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L-93

Creeping Bentgrass

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S E E D

by **Simplot**

The item appeared in *Golf World's* April 2 edition of "The Bunker." Coming so close to April Fool's Day, the editors had to be having a little fun, right?

Tom Doak and Jack Nicklaus were announced as co-designers of a planned private club situated on 312 acres of Southampton real estate near Shinnecock Hills Golf Club and literally next door to the fabled National Golf Links of America.

It's no hoax.

Long Island course developer Michael Pascucci is marrying this odd couple of architecture, believing two divergent minds can craft a design that will hold its own with the neighborhood's other masterpieces.

Doak is the headstrong visionary who has emerged as a design business star by building old-style, nature-inspired layouts. He lets the land dictate routings that he creates by walking the property himself.

Nicklaus, meanwhile, parlayed his status as the greatest golfer ever into a design empire. He builds big, radiant courses. His office churns out courses under an assortment of banners. The more you fork out, the more Jack you get. The less you pay, the more likely one of his sons Jackie, Gary, Steve or even a son-in-law will be the co-architect along with the family patriarch.

Plans are basically useless to Doak. His team approach embraces interesting ideas that evolve out of the construction process.

Nicklaus designs are done from the firm's 11780 U.S. Highway 1 location. Though he makes more site visits than most player architects, Nicklaus courses are still largely created on the office drawing board.

If they were in the hotel business, Team Doak would create quaint bed and breakfasts that you read about in a "hidden gems" sidebar.

Team Nicklaus is the Marriott of golf—solid, consistent and classy lodgings that lack a sense of place.

One can already imagine amusing scenarios when these two walk the holes, ranging from minor spats over bunker placement to outlandish squabbling straight out of *The War of the Roses*. That's the Danny DeVito-directed dark comedy where Michael Douglas and Kathleen Turner

The Odd Couple of Architecture?

BY GEOFF SHACKELFORD



IT'S NO HOAX. DOAK AND NICKLAUS ARE CO-DESIGNERS OF A PLANNED PRIVATE CLUB ON LONG ISLAND

divorce, yet stubbornly continue to live in the same house until they kill each other. The moral of that story was that dog people shouldn't marry cat people.

Doak's courses are rugged and spunky. He builds courses for dog people. Nicklaus designs are sleek and slightly detached. Cat people love his courses.

Since this Southampton course was approved on the basis of holistic maintenance practices, Doak will likely get his way and build something that melds into the native Long Island environment. But who is actually going to construct it? Will it be Doak's crew of creative co-designers, known for shaping features in a hands-on, site-specific way? Or will Nicklaus' construction team be there to make sure the Golden Bear's "signature" is felt?

Maybe it'll be a mix of both, like the Arnold Palmer-Nicklaus World Golf Village 18-hole where the giants co-designed the King and the Bear course. They even had a documentary film crew along to capture the opening round played by the two golfing greats.

Perhaps selling the documentary rights will be developer Pascucci's way of putting a dent in the property's \$45 million price tag. Doak and Nicklaus could be miked with hidden cameras planted all over the place. We could be inside Jack's Gulfstream, listening to what he really thinks of Doak's ideas as they await clearance from Islip air-traffic control. And we could hear what Doak says about Jack as he returns his Taurus rental to JFK.

Come to think of it, some lucky superintendent will get to witness the inner workings of this unprecedented design pairing. Just think of the stories he'll have for the grandchildren!

Get him a literary agent now.

Geoff Shackelford's latest book is The Future of Golf in America.

