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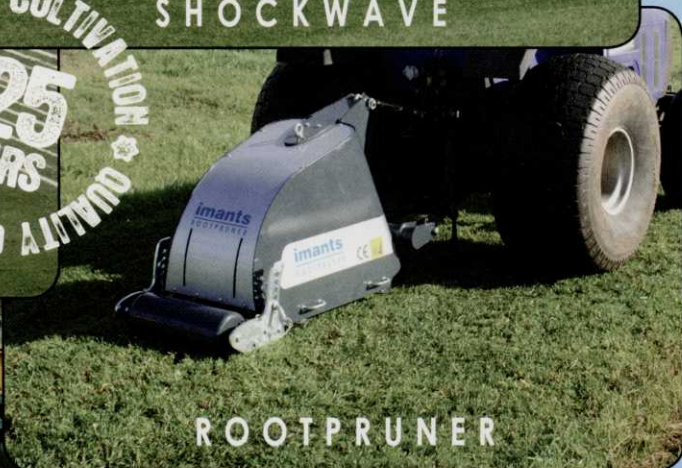
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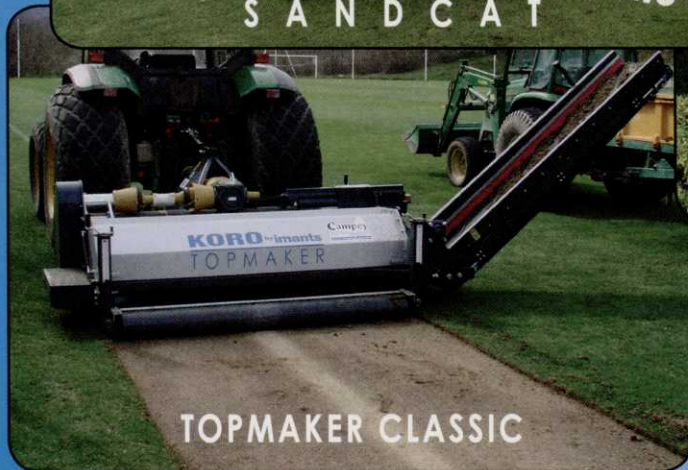
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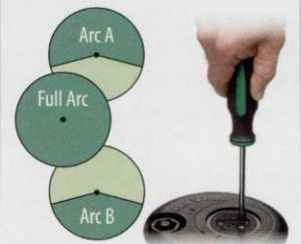
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SURVEY SAYS...

The powers that be in the golf industry will throw some astounding numbers at you. They will tell you that golf has a \$76 billion annual economic impact in the U.S. – bigger than the furniture or motion picture businesses. They will further say course maintenance alone accounts for \$9 billion in spending and payroll. That suggests the average maintenance budget at the average American course is about \$500,000. Take labor and overhead out of that equation and it means that the “typical” course spends about a quarter of a million dollars a year on stuff.

That’s a big number for some of you and a pittance for others, but that’s the average. The real question – no matter what budget you have – is what kind of stuff do you buy and from whom do you buy it?

By my estimate, there are about 300 companies that actively sell products to golf course superintendents. Beyond the actual performance of the product, the bottom line when superintendents choose products nearly always comes down to reputation and relationships. You buy from people you trust who represent companies you respect.

So, we asked you which companies you admire and trust the most, and the results of this first-of-its-kind study are presented in this month’s cover story. Our goal is to benchmark your opinion of the reputations of the companies that serve you.

We sent out 4,000 online survey links to superintendents randomly selected from our circulation and received about 350 valid responses. We asked folks to choose the 10 companies they admired or trusted most from a list of about 100 companies we identified. (By the way, we randomized the multiple choice lists to prevent people from just checking off the biggest companies, the same companies or the first 10 on the list.) From there, we compiled the data and sat on it. We didn’t share the data with anyone – including our own sales team. We decided against using it to go sell self-congratulatory ads to the companies that

did well in the ratings. We could have, but it seemed tacky. We hate tacky.

In some ways, the results weren’t surprising. The big brands that dominate the consciousness of the market generally performed well. But, there were surprisingly small companies that exceeded my expectations and some huge ones that didn’t do as well as I might have expected. So, what’s the takeaway? You get to see how your opinions compare to those of your colleagues around the nation and ponder how your views impact your purchasing decisions.

If this study is a measure of corporate brand reputation, here’s what it is not: It is not a measure of market share or total sales. Yes, companies with better reputations sell more stuff, but just because Company X ranks higher than Company Y in our study doesn’t

mean that Company Y isn’t kicking Company’s X’s butt in total sales because they have better distribution, different pricing or more “must-have” products.

It’s not necessarily a measure of how much each company spends on marketing. There’s definitely a correlation between advertising/marketing and overall reputation but, again, there were smaller manufacturers that ranked

high compared to their ad budgets.

It’s definitely not a measure of how much advertising each company buys in GCI. We compiled a list of the industry’s most visible companies based on multiple sources (ads in all magazines, trade show booths, sponsorships), and we allowed for write-in responses. Many companies that don’t advertise with us were included and a few of them did quite well.

