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## Elevate the Niceties:

Toad Valley's golf receptionist offers high-touch distinction

BY BRUCE ALLAR  
CONTRIBUTING EDITOR

### QUICK TIP

#### Kids Play

The Oak Grove Golf Club in New Boston, Texas, gives junior and beginners a place of their own with small tee boxes located on the edge of each fairway. The tees average 500 square feet to 600 square feet and are elevated about 2 feet. Distances range from 100 yards to 130 yards on par 3s, 150 yards to 180 yards on par 4s, and 180 yards to 230 yards on par 5s. Tees were built in-house with no additional maintenance costs.

**The personal touch of Toad Valley's golf receptionist creates more repeat golfers and generates better wallet share.**

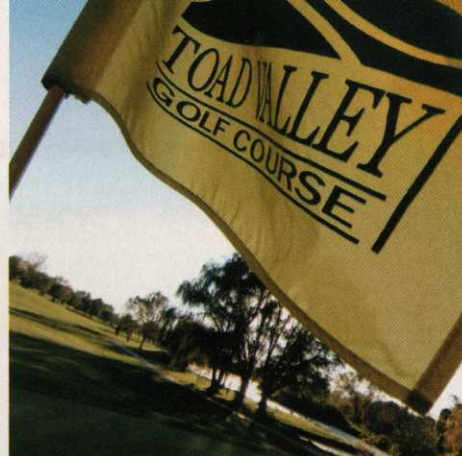
**T**he simplest ideas are often the best. In a departure from current corporate trends, managers of the family-owned Toad Valley Golf Course in Pleasant Hill, Iowa, sought to improve business by hiring a generalist instead of a specialist. By simply creating a golf receptionist position, customer relations and office efficiency has improved greatly.

General Manager Allison George says the Des Moines-area course recently hired a market research firm to gauge golfer satisfaction in the area. The company surveyed 2,000 golfers who had played the public course and 5,000 others in the area.

"We found that many times people feel neglected on the phone," she says. "So this is where the concept of getting a receptionist came to be."

Realizing that staff members in a busy and often noisy pro shop have little time to tend to phone etiquette, receptionist Kassie Underwood, who was hired in April, has been stationed in offices tucked away from the crowds. She works Friday through Sunday, on Tuesdays when the men's club descends on the course, and one other day of the week at her choosing to create a full-time schedule.

Away from the pro shop hubbub, she politely conducts telephone business and patiently gathers information for the e-mail and traditional mail databases. During down times, among other duties, she looks up player addresses in the phone book to add to the list.



"She's doubled our e-mail database and quadrupled our mailing database," George says.

Underwood also calls a few random golfers who played Toad Valley the previous day — mixing morning, midday and late afternoon players — to thank them for playing and to ask for feedback. George says this simple gesture has led to an increase in rounds played by repeat golfers. In fact, when George calls those who have risen from one or two rounds in a season to 10 or more to learn why they're now regulars, they often say, "We really appreciated that phone call back."

With revenues up about 12 percent during the first three quarters of 2007, George calls the hire a success. In truth, Underwood is more an assistant to the general manager than a receptionist. George, for example, designs Web sites for each outing, where golfers can sign up, pay and gather information online. With Underwood available to manage the flow of data on those sites, George is free to move on to creating more of them. Toad Valley has increased group rounds by more than 1,000 this year.

Underwood also helps with two other promotions: Ladies Night Out and Tadpoles. The night for ladies, most of them career women, includes instruction on etiquette, scorekeeping and shotmaking geared toward beginners; the Tadpoles program introduces juniors to the game.

"All of these people call in to sign up or sign up online," George says. "Kassie organizes all of it. She makes them all schedules and hands them out, checks them in and organizes them into groups. It's amazing customer service and frees up more time for me."

"There are over 20 courses within 20 minutes of us. It's extremely competitive, so we do things to try to differentiate ourselves."

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# stamp out Gray Leaf Spot in perennial ryegrass

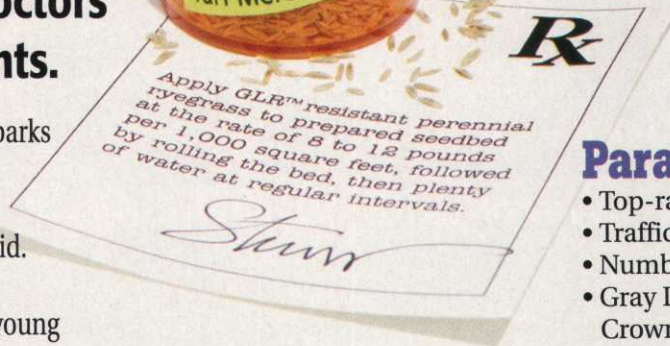
Prevent the dreaded *Pyricularia grisea* (for which there is no cure) by planting new, Gray Leaf Spot resistant ryegrasses developed by doctors for Turf Merchants.