TURFGRASS TRENDS

TURF VARIETIES

Seashore Paspalum Putting Greens Rate Well With Golfers

By Mike Healy

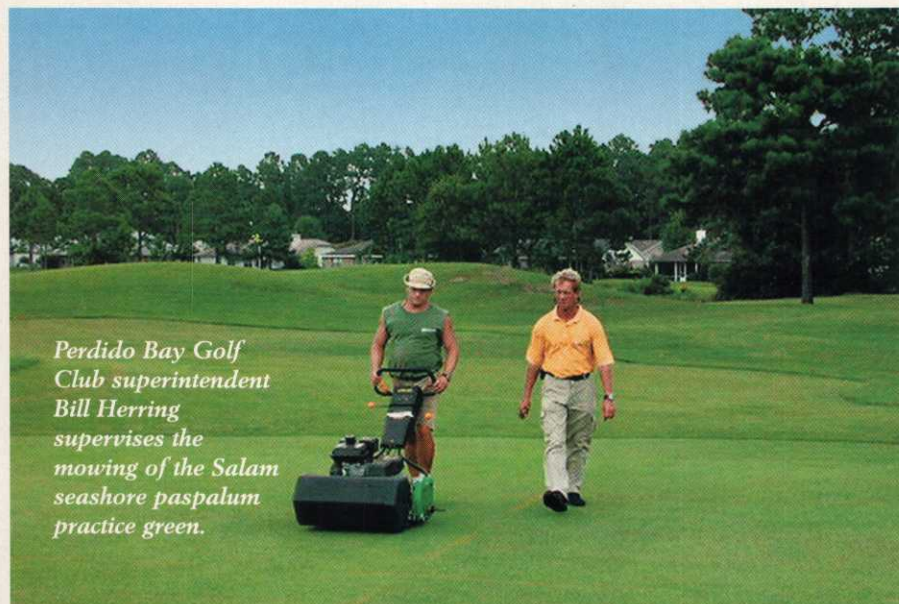
In 2000, the Perdido Bay Golf Club underwent an extensive redesign and renovation. Tifeagle ultradwarf bermudagrass was selected for use on all in-play greens. Salam Seashore Paspalum was selected for use on roughs, fairways and tees. In addition, two practice greens were sprigged with Salam.

To prevent Salam from encroaching into the Tifeagle greens, a 42-inch wide barrier of Tifway 419 bermudagrass sod was planted around the edges of each green.

In fall 2002, Salam had not only invaded the Tifway 419 barrier but could be found growing as patches up to 2 feet in diameter throughout many of the Tifeagle greens. Also in the fall of 2002, Tifeagle developed significant leaf and root diseases. The patches of Salam growing within the Tifeagle greens were seemingly unaffected by these diseases. It's important to note that the two Salam practice greens were maintained in a nearly identical manner to the Tifeagle in-play greens. The dilemma for Perdido Bay Golf Club now is whether to keep and decontaminate its Tifeagle greens of Salam or to convert the course into a 100-percent Salam facility.

Tifeagle is the most widely used of the ultradwarf bermudagrasses, and often selected because of its ability to produce high Stimpmeter speeds. The seashore paspalums, including Salam, are generally considered in the same class speed-wise as the old stan-

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Perdido Bay Golf Club superintendent Bill Herring supervises the mowing of the Salam seashore paspalum practice green.

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- **Syringing Can Dramatically Affect Canopy Temperature 63**
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 dard Tifdwarf. Although seashore paspalums are often selected because of their ability to withstand extremely low water quality, this issue was not a factor for use at Perdido Bay.

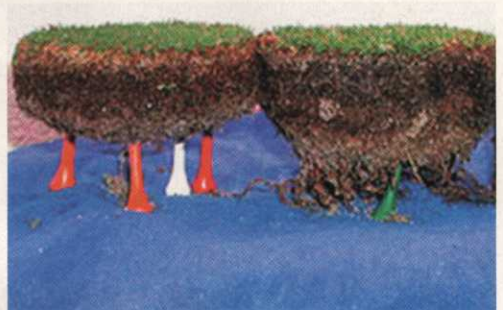
The objectives of this study centered on evaluating various combinations of cultural techniques that would increase Salam Stimp-meter speeds while maintaining acceptable visual quality. On the larger of the two Salam practice greens, a treatment grid of 16 12-foot by 12-foot areas were established. Each of the 16 areas ended up having a different series of cultural practices.

Cultural practices included different mowing heights (.135 inches and .120 inches), light top-dressing vs. no topdressing, periodic verticutting



▲ The practice putting green was broken into individual turf plots. Each received different management regimens.

