

**“I’m hoping something will pan out. I also hope there’s a bright side to all this. But at the moment, there’s not.”**

– PAUL MAYES

was let go, he keeps in contact with the same people by golfing with them.

Buccellato, who is recently married with no kids, believes the job market in the Southeast will pick up. Although he prefers to remain in Florida or the Southeast, he’ll move for a job if he must.

There’s one important thing Buccellato has learned about the industry and trying to find a job: It’s about who you know. “You have no chance of getting a job unless you know the right people,” he says. “Hopefully, that will work to my advantage when the right opportunities arise.”

Thinking back to when things were good at Alaqua, Buccellato says he realizes a superintendent is never really secure in his job.

Cznarecki spent a lot of time with family and making contacts. He said he was willing to move for another job, as far north as Myrtle Beach, but preferred to stay in Florida.

Cznarecki learned in late June he wouldn’t have to move because he was hired as the golf course and landscape operations manager at Timber Pines Country Club in Spring Hill, Fla. His contacts paid off.

“I was hired by the same general manager who originally hired me at Colliers Reserve,” he says.

Like Cznarecki and Buccellato, Mayes would like to stay close to where he lives, partly because his son has two more years of high school. However, there are potential opportunities overseas and in Mexico.

“The way the market is right now, I’d consider something in a related field or in sales,” he says. “I will keep my op-

tions open and keep my eyes and ears open. I’m not limiting myself. I’m hoping something will pan out. I also hope there’s a bright side to all this. But at the moment, there’s not.”

Mayes says he probably wouldn’t apply for a job in which he couldn’t support his family, but he may have to deal with making less than he was.

“I still plan to retire as a superintendent,” he says, adding that he’s about 10 years away from that time.

Mayes advises that even employed superintendents should keep their resumes updated because clubs are under financial restraints and are always looking to save money or cut costs.

“Be ready,” he says. “Stay in touch with as many people as you can in case something happens, and keep an open mind as far as your career path. Be prepared because there’s no job security anymore.” ■

*Walsh is a freelance writer from Cleveland.*

An advertisement for Kochek Hand Watering Solutions. The background is a lush green golf course with a rainbow in the sky. In the foreground, there is a red and black nozzle, a white bucket of wetting agent, and a blue water droplet logo. The text includes the Kochek logo, the product name "Hand Watering Solutions", a list of products, a "NEW!" starburst for the wetting agent, and contact information.

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# Happy Graduation ... Sort of

**'Future Turf Managers' gear up to begin careers in the recession of a lifetime**

By Larry Aylward, Editor in Chief



**I**t wasn't the job Cory Gettemeier really wanted, but he took it without hesitation. This is no time to be picky, after all. It's the Great Recession, and the unemployment rate is the highest it has been in 25 years.

And Gettemeier has the distinction of graduating into this economic mess. The 22-year-old recently graduated from the University of Missouri with a four-year degree in plant science.

"I took what I could get," Gettemeier says, noting he feels lucky to have a job.

Gettemeier is working as an assistant superintendent at a public course in Alton, Ill., across the Missouri River from St. Louis, where he grew up. It wasn't his first choice for a job, but Gettemeier has no complaints. "I'll see where it takes me from here," he says.

Gettemeier spoke about his future — ironically — during an event held by Jacobsen called the "Future Turf Managers." The mower and equipment manufacturer invited 35 students from universities across the country to participate in the three-day event held at its headquarters in Charlotte, N.C. The event allowed the students the opportunity to learn and interact with turf professionals in an educational environment under the guidance of industry leaders.

The students, most of whom recently graduated with four-year, turf-related degrees, were recommended by their professors as being top-level candidates with "great prospects" to become future leaders as they progress in their careers, according to Jacobsen.

Of course, all the graduates agree they face a tough job market. Gettemeier, knowing graduation was upon him, began looking for work last December. He didn't realize how tough the economy was getting until he couldn't find a job.

"Lucky for me, a former boss of mine who was an assistant at another course was laid off," Gettemeier says. "But he found a job at a public course and asked me to join him."

The other attendees of the Jacobsen event also realize what they're up against,



but they remain upbeat about their futures. Shane Tuhy, 23, who graduated in May from North Dakota State University with a degree in turf management, says he applied for a few assistant superintendent positions but didn't get them. He's working for a nine-hole course this summer in his hometown of Killdeer, N.D.

"If I would have graduated a year ago, there was plenty of opportunity for assistant superintendent jobs," Tuhy says. "But that is not the case this year."

