

## New seeded varieties of zoysiagrass ready for market

By ANDREW OVERBECK

Following in the foot steps of Bermudagrass, which 10 years ago was available primarily in vegetative varieties, more new seeded varieties of zoysiagrass are emerging out of the testing plots and into the marketplace.

The typical problems with seeded zoysia have been germination times and rates, inadequate seed yields to justify production, inconsistent quality and unsatisfactory turf density and texture.

The new seeded types are being grown in the United States, as researchers have determined how to get the seed yield necessary to build proper inventory levels. As the turf quality of seeded types improve, more are being used on golf courses because it is more affordable than straight sod.

"Courses that are using seed are those that don't have enough money to completely sod or don't have the time for sprigs," said Dr. Leah Brillman, director of research for Seed Research of Oregon (SRO).

With the advent of better performing seeded types of zoysia, many expect the market to take off because it gives courses access to a turf that is drought tolerant, winter hardy, needs fewer inputs and can stand low-quality water.

#### ZENITH AND COMPANION

Zenith and Companion are both varieties developed by Lakeland,

Ga.-based Patten Seed.

"We bought Zenith from Dr. Jack Murray in 1991," said Dr. Tim Bowyer. "It has taken us this long to get inventory and acreage planted to get seed yields to make it a marketable product."

Both varieties are grown at Patten's farms in South Carolina and Georgia because the climate provides the right day length and humidity to get consistent seed

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Superintendent Casey Crittenden examines his zoysiagrass test plots.

## **Beatrice CC** testing zoysia for fairways

By GARY BURCHFIELD

Zoysiagrass is widely used on golf courses from about the Kansas City area on south, because of zoysia's hardiness and tolerance of heat and drought. Nebraska, though, is on the northern edge of the transition zone, subject to severe winters that can winter kill warm season grasses.

Despite the risk, superintendent Casey Crittenden is running a zoysiagrass test at the Beatrice, Neb., Country Club in the southeast corner of the state. So far, he's more than pleased with the results.

The private course has about 225 members and sees a moderate play level of approximately 20,000 rounds per year. The course is open year-round, but winter weather dictates how much play is possible. Crittenden says the last couple of winters have been mild enough that play was possible nearly the entire 12 months.

The course was renovated and reconfigured in the early 1990s, including the addition of some donated land on the south edge that brought the 18-hole course to 200 acres. Crittenden came aboard as course superintendent during the reconstruction.

During the renovation, the old bentgrass turf was replaced with a bluegrass and ryegrass combination on the fairways, a bentgrass mix on the greens and a bluegrass-rye-bentgrass mix on tees. Still, the combination of heat, humidity and drought the

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### seeded zoysia

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head production.

Zenith is similar to Meyer-type zoysias with medium texture, medium green color and can be maintained at one half- to twoinch heights said Bowyer.

"It is equally susceptible to diseases and pests. However, we have yet to see any zoysia patch," said Bowyer.

Companion is similar to Zenith, but is greener, finer and a

bit more dense.

"We developed Zenith first because it was more promising, but we eventually figured out how to get both varieties to produce commercial quantities," said Bowyer.

Zenith is on the market now. Companion will be released soon and will be marketed by SRO.

#### ZOYSIA SINICA

In addition to its Cathay and Sunrise seeded varieties, Jacklin Seed has received a patent for a new variety of seashore zoysiagrass that is extremely salt tolerant.

"It [zoysia sinica] is as dense as Japonica, a bit lighter in color, highly salt tolerant, has good seed size and winter survival," said Jacklin's Susan Samudio. "We think the bigger seed will enhance its germination ability."

Zoysia sinica was discovered by Jacklin's Dr. Joe Brede during one of his trips to China in the early 1990's. The samples Brede brought back were growing in sea water, leading him to believe that they may have a salttolerant strain.

"It will have a better adaptation on courses that get sea spray and use second-hand water," said Samudio. "And there is potential down the line that the seed would not need to be treated to improve germination."

Jacklin is working to increase seed stocks now and it will be 2001 before certified seed is available.

#### RESEARCH

Researchers are also working to combat the early dormancy and late green-up associated with zoysiagrass.

Brillman believes that year-round green could be achieved with zoysiagrass by seeding tall fescue and zoysia together. "If you overseeded zoysia with tall fescue you could have cover and manage them as a blend in certain areas of the country," she said.

Jacklin's Samudio has also been looking at interseeding zoysia with fescue. "We haven't seen any long term survival studies, but we know that is the way to do it," she said.

### **Beatrice CC**

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past two summers has caused problems with burnout and higher than usual fungus attacks.

"The costs for fungus control on fairways is cost-prohibitive," Crittenden said, not to mention the heavy irrigation needs. He discussed the situation a couple of years ago with Roch Gaussoin, Extension Turfgrass Specialist at the University of Nebraska. "He told me that the university has maintained a plot of Meyer zoysiagrass at its Mead research center, north of Lincoln, for the past 12 years and it has done just fine."

Crittenden discussed the idea with his greens committee chairman, then contacted Winrock Grass Farm in Little Rock, Ark., and arranged for a one acre shipment of Meyer zoysiagrass sod.

The sod arrived in May 1999 and was laid on a cleared area on the driving range. "We watched it all last summer to see how it rooted and knitted in to fill the gaps. We have been very impressed with the results so far."

#### WEIGHING COST VS. BENEFITS

Crittenden figures it would cost \$275,000 with \$300,000 to sod all the fairways to zoysiagrass at Beatrice Country Club. On the other hand, he estimates fungicide costs for the present course grasses could run from \$80,000 to \$100,000 per year if current conditions continue.

"Zoysia is not immune to fungus," Crittenden says. "But, where we might have to treat the bluegrass-ryegrass turf once or twice a month, we can probably get by with one or two treatments per season on zoysiagrass."

Zoysia can save on other maintenance costs. He estimates the zoysia will take from one to one and a half pounds of nitrogen per year, compared to four pounds per year for bluegrass-rye fairways. The zoysia will require less water as well.

Crittenden admits that zoysia isn't a panacea or cure-all for his golf course turf problems. "But, to compete in today's golf market, we have to keep our fairways in good shape and this is one way that seems workable."

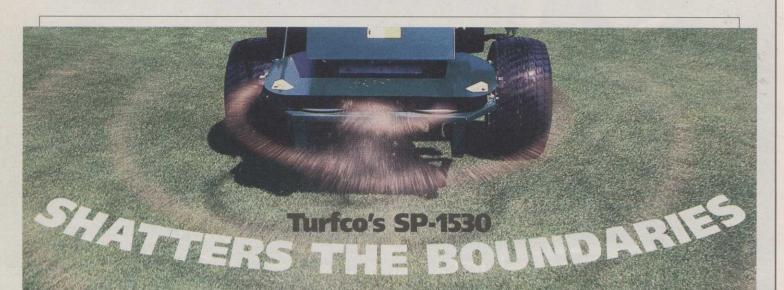
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