All that said, publishing this scares the crap out of me. We’ve never been afraid to be candid but this feels like risky business for a magazine that relies on the kindness of the very companies we’ve rated. But, given our reputation for telling it like it is, it’s riskier business to ignore the fact that brands are meaningful in this market and your perception of those brands is a big part of their success as companies. Comments are welcome. You know where to find us! GCI



Pat Jones

Editorial director and publisher

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We'd like to hear from you.

E-mail us at gci@gje.net with your thoughts and opinions.

FEEDBACK

Sincere thanks

Thanks, Pat, for your interesting and amusing take/writing that always entertains me while further educating me. Even when I have a bad day and/or are going through tough times in this increasingly difficult industry – which it really shouldn't be, aside from the crappy economy – reading your essays always gives me laughter and hope for better times.

Also, enjoyed the "Trick or Treat" essay ("Spooky," October 2011). Continue the great work you are doing.

Dennis P. Petruzzelli, CGCS
Danbury, Conn.

To read "Spooky," enter <http://tinyurl.com/chqq77y> into your Web browser.

Time to deal

Read Pat Jones' column, ("Bone Dry," October) and thanks for the shout out. We are right back in it with a drought here in Georgia. They are beginning to dust off the old rules and look for new ideas.

The golf industry was alerted to the activity of the Department of Natural Resources by the Environmental Group – Upper Chattahoochee Riverkeepers – and the friends we have made in the water supply industry. Very cool when environmental groups come to the aid of golf and visa versa. But the main point is still the "main point" – we all are going to have to deal with this sooner than later. I also had a friend from the Lower Colorado River Authority ask me to help the Dallas/Fort Worth folks with a workshop with golf stakeholders. I remember when Mark Clark from Arizona told me (15 years ago) that water was the next big thing and I didn't believe him. Not in Georgia. Not with 56 inches of annual rainfall. I was an idiot.

Mark Esoda, CGCS
Atlanta Country Club
Marietta, Ga.

To read "Bone Dry," enter <http://tinyurl.com/77gqryc> into your Web browser.

Spot-on

Just read Dennis Lyon's article "A Collision of Cohorts" and found it to be the most spot-on portrayal I've read in this magazine in a long time. Lyon identified the stratification of the typical golf course workforce and how to manage it quite accurately. Nice work.

Steve Carr
Superintendent
Pocasset Golf Club
Pocasset, Mass.

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LUCKY 13

Things weren't looking great for the Meadow Springs Country Club in Jefferson, Wisc. in 2008. The city-owned course was being closed down because while they wanted to keep local golf alive, they couldn't justify spending money on the course. The course's fate seemed sealed when five holes were purchased for development and then abandoned, leaving the remaining 13 floating free and growing wild for a year.

St. Coletta of Wisconsin, a program for those with developmental disabilities, acquired the course fragment with a non-profit organization, but couldn't do much with it. But Mike Kerig and a few other golf pros had the course's number.

"They kind of got stuck with this property that was no longer being maintained as a golf course," says the superintendent now of the Jefferson Golf Club. "We went to them and said, 'If you want this open, we can get it there for you.'"

Working together, they started pulling the course back into shape in spring 2010, using a little trailer for a clubhouse while negotiations were going on with the old owners.

"We didn't really have our deal done until the middle of May," says Kerig. "We didn't have a building, no irrigation, didn't have any space for mowers or any mowers

themselves. Once the deal was signed, we really got going."

Within a year of hard labor, the course came back strong, with bentgrass fairways growing in faster than Kerig anticipated. But working alongside Links Across America developed the idea of the short course as a viable way to keep golf in the community.

"The 13 holes is a novel idea," says Kerig. "The smaller golf course was right up their alley. People were kind of skeptical at first, but after they play it, they say, 'Hey, 13's a lot of fun!'"

Besides bringing in a shorter standard round of golf, the smaller course opens up a variety of routings for a nine-hole round. And any diehard who wants their 18 holes can reroute through a five-hole loop to complete it.

"It's a really nice routing because it doesn't take six hours," says Kerig. "We can get them in and out in four. It's certainly kept the price of golf down here, too. We can offer a four-hole rate, and the shorter time means parents can bring kids around to get them interested in the game."

The course is still young, but Kerig says it has a bright outlook because of the novelty of the short course and the guidance of Links Across America in getting things



Before and after of the first fairway at Jefferson, showing the change from April to August over the summer of 2010.

running again.

"Their organization is committed to keeping golf in communities," says Kerig. "I don't know if we could've kept going without them. But it proves you don't have to be a 18-hole, huge course. If you can get people out there, they'll have fun."

FACIAL HAIR FOR CHANGE

We clean up pretty nicely here at the GCI Intergalactic HQ – as long as you don't look at any of our desks. But we don't mind relaxing our rules a bit, especially if it's for a good cause. The GCI staff eschewed the razor to take part in Movember, the month-long movement to raise awareness for cancers affecting men by growing and grooming our facial hair.

Though we didn't directly raise any money for research and support for the Prostate Cancer Foundation and Livestrong, we've been able to use our mo's to get guys talking about men's health issues that many of us generally wait to hear about from our doctors. Check out associate editor Kyle Brown's Movember page at <http://mobro.co/kyleb>.

Some of our moustaches ended up being much grander than the others', however. Here's Kyle's before and after photos:

If you took part in Movember as well, e-mail us at gci@gie.net and show off your moustache!



