Scientists make breakthrough in drought-resistant tall fescue

By JAY FINEGAN

GRiffin, Ga. — University of Georgia turfgrass scientists have developed a new drought-resistant strain of fescue that promises to be a boon to golf courses. The so-called Southeast Tall Fescue is the first release to emerge from the university’s fescue breeding program, started in 1992. The seed is expected to be marketed by Landmark Seed Co. and available sometime next year.

Ronny Duncan, Ph.D., professor of breeding and stress physiology in the department of crop and soil sciences, headed up the painstaking development project. He searched for grass samples that could be used in the experimentation that took him to South America, Africa, the Bahamas and all over Georgia.

Duncan’s colleague in the fescue breakthrough, Bob Carrow, Ph.D., professor of turfgrass science, said the new variety will likely see duty on golf courses as rough and fairway framing and on clubhouse grounds. He said recommended mowing heights — two inches in southern climates, an inch and a half in more moderate regions — would bar fairway use.

When the breeding program began, the goal was to develop turf-type tall fescues with the attributes necessary to persist under Georgia conditions. The primary goal was to come up with a fescue that could withstand drought, acid soil complex, and high soil temperatures, while generating enough carbohydrates — plant food produced by photosynthesis — to maintain strong roots during hot summer months. Additionally, the scientists sought a fescue strain with good turf quality, in shoot density, color and growth rate, and which would exhibit pest-resistant qualities and strong seed production.

BOOT CAMP FOR PLANTS

It took eight years, but finally Duncan and Carrow produced a strain, through natural selection, that met the criteria. “Southeast Tall Fescue,” Carrow said, “is very, very drought resistant.”

The scientists subjected their various experimental strains to severe stress and water deprivation during a “plant boot camp” that killed between 95 and 99 percent of them. “That’s the only way you can identify the ones that have super

At Montreux, Heinricks thrives on annual Reno Tahoe Open

By DOUG SAUNDERS

RENO, Nev. — The long, hot, sunny days of Nevada summer never come quickly enough for Doug Heinricks, head superintendent here at Montreux Golf and Country Club.

The Iowa native is in his second year caring for the bentgrass fairways of this massive Jack Nicklaus-designed golf course on the eastern slope of Mount Rose, just south of Reno — “The Biggest Little City in the World.” His challenge is nurturing lush, consistent fairways and greens, not only for the discerning members of this private facility, but also for the recently held Reno Tahoe Open, a PGA Tour event.

“I love it when the warm weather sets in, because I need to have my soil temperatures come up in order to stimulate microbial activity and root growth,” he said. “The soil at the base of the mountains is decomposed granite, which makes it easily compacted and hard to penetrate. Irrigation water seems to run off rather than soak in. But it is a challenge that I am glad to take on just to be in this region.”

Montreux opened in 1997 in the midst of a golf construction boom in these parts. More than 140 holes have been built in four years. Montreux has established itself as the premier private club on the eastern slope of the monsoon belt, and natural resources. Today, 2,140 courses in the United States are enrolled in the program, and

ISTRC adds new greens mix

OLATHE, Kan. — International Sports Turf Research Center (ISTRC), based here near Kansas City, recently created a second company, ISTRC NML to provide physical properties analysis for the construction and reconstruction of greens.

ISTRC developed the first ISTRC system of physical properties analysis mainly for existing golf course greens. Their system of undisturbed core analysis has produced data from thousands of cores that has resulted in the guidelines for new bent and Bermuda grasses that refine U.S. Golf Association (USGA) spec.

ISTRC NML (New Mix Lab) was created to conduct tests required to meet USGA Green Section guidelines for new construction and reconstruction of greens. ISTRC NML qualifies for USGA recommendation by meeting the criteria and earning the accreditation of the American Association for Laboratory Accreditation (A SLA).

Dave Doherty, founder of both companies, said that ISTRC NML is a natural extension of the firm’s capabilities. “Imagine the benefits of the data that we have already compiled when applied to New Mix Lab technologies. As the only company with two labs, one for existing greens and one for new construction, we have combined an operation that will be an invaluable asset to the new course from inception through maturity,” he said. “We’re excited about all that we can offer our clients today.”

In 1990, Doherty and Leon Howard, who wrote the original USGA specs, began to monitor sand-based greens, a task which no one had then bothered to do. “When we first started this company, we were really just out to grow grass on athletic fields for kids,” Doherty said. “But now we do about 40 of the top 100 courses in the country.”

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Sierra. But with so many new courses in the region, a strong identity for the club was essential to develop the prestige that leads to strong sales of memberships and house lots.

When the PGA Tour began to look for a new event to fill the void of the August date that coincided with the NEC World Series of Golf, Reno entered the competition against such cities as St. Louis, Seattle and Portland, Ore.

To some, Reno was a surprise choice over cites that had hosted major championships in the past. Tour officials were satisfied that Reno, which hosted a PGA Event in the 1940s and a Senior Tour stop in the early '80s, could once again fill the need, as well as come up with the required $2-million franchise fee.

**BENTGRASS IN THE SNOW**

The success of Nicklaus's Castles Pines Country Club in Colorado, which also hosts an annual PGA Tour event, lead the designer to the choice of bentgrass for the Montreux course. The decision promoted a lot of consternation from local superintendents. This region sees plenty of weather cold enough to hinder the warm soil temperatures that bentgrass needs to thrive.

Doug Heinricks came to Montreux in January 1999 after working nine years in the Palm Springs area. The 32-year-old Iowa State grad has been working around golf courses since he was 15. "When the Montreux opportunity presented itself, I was excited to come to a mountain region just to be able to enjoy seasonal weather again," he said.

In Palm Springs the weather pattern is warm, hot and hotter. Around Reno, on the other hand, the thermometer can shoot into the high 90s during summer, but winter temperatures dip into the 30s. Snow is not unusual in February, but Heinricks still works to keep the course open year-round. He combats the cold and compaction by doing an early aerification and closely monitoring his watering.

"We have bentgrass fairways but bluegrass rough," he said. "I have to really control my irrigation patterns to get a consistent look to the course. In the end, though, it is the warm days, especially warm days early in the spring, that are my best friend."

**SPECTACULAR LAYOUT**

Montreux is a huge golf course, with over 45 acres of fairways. Located at 5,000 feet at the base of statuesque Mount Rose, the bold layout shares two distinct landscapes - rolling high-desert land, and thick pine forests. Nicklaus used the best of both terrains to create a stunning course that measures 7,552 yards from the tips and features dramatic elevation changes. The 17th hole alone features a 130-foot drop from the tee to the slender fairway below.

Heinricks and his summertime staff of 35 endeavor to keep the course in tournament shape at all times. This plan pays off when he sets about preparing the course for the annual PGA Tour event, where the most critical things are consistent lies on the fairways, the condition of bunkers and green speeds.

Heinricks felt that his course provided a fair test last year during its inaugural Tour run. PGA green specs were easily met, as Heinricks usually mows his greens lower than the Tour requires.

"I mow during the summer at 120/1000 and raise up to 125/1000 [1/8 inch] for the event," he said. "We have the green speeds stimping at 10 in advance of the tournament, and with double mowing we get the speed up to 10.6. We work so hard to get the course ready for the PGA Tour that you hope all of your effort is appreciated."

Still, he would not trade the experience for anything. "Few superintendents get the chance to host a Tour event, with all the energy and excitement that surrounds it," Heinricks said. "Even fewer have the opportunity to work on a course that is willing to spend the money necessary to provide that type of conditioning every day for its membership. I'm fortunate to be here at Montreux and have that chance."

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**MAINTENANCE**

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