RESEARCH | PRODUCTS | PEOPLE | STEWARDSHIP

syngenta

No matter how beautiful
the fairway is,
some people still won't use it.

Keep your course in top condition with the premier fungicide, Banner MAXX.® It's proven to provide superior protection against dollar spot and many other turf diseases, including summer patch and brown patch. Besides, Banner MAXX is specifically designed for the turf market, so you know what to expect. For more information on Banner MAXX, call 1-800-395-8873.

Banner MAXX® Fungicide

www.syngentaprofessionalproducts.com

CIRCLE NO. 102

Continued from page 30

The rough should be a tad higher than normal for local professional tournaments, but not too high.

"You don't want to go so high that you end up affecting the daily play of your members immediately following the tournament," Ayers warns.

A happy medium is what Ayers calls a "happy height."

"The happy height is the height when I don't hear golfers complain about not being able to find their balls," he says. "But there are differences between the various heights of cut from fairways to the intermediate rough to the rough."

For fairways, mowing height can simply be adjusted in accordance to the type of tournament, Ayers notes.

"If you want the golf course to play shorter, you might cut it tighter," he says. "If you want it to play longer, you simply bump up the height of cut."

Challenges abound

As soon as you find out you're having a tournament, you need to start preparing for it, Miller says. That means upgrading your planning and communications skills, he stresses.

"You need to set goals for your event, and those will vary from course to course," Miller says. "It might just be an overall look you want to establish for your course. But once you establish your goals, make sure to share them with your staff, and let them know what you expect from them."

Ayers' advice is to plan, prioritize and schedule. In essence, it's vital to get ahead.

"We start some maintenance practices as much as 30 days prior to an in-house event," Ayers says. "We start with little things, like landscaping certain areas. The fewer things you have to do the week of the event, the less last-minute details you'll have and the better."

A few tricks of the trade, Ayers notes, as the tournament nears:

- Make an iron application to the fairways a few days before the event to enhance their color.
- Use a plant growth regulator on some areas shortly before the event so the entire course doesn't need to be mowed during the event.

Come tournament time, it's also time to utilize the good relationships you have with other superintendents and equipment distributors, Ayers says. Don't be shy to ask them for favors.

Continued on page 34

Tips from a Tournament Prep Vet

John Miller, certified superintendent of the Golf Club at Yankee Trace GC in Beavercreek, Ohio, is a veteran when it comes to preparing for tournaments. Last December at the Ohio Turfgrass Conference & Show in Columbus, Ohio, Miller presented the seminar, "Preparing Your Golf Course for Tournaments."

Below, Miller shares some of his philosophy about preparing for a tournament. His advice is taken from a manual he handed out during his presentation.

Green speed – How will you get to your target speed? Will you topdress, roll, use growth regulators, lower the height of cut or use a combination of these practices? How much water will you put on before the event and during the event? What practices and what schedule will you use to maintain that speed?

Green height – You must determine a green height that will allow you to keep healthy greens while achieving the desired green speed. Many factors enter into the decision of selecting a green height. Species and grass variety will give you a range of heights you can achieve. Disease resistance and recoverability of the grass will also affect how low you can go.

Tee, fairway and rough heights – You need to take into consideration two things: the health of the turf and the type of golfer playing in the tournament. If the turf is weak, keep the cutting heights up. If it's healthy, cut the turf to the golfers' abilities.

Topdressing – If possible, put your last application of topdressing on seven to 10 days before the tournament. This will allow time for the sand to work into the putting surface so the greens are rolling as smooth as possible.

Marking the golf course – Make sure you have an adequate knowledge of the Rules of Golf and look for problem areas in advance of the event. Have plenty of yellow and red hazard stakes on hand, and have out-of-bounds areas defined by white stakes prior to the event.

INTRODUCING A NEW GRASS ROOTS ORGANIZATION.

