

▲ The fairway after two years of topdressing.

Appearance of the fairway after aerification, topdressing and blowing to remove debris.

dust and was composted to maturity. The typical nutrient range of the compost was 1.7-2.4 percent nitrogen, 2.2-4.3 percent P_2O_5 and 0.23-0.37 percent K_2O . A pH of 6.2, C:N ratio of 23:1 and organic matter of 89 percent were typical of the compost source.

In October 2007, Pagett and his two assistant superintendents, Don Chester and Scott Martell, finalized the compost application operation. They applied compost to a depth of approximately 0.5 inches using a Bannerman Turf Topper

set wide open, then aerated with hollow 3/4-inch tines on a 2 x 2-inch spacing.

They then drug the fairway and rough with a metal 8-foot chain harrow drag mat to incorporate the compost into the aerification holes and break up the soil cores.

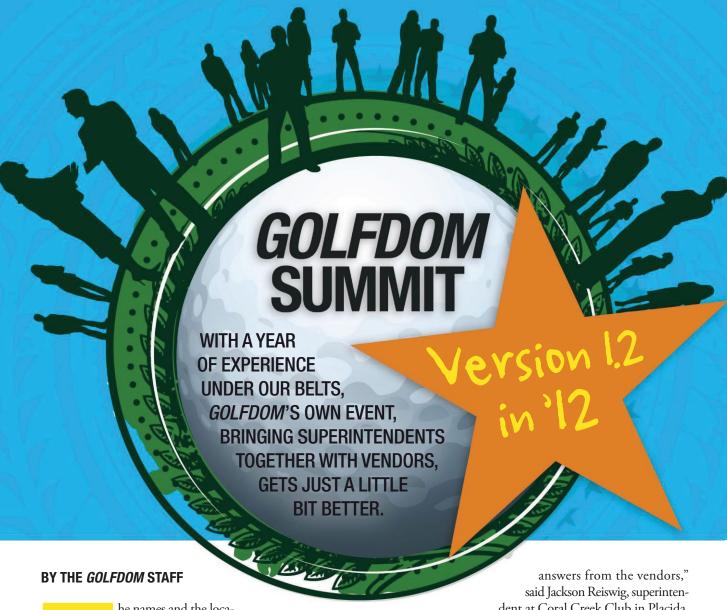
"The nutrients in the compost led to an increase in turfgrass color and density," said Pagett. "I also observed an increase in water penetration on the aerified and compost-treated turf. By the time the Big Ten Men's Golf Championship was held in May 2008, the turf was in great condition and was suitable for championship golfers."

In preparation for the championship the following year, Pagett again topdressed the 7th fairway and surrounding rough with compost in fall 2008. The turf in the fairway and rough was in great condition for a couple of years, but the quality has started to decline. So, Pagett planned to topdress with compost again last month.

By experimenting along the way, Pagett says he has found that "aerification after topdressing with compost works the best to incorporate the compost into soil. Aerification before topdressing with compost has not worked as well and topdressing with compost without aerification has only provided so-so results."

Topdressing with compost is now one of Pagett's go-to management tools. Sometimes the old, old school turfgrass management techniques are still the best.

Clark Throssell, Ph.D. is a turfgrass scientist and is research editor for Golfdom.



he names and the location changed, but neither was the major difference between 2011 and 2012 when it came to the Golfdom Summit. "This year was just better," said Damon Di Giorgio, superintendent at Fieldstone GC in Wilmington, Del., and one of only four superintendents to attend both years. "Having more sponsors really helped in that we had more meetings to attend, but the event was also more organized and the speakers were all great."

The Golfdom Summit, an invite-only event, is in its second year. Attendees apply to the Summit by registering at www.golfdomsummit.com. This year, a group of 40 superintendents convened at the Reunion Resort in Orlando to meet with eight sponsors of the event (see sidebar, page 34).

"It is a fabulous event. The intimate setting and constant interaction between superintendents and vendors is incredibly effective. The conversations between grass growers and product representatives over a continual time vs. a one-day event, or multi-day events with 15 times as many vendors, brought so many more questions from us, which delivered so many more

dent at Coral Creek Club in Placida, Fla., and a first-time attendee. "I will abso-

lutely be casting my ballot for next year's event, and even though I'd like to keep it to myself, I will in fact be sharing my experience with those of my peers who I know will benefit from such a directed event."

Indeed, the key to the success of the Summit is the interaction between vendors and superintendents, but there is still a great list of speakers for attendees (see sidebar, page 34). Attendees also teed it up on the Reunion Resort's scenic, yet challenging Palmer Course and got to enjoy a round of golf far away from the stresses of their own course.

"I had a great time, met some new supers, picked up a couple ideas and vendors helped me on a couple issues," said Joe Stribley, superintendent at Yellowstone CC in Billings, Mont. "Great venue, well organized and I enjoyed the agenda."