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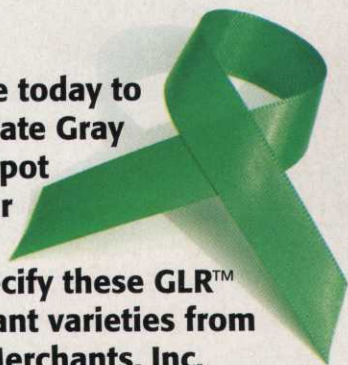
Gray Leaf Spot isn't pretty. It strikes quickly, affecting young ryegrass seedlings first with gray-to-brown lesions, often contorting tender blades into fishhook shapes. With prolonged hot, humid weather, large, mature turf areas can be lost to this dreaded disease.

In existing, older ryegrass turfs, Gray Leaf Spot can be addressed by applying a preventive fungicide, but once the pathogen has developed, little or nothing can cure it.

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# TURFGRASS TRENDS

## BENTGRASS EVOLUTION

# Bentgrass Cultivars Outgrow Some Pests

By Cale A. Bigelow

In the early days of golf course construction in the United States, putting greens were originally planted as a species mixture that contained a combination of creeping, colonial and velvet bentgrass referred to as South German bentgrass. This mixture was suitable for putting greens because it tolerated the mowing heights of the time and most importantly was widely available.

As management intensity increased, it became clear that creeping bentgrass was the most suitable species for putting greens because it formed the most persistent and reliable turf. Many early putting greens were established with stolons in a process called stolonizing. The availability of high-quality stolons and stolon storage and transport fueled the demand for a high-quality seeded bentgrass. An early seeded bentgrass eventually became available and was known as Seaside. Like the South German bentgrass mixture, this cultivar was prone to severe segregation or a patchy appearance over time. Seaside also possessed a very coarse leaf texture and was prone to severe grain development.

As the game of golf grew dramatically during the post-World War II era, the majority of golf course putting greens were planted using an emerging generation of seeded bentgrass called Penncross. This cultivar was more attractive than Seaside, segregated less and was highly prized because of its adaptation to a wide range of environmental conditions and its resistance to several problem diseases, including dollar spot and brown patch.

Further cultivar improvements continued to include some familiar varieties. In the 1970s, Penneagle was introduced, and in the 1980s Pennlinks, Providence and several others were introduced.

Much has changed since the golden age of golf course construction. And during the past 20 years, golfers have expected and demanded the firmest, smoothest putting surfaces. Golf course managers have responded by modifying their putting green management practices.

*Continued on page 46*

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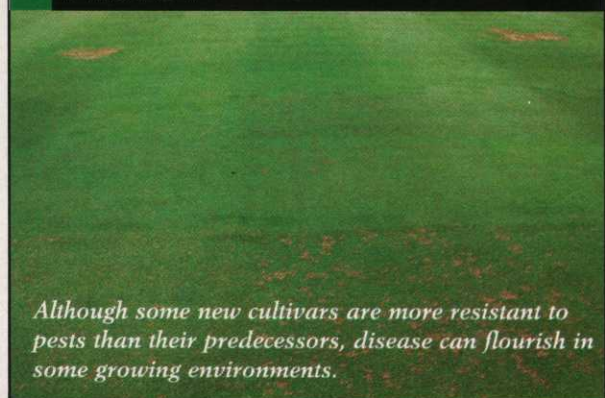
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### PHOTO 1



*Although some new cultivars are more resistant to pests than their predecessors, disease can flourish in some growing environments.*

*Continued from page 45*

The primary changes to putting green culture have been focused on the quest for consistent, fast ball speeds. To achieve this goal, daily mowing heights are much lower (the industry standard appears to be no greater than one-eighth inch). Fertilizer and irrigation are highly regulated, and there is a trend toward more frequent (weekly) sand topdressing.

Not surprisingly, with less fertilizer, drier soil conditions and the added stress of close, frequent mowing, diseases like dollar spot are reported to be a serious challenge.

