ADVERTORIAL

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Moles can't hide on Jekyll Island

The new TALPIRID® PATENT PENDING MOLE TRAP helps the Jekyll Island Golf Club keep these critters under control

Georgia's Jekyll Island Golf Club was built more than a century ago, when the island was known as a winter haven for wealthy Americans like J.P. Morgan, William Rockefeller and their families. Today, the largest golf complex in Georgia is owned by the Jekyll Island Authority as part of the state's park system. The facility and its courses are as grand and elegant as ever, but in recent years it has had to deal with a decidedly unelegant pest: moles.

"There's always been some mole pressure, but as we have cut back on pesticide use, the earthworm population has dramatically increased as a matter of course — providing more food for the moles," explains John Neidhardt, superintendent of the four-course, 63-hole club. Laughing, he adds, "I've been in turf since 1983. If you had told me back then that our biggest turf problem would be with earthworms, I would have thought you were crazy!"

Neidhardt, his assistant superintendents, Timmy Head and Patrick Tye, and Jekyll Island's integrated pest management specialist, Paul Meridith, were dissatisfied with their approach of spending about 24 hours each week setting and checking 20 harpoon traps. The traps, placed throughout the 350-acre grounds, only yielded about one or two moles a day. They knew they were barely making a dent in the population.

Finally, a solution

In March, Tye came across an industry magazine ad for Bell's new Talpirid Mole Trap, and brought it to the team's attention. Neidhardt believed it was worth a try, and ordered 10 traps from their LESCO representative. The results, he says, were amazing. The Talpirid traps caught six moles almost immediately.

"With Talpirid, we've never had a trap triggered that hadn't caught," he notes, comparing it to the estimated 10% success rate he's had with the harpoon traps. "Right away, we purchased another 25 traps.

"We move the traps around with each mowing, so every three days on rotation, each trap is in a different place," he continues, adding that the Talpirid traps are relatively easy to install and set. Their bright yellow color makes them easier to mow around, Neidhardt says, and their safety features — including being made of non-corrosive, glass-filled nylon — make them a smart choice.

"We also take care of a 10-acre soccer complex, and I wouldn't hesitate to use this trap in that area over a harpoon trap," he says. However, that isn't necessary: Talpirid's sibling product, Talpirid Mole Bait, is taking care of the minor mole issues at the fields just fine.

Assistant Superintendent Patrick Tye discovers another successful capture with a Talpirid Mole Trap.

Neidhardt estimates that because the Talpirid traps are less labor-intensive to maintain and yield more catches than the harpoon traps, his crew is realizing nearly 60% less labor and time involved in mole management. In fact, he is enthusiastic about how well the Talpirid Mole Traps are keeping mole damage to a minimum this season.

"It's a superior mole trap," he asserts. "If you install it correctly, you can really reap the dividends."

For more information about Talpirid and other Bell Laboratories products, please contact your Bell representative or visit www.belllabs.com.

The MORE Things

"What do I know now that I didn't know then? And am I a better superintendent for having learned those things?

Change . . .

Veteran superintendent reflects on what he knew 22 years ago compared with what he knows now

BY RON FURLONG, CONTRIBUTING EDITOR

The year was 1988. George H.W. Bush was in his first year as president. "Who Framed Roger Rabbit?" was the big moneymaker in movie theaters. The Cure and R.E.M. were slowly replacing the heavy-metal bands on my car stereo.

It was also the year I began working on a golf course.

And 22 years and six golf courses later, I'm still working on a golf course.

So, what does the wily, old veteran know that the young punk back in 1988 didn't? Well, for one, he knows what's good for his body and what's not. Although, in retrospect, the younger guy probably knew but just didn't care as much as the older guy.

But, more to the point, what has the modern-day superintendent learned in his 20-plus years on the links? And am I a better superintendent for having learned these things?

Good questions, and I shall try to answer them.

Let me say this: Of course I know more now than I did 22 years ago. I wouldn't be much of a superintendent if I didn't. But, what major things have I discovered? And not just in maintenance philosophies but within myself? What changes in attitude and practices are different? What opinions did I have that I would scoff at today?

Here's a quick overview of a few of the more dramatic differences between young Ron and old … I mean, *mature* Ron:

Love thy Earth

Mother Earth. The big blue. I'm pretty sure I wasn't real concerned with the future of our planet 22 years ago. I thought she'd be fine. In fact, probably not many of us were real worried about the planet. So this "going green" thing is a new fad.

But, of course, we now know Mother Earth isn't infallible. She is vulnerable, and she needs our help. She needs buffer zones around wetlands. She needs safer chemicals applied to her turfgrass. She needs us to recycle and compost and reuse. She needs us not to waste her water. Let's face it, she is very high maintenance, kind of like we imagine Angelina Jolie might be. (High maintenance, but worth the effort.)