There's a new system for making grass greener that's so effective it's generating quite a following. Introducing Flowtronex Integrated Water Management™ system. Organized to handle all your water quality control and distribution needs, IWM links the best pH control, filtration and fertigation components to the industry's highest quality, pre-assembled pump station. Call 1-800-786-7480 or visit www.flowtronex.com to find out more about the ground-swell of support you'll experience from the Flowtronex Integrated Water Management system.

FLOWTRONEX™

No One Makes Your Life Easier. No One.

"Let golfers compete with themselves. Don't try to trick up the course."

JOHN MILLER
CERTIFIED SUPERINTENDENT
GOLF CLUB AT YANKEE TRACE
BEAVERCREEK, OHIO

PGA Tour's Scott on Proper Planning and Executing

Jon Scott, vice president of agronomy for the PGA Tour, knows a few things about getting ready for a big tournament. But tournament size doesn't matter when it comes to planning and execution, Scott stresses.

"Whether you're talking about the PGA Tour or the member-guest tournament, there's a planning process to go through," Scott says. "You need to follow that process step by step. If you do that, you'll have a successful event. If you don't do that, there's going to be [trouble]. The planning stage is the most important part."

Scott warns superintendents not to implement decisions if there are no concrete plans to support them.

"The most important part of what you're going to do is planning, not executing," he says. "If you're executing without a plan, you're reacting. If you're reacting, you're behind the ball. If you're behind the ball, you never catch up."

– Larry Aylward, Editor

Continued from page 32

"You might borrow a piece of equipment from a fellow superintendent so you have a backup," Ayers says. "You might try to borrow a greens mower to help you double-cut the greens. You should certainly arrange to use back-up equipment from distributors. They tend to help superintendents whenever they can."

Getting ready for a tournament is never easy, especially for a member-guest. Not only are workers sprucing up the course for the big event, they're often taking care of the regular maintenance that comes with daily play. And, no, there are no additional workers or more hours in the day for the usual employees to get the work done.

But preparation does get easier after you've experienced it a few times, Ayers says.

"After you do it for a few years, you get a feel for what members and golfers want," he says. "You also get an idea of how long it takes for you to accomplish certain things."

Gettin' pumped

Ayers feels the pressure that comes with tournament time. But it's healthy pressure, and it pumps him up to do his best. Ayers knows what's expected of him, and he strives to deliver.

"It's a self-imposed pressure," he says. "Members want the course to peak for certain events, especially the member-guest. They want the facility to shine.

"A superintendent is often judged by his ability to peak the golf course for a tournament," Ayers continues. "That's the nature of the beast, but it's a motivator."

While Ayers places pressure on himself, he doesn't place pressure on his crew members. Ayers realizes that his

crew members extend themselves during tournaments by working extra hours, and he wants them to be relaxed.

But Ayers does want crew members to be fired up for tournaments, and he hopes they channel their positive energy into motivation to do the best jobs they can.

"We enjoy getting the course to peak, even though it's difficult, time-consuming and a mental strain," Ayers says, "It's like a game. We definitely turn it up a notch for the tournaments."

To get the point across to crew members that they need to be at their best, Ihms doesn't give a Knute Rockne-type speech — he throws a party. "We let them know that we appreciate their work and that we're asking them for a little extra effort for the next 10 to 14 days," Ihms says.

Ihms says he employs a bunch of go-getters. Most crew members have been with Bent Tree for about seven years, and it doesn't take much to motivate them. "They have a lot of pride and take a lot of personal satisfaction in the work they do," Ihms says.

In fact, Bent Tree is divided into three sections with separate leaders and crews. The groups compete against each other to see who can maintain their sections best. "They really get carried away come tournament time," Ihms says.

His crew members are the key to a tournament's success, Ihms adds.

Continued on page 36

"You want your course to look so good that even the members are surprised how good it looks."

STEVE NUMBERS
SUPERINTENDENT
WESTFIELD GROUP CC
WESTFIELD CENTER, OHIO

Continued from page 35

"They're out there doing the work and making it happen," he says. "If they don't take pride in what they're doing, [the course] is not going to turn out like we want."

