. My father was an accounting professor. He always thought that, after a few years, it was time to move on."

Mike recalls some advice his mother gave him when he graduated with his PhD. "My mother's advice was, 'You've seen your father's life. You might want to think about putting some roots down somewhere and not always having the attitude that the grass is greener on the other side of the fence.'" Interesting advice for someone who literally does look for greener grass!

**Eventually finds agronomy...**

Mike graduated from high school in DeKalb, IL, in 1972. He then attended The University of Illinois. "It took me a long time to settle on agronomy just because I had no ag background," he remembers. "I tried chemistry. I even tried accounting, but I didn't like that at all. Then I tried forestry, and that's how I got into agronomy because I had to take some soils courses for that. Because of the terrible job market in forestry at the time, I decided to go into agronomy."

He received a BS in agronomy in 1976 and then went straight to the University of Minnesota to do his graduate work in forage breeding. "When I was an undergrad in agronomy, I had a professor who was one of those people who can change your life," Mike recalls. "From the moment he opened his mouth, he inspired me. And he was an evangelist when it came to forages. He got me excited about working with forages."

While an undergrad he also worked at a seed company during the summers. "That experience made me interested in plant breeding and genetics," Mike explains. "So when I went to grad school, I knew I wanted to study forage breeding and genetics." He received his MS in 1979 and his PhD in 1980.

Why the decision to work at a university rather than in industry? "I think that was decided while I was in graduate school," Mike answers. "I had a lot of exposure to both professors and plant breeders for private companies. I decided to teach and research. I like to be able to answer questions and to do genetic research without the constraints of having to worry about a company's bottom line."

**Statistics bring him to UW...**

But it was statistics that brought him to the UW. "It was amazing. When the UW agronomy department was interested in hiring someone, they wrote a job description that fit me to a tee - forage breeding and statistics," he recalls,

adding that he had a minor in statistics at Minnesota. "I had a lot of background in statistics and had been a teaching assistant for a statistics course up there."

"So the 19 years that I've been here I've been teaching two statistics courses in the agronomy department," Mike points out. "It's mostly for graduate students who are working on their dissertations and need to learn how to analyze their data. About half my students are from agronomy and horticulture, and half are from dairy and animal science." He also teaches a course in plant breeding and genetics.

As a forage researcher, he has done some work with rotational grazing in the dairy industry - a type of grazing whereby farmers keep moving their cattle from one small pasture to the next so that the cows are always eating the less mature, more nutritious grass. Again, it was an "evangelist" who converted him to work in this area.

"I was sitting in the office one day in 1989 and the phone rang," Mike explains. "The caller asked me if I'd be interested in doing some on-farm research on pastures. I thought, 'Are you kidding? I don't want to get involved in something as complicated and messy as that.' But I didn't say that to him."

**Loves the enthusiasm...**

"Gradually, as we talked some more and I found out what he wanted, he just convinced me that I should do this," Mike continues, adding that he's been trying to find

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grasses that are more nutritious for animals. "And I've never regretted it. It's really been interesting to get involved with grazing people. They're very enthusiastic.

"I've seen the same thing with turf people," he adds. "As I've gotten to know golf course superintendents and athletic field managers, I've seen the same sort of enthusiasm. And it's great. A researcher really feeds on that enthusiasm. It gives you some real positive reinforcement for what you're doing."

A few years ago, Mike also started doing some work with the federal government on bio-fuels. "We're doing some breeding work, trying to develop one of the native grasses, switchgrass, as a bioenergy crop that would be used for making ethanol or for burning at power plants," he explains.

**Likes variety, flexibility...**

"So my research program is pretty diverse," he admits, "working on forages and bioenergy and turf. The one common denominator is that it's all with grass. I love grass." He also likes the freedom and flexibility he has for picking and choosing research projects that interest him. And, he adds, funding is good right now.

Following the advice of his mother, Mike has "put down roots" in Wisconsin. "I didn't come here with the idea that I was going to stay for my whole life," he points out. "And I'm not sure I will. But, obviously, the longer I stay here,

the more likely I will."

Mike met his wife, Judy, 12 years ago in Madison. A native of Belleville, she is a medical technologist at Meriter Hospital in Madison. They live in Middleton and enjoy hiking, canoeing and golfing.

"I've played sports my whole life," Mike points out. "It's kind of fun working on turf now because it seems I've spent most of my life on turf of one form or another. Now I have a much better feeling for the problems that turf managers have."

Which brings us to another epiphany in Mike's life. He recalls one of his bosses at the seed company where he worked as an undergraduate student. "When I told him I finally decided to major in agronomy, I was really happy about my decision. So he really stunned me when he said, 'You know, I don't think you're going to be a good agronomist.' I didn't want to hear this from my boss. I really respected this guy! Then he paused and said, 'You like summer sports and activities too much. You're going to get out in your career and find that you don't have time for those activities.' He was right."

Right about the lack of time for sports. But Mike has had an interesting and successful career as an agronomist so far. After all, he's had a knack for following his own instincts and being persuaded by the enthusiasm of others. And he loves grass. ♣

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