With the lack of available jobs, Tuhy thought for a moment about attending graduate school. But he wants to begin his career now. "My goal is to be a superintendent," he says, noting he would prefer to stay in the Midwest.

The graduates realize they must use all the tools available to them to find jobs, including networking. Brian Tencza, who recently graduated from the University of Connecticut with a bachelor's degree in turfgrass and soil science, found a job with a little bit of help from his friends. Tencza began his new job on Memorial Day as the second assistant at Glenarbor Golf Club in Bedford Hills, N.Y. He was helped by an industry connection. His former professor, John Kaminski, spoke with Glenarbor's certified superintendent, Ken Benoit, and told him about Tencza.

"Networking means everything," Tencza says. "I'm very fortunate to have a job."

Ryan Tretter landed a nice gig. He gets to work for Superintendent John Zimmers Jr. at Oakmont Country Club near Pittsburgh. Zimmers Jr. is well known for his mentoring capabilities. Tretter, who graduates in December from Delaware Valley College, began an internship at the club this summer and begins work as its second assistant later this year. Tretter, who says he wants to make a career out of working at high-end courses, interned at Pine Valley Golf Club last year.

Tim Williams, 19, recently graduated with an associate's degree in golf course operation from Delhi State University of New York. But Williams is staying in school to obtain a four-year degree. He hopes business in the golf industry is thriving by then.



**Eric Sides (center), Jacobsen's training manager, played a big role in the Future Turf Managers program, whether it was conducting equipment demonstrations during the day, teaching attendees about the nuances of go-carting at night (the trip also included some fun and games), or just talking and joking with them to make them feel at home.**

"It seems like we're at our low now, but I think things will pick up again," he says.

Lyne Tumlinson, director of career services for the Golf Course Superintendents Association of America, spoke to the graduates during the event. She told them they were entering a changing business world because of the down economy. "Businesses are going to look different than they did before because everybody is going through this," she said. "And the golf industry will change as well as every other business."

Tumlinson said taking a first job offer is not a bad thing, even if it's not the job a person really wants. "I don't think it's as much where you work as it is whom you work for and what you learn," she said.

With golf course closings outnumbering openings the past three years, the competition for jobs has only gotten more competitive.

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“If I would have graduated a year ago, there was plenty of opportunity for assistant superintendent jobs.”

— SHANE TUHY



“Networking means everything. I’m very fortunate to have a job.”

— BRIAN TENCZA

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Tumlinson said the graduates must find ways to differentiate themselves.

Eventually, course openings will again outnumber closings. That won’t happen in 2009, but it could happen in the next few years. Most of the graduates believe the golf economy will soon turn in their favor.

“Golf will bounce back up,” Tretter says. “The game will grow. You’ll see more golf courses being built in the next five or 10 years.”

Gettemeier, who says he’s still “very concerned” about the economy, says he got the feeling from others at the meeting that things would get better. “I’ve been working on golf courses since I was 15,” he says. “I love working outside and working with people. I hope I can find a decent course where I can make a living.”

Peter Whirr, Jacobsen’s vice presi-

## Augusta’s Owen Gives the Graduates Some Sound Advice

‘Future Turf Managers’ tour famed golf club as part of educational program

By Larry Aylward, Editor in Chief

Jacobsen’s “Future Turf Managers,” a program which began in the 1970s, bills itself as an opportunity for just-graduated or soon-to-graduate college students “to learn and interact with turfgrass professionals in an educational environment under the guidance of industry leaders, an experience impossible to duplicate in the classroom.”

That’s no lie. The 35 attendees toured Jacobsen’s manufacturing facilities in Charlotte and the E-Z-GO plant (Jacobsen’s sister plant) while on a

field trip to Augusta, Ga. They also listened to several high-profile speakers. And as part of the activities while on the field trip to Augusta, the attendees visited Augusta National Golf Club, where they had a question-and-answer session with Brad Owen, superintendent of the club. Then they got to tour the maintenance facility and part of the grounds and have their photograph taken on the Ben Hogan Bridge.

Owen has been at Augusta since 1986, when he interned as a student from

Penn State University. He began full time in 1987 and worked on the crew. He became superintendent in 1997. “I’m fortunate and lucky to be here,” he told the attendees. “It’s a pretty special place.”

A graduate asked Owen for his advice on getting a job. Owen advised not to take a job just because of its title. It may be that such a job is not at the level of the person’s future expectations.