▼ The seashore paspalum roots (right) drove deeper into the soil than those of the Tifeagle.



vs. no verticutting, and the use of Primo Maxx plant growth regulator vs. no Primo Maxx. The study began with the first application of Primo Maxx on July 25, 2003, with speed rating and visual quality measurements for all 16 treatment combinations taken on Sept. 17.

Two golfer preference studies were conducted on three separate Salam putting surfaces on Sept. 26 and Oct. 2. In all the evaluations, the Tifeagle No. 18 in-play green was used as a standard of comparison to the 16 different Salam putting surfaces

Results summary

On Sept. 17, speed ratings were taken at 10:30 a.m., 3 p.m., and 6:15 p.m. for the 16 Salam cultural practices combinations along with the No. 18 Tifeagle in-play green.

At 3 p.m., visual quality ratings were taken.

Continued on page 56

TABLE 1

**Peridido Bay Golf Club
 Salam Seashore Paspalum Speed-Up Study**

Sept. 17, 2003 — Turf Quality and Speed Ratings

Treatment	10:30 a.m.	3 p.m.	6:15 p.m.	Quality Rating
.135 inches	7	8	7.7	7.5
.135 inches + TD	7.7	8.3	8.4	7.5
.135 inches + P	7.6	8.5	8.1	7
.135 inches + TD+ P	7.1	8	8.3	8
.135 inches + V	8.1	9.1	8.1	7
.135 inches + V+ TD	7.7	9	8.7	7
.135 inches + V+ P	8.2	9.3	8.9	7
.135 inches + V + TD + P	7.8	8.7	8.3	7.5
.120 inches	8.4	9.4	9.1	7
.120 inches + TD	8.3	8.1	9	7
.120 inches + P	8.8	9.6	9	7.5
.120 inches + TD + P	8.7	9.4	9.2	6.5
.120 inches + V	9.9	9.6	10.3	5.5
.120 inches + V + TD	9.2	9.5	9.5	5.5
.120 inches + V+ P	10.2	10.5	9.7	6
.120 inches + V+ TD + P	8.8	9.6	8.8	6.5
Tifeagle in-play .135 inches	9.1	10.2	9.6	8

.135 inches and .120 inches = mowing heights, V= verticut, TD = topdressing, P = Primo Maxx® Stimp-meter ratings (in feet) at times listed in first three columns, last column is turf quality rating where 1 = lowest quality to 9 = highest quality (color and uniformity). Mowing previous to these ratings was done on Sept. 16 at 9 a.m. Green was rolled only at 9 a.m. on Sept. 17.



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FIRST ROUND — GOLFER PREFERENCE SURVEY

Perdido Bay Golf Club, Paspalum Speedup Study

On Sept. 26, 30 golfers finishing the 18th green were asked to putt three balls on each of three Salam Seashore Paspalum putting surfaces. Golfers were randomly chosen. Golfers putted downslope on all surfaces tested. The putting surface pedigrees and surveyed golfer profiles are summarized below:

SURVEYED GOLFER-PROFILES:

Of the 30 randomly selected golfers:

- **Sex** — 80% men; 20% women
- **Shots** — 7% shot 70-79; 33% shot 80-89; 40% shot 90-99; 13% shot 100-109; and 7% shot over 110.
- **"Normal" scores for these golfers were** — 70-79 = 10%; 80-89=43%; 90-99=33%; 100-109 = 7%; and 110+ = 3%
- **Played on this course frequency** — first time: 10%; 6-10 times in last two years: 3%; 11-20 times in last two years: 10%; and over 20 times in last two years: 77%.
- **Golfer age** — 46-59: 20%; over 60: 80%

Salam Putting Surface "A" — mowed: .135 inches, topdressing, Primo.

Stimpmeter speed on Sept. 17: 7.1 feet. Visual quality on Sept. 17: 8 (9 = best.)

Stimpmeter speed on Sept. 26: 8.9 feet (downslope component = 9.7 feet).

Golfer preference: 17 percent preferred this surface over the other two Paspalum surfaces. Forty percent of those preferring this surface thought it was better than the Tifeagle in-play greens; 40 percent thought it was equal to the Tifeagle in-play greens.

