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TALL FESCUES FIND A HOME IN K.C.

Move over zoysiagrass, superintendents are discovering the benefits of tall fescues.



Improved tall fescue varieties, with their deep-rooted, low maintenance characteristics, seem a natural for golf courses in the transition zone.

Everything is up to par in Kansas City where several new and up-and-coming golf courses are reaping the benefits of improved turf-type tall fescue varieties.

Because Kansas City lies in the transition area, superintendents have traditionally used both cool- and warm-season grasses. Zoysiagrass, a native of the area, is a fixture on area courses because it can be mowed to less than 1/2 inch. However, at an elevation of nearly 1,000 feet in an area that has been known to undergo a severe winter or two, zoysiagrass doesn't fare well in the chilly months. Superintendents have found that tall fescue, a pasture grass that had been adapted to home lawns, was too coarse for any part of their course but rough and unruly areas. Kentucky 31 and Fawn were their early choices, but because of their lighter green color, coarse, uneven texture and disease susceptibility, they were not included in the playing areas of better courses.

As tall fescue breeding produced finer-leafed, darker green and more disease-resistant varieties, a closer look at this promising turfgrass was warranted. These improved tall fescue varieties, with their deep-rooted, low maintenance characteristics, seem a natural for golf courses in the transition zone that have limited water and upkeep budgets.

...Here I come

If Kansas City was not the only area to employ tall fescue in great quantities, it may have the highest concentration of courses using it.

Harold Vance, owner and designer of Teetering Rocks, an executive par three at Royaltown, Mo., has had tall fescue on nine fairways for three years. The second nine holes, which will open next year, will be seeded with Turf Gem, a blend of Apache, Bonanza and Finelawn tall fescues, between ryegrass tees and creeping bentgrass greens.

Lee Miller, superintendent for Smiley's Sportland Executive Course in Overland Park, also due to open in 1989, specified Turf Gem blend on 18

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Kansas City superintendents say that tall fescues survive hot, dry summers with limited maintenance and do well in shade and high-wear areas.

fairways. Miller mowed the new growth at two inches in August, reduced the cut to one inch later in the fall and plans to reduce playing height to $\frac{3}{4}$ of an inch by the spring of 1989. At that time, he'll overseed with a blend of Monarch, Bonanza, Arid and Falcon.

A destination course in the works is Deer Creek, also in Overland Park. Deer Creek, designed by Robert Trent Jones II, is intended to be a world class, richly detailed, tree-lined 18-hole course set into an upscale residential development.

Larry Hanks, vice president for golf course operations for North Star Development Co. and spokesman for Deer Creek, says he researched courses in the area and found that tall fescues did survive the hot, dry summers with limited maintenance. He also found tall fescues do well in shade and high-wear areas.

Hanks and Don Zelfer, owner of Mr. Turf Sod Co., and Leon Williams of Williams Lawn Seed in Maryville, Mo., agreed to seed the roughs at Deer Creek with Triathalawn tall fescue blend. The preparation and seeding were done by the Mr. Turf team.

Fertilization, seeding and mulching began in mid-August with one application of Lilly 6-24-24 Sure Grow. Triathalawn was broadcast seeded around trees. A Brillion seeder was used for the accessible open areas and the seed was distributed at a rate of 350 lbs. per acre. Seeds were covered with straw and then hydro-mulched.

Quick establishment

The seed blend established quickly. Seedlings were two inches high in the irrigated areas after two weeks.

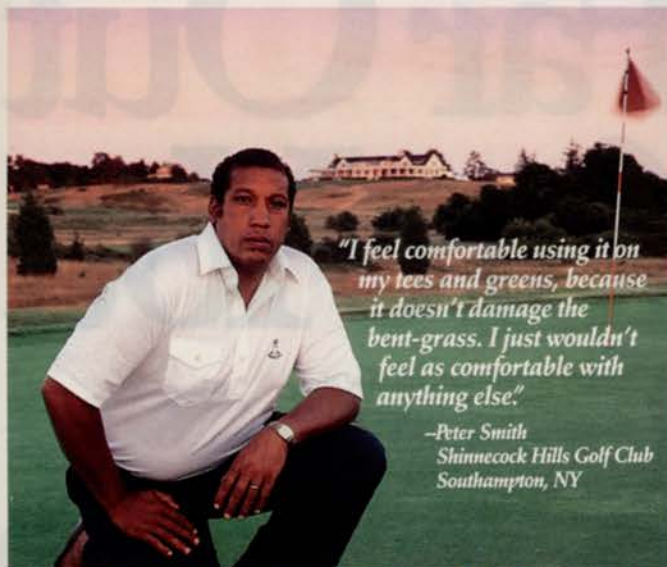
The fairways were sodded with Meyer zoysia and the greens were seeded with Penncross creeping bentgrass.