These "love thy earth" things are concepts that 1988 Ron couldn't have comprehended.

What have you done for me lately?

This section could also have been called — "You're only as good as last month."

I've learned that no matter how well you've kept the golf course over the years, you're only as good as, oh, maybe a few months out. You'd better not only have done well in the past, but you'd better have kept it up.

I'm not faulting anyone for this mindset; it's just the way it is. We all just need to be aware of that going in.

Keep raising the bar

This kind of falls into the above category, but is a little different.

We all learned years ago that technology and ingenuity would allow us to start doing our jobs better. The bar started to rise then. Water-injection cultivation came along. So did rollers, light topdressers, better and faster sprayers, plant growth regulators and a zillion other things. And, of course, when the superintendent at the golf course down the street raised the bar, he inadvertently forced you to raise the bar as well. Again, not a bad thing, but just the way it is.

It's fun to keep making the product better. However, in lean times like we're

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YOUNGER RON WAS ALWAYS ON A TIME CRUNCH. AND THINGS COULD NEVER GET DONE TO HIS SATISFACTION.

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in now, it has become a double-edged sword. We try to keep raising that bar slightly, but we're trying to do it with fewer resources than we had in the past — or, another way to put it, with less money. That's where the difficulty now lies. It's kind of fun if you can get creative and find new ways to do things, but when you discover you can't duplicate a particular result, it can be frustrating.

The answer to this dilemma may be a change in mindset by the powers that be. But that's a topic for another day.

Respect

This may be more a personal one for me than for everyone else, but then again we're talking about me and what I've learned here, right?

When I say respect, I'm talking about people who work for me and, just as importantly, the golfers who play my course. Younger Ron tended to look out for younger Ron. He wasn't much interested in what the golfers had to say, or what the seasonal kid who string trims the ditches and around the trees gave for input. Younger Ron was always on a time crunch. Things could never get done to his satisfaction, and he had convinced himself that it was people not following through, or people (golfers) getting in his way.

Older Ron has learned from these mistakes (at least I like to think he has). He has a heightened sense of respect for others. For some, this happens at a younger age; they're better people at 25 than most are at 40. But for the rest of us, it's something we need to acquire, like a taste for olives or beets (OK, I still don't like beets, but I've tried).

I like to think that now I actually listen to input and accept it. I have time for golfers, and even listen and try to respond to favors or suggestions they may have, even if I don't agree with them. Listening to others may actually make your job easier and more efficient.

Perhaps this is the one thing I've learned that's more important than anything: Respect *everyone*.

The year is 2010. Barack Obama is president. "Toy Story 3" is the top moneymaker at the movies. John Mayer and Jack Johnson have replaced R.E.M. and The Cure on my car stereo.

And I'm still working on a golf course.

The more things change, the more they … well, you know the rest. ■

Furlong, a contributing editor to Golfdom, is superintendent of Avalon Golf Club in Burlington, Wash.

CASE STUDY

Pow! to Poa

Superintendents say herbicide eradicates pesky weed during fairway renovations

BY LARRY AYLWARD, EDITOR IN CHIEF

Mike Hart has been working as a golf course superintendent since 1975, and the 63-year-old says he's never seen anything to rid *Poa annua* (annual bluegrass) on bentgrass fairways.

Until now.

Hart, the superintendent of Danville (Ill.) Country Club, recently renovated his course's 18 fairways — the front nine in 2008 and the back nine in 2009 — and converted them from Kentucky bluegrass to bentgrass. Working with turfgrass professor Bruce Branham from the University of Illinois, Hart applied Velocity herbicide on the turfgrass three weeks after seeding to keep *Poa* from growing in with the bentgrass.

"We had a bad *Poa* problem here before," Hart says. "It drove me crazy."

Hart believes the old low-mow bluegrass on the fairways grew weak, and the *Poa* kept getting stronger until it overtook the bluegrass.

"Every year I'd watch the *Poa* get more dominant," he says. "So we decided to switch to bentgrass."

Hart had been through such conversions before, and many of them were unsuccessful in his mind because the *Poa* grew back so strongly. To Hart, a successful conversion was limiting *Poa* to a 10 to 20 percent grow-back range so it was more manageable.

Velocity, from Valent Professional Products, features bispyribac-sodium as its active ingredient. Valent says the herbicide can gradually eliminate *Poa annua* and *Poa* trivialis from creeping bentgrass and effectively transition a *Poa*-dominated mixed stand of turf to pure bentgrass.