It is said that "necessity is the mother of invention" and turfgrass breeders have responded to the golf course managers' needs by breeding bentgrasses with more upright growth habits (prone to less grain), finer leaf texture, an ability to maintain shoot density at extremely low mowing heights, increased rooting depths and a greater focus on disease resistance even when managed with very little fertilizer.

Interestingly, most of the newer cultivars have been bred from selections that developed on putting greens that were originally planted to Penncross, which means the genetic diversity among modern cultivars is not very high. In the mid-1990s, the golf construction industry was extremely busy opening approximately 300 courses per year. Concurrent with this construction boom many putting greens were established using the new standards for bentgrass, such as Crenshaw, Pennlinks, Putter, L-93, Southshore, and several of the emerging Penn A- and G-series bentgrasses. Probably the most widely planted bentgrass on putting greens in the cool-humid region was Penn A-4 or a blend of A-1 and A-4.

For the past decade this cultivar has a good track record at many of the finest golf facilities. While this most recent generation of cultivars has provided superior visual and functional characteristics, some possible negative attributes have also been reported, including reduced lateral spread due to a more compact and upright growth habit that sometimes results in slower ball-mark healing. Other reported attributes include greater susceptibility to diseases like dollar spot, and a general perceived requirement for increased cultural inputs, such as more-frequent, ultra-

low mowing, increased core cultivation and sand topdressing needs in order to manage potential surface organic matter accumulation associated with the new high shoot densities (Samples and Stone, 1994; Landry, et al. 1997; Morris, 1998; Bruneau et al., 2001).

One example of unexpected management challenges with the newer cultivars is that during the mid-1990s many new putting greens were established to the newest heat-tolerant bentgrass, Crenshaw. This cultivar was widely planted throughout the Southeastern United States where prolonged hot, humid summer conditions are the norm. Overall this cultivar has performed very well at many golf facilities throughout the Carolinas.

Although this cultivar has excellent heat tolerance and summer performance, its Achilles heal has been its susceptibility to dollar spot. It is one of the least resistant, making preventive fungicide sprays a necessity. In addition, golf course managers that pushed the cultivar farther north into the mid-Atlantic often complain of the lack of spring vigor. This example illustrates how a good cultivar (perhaps simply planted in the wrong growing environment, a humid one rather than an arid one such as the area in which it was bred) can present new management challenges, which should be kept in mind as the profession begins to consider the newest bentgrass generation.

*Cale A. Bigelow is an assistant professor of agronomy and turfgrass Science at Purdue University in West Lafayette, Ind., where he has teaching, research and outreach responsibilities. His research program focuses on cultural management strategies and soil-related problems for recreational turfgrass areas and commercial/home lawns. Contact him at [cbigelow@purdue.edu](mailto:cbigelow@purdue.edu).*