There is still some detailing that needs to be addressed before the course opens next summer, but the tall fescue roughs are established and looking good. And that's one big particular they won't have to worry about.

In the future, tall fescues will have a more aggressive growth habit with reduced vertical growth, producing a denser turf. These new varieties will be more competitive in mixtures with other species, allowing their attributes to be incorporated without taking over the tall fescue.

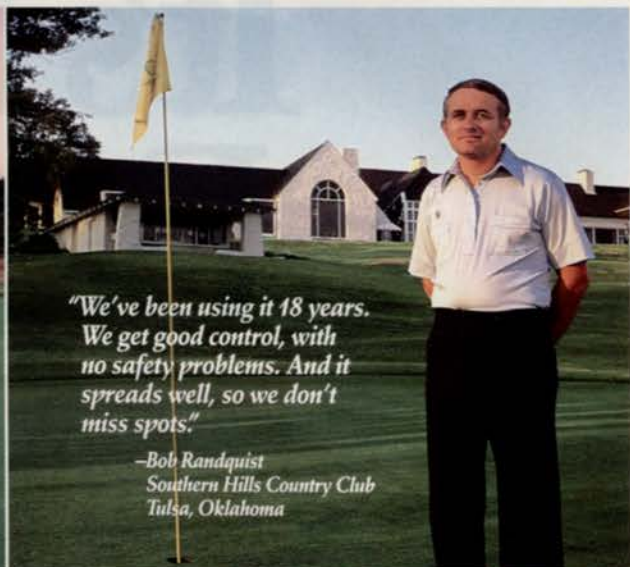
The dwarf growth habit of tall fescue, combined with improved disease resistance and endophyte enhancement, will provide a more attractive, healthy turf adapted to a wider range of use. **LM**

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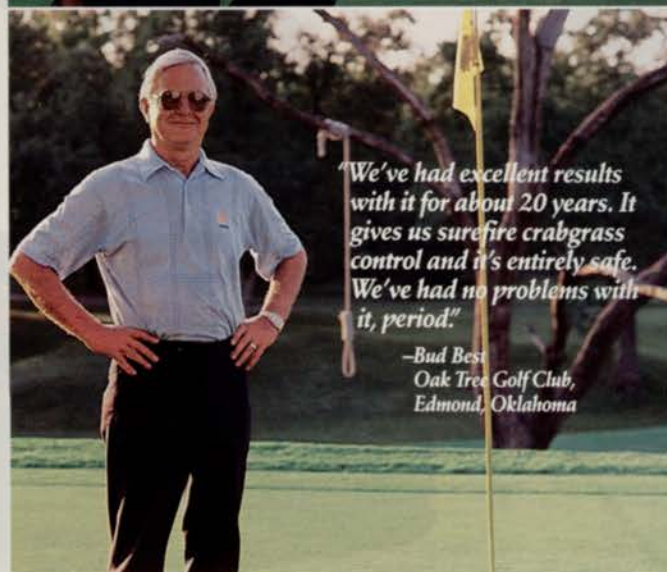
"I feel comfortable using it on my tees and greens, because it doesn't damage the bent-grass. I just wouldn't feel as comfortable with anything else."

*—Peter Smith
Shinnecock Hills Golf Club
Southampton, NY*



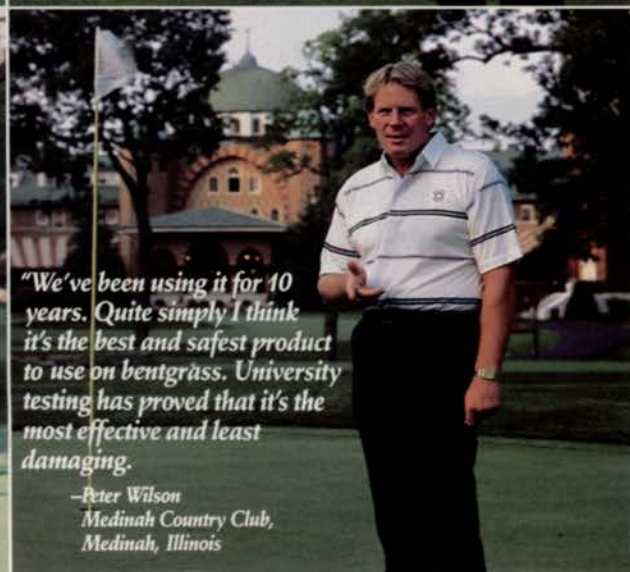
"We've been using it 18 years. We get good control, with no safety problems. And it spreads well, so we don't miss spots."

*—Bob Randquist
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*—Bud Best
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"We've been using it for 10 years. Quite simply I think it's the best and safest product to use on bentgrass. University testing has proved that it's the most effective and least damaging."