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ABOVE: MIKE KERIG



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ROLL CALL

Peter Dernoeden, Ph.D., turfgrass science professor at the University of Maryland, has been selected to receive the 2012 Golf Course Superintendents Association of America (GCSAA) Col. John Morley Distinguished Service Award.

Doug Lowe, Greensboro Country Club, Greensboro, N.C., is the new president of the Carolinas GCSA.

Mark Anzlovar was named the superintendent of Hollydot Golf Course at the Colorado City, Colo.

Syngenta named **John Spaulding** territory manager for the turf and landscape sales team.

Direct Solutions announced addition of **Bryan Gooch** as North American Marketing Manager with the Direct Solutions team.

GREENKEEPER MOVES TO A DIFFERENT BEAT

At 5 a.m., while most of us are still deep in slumber, Bill Gilkes has already been pounding the drums for half an hour.

"It's my getaway," says the seasoned superintendent of his daily morning ritual.

What helps Gilkes keep such a positive outlook is that he always keeps things in perspective. The superintendent at Scarboro G&CC, the private club east of Toronto that celebrates its centennial this year, also owns a 1967 Mustang and loves tinkering with this antique car.

Gilkes first started playing drums back in 1964 when his dad gave the then-9-year-old his first kit (Broadway). "My dad was a plumber," recalls the greenkeeper. "He was doing a job for Henry & Company, a pawn shop that later became Henry's Camera, and my dad made a deal with the owner to get a drum kit in exchange for his plumbing work."

At 12, Gilkes had another memorable musical moment. At the time, he was taking drum lessons at the house of jazz musician Lou Williamson. One Saturday morning, he arrived at his teacher's house to find Buddy Rich had stayed the night. Rich, who in his time played with many of the jazz greats, was nursing a hangover. As Gilkes recalls, the drummer came out of the bedroom in a bathrobe, with an ice pack on his head, hollering at his host for some aspirin.

"He then walked over to me, took one of my drumsticks in his left hand and told me I needed to do more with my left hand," laughs Gilkes. "Then he did a roll on my kit ... it was unbelievable."

Gilkes went to his first rock concert at 11; the show was Jimi Hendrix at The Coliseum at the Canadian National Exhibition and his older sister was his chaperone. Memories of this first brush with rock 'n roll greatness are ever-present as the wall behind his Ludwig John Bonham classic drum kit — his instrument of choice these days — is adorned with a Hendrix banner. And the 11,104 songs that fill his iPod are an eclectic mix: everything from The Carpenters to Hendrix.

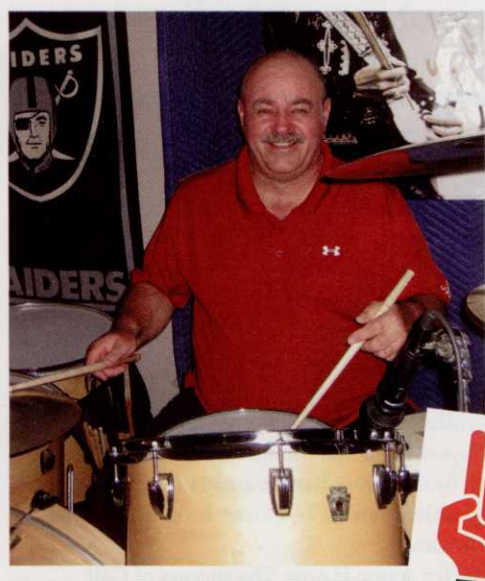
Flash back to 1970 and Gilkes drummed in a band called Fat Moon. He says they played all over Toronto and developed into one of those 'what if' stories.

"We were a bit ahead of our time," he explains. "We were writing our own material at a time when all people wanted to hear local bands play was covers. We rehearsed in a space near the former National Hotel in downtown Toronto and two floors down rehearsed Rush, who at the time was a Led Zeppelin tribute band."

You never know, rather than cutting grass for a living, Gilkes could have been travelling the world as a rock 'n roller. Then again, the 56-year-old says he wouldn't change a thing. He still enjoys drumming as a hobby and besides banging the skins in his basement office at Scarboro every morning, he also plays once in a while at the open jam sessions in downtown Toronto.

Gilkes loves his job as a superintendent at the only remaining A.J. Tillinghast course in Canada.

"I went from making \$23/hour to \$8.50 per hour, but it was the best decision I ever made," he says. "I've loved every day I've been in the business. I have a lot of freedom and I am surrounded by great people. If I want, my office can be any hole on the golf course. It's something I wish I could bottle up and sell."



Gilkes received his first drum kit when he was just nine years old. He plays the drums each morning to prepare for taking care of turf that day.



Dennis Lyon, CGCSA, is a GCSAA past president. He spent more than 35 years as the golf division manager in Aurora, Colo., and is the 2011 recipient of the USGA Green Section Award. Dennis can be reached at dlyon@gje.net.

GOLF 2.0: STRATEGIC PLAN OR PRAYER?

The PGA of America is championing a new initiative to grow the game called Golf 2.0. The concept, which targets the new era in golf, (thus 2.0) aims to substantially boost the number of golfers and much needed revenue.

Is Golf 2.0 a plan for our game's future or a well-conceived prayer?