“If you’re shooting for the stars or want to be at a nice private club that holds a major





dent of product support, doesn't believe the doom and gloomers who say economic recovery will be slow.

"With new technology — and the way the world seems to be that much smaller — I think recovery will be that much quicker," he says. "And when it does recover I think you'll see a totally different industry to what happened just prior to when the recession took place. What will it look like? I don't think it will go back to the way it was, with the changes in technology, alternative fuel sources and lean processes. It will be a different looking industry."

When employers are scanning his resume, Tuhy hopes they're impressed he was selected to attend the Future Turf Managers event, which he considers a feather in his cap. "I hope employers realize how special it was for me to be here when they see it on my resume," he says. ■

PHOTOS BY: LARRY AYLWARD



Golf will bounce back up. You'll see more golf courses being built in the next five or 10 years."

— RYAN TRETTER

**"Don't take a position that's not going to get you where you want to be 10 years down the road."**

— BRAD OWEN

tournament, you need to seek that early on," Owen said. "If it's not available, don't be impatient. Don't take a position that's not going to get you where you want to be 10 years down the road. Don't take an assistant job at the XYZ Club just because you want to be an assistant."

When asked about how he manages stress and balances career with family while working at such a high-profile club, Owen said he often relies on his faith to give him strength and direction.

"We don't control our lives and our destiny as much as we think we do when we start figuring out our goals and plans," Owen says. "There's somebody else bigger than all of us who knows what that plan is." ■

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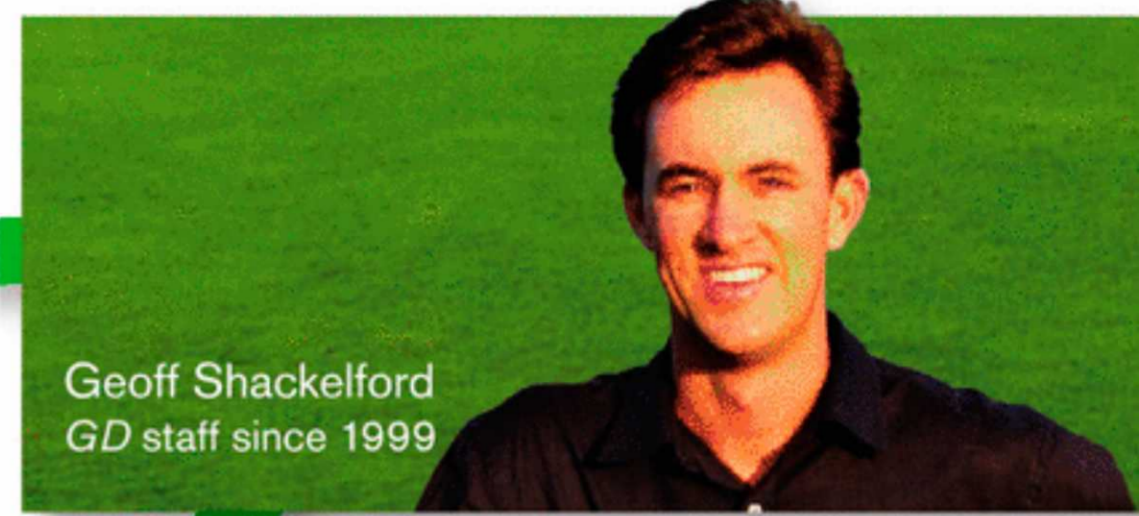


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# TURFGRASS TRENDS

■ BALL-MARK RECOVERY

## Golf Ball-Mark Recovery Affected by Surface Firmness and Repair Tool

By Jared R. Nemitz, Adam C. Moeller, and Cale A. Bigelow

**U**nrepaired golf ball marks can leave localized necrotic scars, raised turf prone to mower scalping, loss of surface smoothness and the potential for weed (*Poa annua*) encroachment (Beard, 2002).

The traditional repair method suggested by the Golf Course Superintendents Association of America and encouraged by golf professionals involves inserting a traditional metal tool with equal-length tongs (3 centimeters) and employing a knit-and-twist method intended to pull healthy turf from the perimeter (GCSAA, 2009). This method and tool choice has been scrutinized because it may damage roots, especially if used improperly. Novel repair tools, including those with shorter tongs (1 centimeter) and utilizing a perimeter pushing method have been commercialized. These tools are designed to push healthy turf forward into the ball mark scar areas resulting in less damage to roots than tools designed to lift soil and twist canopy surfaces. However, rootzone moisture status as well as surface firmness on ball mark recovery time is unclear.