*—Peter Wilson
Medinah Country Club,
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DECEMBER 1988/LANDSCAPE MANAGEMENT 27

GROWTH REGULATORS FOR POA CONTROL

Two chemical means can be used to control *Poa annua*, or annual bluegrass, in other grasses. One of the means is by using turf growth regulators.

by Terry McIver, associate editor

Many golf course superintendents and other landscape managers consider *Poa annua* their biggest hurdle. Left to plant itself wherever it so chooses, this winter annual can become a handicap to the beauty and playability of golf courses, and the beauty of lawns.

When it's healthy and seedless, poa can be a pleasure for golfers. Its upright growth pattern provides a great fairway lie. Unfortunately, it lacks the endurance of most weeds, and its negative qualities—low disease immunity (anthracnose, summer patch, dollar patch), low heat tolerance and seedhead formation—outweigh the positives. The result is the summer devastation of many poa-intensive courses.

Germinating in the fall, poa remains dormant during early and mid-winter, and germinates again in late winter or early spring.

Poa annua needs little encouragement during its formative weeks. It grows and spreads easily, and flourishes best in compacted soil and shady areas.

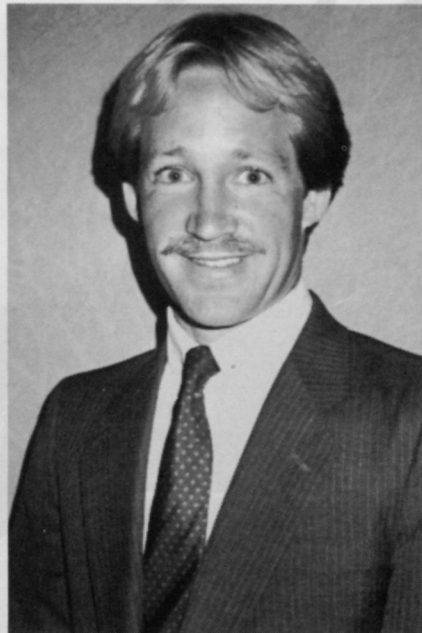
According to Cornell University's Norm Hummel, Ph.D., poa is well able to tolerate the lower oxygen content of compacted soil typical of high-traffic golf courses.

Dave Chalmers, Ph.D., Virginia Tech says poa's growth characteristics make it a mixed blessing for golf course managers. He asks the question, "What more could you ask for than a grass that reseeds itself?"

"Many courses have poa as their predominant grass," says Chalmers. "How they deal with poa depends on what level of quality the managers want their courses to attain."

How do we control *Poa annua*? Hummel says that a vigorous poa management plan should include mowing with lightweight mowers to cause less soil compaction than with tractors, and clipping removal, taking away the seed source.

Frank Dobie of Ohio's Sharon Country Club believes grass pickup



Scott Niven: "Cutless controls the poa, we have fewer clippings, and use less water."

has a minimum effect on seed control, considering the 10,000-20,000 poa seeds per square foot. Dobie believes that removing clippings means less heat caused by decomposition, giving bentgrass a more competitive edge.

Other proven poa fighters include:
● On-time aeration with flexible tine equipment, to further reduce compaction;

● Deep and repeated irrigation, to stimulate deeper-rooted species, such as ryegrass, bentgrass and Kentucky bluegrass;

● Delayed fertilization in the spring, to deny poa the energy it needs to get a leg up on the perennials; and

● Low phosphorus fertilizers (poa thrives on high amounts of phosphorus).

Chemical tools used to fight poa are growth regulators and selective herbicides.

Hummel believes the two materials available to best combat *Poa annua* are Scott's TGR, a turf growth

regulator (paclobutrazol), and Prograss, a selective herbicide effective on newly-germinating, pre-emergent grass or newly post-emergent bluegrass (see sidebar).

Here are growth regulators labelled for this function:

Scott's TGR

"Poa is a universal problem. Scott's TGR retards *Poa annua* while the bentgrass is stimulated," says Larry Widdell, senior project leader of research and development for TGR manufacturer O.M. Scott & Sons Co. "You thereby get a gradual reduction of poa post-emergence with sequential applications."

Widdell says that, in research conducted by O.M. Scott, bentgrass populations increased from seven to 90 percent in August, after May and June applications of TGR.

The product is registered for use on fairways, bentgrass greens, collars and roughs. "More research is needed before Scott's TGR can be recommended for tees," cautions Widdell. "Long-term, permanent suppression of *Poa annua* on these high-traffic, high-wear areas may be more difficult. Many tees, in fact, are nearly 100 percent *Poa annua* and conversion to other grass types would require much overseeding or possibly divot fill-in with a mixture of seed and sand."

Scott Niven, property manager for the Stanwich Club, Greenwich, Conn., and president of the Metropolitan Golf Course Superintendents' Association, says TGR has a strong effect on poa, immobilizing it so it can be overcome by the bentgrass.