We are all painfully aware golf is in a skid. According to the National Golf Foundation, the number of golfers declined by about 1 million from 2009 to 2010. The NGF recently posted, "Since 2001 golf rounds have declined 12 percent nationwide, which is the equivalent of 60 million rounds."

I was not familiar with Golf 2.0 until I attended a recent Colorado Golf Summit and heard a presentation by Darrell Crall. Crall is the PGA's Senior Director for Golf 2.0.

According to Crall, Golf 2.0 is envisioned as an industry-wide effort to increase the number of players and the revenue generated by the golf industry. Specifically, the Golf 2.0 vision is to go from 26.1 million golfers and \$33 billion in consumer spending in 2011 to 32 million golfers and \$35 billion in consumer spending by 2016. The 2020 vision is 40-plus million golfers and \$40 billion in consumer spending. (To view Crall's entire presentation go to www.coloradopga.com and click on Golf 2.0)

Based on golfer and non-golfer focus groups and other research, various key demographic and consumer megatrends were developed. In addition the following Golf 2.0 action plan tasks were identified:

- Focus to make the game more relevant, friendly, fun and welcoming to all;
- Reshape the perception, image and environment of the game;
- Redefine how to grow golf participation;
- Adapt to changing consumer profiles and preferences and
- Create meaningful experiences which resonate on an emotional level.

Research by the PGA also identified various classifications of golfers and non-golfers such as: no contact to golf, familiar with golf but don't play, lapsed, don't like the game, etc. Each classification was then evaluated for its respective growth potential. The largest group identified to

grow the game was the lapsed golfer with some barrier; 90 million. Of these 90 million lapsed golfers, 68 percent or 61 million indicated an interest in returning to the game. By contrast the study showed of the 26.1 million current golfers; composed of occasional golfers, regular golfers and heavy golfers, only 9 million indicated an interest in golfing more frequently.

According to the PGA, to meet the goals of Golf 2.0, the industry needs to implement a strategy which:

- Restores and strengthens the core;
- Engages the lapsed golfer and
- Drives new players to the game

"The success of Golf 2.0 depends on each course or club developing an action plan which includes fortifying the core while extending a welcoming hand to the millions of potential golfers waiting on the sidelines."

The \$40 billion question remains, how does the industry achieve the goals of Golf 2.0? At this point no one has all the answers. Another question is what is the superintendent's role in this effort? I believe superintendents are a valuable asset for inclusion in the process.

The PGA golf professional is positioned to take the lead in this initiative. To this end, the PGA has made enhanced training for golf professionals in the recruitment and retention of players a top priority. Superintendents should also embrace this effort. By their very nature, superintendents are great problem solvers and foster innovative ideas all the time.

The time for action is now. The success of Golf 2.0 depends on each course or club developing an action plan which includes fortifying the core while extending a welcoming hand to the millions of potential golfers waiting on the sidelines.

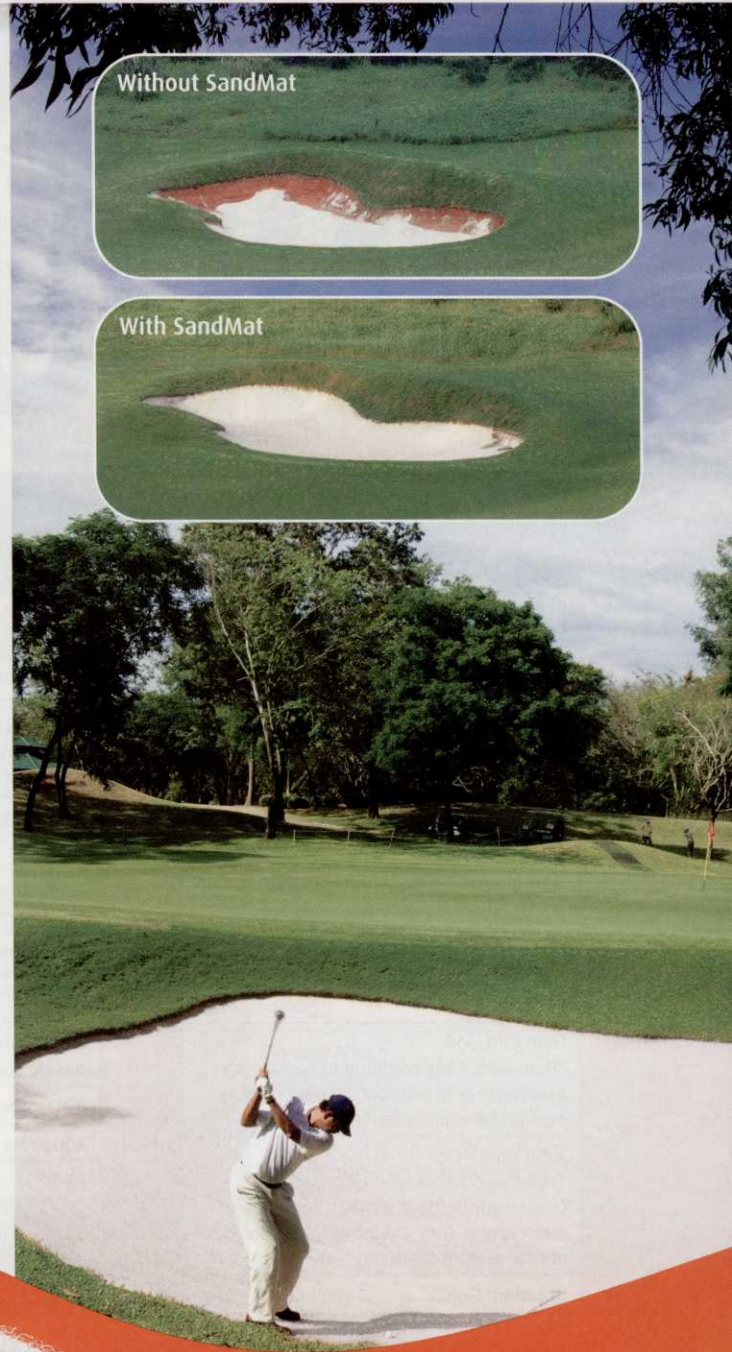
In the final analysis, whether Golf 2.0 becomes a viable plan or turns out to be just a prayer is up to all of us. **GCI**