Scott Ramsay, CGCS at Yale Golf Course in New Haven, Conn., said he was surprised by how many of his colleagues had never heard of the event.

"I've texted a lot of the guys back home, and I've told them Continued on page 34



- 5 "It's not a magazine that overeditorializes, it gets down to the facts, and that's one of the reasons I like Golfdom," Rees Jones said. No, seriously, he said that. We have witnesses! Photo by Tim Kreger
- **6** There was an uncomfortable moment when Pasatiempo superintendent Paul Chojnacky and Golfdom EIC Seth Jones realized they both arrived to a party wearing the same Pasatiempo pull-over. Awkward! Photo by Beth Geraci



Summit 1.2

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where I'm at," Ramsay told Golfdom. "They're clueless to this event. But I'm going to tell them: You need to register for this next year, and if you get invited, you absolutely have to come."

From one Jones to another

The speakers at the Golfdom Summit were definitely diverse. From Rees Jones' keynote, discussing changes he made at Medinah in anticipation of the 2012 Ryder Cup, to Golfdom EIC Seth Jones' story of a bottle of tequila bought for him in Mexico, attendees got a lot outside of normal agronomy.

Medinah's director of golf course operations,

Curtis Tyrrell, CGCS, talked about his career path and preparing for the 2012 Ryder Cup.

"Two nights ago somebody won \$500 million in the lottery. I didn't play. But I'll tell you a quick little story about the day that I hit the lottery," Tyrrell told the group. "I was working in Las Vegas. I get a call and Jeff Spangler (Troon Golf's Senior VP, Science and Agronomy) says, 'How would you like to move to

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7 Orlando Delgado, superintendent at Marrakesh CC in Palm Desert, Calif., and FMC's Adam Manwarren, wanted to know the course record... then they found out it was a scramble. Sorry, guys. Photo by Beth Geraci

8 (L to R) Jackson Reiswig (Coral Creek Club), Chris Vernon (Jacobsen), Scott Ramsay (Yale GC) and Kevin Stoltman (North Coast Media) may not have shot the low score, but they looked like pros. Photo by Beth Geraci

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2012 SPEAKERS

Rees Jones, architect

Curtis Tyrrell, CGCS, Medinah (III.) CC

Anthony Williams, CGCS, CGM, Stone Mountain (Ga.) GC

Seth Jones, Golfdom EIC

Paul Chojnacky, superintendent, Pasatiempo GC, Santa Cruz,

David Littrell, superintendent, Iroquois GC, Louisville, Ky.

Mark Woodward, CGCS. DaMarCo Golf, Scottsdale, Ariz.

Tim Kreger, Executive Director, Carolinas GCSA

Joel Jackson, CGCS-Ret., Executive Director, Florida GCSA

Connecticut and build 36 holes with Rees Jones?' And, what do you say to that except 'When do we leave?' And literally that was the day that changed my life."

Rees Jones shared some interesting facts on the work done in anticipation of the Ryder Cup.

"During the (2006) PGA Championship, (17) wasn't that hard a golf hole. But then Davis Love (III) put the pin on the tongue of the green on the right side where the bunker comes into play. He thought he was protecting his lead," Jones said. "Little did he know that he would be trying to catch up. So many guys hit it into the left bunker, it was astounding. When you get under pressure in the game of golf, your body doesn't

work as well and the alarms take over. And I think that's what happened to a lot of players coming down the stretch."

Futurecast

There will be a 2013 Golfdom Summit, but undetermined is the where, the who and the how many.

If things continue on the current path, there is one scoop to be shared: The hope is to host two Summits in 2014, enabling us to double the amount of supers we can host in a year. The more superintendents we can introduce to the Summit, the better.

TURFGRIMSS TRENDS

SHADE TOLERANCE

All Zoysias are **Not Created Equal**

By Ben Wherley, Ph.D.

t seems that I get more and more questions about zoysiagrass these days, both from superintendents and homeowners. The increasingly popular species is starting to make a dent in the St. Augustinegrass and bermudagrass markets here in Texas, largely due to its great curb appeal.

For many snowbirds, zoysiagrass (Zoysia japonica) has the look and feel of a Kentucky bluegrass lawn. Add to this the inherent heat, drought, cold and salinity tolerance of the species, and it's easy to see why it has gained popularity in the state. Once established, zoysiagrass requires about half the nitrogen and mowing inputs that bermudagrass does, which speaks to its low-maintenance characteristics.

While use on golf courses has traditionally been limited to transition zone areas, an increasing number of courses are realizing the exceptional playability and benefits the species offers for fairways, tees and even greens. Even Tiger Woods became a believer after last year's PGA Championship at Atlanta Athletic Club.