Salam Putting Surface "B" — mowed: .120 inches, Primo. Stimpmeter speed on Sept. 17: 8.8 feet. Visual quality rating on Sept. 17: 7.5. Stimpmeter speed on Sept. 26 = 11.6 feet (downslope component = 15.1 feet). Golfer preference: 70 percent preferred this surface over the other two Paspalum surfaces. Fifty percent of those preferring this surface thought it to be better than the in-play Tifeagle greens; 50 percent thought it was equal to the Tifeagle in-play greens.

Salam Putting Surface "C" — mowed: 120 inches, verticutting, Primo. Stimpmeter speed on Sept. 17: 10.2 feet. Visual quality rating on Sept. 17: 6, Stimpmeter speed on 9/26: 10.3 feet (downslope component: 12.9 feet). Golfer preference: 13 percent of golfers preferred this surface over the other two paspalum surfaces. Of those preferring this surface, 25 percent thought it was better than the Tifeagle in-play greens. 50 percent thought it to be equal to the Tifeagle greens.

Tifeagle in-play greens — Stimpmeter speed on Sept. 17: 9.1. Visual quality rating: 8.

Continued from page 54

For all cultural treatments, Stimpmeter speeds were slowest at 10:30 a.m., fastest at 3 p.m. and in the middle at 6:15 p.m. The day was sunny and moderately windy. Mowing height reduction from .135 inches to .120 inches provided a 20 percent increase in speed. Salam mowed at .120 inches the use of Primo Maxx and verticutting had speed slightly in excess of the in-play Tifeagle green (mowed at .135 inches).

For speed and visual quality, Salam mowed at .120 inches with Primo Maxx produced the most favorable numbers. In most cases, topdressing did not appear to significantly increase Stimpmeter speeds (See Table 1).

On Sept. 26, 30 golfers completing the 18th green were selected at random to putt three balls on each of three different Salam putting surfaces. All golfers selected filled out a brief survey along with rating the three selected Salam surfaces to each other and to the Tifeagle green they had just exited.

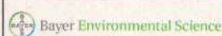
One of the three Salam surfaces was select-

The dilemma for Perdido Bay Golf Club is whether to decontaminate their Tifeagle greens of Salam or to convert the course into a 100 percent Salam facility.

ed as "best" by 70 percent of the golfers surveyed. Golfers rated this surface as superior to the in-play Tifeagle greens 50 percent of the time and as equal to the Tifeagle greens 50 percent.

On Oct. 2, a second group of 30 golfers randomly selected after completing the 18th green were selected to putt six balls on each of three different Salam putting surfaces. Although the demographics of the golfers surveyed along with the survey technique were slightly different than in the Sept. 26 survey, the results of both surveys were similar.