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RATING THE INDUSTRY

Which industry companies do you admire most?

RANK	COMPANY	RANK	COMPANY	RANK	COMPANY
1	Toro <i>"Toro is my most admired company because I feel they keep their equipment at the leading edge of technology. They appear to listen to the needs of their golf course customers and design equipment for the superintendent."</i>	11	Andersons Golf <i>"Andersons for providing affordable, environmentally sensitive products that are multi-tasking and that can do many things to make our turf perform at an optimum level."</i>	29	Lebanon Turf <i>"Lebanon Turf – their bio-stimulants and other foliar get my greens through the summer."</i>
2	Syngenta	12	Flowtronex	30	Growth Products
3	Bayer	13	Turfco	31	Yamaha
4	Par Aide <i>"Par Aide, because they do one thing and do it very well!"</i>	14	Grigg Brothers <i>"Grigg Bros. – Best in the market."</i>	32	Ryan
5	Club Car	15	Cleary Chemical	33	Valent
6	Rain Bird Golf <i>"Rain Bird. They continue to be industry leaders in both product development and environmental issues."</i>	16	Agrium <i>"Agrium: doing more to keep the market competitive, and offering more products besides just agency (over) pricing."</i>	34	Redexim <i>"They have been on the leading edge in the U.S. on deep aeration techniques which I believe has the greatest impact on plant strength and health."</i>
7	John Deere Golf <i>"Years ago when John Deere started breaking into the golf and turf equipment arena, they did it by listening to golf course superintendents."</i>	17	PBI Gordon	35	FMC
8	Standard Golf	18	Aquatrols	36	Interstate batteries
9	BASF <i>"BASF: they are always working to get new products aimed toward golf and not as a second thought."</i>	19	EZ Go	37	Trojan Battery
10	Jacobsen <i>"Jacobsen: They are innovative in design, actively looking for better products. Our local service is top notch."</i>	20	Floratine <i>"Floratine. I believe they produce the highest quality products with the user in mind."</i>	38	SePRO
		21	Dow	39	Phoenix
		22	Tee-2-Green <i>"Tee-to-Green: A small company who has had the most impact on the golf course with the Penns and A series bentgrasses."</i>	40	Ewing Irrigation
		23	Bernhard & Co.	41	Aqua Aid
		24	Quali-Pro	42	Horizon
		25	Foley	43	Arysta
		26	DuPont	44	Nufarm
		27	JRM	45	Champion Turf
		28	Precision Labs	46	Becker-Underwood
				47	Neary
				48	Sipcam/Advan
				49	Milliken <i>"Milliken, because they are dedicated to natural products that are compatible with the environment."</i>
				50	Hustler

Who's tops in quality products, communication and brand strength? And who would you like to work for?

You buy from companies you trust and respect. GCI asked superintendents their opinion of the reputations of the companies in our industry through an online survey, with about 350 valid responses. Questions had randomized lists and were multiple choice, preventing the same few companies to be chosen simply because they were at the top. Along with our results, we've included some choice superintendent comments about how they feel about their favorite companies.

Our compiled answers don't necessarily tell who's spending the most money on marketing, and definitely don't define total market share or sales. What they do is give us an idea of which companies superintendents think are meaningful to the industry right now.

Industry companies you trust the most to provide reliable products and support?

RANK	COMPANY
1	Toro <i>"Toro - I can count on them to work on a solution to my problem right away and if they can't fix it quickly they will stay in communication with me so I know what is going on."</i>
2	Syngenta <i>"Syngenta. They have a proven track record with our facility. Trust is earned and they have earned it!"</i>
3	Bayer <i>"Bayer - Leader in product development. It stands behind its products."</i>
4	Par Aide
5	Standard Golf
6	John Deere Golf
7	BASF
8	Club Car <i>"Club Car = Great utility vehicle."</i>
9	Rain Bird Golf
10	Andersons Golf <i>"Andersons' fertilizers are always consistent quality."</i>
11	Jacobsen <i>"Jacobson. I have always trusted their mowers."</i>
12	Flowtronex <i>"Flowtronex. Bullet proof product!"</i>