At Westfield, Numbers says crew workers are a bit pampered for the Junior PGA — and deservedly so. They receive two new golf shirts to wear during the tournament and to keep afterward. They also get free meals and are allowed to work overtime, something Westfield usually doesn't permit its workers.

"They know the tournament is important," Numbers states. "We ask them to step up and be at their best for the entire week. And they tend to step up — and it's fun to see it happen."

Do look back

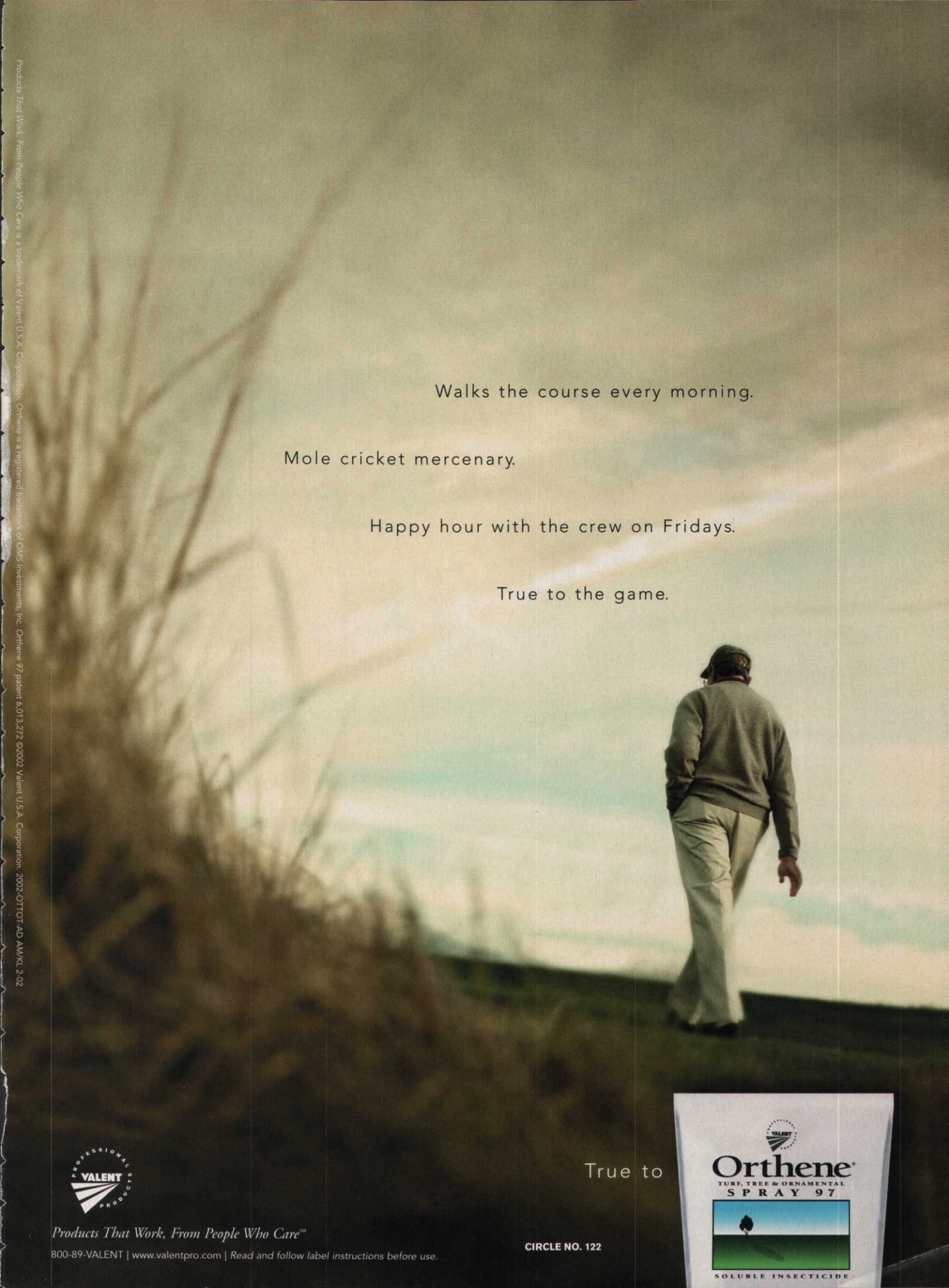
After the tournament, go back and sit down with your staff and talk about the things you did right, Miller says. Also look for the areas you need to improve.