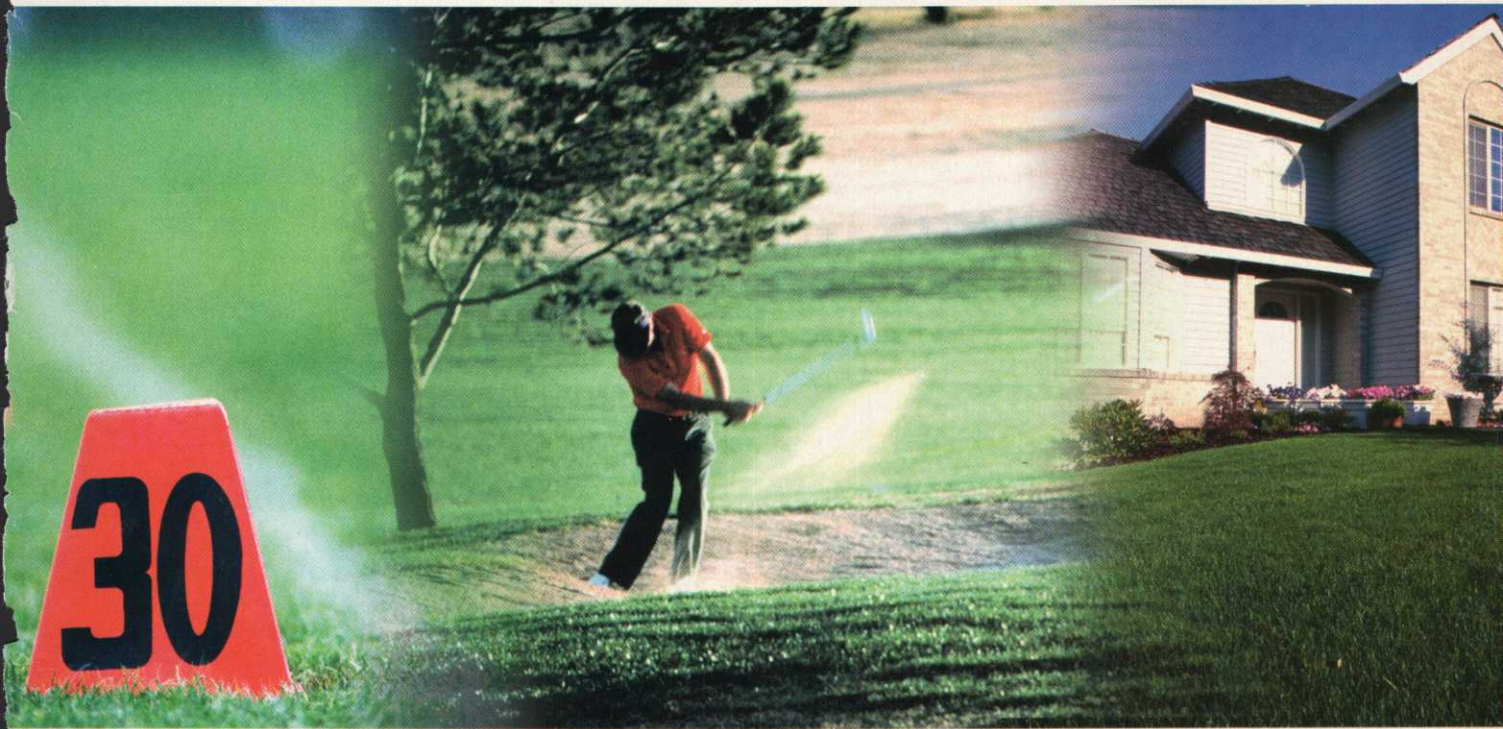
Continued on page 58



QUICK TIP

For fast disease-control efficacy at very low rates, use Compass™ fungicide to control brown patch, anthracnose, leaf spot and gray leaf spot, among other turf diseases. A broad-spectrum strobilurin fungicide, Compass™ has a mesostemic mode of action, delivering the value of a contact with the power of a systemic.

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SECOND ROUND — GOLFER PREFERENCE SURVEY

Stimpmeter speed on Sept. 26: 8.7 feet (downslope component: 9.7 feet) at a .135 inch mowing height.

Perdido Bay Golf Club, Paspalum Speedup Study

On Oct. 2, 30 golfers completing golf on the 18th green were asked to putt six balls on each of three different Salam Seashore Paspalum putting surfaces. Golfers were randomly chosen. Golfers putted both downslope and upslope on all surfaces tested. The putting surface pedigrees and surveyed golfer profiles are summarized below:

Salam Putting Surface "A" — Mowed: .135 inches (no other treatment). Stimpmeter speed on Oct. 2: 7.5 feet (downslope component = 8.2 feet). Golfer preference: 27 percent preferred this surface over the other two Paspalum surfaces. Sixty-three percent of those preferring this surface thought it was better than the Tifeagle in-play greens; 25 percent thought it was equal to the Tifeagle in-play greens.

Salam Putting Surface "B" — Mowed: .120 inches, Primo, topdressing. Stimpmeter speed on Oct. 2 = 10.7 feet (downslope component=14.8 feet). Golfer preference: 67 percent preferred this surface over the other two paspalum surfaces. Forty-five percent of those preferring this surface thought it to be better than the in-play Tifeagle greens; 50 percent thought it was equal to the Tifeagle in-play greens.