Second chance for zoysiagrass

Superintendents who are experiencing shade issues on their courses are giving zoysiagrass a second look. A few years ago, I walked a few courses in northern Texas with Dr. Milt Engelke of Texas A&M University in the early spring after a brutally cold winter. The course had begun to make the switch to Diamond zoysiagrass on shaded tees and greens. While many of the bermudagrass tees had suffered considerable winterkill at that time, areas that had been converted to zoysiagrass were thriving.

With a growing number of cultivars available to superintendents, and little available information on relative shade performance, scientists at Texas A&M AgriLife Research initiated field shade studies under a nursery of 40-year-old live oak trees. The trees in the area had been planted into 3x8 rows on 20 ft. centers. Prior to conducting shade trials, limbs were all pruned to 10 feet above the ground. The heavily shaded nursery screened ~90 percent of incoming solar radiation, and therefore created an environment of 10 percent of full sunlight.

Implementing the project

The project was initiated by randomly planting multiple 4-square-inch plugs representing 10 commercially available zoysiagrass (both Z. japonica and Z. matrella) cultivars throughout the shade nursery. Cultivars included Shadow Turf, Diamond, Cavalier, Royal, Zorro, Crowne, Palisades, Meyer, Zeon and JaMur. During the initial Continued on page 36

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The heavily shaded nursery, planted with 4-square-inch plugs, created an environment of 10 percent sunlight.

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year of establishment, grasses were irrigated and fertilized to encourage ideal grow-in conditions. However, for the remainder of the three-year study, inputs were scaled back considerably, with nitrogen fertilizer limited to only a May application of 3/4 lb. N/1,000 sq. ft. and irrigation limited to every two weeks, or as wilt became apparent within plots.

Near-average amounts of rainfall were received during the study (~30 inches/yr.). Mowing was also scaled back considerably, with plots mowed to a 3-and-a-half-inch mowing height. While this maintenance regime was not by any means intensive, it was intended to provide a low-input environment in which to evaluate shade tolerance/ persistence differences among cultivars.

In theory, the top performers in this study would be capable of maintaining relatively compact, low-growing growth habit, with good rates of lateral growth, dark green color and density, and good late fall/early spring color. Over the course of the following two years, parameters were evaluated monthly, including turf quality, color, density, lateral spread and vertical canopy height ratings. Winter color, spring green-up and genetic color were also evaluated, according to National Turfgrass Evaluation Program guidelines.

Data analysis

At the conclusion of each season, data were analyzed and statistically compared to determine the winners of each season's evaluations. Following the third year, a turf performance index (TPI) was generated as a means of ranking the cultivars. The TPI represented the number of times a cultivar occurred in the top statistical group, taking into account all parameters and rating dates.

It should be noted that this level of shade was intended for screening germplasm and is Continued on page 38

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Zoysiagrass, with its heat, drought, cold and salinity tolerance, is quickly growing in popularity in Texas.

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therefore a considerably more stressful shade environment than zoysiagrass would typically be recommended for. It is commonly recommended that a site receive at least 4 hours of direct sunlight for satisfactory zoysiagrass performance.

Conclusions

By the conclusion of the study, it had become clear that the finer textured zoysiagrass cultivars (Z. matrellas) possess much better shade tolerance than their coarsertextured counterparts (Z. japonicas). In fact, the top four performers in our study were Z. matrella, while four of the bottom six were Z. japonica cultivars. Clearly, newer cultivars of zoysia are superior to Meyer in terms of shade tolerance.

Based on previous reports, we were also surprised by the somewhat average performance of Diamond zoysiagrass in this study. Diamond had shown remarkable shade tolerance in past studies, when managed under much tighter mowing heights and greater management intensity. However, in the confines of this low-input, heavily shaded environment, Royal, Zorro and Shadow Turf demonstrated good lateral growth rates while generally maintaining higher density and color than the coarser-textured cultivars Palisades, Crowne, JaMur and Meyer.

A 3-year shade tolerance summary based on our work resulted in the following cumulative ranking (the number of times cultivar ranked in top statistical group is shown in parenthesis): Royal (51) > Zorro (49) > Shadow Turf (46) > Diamond (39) > Palisades (36) > Crowne (30) > Cavalier (28) > JaMur (27) > Zeon (17) > Meyer (10).

Ben Wherley, Ph.D., is an assistant professor in the Department of Soil & Crop Sciences at Texas A&M University. He can be reached at b-wherley@tamu.edu.

The Company Line

NEW PRODUCTS FOR SUPERINTENDENTS

Mystery product

It's not often we lead with a product shrouded in mystery, but this month, that's exactly what we're doing.

Jacobsen is asking people to guess what new turf product is under that sheet. The only clues they're giving us is this photo, and the fact that it has wheels and comes in orange. Some guesses will get prizes and be posted on the website. To make a guess at what is under the sheet, visit www.jacobsen.com. Jacobsen will pull the cover off on Jan. 15th at 5:10 p.m. EST.