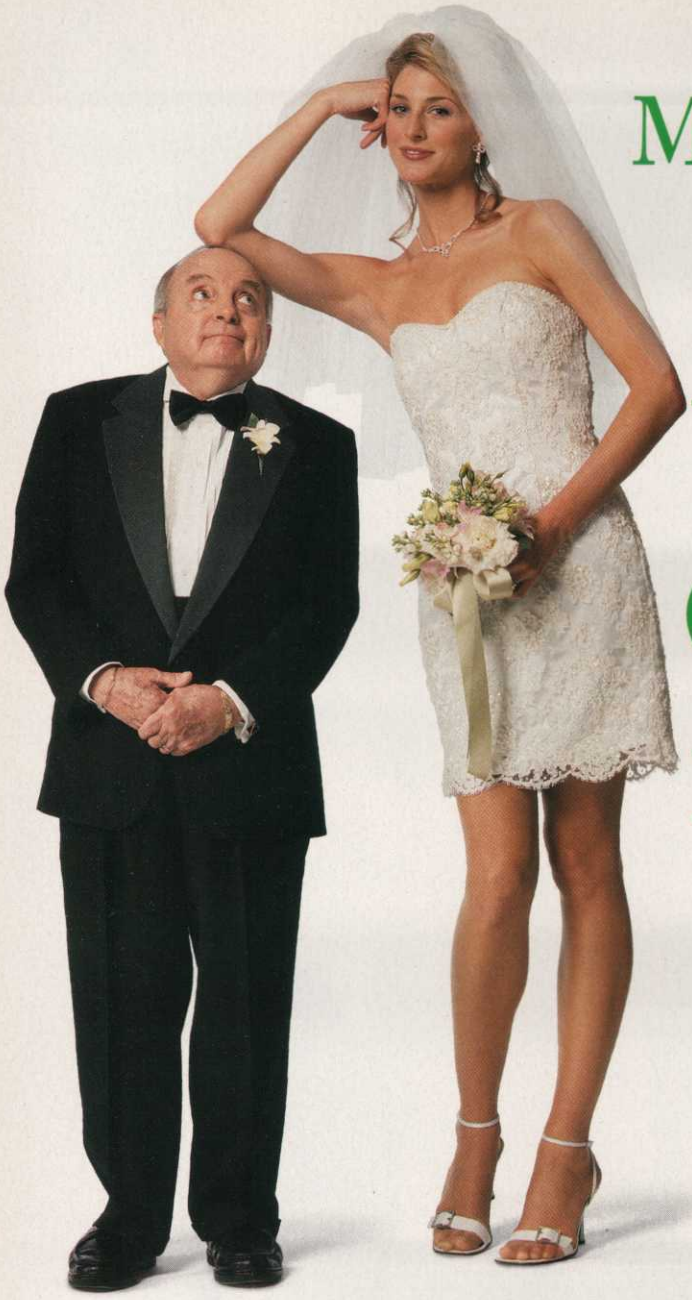
"You need to get input from everyone who was involved in the event," Miller says. "Your crew members will give you the most input because they'll be the most critical of your course and themselves. They will tell you what they think they did right and wrong."

After getting input from the pro, tournament director and others involved, make sure to share that feedback with the crew, Miller says. And don't just share the bad information.

"If you've got a number of bad things to tell them, tell them the bad things first and leave them with something good at the end," he adds. ■

You can reach Aylward, the author of this article, at laylward@advanstar.com.