Salam Putting Surface "C" — Mowed: .120 inches, verticutting Stimpmeter speed on Oct. 2 = 10.3 feet (downslope component: 12 feet). Golfer preference: 6 percent preferred this surface over the other two paspalum surfaces. Of those preferring this surface, 50 percent thought it was better than the Tifeagle in-play greens, while 50 percent thought it was equal to the Tifeagle greens.

Tifeagle in-play greens — Stimpmeter speed on Oct. 2 = 9.6 feet (downslope component: 9.8 feet at a .135 inch mowing height).

SURVEYED GOLFER- PROFILES:

Of the 30 randomly selected golfers:

- **Sex** — 100% men
- **Shots** — 13% shot 70-79; 30% shot 80-89; 40% shot 90-99; 17% shot 100-109.
- **"Normal" scores for these golfers were** — 70-79 = 13%; 80-89=47%; 90-99=37%; 100-109 = 3%.
- **Played on this course frequency** — first time: 10%; 1-5 times: 37%; 6-10 times in last two years: 3%; 11-20 times in last two years: 3%; and over 20 times in last two years: 47%.
- **Golfer age** — under 30: 10%; 31-45: 3%; 46-59: 37%; over 60: 50%

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Future activity

Perdido Bay superintendent Bill Herring decided to continue many of the cultural practices on the Salam green to assess their impact on the onset and duration of dormancy.

This trial green along with all in-play Tifeagle greens will not be overseeded. The trial green has now gone through the winter of 2003/2004 with almost no differences between treatments noted. Relatively mild winter temperatures were responsible for the Salam trial green not attaining full dormancy, while the in-play Tifeagle greens did reach full dormancy.

A light outbreak of dollar spot hit the trial green in mid-February, but no treatment-based differences in disease severity were observed. Herring observed that the lower-mowed Salam came out of semidormancy several days sooner than the higher mowed areas, this happening in the middle of March 2004.

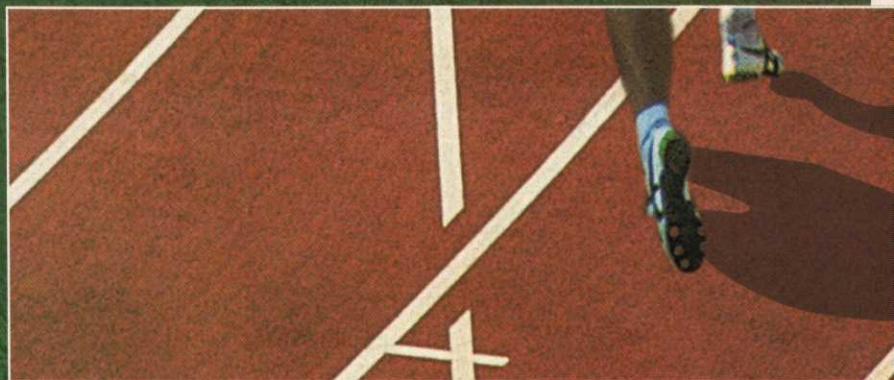
Discussion

If one were to consult only Table 1, it would appear that on the basis of both speed and turf (visual) quality, Tifeagle outperformed Salam, regardless of Salam treatment routine. Yet it's clear from the golfer surveys conducted that Salam treatments did make a difference as to customer preference and that the best treatments compared favorably to customer opinion of Tifeagle in-play greens.

Will the Salam treatments responsible for best customer reviews be able to be maintained on a long-term basis? Do we trust formal (technical) measurements of putting green speed and quality as the primary means of attending to customer desires, or do we find a way to account for customer preferences into any turf management program? Each superintendent will have to make that decision based on conditions at his or her course.

Healy owns and operates a turfgrass disease diagnostics laboratory and consulting service in the Southeast.