### Effects of Surface Firmness on Recovery

A field study was conducted at the W.H. Daniel Turfgrass Research and Diagnostic Center at Purdue University in West Lafayette, Ind., on a creeping bentgrass sand-based research putting green built to United States Golf Association specifications. The study area was maintained to emulate moderate golf course putting green conditions, including mowing at .140 inches with a triplex mower six times weekly; fertilizing with 3 pounds of nitrogen per 1,000 square feet per year; and irrigation via an overhead system to supplement rainfall every one to two days, providing approximately 1 inch per week.

Prior to initiating the experiment, the study area was divided into two areas to create "firm" and "soft" locations. The firm area was repeatedly rolled with a sidewinder roller until an average surface hardness value of 145 gmax (peak deceleration) was achieved as measured by a Clegg Impact Soil Tester. The Clegg is a commonly used method of measuring surface hardness (Lush, 1985; Linde, 2005). Units were recorded in Clegg Impact Values (CIV's) which were converted to gmax using the equation  $gmax = 10 (CIV)$  (Bregar and Moyer, 1990).

The surface hardness value for the soft area was 100 gmax. The soft area was not rolled, but heavily hand-watered the day of study initiation until surface pond-

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Achieving solid structure is keystone to healthy soils, writes Jared DeForest, an assistant professor of soil ecology at Ohio University .....50

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Repeated rolling was conducted and surface hardness measurements were taken to create the "firm" study area.

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ing occurred. Volumetric water content of each area was measured using a portable soil moisture probe. The average surface moisture contents at the 0 to 2 inches depth were 20 percent and 28 percent for the firm and soft areas, respectively.

Ball marks were created in June 2007 by hitting golf balls from a distance of 100 yards into both research areas using a pitching wedge. Four ball-mark repair tools plus an unrepaired ball mark were randomly assigned to the marks within each location and repaired according to repair tool manufacturer's directions. The GCSAA method for the traditional tool (TT) was employed because of its widespread use on golf courses.

Briefly, the tongs were inserted at the backside of the mark, and a twisting action was used four to five times around the perimeter until the turf canopy enclosed the ball mark. The angled traditional tool (ATT) was inserted at the back of the mark and by pressing down on the head of the tool a lifting action was used to lift the center of the mark three to four times around the perimeter and lightly tamped flat.

The wooden golf tee (WGT) was chosen for this study because golfers often have this tool in their pocket for launching golf balls from teeing grounds and can also be used to repair ball marks. The WGT was inserted around the mark four to five times until the turf canopy completely enclosed the ball mark. The GreenFix Wizard (GFW) was

pushed into the ball mark surround four to five times at a 45-degree angle, starting at the back of the mark, pushing the turf back into the disturbed area.

Scar areas were calculated by measuring each mark with a ruler in two perpendicular directions to the nearest millimeter and calculating an average diameter, which was used to calculate the area of a circle. Initial ball-mark cavity volumes were determined for eight ball marks in each location by placing a thin sheet of plastic food wrap over the ball mark and pouring dry sand into the depressed area until the sand was level with the green surface and then weighed.

## Repair Tool Affects Scar Area and Recovery

Initial ball mark volumes for the soft and firm surface areas resulted in mean sand masses of 9.08 and 5.01 grams, respectively. Not surprisingly, increased moisture in the soft area resulted in larger ball-mark volumes, potentially prolonging ball-mark recovery time.

All repair tools resulted in a smooth surface immediately following repair with little or no disruption visible but resulted in small necrotic spots where the ball mark had previously been repaired, which is consistent with other research (Fry et al., 2005; Munshaw et al., 2007).

As expected, scar areas were largest on the first rating date. Ball-mark scars left unrepaired in the soft area were substantially larger, 640 vs. 459 square millimeters (mm<sup>2</sup>), than those in the firm area. Scar area decreased over time and by 28 days after repair (DAR) all tools resulted in equivalent scar areas in both areas. Significant differences were observed early in the study. For example, scar areas ranged 156 to 509 mm<sup>2</sup> in the soft area and 210 to 356 mm<sup>2</sup> in the firm area at five DAR, which was expected with the larger scar cavities produced in the soft areas.

For both areas the lowest numerical scar area was measured for the GFW, although not statistically different from the TT on any measurement date.