We made our guess, and it's been posted at Jacobsen.com. Yes, it involved lasers and a time-locked six-pack cooler. We think we're on to something. Jacobsen.com

Video series

The first set of Trojan Tips educational videos is now available on the Trojan Battery Co. website. The Trojan Tips video tutorials are designed to provide in-depth information focusing on a variety of battery topics as well as expand awareness and understanding of deep-cycle battery



technology. The Trojan Tips educational videos can be viewed at www.trojanbattery.com/TrojanTips. Some of the title available include: Deep-Cycle Battery Technologies; Determining the Health of a Deep-Cycle Battery; Battery Maintenance to Maximize Performance and Life; and Expand Your Battery Charging "Know-How." trojanbattery.com

New partnership

Pin placement technology company ezLocator and Lone Star Flags & Golf have formed a new business partnership. "Our alliance with Lone Star Flags & Golf will allow us to tap into new markets and leverage the strengths of both companies," says Jon Schultz, CEO of ezLocator. Founded in 1980 by golf course superintendent T.C. Hamilton, Lone Star Flags & Golf provides accessories and products to courses. Examples include custom golf flags, Par Aide and Standard Golf course accessories, JRM bedknives and tines. EnP Turf products. Turf Pride's Core Collector and more. ezLocator is a computerized system that finds the optimum pin location, helps maintain pristine green conditions, and makes golfers feel like they are playing a new course every day. goezlocator.com

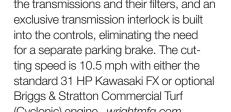
Zero turn

Wright Commercial Products has introduced a new mid-mount zero turning radius mower, the ZTO. The ZTO, with deck widths of 48-inches, 52-inches and 61-inches, has enhanced features from the ground up. The rear tires are low profile 23-inch x 10.5-inch and the front tires are 13-inch x 5-inch run flats. The transmissions are Z3400 series Hydro-Gear. An undercarriage cage protects the transmissions and their filters, and an exclusive transmission interlock is built into the controls, eliminating the need for a separate parking brake. The cutting speed is 10.5 mph with either the Briggs & Stratton Commercial Turf (Cyclonic) engine. wrightmfg.com



New fungicide

BASF announced the launch of its Pillar G Intrinsic brand fungicide, the third fungicide brought to the professional turfgrass market since 2010 that is labeled for disease control and plant health. Pillar G Intrinsic brand fungicide is a granular product that combines triticonazole, the same active ingredient in Trinity fungicide, and pyraclostrobin, a key active ingredient in Honor Intrinsic brand fungicide. Turfgrass diseases controlled by Pillar G Intrinsic brand fungicide include dollar spot, anthracnose, patch diseases (brown patch, large patch, take-all patch and summer patch), gray and pink snow mold and leaf spot. In addition, BASF and independent research has shown Intrinsic brand fungicides enable turf to better withstand disease and environmental stresses including drought, moisture and temperature extremes. betterturf.basf.us





Brian Koffler

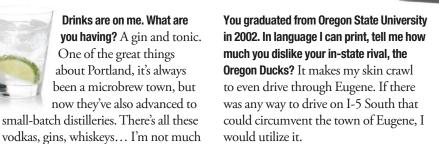
of a hard alcohol drinker — I'm more of

a wine guy — but I do like good gin.

Gil Hanse did a renovation project here

recently. What was it like working with

Superintendent, Waverley CC, Portland, Ore.



Which do you think would be the biggest adrenaline rush; hitting a homer in the Majors, dunking off an alley-oop pass in the NBA, or catching a touchdown in the NFL?

What do you love the most about Portland?

The summers are incredible here. We'll get some days in the 90s, but usually it's in the 80s. Humidity is high in the morning but by noon it's 40 percent at the most. The day length, the daylight is so much later, it's great.

You just lucked into \$1,000. Where are you taking your fiancée, Nicole? Mexico. We've been to Playa del Carmen a number of times. I haven't been to Sayulita, north of Puerto Vallarta. I've heard good things. I'm not a surfer — I hear it's a surf town — but the more low-key, the better. I'm not the active type when I go on vacation.

How do you like driving your Santa Fe?

I love it. Living in an urban environment, I don't really need a pick-up. It's a great economical option for a small SUV. It's been a great car for us. As Ferris Bueller says, "If you have the means, I would highly suggest it."

Will you be getting your crew anything for **Christmas?** Thank you to Syngenta — I don't know if I can make plugs like that, but... Syngenta's early order program, with GreenCast Online, we usually take those points and buy gift certificates. We buy 15 \$50 gift certificates and everyone draws one out of a hat. So thank you to Syngenta for supply-

ing our staff with gift certificates for the holidays.