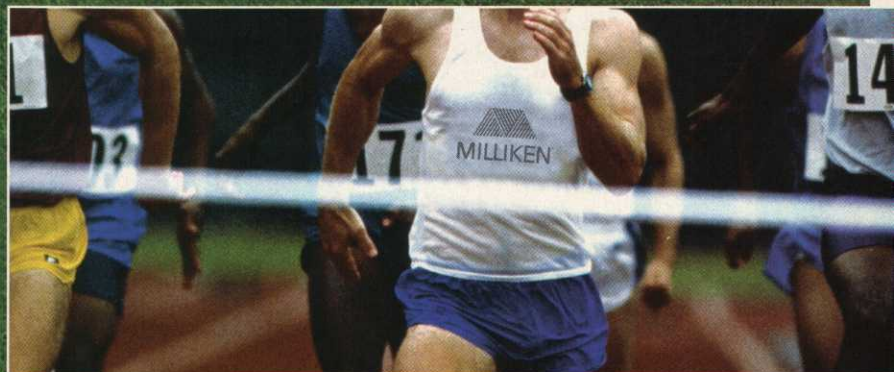
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Getting the Most Out of the Newest Strobilurin Fungicide

By Paul Vincelli and Ed Dixon

Several months ago, Insignia 20WG fungicide received a federal label for use on golf courses for disease control. Insignia contains the active ingredient pyraclostrobin, which is a member of the strobilurin (QoI) class of fungicides. Turf managers should note that Insignia is labeled only for use on golf courses.

Pyraclostrobin has a rather broad spectrum of activity against fungal pathogens in turfgrass as reflected by the range of diseases on the label. In preparation for writing this article, we searched the literature available to us and found 52 scientifically valid research reports which included Insignia. As always, the principal source for fungicide efficacy ratings in the University of Kentucky Turf Program was the journal *Fungicide and Nematicide Tests*, although other published reports were used when available. The efficacy of the product was evaluated in the 52 reports, and the results are summarized in Table 1.

These efficacy ratings are based on the best information available to us at the time of publication; ratings may change as new information becomes available. It should also be noted that the manufacturer has access to results of many research trials that we have not seen.

Based on the available data, it is clear that Insignia has excellent activity against brown patch and gray leaf spot. It also appears to be useful for control of pink snow mold/*Microdochium* patch, red thread and take-all patch. In a single test for each disease, Insignia performed well against leaf spot, leaf rust and summer patch. One test is not enough to make a judgement about efficacy, however.

Performance against anthracnose, dollar spot, and *Pythium* blight has been erratic in published tests. While it performed well against these diseases in certain tests, efficacy has been variable enough that superintendents may wish to use this tank-mix product with other fungicides when targeting these diseases. It should be noted that the Insignia label only claims

“suppression” for dollar spot, and it recommends tank-mixable with another effective dollar spot fungicide under moderate to severe dollar spot pressure. The reader should also note that there is no single product that consistently controls anthracnose.

As is typical of the strobilurin fungicides, pyraclostrobin is effective at low use rates and has low mammalian toxicity. Strobilurin fungicides typically are toxic to highly toxic to rainbow trout and *Daphnia magna* (water flea), which are indicator species of toxicity to aquatic ecosystems. Among the strobilurins, pyraclostrobin is particularly toxic to rainbow trout. Thus, it will be important when using the product carefully to avoid contamination of streams, ponds and lakes.

The potential for resistance to pyraclostrobin is high.

Some guidelines for minimizing the risk of contamination are available on the label. One factor that will help reduce risk to aquatic ecosystems is pyraclostrobin's strong ability to bind to organic matter in leaves and thatch. The binding ability of pyraclostrobin is the highest among the range of turf fungicides to which we compared it. This strong binding to organic matter will also help minimize leaching potential.

Pyraclostrobin is strongly lipophilic, which means it binds tightly to the waxy cuticle of turfgrass plants. It's not a systemic fungicide; pyraclostrobin simply moves across the leaf blade from the treated leaf surface to the other surface. Thus, applicators should strive for excellent spray coverage to get the most out of this product.

Insignia has a single, specific biochemical site of action in the fungal cell, which it shares with other strobilurin fungicides. Since resistance to these fungicides has occurred rather quickly in certain fungi, including the gray leaf spot and anthracnose fungi in turf, the potential for resistance to pyraclostrobin is high. In locations

Continued on page 62



QUICK TIP

DG Pro — the new dispersing granular carrier from The Andersons. A number of fungicides, insecticides and herbicides now utilize this carrier. There's no mower pickup, no ball pickup and quick active ingredient delivery.