RANK	COMPANY
13	Grigg Brothers <i>"They develop products that help produce better playing conditions and then have the research tested to verify the quality of the products and that it will do what we expect it to do."</i>
14	Turfco
15	Cleary Chemical
16	Aquatrols
17	EZ Go
18	Floratine
19	Agrium
20	Tee-2-Green
21	Bernhard & Co. <i>"Bernhard & Co. has such a precision product... and much of the golf course function is reliant upon it."</i>
22	PBI Gordon
23	Foley
24	JRM
25	DuPont
26	Dow
27	Quali-Pro
28	Precision Labs
29	Yamaha
30	Lebanon Turf
31	Trojan Battery

RANK	COMPANY
32	Growth Products
33	Redexim
34	Interstate batteries
35	Ryan
36	Phoenix
37	Valent
38	Horizon
39	SePRO
40	Sipcam/Advan
41	Milliken <i>"Milliken, in my opinion, has given me the most bang for my buck, the products have done what they say they will do."</i>
42	Champion Turf
43	FMC
44	Aqua Aid
45	Hustler
46	Becker-Underwood
47	Nufarm
48	Arysta
49	Neary
50	Ewing Irrigation

TOP 10

COMPANIES THAT DO AN EFFECTIVE JOB
MARKETING AND ADVERTISING TO THE INDUSTRY.

- 1 **Toro**
- 2 Syngenta
- 3 Bayer
- 4 Par Aide
- 5 Standard Golf
- 6 John Deere Golf
- 7 BASF
- 8 Rain Bird Golf
- 9 Andersons Golf
- 10 Turfco

Which ONE chemical company does the best job of serving your specific agronomic needs?

RANK	COMPANY
1	Syngenta
2	Bayer
3	Agrium
4	Andersons Golf
5	BASF
6	Quali-Pro
7	PBI Gordon
8	Sipcam/Advan
9	Phoenix
10	Lebanon Turf

Which ONE chemical company best supports your professional and management needs?

RANK	COMPANY
1	Syngenta
2	Bayer
3	Andersons Golf
4	Agrium
5	BASF
6	Quali-Pro
7	PBI Gordon
8	Phoenix
9	DuPont
10	Sipcam/Advan

Which ONE chemical company offers the best combination of value and products?

RANK	COMPANY
1	Syngenta
2	Quali-Pro
3	Bayer
4	BASF
5	Agrium
6	Phoenix
7	Sipcam/Advan
8	Andersons Golf
9	PBI Gordon
10	Lebanon Turf

Syngenta responds...



Reasons

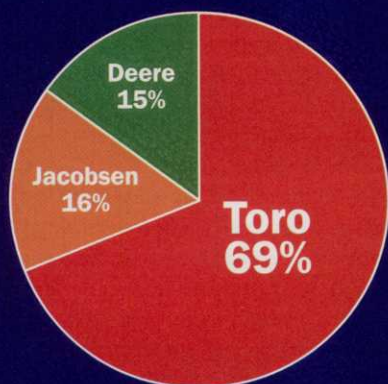
Providing our customers with the highest quality of service and products has been our No. 1 goal for decades. We remain a global leader in the manufacturing of quality plant protection products for the golf industry with a never-ending commitment to our customers and to the innovations they desire. The widespread acknowledgement by survey respondents to that fact further validates our belief that our efforts to deliver the best overall value and reliability to superintendents help retain our industry leading position.

Our commitment to our customers goes far deeper than the integrated product solutions we provide. Syngenta product purchases give superintendents access to agronomic technical support that is "second-to-none,"

as mentioned in the survey. Syngenta also strives to understand the superintendents' non-agronomic needs. As such, we partnered with the Wake Forest University School of Business in 2009 to develop the Syngenta Business Institute – an intensive, two-day educational event designed for and by superintendents. We are energized by the results in this survey and will continue working to maintain the trust and confidence of our superintendent customers. Syngenta will continue to listen to the needs of our customers and dedicate the necessary resources to provide innovative solutions today and into the future.

— Scott Reasons, Head, Syngenta Turf & Landscape North America

Which ONE major mowing equipment company produces the best quality cutting products for your needs?



Toro responds...

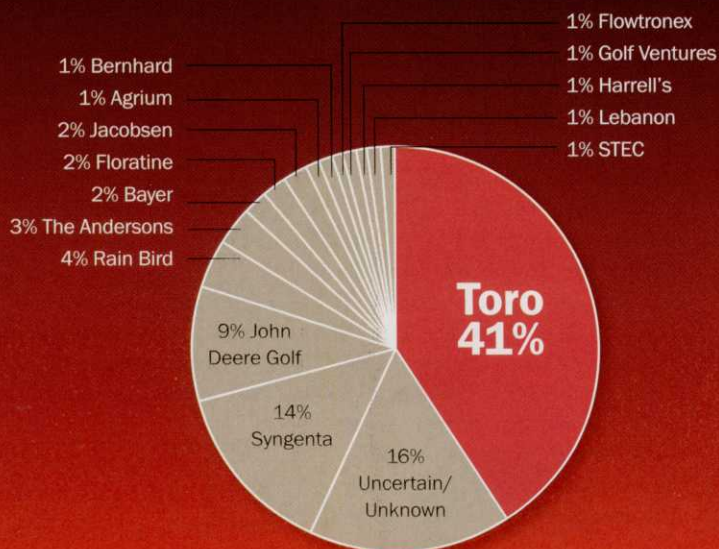
Toro and our distributor partners worldwide consider it a privilege to serve and support the golf industry. We are both honored and humbled to be recognized by our customers as an admired and trusted company. While this trust is earned over time, the company's ongoing approach to doing business and serving customers is best summed up by one of its key people values that simply states: Do what we say we will do. We try to make this mentality transcend everything we do – from product development and quality to customer service and our relationships. These survey results validate one of the core values of our company; that is the deep respect we have for customer relationships. Recognized as a leader in the industry, Toro continues its commitment to investing in customer relationships, differentiated products, channel development and the ongoing health of the golf industry.