Hart began renovation of the front nine holes in the fall of 2007. He renovated the back nine a year later. He closed the holes in August in both cases.

Hart slit-seeded the fairways as carefully as possible. Four weeks after seeding, Hart sprayed the fairways with 6 ounces (30 grams) per acre of Velocity. He couldn't believe he was applying a herbicide at such a high rate to such young turf.

"It scared the bejesus out of me when I did it," Hart admits.

Three days later, the bentgrass displayed some yellow and began to thin.

"It went from new lush fairways to a yellow thin stand of grass in one week," Hart says. "I was expecting that to happen, but it didn't do my heart any good to see it."

But Hart felt much better when he saw the *Poa* in the mix also turn to yellow and begin to die. Then the green returned to the bentgrass in about a week — minus the *Poa*. Hart was impressed.

After the projects were completed on both nines, Hart estimates the turfgrass was 85 to 90 percent bentgrass.

Two and three years later, Hart remains impressed with the healthy stand of bentgrass fairways. And he didn't have to spend a million dollars to get the renovation done.

"The fairways look absolutely fantastic," he says. "We did the project for under $40,000 and did everything in-house."

Hart continues to battle the low percentage of *Poa annua* in the fairways and he wants to be sure to keep it in check. He applies light rates of Velocity — about 2 ounces (10 grams) per acre — three times a year to keep the *Poa* weak.

"It's the only thing I've seen that works against *Poa*," he says of Velocity.

William Sharp, a research specialist from the University of Illinois who has studied the herbicide's effect on *Poa*, recommends 30 grams of active ingredient per acre sprayed at two weeks apart for a fairway renovation.

Sharp advises the first application be

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This close-up photograph of turfgrass at Twin Orchard Country Club shows healthy bentgrass growing over the top of stressed *Poa annua* plants one day after a 2-ounce treatment of Velocity and 14 days after a 2-ounce treatment of plant growth regulators.

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made three weeks after seeding.

"Don't let *Poa* mature," he says. "Don't allow annual bluegrass plants to get rooted."

Any yellowing can be masked with an iron application to green up the turf, Sharp adds.

"Educate your members and golfers that they'll see yellowing," Sharp advises. "You want them to know the process is normal."

Kyle Jacobsen, superintendent of Twin Orchard Country Club in Lake Zurich, Ill., attempted a fairway renovation similar to that at Danville, but things went awry because of heavy rains.

Twin Orchard closed 18 of its 35 holes in August 2008. The fairways were sprayed to kill all vegetation. They were then aerified and topdressed before being seeded. Then the rains came, about 6 inches in a few days, and the seed washed out. The fairways were reseeded, but there was no time to do a re-sterilization. Alas, plenty of *Poa* grew in with the bentgrass. Jacobsen wanted to spray Velocity on the fairways then, but the weather turned rainy and cold and he couldn't do it.

Fast-forward to June 2009. With the weather warming and the course getting ready to reopen, Jacobsen sprayed two applications of 6 ounces of Velocity per acre at 12 days apart. While there was mild discoloration to the bentgrass, Jacobsen says the herbicide knocked back the *Poa annua*.

But the weather that summer, which was cool and dry, made for favorable conditions to grow *Poa*. So Jacobsen decided to overseed the fairways with 1 pound of bentgrass per 1,000 square feet and topdress them. The bentgrass grew, but so did the *Poa*.

Jacobsen began applying 2 ounces of Velocity per acre every month with a plant growth regulator application coming monthly two weeks after the herbicide applications. He increases the PGR application by 2 ounces each time (he started in May with an 8-ounce application). He'll continue this program through mid-September.

"The bentgrass looks off for a couple days after each herbicide application, but it bounces back much quicker and the *Poa* doesn't bounce back," Jacobsen says. "The bentgrass has the competitive edge."

A.J. Powell, a long-time agronomist from the University of Kentucky, says superintendents need tools to take out *Poa* slowly. The problem with wiping out *Poa* in one fell swoop is that suddenly there are bare spots on a course's greens that need reseeding, Powell says. Golfers surely don't want that.

"You don't want to kill *Poa*," Powell affirms. "You want it to go away gradually." ■

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Differentiating Between Wear and Compaction

How their interaction affects turf stress

By W.M. Dest and J.S. Ebdon

Traffic is broken down into wear and soil compaction, but few studies directly compare these two confounding factors and their interactive effects on plant response.

The objectives of our study were first to differentiate between the influence of wear and soil compaction and their interaction and which had the greater effect on turfgrass stress and species composition; and second, to compare the effects of soil compaction between a native soil and sand rootzone on their physical properties conducted in the field and their relationship to plant stress.