Niven has tried TGR after the spring green-up and between mid-August and/or mid-September.

"It (TGR) does work," admits Niven, "but the biggest obstacle you have to overcome is a disgruntled club membership; if the course contains a high amount of poa, golfers must be told that the course will be yellow for six to 10 weeks."

Dobie reports that lately, Scott's

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TGR has been used as a retardant by some course managers.

"It's put on a fertilizer carrier and taken up into plant roots. It causes a retardation of all plants, but it retards the poa for a longer period of time than Embark. The bent recovers sooner and spreads."

The Sharon Country Club has used TGR experimentally on one fairway. Prior to the experiment, the poa/bent ratio was 50/50. That ratio has improved considerably, to a full 90 percent bent growth.

Dobie is not using TGR on putting greens, but a number of golf course superintendents have, including Ken Aukerman of Weymouth Country Club in Medina, Ohio.

"I applied TGR on four greens last fall at normal rates," says Aukerman, "and it killed the poa too effectively, resulting in brown spots. Then it rained, and there were yellow areas on the greens. But by spring, they greened up beautifully."

Aukerman treated all the Weymouth greens this fall, and, as predicted, they started to green up on the 21st day following treatment. Now, the Weymouth greens consist of a mere 10 percent *Poa annua*, as opposed to 90 percent before the applications.

Niven did much experimental work with Embark a number of years

ago, and says that that product is best prescribed for seedhead control rather than poa control.

Niven recommends using Embark in early spring, just before seedheads

form. It will effectively stop seeds for four or five weeks. If, however, a manager attempts to correct a bad first application by a repeat treatment, there

continued on page 32

A herbicide for poa

For many golf course managers, Prograss, from Nor-Am Chemical, remains the product of choice for controlling *Poa annua*.

"Nothing worked on *Poa annua* until we tried Prograss," says Roy Hourigan of the Harmony Landing Country Club in Goshen, Ky.

"We used it on one ryegrass fairway in the late fall of 1985. We applied two treatments a month apart at a gallon per acre. After the second application, I could tell the poa was starting to die. By the time I slit-seeded and got a stand in the spring, my fairway was about 90 percent ryegrass."

Hourigan has used Prograss on all Harmony's fairways since 1986, and says some areas have converted from nearly 100 percent *Poa annua* to about 80 percent ryegrass.

"We'll use it at the lower rate every fall as a maintenance program."

"We tried Prograss on our fairways and roughs in the fall at a ½-lb. per acre rate," says Niven, who applied it on ¾-inch bent fairways. There was minor discoloration, but the poa looked thin by the end of November. By April, it was overcome completely. We used it at a higher rate on bluegrass roughs, with equally good results."

Prograss was originally labeled for ryegrass, overseeded Bermudagrass and bluegrass, but recently expanded its use to fairway height bentgrass.

"We're very optimistic about Prograss's performance," says Don Maske, district manager for Nor-Am. "A number of superintendents whose courses have bentgrass fairways are trying the product and expanding further into a Prograss program."

—Terry McIver □

POA 'PROBLEM' IN THE EYE OF THE BEHOLDER

by Eliot Roberts, The Lawn Institute

An annual bluegrass, often referred to as *Poa annua*, comes close to being a universal grass. It can be found from east to west and from north to south wherever there is sufficient moisture for seeds to germinate, produce a new plant which can flower and yield a few more seeds.

Only a very short growing season is required to produce seed. Even under close mowing of golf putting greens, annual bluegrass will seed and perpetuate itself nicely.

As long as temperatures are cool and moist, annual bluegrass flourishes. When temperatures increase to produce the slightest stress on the plant, annual bluegrass weakens quickly. Shallow roots and disease

susceptibility are often cited as causes for this growth recession and ultimate demise of annual bluegrass-infested turf.

For as long as turf managers have been in existence, there have been two schools of thought for dealing with annual bluegrass. The first is to live with it. Keep it alive by providing for its needs in times of stress. This often has meant frequent light watering to keep it cool; use of fungicides and applications of fertilizer formulated to help it resist wilt. Low nitrogen and phosphorus with high potassium during the summer months work well. At other times of the year, practices that favor other basic grasses are emphasized to help establish a healthier, more competitive turf that will crowd out the

annual bluegrass. Unfortunately, most of these practices, such as core cultivation, thinning to control thatch and adjusting clipping heights, also favor annual bluegrass.

Killing it

The second school of thought has been to kill it by whatever means will work best under local conditions. Many different types of chemicals have been tested with varying degrees of control. But annual bluegrass is such a heavy seed producer that soils contaminated with seed are hard to clean up. Thus any practice takes a long time to really show progress. Growth regulators are being used to cut back on seed production that in time helps reduce annual bluegrass