By 21 DAR the GFW was equal to both long-tong tools. This is consistent with a pre-



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*(Left photo) Traditional tools employed when using the GCSAA ball mark repair method are angled traditional tools, standard wooden golf tee and the GreenFix Wizard. A circle shows an unrepaired ball mark. (Right photo) A front view of tools shows the angular nature of the angled tool and the push lever of the GreenFix Wizard.*

vious study (Munshaw et al., 2007) reporting that using tools with the push technique, such as the GFW, resulted in no significant difference in ball-mark diameter compared to using a standard long-tong tool and the traditional method.

Surprisingly, one of the worst-performing tools in this study was the WGT, which was similar to an unrepaired mark on all measurement dates in the firm area and six of seven dates in the soft area. Additionally, the ATT was not substantially different from the unrepaired marks on four of seven measurement dates for the soft area and all dates in the firm area. Aside from improving surface smoothness by reducing the scar cavity, it appears there is no major benefit to using the ATT and WGT to repair ball marks.

## Summary and Recommendations

In this study, the TT and the GFW resulted in the fastest ball-mark recovery time. The ATT was not significantly different from the unrepaired marks on four of seven measurement dates for the soft area and all dates in the firm area. The longest recovery was associated with the WGT, which was similar to an unrepaired mark on most rating dates making

it an undesirable choice for ball-mark repair.

Furthermore, it is clear from this study that many factors affect ball-mark recovery. Surface firmness and repair tool both play an important role in recovery time. Maintaining drier and firmer surfaces by rolling, irrigating deep and infrequently, and using management practices that decrease organic matter such as core cultivation and sand topdressing could provide better resistance to ball marks and decrease the recovery period by ensuring smaller initial ball mark scar cavities.

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# Achieving Solid Soil Structure Is Keystone to Healthy Soils

By Jared DeForest

**W**alking around on a perfectly manicured golf course, it's easy to forget most of the plant is below ground. It almost goes without saying that proper soil management is vital in turf management.

One important soil property that can be easily overlooked is soil structure or tilth. Soil structure refers to the spatial arrangement of soil particles. These aggregates form through physical, chemical and biological processes, which will greatly influence soil quality (Brady and Weil, 2008). Good soil structure is a hallmark of healthy soil. If soils are healthy, then healthy turf can follow.

An easy way to determine soil structure quality is to collect surface soil between 5 centimeters (cm) and 10 cm deep. Gently toss the soil in the palm of your hand to break up the soil. Take a representative soil clod and gently try to break it apart. If the clod breaks or fractures along a plane, it means you have some structure. If the clod tears apart, then it's a clear indication you have very poor or no structure.

Likewise, soils with good structure will break apart when dry, but will not turn into a powder. The best kind of soil structure for plant growth is granular structure, which resembles cookie crumbs and is usually less than 0.5 cm in diameter. This structure maximizes soil's water infiltration, fertility, rooting, gas exchange, decomposition, and the biodiversity of soil fauna and flora (Brady and Weil, 2008). Likewise, soils with good structure are porous and have low bulk density. However, soil compaction will destroy soil structure. Poor soil structure will appear plate-like or blocky with sharp edges when broken apart and can be over 5 cm in diameter. Water infiltration is slow in these soils compared to granular structure. Moreover, because plant roots grow between aggregates, poor soil structure will limit the ability of plants to root.

Fine-textured soils are prone to poor



*The best kind of soil structure for plant growth is granular structure, which resembles cookie crumbs and is usually less than 0.5 centimeter in diameter.*



*It's well known that soils with high soil organic matter are of better quality, in part, because of their effect on soil structure.*

structure, especially in high-traffic areas. Very sandy soils typically have no structure. Without tilling, there are two ways to improve soil structure: adding organic matter and liming. Organic matter will work on virtually all soils, whereas adding lime primarily works on acidic heavy soils.

The main reason why lime is added to soils is to reduce soil acidity by raising pH. However, to a certain extent adding lime (CaCO<sub>3</sub>) or even gypsum (CaSO<sub>4</sub>) can improve soil structure through a physical-chemical process. This is especially true for heavy (i.e., clay) soil with low calcium or pH.

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JOHN DEERE

## QUICK TIP

The scissor-like shearing action of a reel mower is only possible if the reel and bed knife are sharp and clearance is maintained. Backlapping after spin grinding will remove burrs and rough edges, ultimately leaving the grass with a clean, manicured look. For more information on reel mower maintenance, contact your John Deere Golf sales representative or visit [www.john-deere.com](http://www.john-deere.com)