Material and methods

A field experiment was conducted at the Joseph Troll Turf Research Center at the University of Massachusetts-Amherst over a three-year period. Experiments were established in two soil types: a native silt loam and a sand rootzone.

The compaction treatments were applied using a vibro-tamper prior to seeding the plots. A 3-inch depth of the topsoil and sand rootzone were removed and the soil below 3 inches compacted with the vibro-Tamper to ensure that the soil was compacted to a 6-inch depth below the surface. The 3 inches of soil removed was replaced and the Vibro-Tamper used again to compact the top 3 inches. Wear treatments were simulated with a steel brush set into a frame in which the height of the brush can be set so that injury to the leaves can be adjusted through the setting to compensate for mowing height. The brush was guided over the plots by movable tracks set at the edge of the plots. Each plot received the same number of oscillations starting at 75 on Sept. 13, 2005, to as many as 200 over the duration of the experiment. Treatments were set out in a randomized complete block design with three replications on each soil. Plot size was 4 feet by 4 feet.

The plots were established with a seed mixture comprised of 25 percent Kentucky bluegrass (America and Touchdown) and 75 percent perennial ryegrass (Fiesta 3, Express and Cutter) on Sept. 14, 2004. The plots were mowed at 1.25-inch cutting height two to three times per week depending on the season and growth rate. Grass clippings were returned. The plots were irrigated to maintain active growth. After initial fertilization at seeding, the sand rootzone plots were fertilized

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While traffic is broken down into wear and soil compaction, few studies have directly compared these two confounding factors and their interactive effects on plant response. Until now.

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with nitrogen at 413 pounds, 231 pounds and 148 pounds and acre, and the silt loam at 283 pounds, 187 pounds and 148 pounds an acre in 2005, 2006 and 2007, respectively.

Percent turfgrass cover prior to wear treatments was taken in the fall 2004 to spring 2005. Wear ratings were taken immediately after wear treatments using a scale of 1 to 9 (1 equals severe wear with 50 percent bare ground, 5 equals leaf injury with loss of color and density, 6 equals leaf injury with loss of color and less than 6 acceptable with progressively less injury) starting in 2006. Recovery from injury was rated several days after the wear treatments using the same scale with acceptable recovery indicated when the rating was greater than 6 with 9 equaling 100-percent recovery.

Five cores (1.2 square inches) were taken from all plots prior to wear treatment on June 6, 2006, and after termination of the study on June 14, 2008, to assess species composition. Aerial shoots of Kentucky bluegrass and perennial ryegrass were separated by species and pooled to estimate species composition by count.

Six cores (1.2 square inches) were taken in October 2007 to a depth of 6 inches to measure root weights. The cores were divided in half to measure root biomass between 0 to 3 inches and 3 to 6 inches, respectively. The soil was washed from the cores and dried at 70 degrees C until a constant weight was obtained.

The roots were weighed and then ashed at 600 degrees C for two hours. The ash weight was subtracted from the oven-dry weight to obtain the weight of the roots.

Penetration resistance was measured using a Proving Ring Penetrometer with a cone point, which was pushed slowly and at a constant rate into the top 2 inches of soil. Two readings were taken per plot beginning in 2004 with the results reported in megapascals (MPa).

Two intact cores 2 inches in diameter by 2.4 inches in length were obtained in the fall 2006 with a brass cylinder fitted inside a metal tube from each plot for determining bulk density and air-filled porosity. Thatch and soil were removed to 2 inches below the surface before inserting the metal tube with the brass cylinder.

Soil samples were collected from the silt loam and sand rootzone prior to setting out the experiment to determine the soil's maximum dry density using the Proctor Test, Modified Compaction Effort, ASTM D1557-07 (2008). The maximum dry density is used as a reference in which the observed bulk density is expressed as a proportion of the maximum dry density. Field-saturated hydraulic conductivity (Kfs) was determined in the fall 2007 using the Guelph Field Permeameter (Reynolds, 1993; Reynolds & Elrick, 1985), which maintains a stable depth of water in an uncased auger hole.

Results: grass establishment

Full cover on the silt loam was achieved by April 20, 2005, while full cover on the sand rootzone did not achieve full cover until June 29, 2005. Soil compaction also significantly reduced stand establishment over both soils up until June 7, 2005 (Table 1).

Although most of the reduction in vegetative cover was associated with the sand rootzone, the data strongly suggests that soil compaction as a result of construction activities can have a profound effect on turfgrass establishment.

Species composition

Perennial ryegrass increases significantly in the population with a concomitant decrease in Kentucky bluegrass in the compacted plots compared to the non-compacted plots,

PHOTO BY: EYEWIRE INC.