Redetzke

— Darren Redetzke, vice president,
Toro Commercial Business

Which ONE industry company would you love to work for if you could and why?



TOP COMPANY TO WORK FOR

So why would so many golf course superintendents, if they had the chance to give up turf, would work for Toro? Here is a sampling of some of the typical answers they gave...

- Toro is a professional company with a product to be proud of one they stand behind.
- It's a very diverse company that makes quality products, is very active in the industry, big market that includes residential and lawn care
- Work for the best
- Good products sell themselves.
- I'd like to help innovate new equipment products for the best use on golf courses.
- Toro. Seems that it would be fun and rewarding to sell a product that you have a ton of experience with and has quality to back it up.
- Toro...I am a second generation golf course superintendent and in 90 percent of my career I have used Toro irrigation and equipment. I believe in Toro and as I tell my Toro reps, "I bleed Toro Red." They have treated me and my clubs the best of any company in the industry.

But what was also intriguing was that "Uncertain/Unknown was the runner up to Toro. Here's what some superintendents had to say to those responses...

- I couldn't sell if I tried.
- I love what I do as a golf course superintendent, if I had to do something else it would have to be something that improved the environment.
- I prefer to remain a superintendent and not work on that side of the industry.
- I would never want to change to the "other side."
- None (of those companies) are golf courses, so I will stay put, but if had to work for one, which ever paid the most!
- None of them - I fully expect to retire as a golf course superintendent.
- None... but I would like to own Toro.
- I'll pass.
- I really don't know ?!
- Sorry, I am not a good sales person, so it would be best if I stayed at the user end.

Maybe for some superintendents the grass isn't greener on the other side? GCI



Tim Moraghan, principal, ASPIRE Golf (tmoraghan@aspire-golf.com). Follow Tim's blog, Golf Course Confidential at <http://www.aspire-golf.com/buzz.html> or on Twitter @TimMoraghan

DON'T OVERLOOK THESE LESSONS

While sorting through old family papers recently, I came across a reprint of a book entitled "Don't", a guide to manners first published in the 1800s. The reprint was from the 1960s and included annotations by Eric Sloane, a Colonial Era historian. Sloane compared the manners and courtesies of days long gone with those of his day, noting that there had been a retreat from tradition and customs. He wrote that, "a social rebellion that accepts teen-age revolt, junk art, pornography and hallucinatory drugs appears to have little need for the niceties of etiquette. In fact, the practice of doing the exact opposite of what grandfather used to do in now considered fashionable."

That was nearly 50 years ago: Things have only gotten worse. We are witnessing the decline of basic rules of etiquette in society and our profession. Is a lack of good manners hurting you? Are simple courtesies keeping you from getting a better job, making more money, moving up the ladder?

Just as the game of golf is steeped in history and tradition, I suggest a quick review of the following traditional, yet simple, rules of social decency and consideration for others from 200 years ago. Yes, some of them are pretty funny, but they are timeless suggestions that will serve us all both on and off the golf course. With a new year upon us, they also might serve as fodder for resolutions.

APPEARANCE. The adage "you never get a second chance to make a good first impression" still holds true. The comments from the 19th century remain relevant today:

- "Don't neglect personal cleanliness — which is more neglected than careless observers suppose." Do you have a set of clean clothes in your

office? You never know when you'll be called upon to represent your club.

- "Don't be untidy in anything. Neatness is one of the most important of the minor morals." How neat is your office? I don't just mean your desk, but your bunkers, rough, greens, tee boxes, etc. What does your "office" say about you and your work ethic?

- My personal favorite. "Don't neglect the small hairs that project from the nostrils and grow about the

"Are simple courtesies keeping you from getting a better job, making more money, moving up the ladder?"

apertures of the ears." Enough said!

CONVERSATION. The way we speak says all anyone needs to know about our intelligence and knowledge. The original points were made at a time when writing and speaking were the only methods of communication. We may communicate in many new ways — phone, texts, e-mails and so on — but the lessons haven't changed.

- "Don't speak ungrammatically.

Study books of grammar and the writings of only the best authors." A great man once told me "readers are leaders." That includes reading and knowing the rules of grammar.

- "Don't use slang, profane language anywhere. Moderate your transports." As a boss or employee you are a representative of your club, so choose your words carefully and resist the temptation to become too loud or profane. Furthermore, speak clearly and slowly so you can be both heard and understood.