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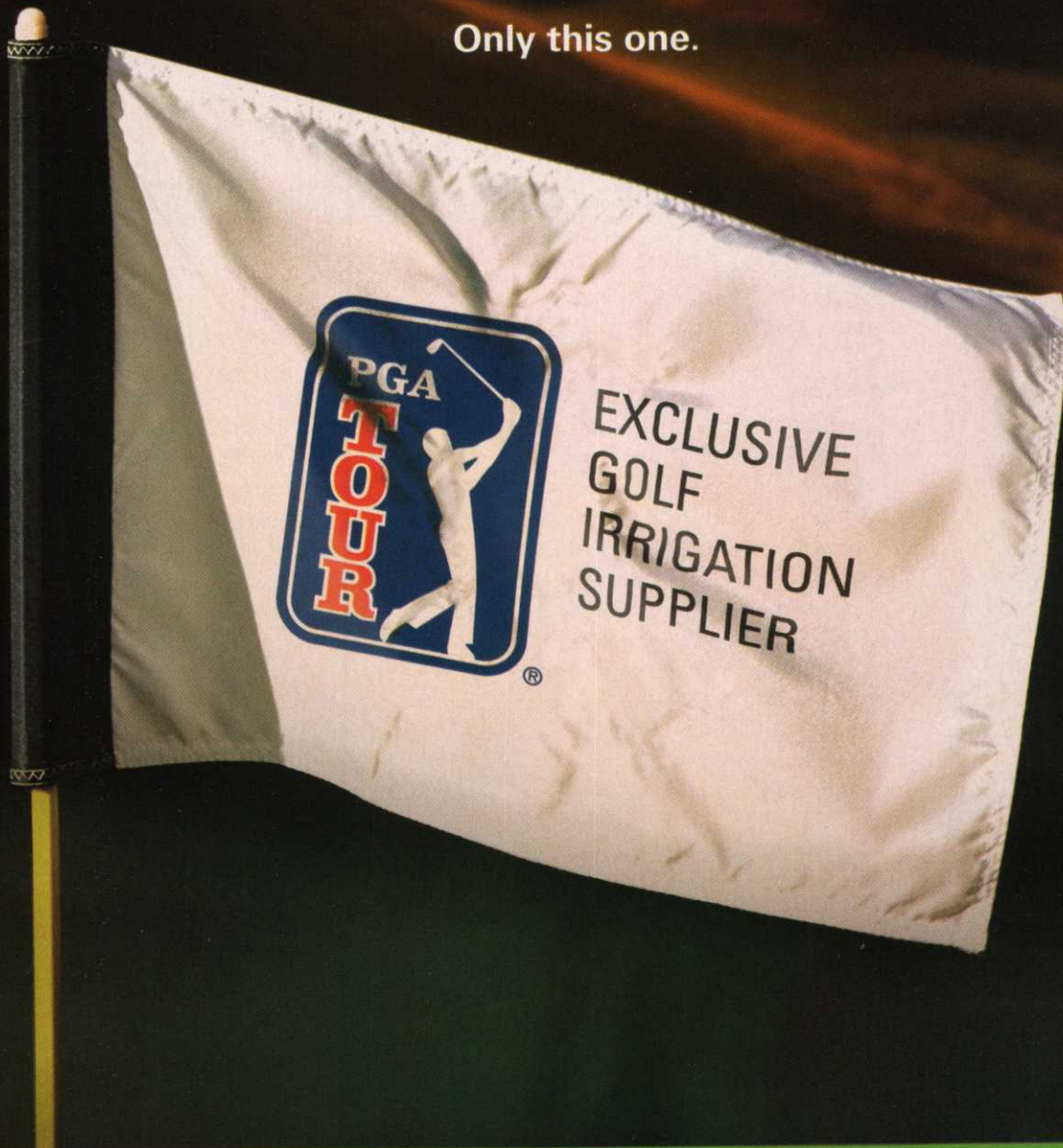


### QUICK TIP

Superintendents have many reasons to work late hours on the course and in the office. New, innovative products flood our markets and sometimes leave unanswered questions. Of all the different categories of products within the turfgrass industry, the multitude of new varieties of turf species released every year pose much debate. Breeders continue to improve our current turfgrasses with better attributes like heat and drought tolerances. Every superintendent has the daunting task of sifting through the data and determining what new variety is best for his or her course. As with any decision we make — whether it's what seed to buy or what fertilizer to use — do your homework!

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# Dark-green Varieties Continue to Dominate Turfgrass Breeding for Color

By Melodee L. Fraser and  
Crystal A. Rose-Fricker

**T**urfgrass breeders have been very successful in darkening the color of and broadening the range of color in cultivars of cool-season turfgrass species. Dark green color is often desired by turfgrass managers and homeowners in the United States because the turf is perceived to require less nitrogen fertility and to look healthier than lighter green cultivars. In Europe, lighter green colors are often preferred because of the prevalence of high populations of lighter-colored annual bluegrass (*Poa annua*).

In some turf situations, like golf courses, a combination of species and cultivars with a range of colors is often used to provide an interesting contrast throughout the property. Landscape architects may select a particular turf species or variety to complement or contrast with the colors of the other plants in the landscape.

How difficult is it to develop a darker green turfgrass variety? In tall fescue and perennial ryegrass, turfgrass breeders have made rather rapid progress in developing dark-green turf-type cultivars. In both of these species, early cultivars for turf were developed from germplasm used for forage or hay, which was very light green in color. Both species are highly heterozygous and heterogeneous, which means there is a lot of genetic variation within the species. Subsequently, it's rather easy to plant out a high number of plants in a population and select the low percentage of plants that are much darker green than the others. These darker plants can then be combined and recombined over a number of generations to develop a darker green variety. Dur-

ing the 1980s and 1990s, many breeding programs in the United States focused on developing darker green cultivars.

Rapid progress was made in the development of dark-green varieties and continues to be made. This can be illustrated by examining data from the National Turfgrass Evaluation Program (NTEP). Brightstar is an example of one of the first very dark-green perennial ryegrass cultivars. In the final report of the 1990 NTEP perennial ryegrass test (Morris, 1995), Brightstar and Palmer II tied for the top ratings for genetic color, rating 7.7 on a 1 to 9 scale, where 9 was darkest.