Walks the course every morning.
Mole cricket mercenary.
Happy hour with the crew on Fridays.
True to the game.
True to
Orthene
TURF, TREE & ORNAMENTAL
SPRAY 97
SOLUBLE INSECTICIDE
VALENT
PROFESSIONAL PRODUCTS
Products That Work, From People Who Care™
800-89-VALENT | www.valentpro.com | Read and follow label instructions before use.
CIRCLE NO. 122
Products That Work, From People Who Care is a trademark of Valent U.S.A. Corporation. Orthene is a registered trademark of OMS Investments, Inc. Orthene 97 patent 6,013,272 ©2002 Valent U.S.A. Corporation. 2002-OTTOT-AD AM/KL 2-02



MARRY THE WRONG ADJUVANT WITH YOUR SPRAY CHEMISTRY AND YOU'RE HEADED FOR TROUBLE.

Choosing the right adjuvant makes a big difference in pesticide efficacy. Marry the wrong adjuvant with your spray chemistry and you may decrease pesticide performance, increase phytotoxicity, or both. At Precision Laboratories, our adjuvants work to maximize pesticide performance, your performance and your budget. We have manufactured and tested adjuvants for more than 20 years, and we know what it takes to pair the right adjuvant with the active ingredients that benefit you and your spray program. That's why superintendents choose Precision Laboratories, the adjuvant experts.

For a free Adjuvant Use Guide and product guide call 800-323-6280 or email info@precisionlab.com.

PRECISION™
Adjuvant Experts
www.precisionlab.com

CIRCLE NO. 108

Golfdom's PRACTICAL RESEARCH DIGEST FOR TURF MANAGERS

TURFGRASS TRENDS

TURF VARIETIES

Breeders Refine Fine Fescue's Disease Resistance

By Leah A. Brilman

Tall fescue, usually classified as *Festuca arundinacea* but now classified as *Lolium arundinaceum* by some taxonomists, originated in Europe, possibly near Morocco. It has been used extensively as a forage grass due to high dry-matter production combined with excellent drought avoidance.

Over the years, millions of pounds of tall fescue seed designated as Kentucky-31 were also planted as a drought-resistant, low-maintenance turfgrass. Improvement of tall fescue for turfgrass traces its origin to plants selected from old turfs of the United States in a germplasm collection program initiated in 1962 by C. Reed Funk of Rutgers University in New Jersey. The first improved tall fescue developed from this program was Rebel (Funk et al., 1981), which also had some plants from trihybrid crosses between tall fescue, meadow fescue and perennial ryegrass used in its development.

Typically, the plants selected for improved turf quality have increased density and finer leaf texture, yet these same qualities may be increasing brown patch.

Attractive clones were selected from old turfs in Birmingham, Ala.; Athens, Ga., Atlanta, and Millegeville, Ga; Preston, Idaho; Baltimore; Bayonne, N.J., Jersey City, N.J., Elizabeth, N.J., Princeton, N.J., and Cape May, N.J.; eastern North Carolina; Philadelphia; Nashville; Lexington, Ky.; Cincinnati; Dallas; and northern Mississippi.

The tall fescue plants selected from old turfs were of unknown origin. All were large patches of turf surviving in stressful environments, indicating that they had persisted and developed over a period of many years. A few hundred attractive, turf-type plants were collected and established in spaced-plant nurseries and/or frequently mowed clonal evaluation trials at Rutgers University. All but a few dozen of the most promising plants were quickly discarded.

The best selections were different from any tall fescue variety in existence at the time. They produced lower-growing turfs with finer leaves, greater density, darker color, and greater tolerance of close mowing. This material developed by Funk, plus additional material collected by other breeders usually in other high-stress locations, forms the basis of most turf-type tall fescue varieties currently available.

If you glance at brochures for tall fescue varieties, you will see descriptions of them as low-growing, dwarf, semidwarf, dark green, fine-textured and dense. These descriptions show where the major improvements have been in this species. If you walk through plots of the newest tall fescues during spring and fall, you will notice the newest material has all of those

Continued on page 40

IN THIS ISSUE

OUR SPONSORS

Continued from page 39

characteristics and forms high-quality turf.

In much of the Eastern and Midwestern United States, you will find significant amounts of brown patch if you walk through these same plots in the summer, however. It's usually caused by *Rhizoctonia solani* and appears on these same dense, dark-green varieties that had excellent quality earlier in the year. Table 1 shows a comparison of the NTEP data from the 1992 trial and the 1996 trial. Although small improvements have been made, which may be more evident in individual trials, similar varieties ranked toward the top of both trials, probably because of small advances in resistance to this disease.

Turf-type tall fescue breeders have been trying since the original turf selections to improve resistance to this disease. But the genetics of tall fescue, the complex of brown patch varieties or the types of plants selected to increase turf quality make this disease devastating under the proper environmental conditions. Typically the plants selected for improved turf quality have increased density and finer leaf texture, yet these same qualities may be increasing brown patch. Studies by Giesler et al. (1996 a,b) showed that brown patch severity in tall fescues was highly correlated with blade density because a denser canopy promoted a higher relative humidity and a longer leaf wetness duration.

Funk has often observed that tall fescue cultivars that are thinned by brown patch early in the season have little or less severe brown patch later in the year, probably due to reduced density. Recently, Rutgers University selected populations that are dwarf and dark green but with reduced density to see if these show improved long-term brown patch resistance (Watkins et al. 2000). Pure Seed Testing has an additional research farm in Rolesville, N.C,. to select for varieties with better brown patch resistance combined with tolerance of heat and humidity.

Jacklin Seed Co. has used screening in Maryland and Seed Research of Oregon has utilized screening in New Jersey, Virginia and Missouri to help identify resistance.

Brown patch on tall fescue is typically caused by *R. solani* but *R. zeae* has also been shown to cause the disease, and you cannot tell the difference based on visual symptoms. In addition, *R. solani* comes in many different forms, called anastomosis groups, determined by fusing in culture. Different isolates from the same anastomosis group may have varying pathogenicity (Martin et al, 2001). In Maryland, Zhang and Dernoeden (1997) isolated AG-1 IA and AG-2-2 IIB six times each from tall fescue, with the later found two times outside disease patches. In South Carolina, Martin et al (2001) found differences in causal agent in two locations and in different parts of the plants. *R. solani* AG 1-IA was detected principally from leaf tissue and at Florence, S.C., and AG 2-2 IIIB was detected primarily from crown tissue and at Clemson, S.C. *R. zeae* and binucleate rhizoctonia were also found more frequently in crown tissue and more frequently from asymptomatic plants.

The complexity of the disease and the lack of information about the causative organism in many ratings has made breeding for resistance difficult. Breeders have observed varieties and experimental lines that appear to have improved resistance in one location but fail to exhibit it in another. Often a variety may exhibit resistance early in the summer, only to succumb to a later infection at the same location. This may be due to density factors outlined above, or it may be the result of changes in AG type or species causing the brown patch.

Long-term stable resistance against the many forms of rhizoctonia will continue to be a focus of breeding programs.

Further understanding of the causes of variability in resistance to brown patch will depend on quick, reliable tests for type or species of rhizoctonia involved. Current ELISA tests, which are simple tests to check for organisms based on an immunological reaction, do not distinguish between species or types of rhizoctonia, although in some locations they have helped in disease monitoring along with environmental models. DNA sequences of the ITS region were able to separate Rhizoctonia solani into anastomosis groups (Hsiang and Dean, 2001) and may prove useful in developing tests that do not rely on maintenance of live tester strains, so more accurate identification may be possible.

Identification of genes for resistance to brown patch would help in the improvement of tall fescues. The problems mentioned above in disease identification plus the complex genetics of tall

Continued on page 42