In the final report of the 1994 test, Brightstar averaged a 7 rating for color, but was left behind by Brightstar II, which tied for the top rating in the trial, an 8 (Morris, 1999). In the final data for the 1999 trial, Brightstar II rated a 7, but 37 other varieties had the same rating or higher (Morris, 2004).

A similar story can be told for Kentucky bluegrass. Midnight Kentucky bluegrass set the standard for dark color, beginning with the 1985 NTEP test (Morris, 1991). It continued to be the darkest variety in national trials through the end of the 1995 test (Morris, 1996; 2001). At the end of the 2000 NTEP test, Midnight rated 7.3 for genetic color, which was significantly lower than Moonlight, which rated 7.8 (Morris, 2006).

During the first year of the 2005 NTEP test, Midnight rated 7, while 30 other varieties rated the same or higher (Morris, 2007). Blueberry rated 7.8, followed by other very dark green varieties, including Emblem, Pinot, Moonlight SLT and Prosperity. In another five years, even darker Kentucky bluegrass varieties are likely to be developed.

While attention is often given to very



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To help keep your course on the straight and narrow, use a walking greens mower with a dual-traction drive, such as the John Deere C Series Walk Greens Mowers. These mowers have been upgraded to provide even straighter tracking on greens, tees and surrounding areas. For more information on walk behind mowers, contact your local John Deere Golf & Turf distributor or visit [www.johndeere.com](http://www.johndeere.com).



PHOTO 1



*Kentucky bluegrass cultivars show a wide range of genetic colors.*

dark-green varieties, top-performing varieties in several species have a range of colors. Kentucky bluegrass cultivars range from light yellow-green to very dark blue-green (Photo 1).

Avalanche Kentucky bluegrass is an example of a light-green variety with outstanding turf quality, heat tolerance and wear tolerance. Fine fescue varieties come in almost every shade of green, from bright yellow-green to dark blue-green to bright blue (Photo 2). Creeping bentgrasses are sometimes chosen by golf course architects for their color, in addition to other attributes. Penn G-2 is light yellow-green; T1 is dark green; and Crystal BlueLinks is bright blue-green.

There are many colors and cultivars, to select from when turfgrass managers are choosing varieties for projects. Turfgrass breeders have been successful in developing many cultivars with excellent genetic color in all cool-season turfgrass species. For most breeders, color is now a secondary attribute of interest in variety development. More emphasis today is placed on developing cultivars with more economically and ecologically valuable traits, such as disease resistance, drought tolerance,

high and low temperature tolerance, salt tolerance, herbicide tolerance, shade tolerance and traffic tolerance. Making significant progress in improving these traits is more difficult and time consuming for turfgrass breeders. Most of these traits are controlled by multiple genes and require many cycles of selection, recombination and evaluation to obtain and confirm the stability of the trait.

Breeders are making progress in develop-  
*Continued on page 50*

Lower-input turfgrasses are getting more emphasis today, but traits that make turf tolerant to heat, drought, herbicides and disease are controlled by multiple traits.

PHOTO 2



*Fine fescue cultivars range in color from yellow-green to bright blue.*

## PHOTO 3



*This bluegrass trial will help identify cultivars that require fewer inputs while retaining dark-green aesthetics.*

*Continued from page 49*  
ing varieties with these valuable attributes, which require fewer inputs from the turfgrass manager, save money and are healthier for our environment.

There are now commercially available varieties with improved genetic resistance to some of the most problematic turfgrass diseases, such as brown patch, gray leaf spot, dollar spot, crown rust, stripe rust and stem rust. These varieties can dramatically decrease fungicides and herbicides applied to turf and to turfgrass seed production fields. New salt-tolerant varieties can be used in areas where non-potable water is required for turf irrigation. A turf manager with saline irrigation water likely will be pleased with a salt-tolerant variety that can survive difficult growing conditions, whether the variety is dark green or not. The use of dark-green varieties might help lower some inputs as well, as a turf manager might not apply as much nitrogen fertilizer as he would to darken a turf of a lighter green variety.

Turfgrass breeders have made major progress in developing darker green varieties and in developing varieties with a range of colors to provide choices for turfgrass managers. While color remains an important characteristic in turfgrass variety development, traits with higher environmental and economical significance are receiving

more attention from turfgrass breeders and managers alike.

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