- "Don't use extravagant adjectives. Extravagance in any form is never in

good taste." Speak and write plainly. Big words don't impress and are often used incorrectly. Also, don't think you have to write or say a lot: There is no need to state your case in 100 words when 20 will do.

- "Don't pronounce incorrectly. Listen carefully to the conversation of cultivated people." No one is expecting you to make speeches, but be sure you know what you are talking about before you open your mouth, and that includes pronunciation as well as speaking clearly and concisely.

COMMON COURTESY. I'm amazed how many phone calls, e-mails, and voice mails go unanswered. I can't think of anything so rude as not getting back to someone who has reached out to you. Is it that difficult to pick up the phone or send back an e-mail? I'd rather be told no or to get lost than hear nothing at all.

- "Don't fail to apologize if you tread upon or cause inconvenience in any way." Return those phone calls, letters, and e-mails. And if you're slow doing so, apologize for your tardiness.

- "Don't fail to acknowledge, by note, all invitations, requests, and questions, whether accepted or not." Again, return those calls.

- "Don't write notes on rules paper or inferior paper." When writing back to someone, use proper business stationery or invest in quality, tasteful note cards.

- "Don't talk about yourself and don't talk about your affairs. If you wish to be popular, talk to people about what interests them and not what interests you." Let others talk, learn to listen, and not only will you learn some things, you'll become very popular.

- "Don't, as an invited guest, be late for the appointment." Being late is being rude. It's that simple. **GC!**

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 - 8am-12pm *MS Excel 2007 w/Windows 7*
 - 1pm-5pm *Keeping Your Insect Management on Course*
 - 1pm-5pm *Negotiating for Success*
 - 1pm-5pm *Surface Sealing of Our Greens*
 - 1pm-5pm *MS Excel 2007 w/Windows 7*

Sports Turf Seminar

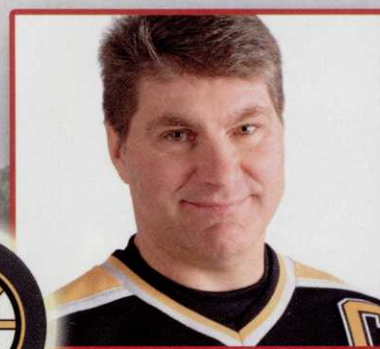
Tuesday, February 7 • 1pm-3:30pm
Case Study: Sand Capping as an Effective Remedy for Failure of the Washington Redskins Field

Trade Show Hours

- Tuesday, February 7 • 4:30pm-7:30pm with reception
- Wednesday, February 8 • 10am-5pm Live Auction 4pm
- Thursday, February 9 • 9am-1pm

Educational Session Hours

- Tuesday, February 7 • 9am-11:30am *"New" Sports Turf Session*
• 9am-4:30pm *USGA Session & Keynote Speaker Ray Bourque*
- Wednesday, February 8 • 9am-11am & 2pm-4pm
Golf / Sports Turf / Turf & Ornamental / Lawn Care & Landscape / Equipment Technicians
- Thursday, February 9 • 9am-11am *Golf / Landscape*
• 9am-11am *"New" Professional Development Session*



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Various control methods can help keep your bentgrass looking its best.

By David McPherson



ases

WILLIAM M. BROWN, JR., BUGWOOD.ORG

Golf fans watching the 2011 Open Championship on TV were surprised to see large, dark green round rings on some of Royal St. George's greens. For North Americans used to watching the pristine greens in high-definition on their big-screens at Augusta each April, this was a shock.

What were these strange circles? For superintendents, the appearance of these blights on greens for all the world to see – especially at one of golf's majors – was viewed as a positive since it gave the media a chance to educate the average fan and a global audience on one of the many diseases superintendents combat daily to get their putting greens in top playing shape.

This excerpt from "The Open Championship: a Guide to the Environmental Management of the Links, further educates the average golfer of what these strange rings were all about:

"Observant spectators at The Open may spot rings and arcs of darker coloured grass to some greens and fairways at Royal St George's. These 'fairy' rings are veteran living organisms that may be hundreds of years old. Fairy rings were once believed to be meeting places where fairies came together to dance but are actually caused by fungal mycelia (fungal roots) which grow in circular patterns beneath the soil."

Fairy rings can vary in size from a few inches to 200 feet in diameter and suppression is the most practical way to manage them. The theory is that fairy rings will thrive less where the turf is well irrigated and fertilized. This control method involves a combination of core aeration, deep watering and proper fertilization. As Dr. Peter Dernoeden, turfgrass specialist at the University of Maryland – an expert in creeping bentgrass management – points out, these diseases may be caused by any one of 60 species of fungi, which makes chemical control more unpredictable.

"Control of fairy rings is made extremely difficult due to the hydrophobic nature of the infested soil," says Dernoeden. "Chemical control is difficult because the fungus grows deeply into the soil and lethal concentrations

of fungicide do not come into contact with the entire fungal body."

Fairy rings are just one of several bentgrass diseases superintendents are seeing on their greens. Together, turf researchers and agronomists are working diligently to stay ahead of these pathogens to keep those greens green for golfers, but it's no easy task. Many of these pathogens attack thatch, but depending on the growing conditions and climate, each region tends to see different diseases.

Darin Bevard, senior agronomist for the USGA for the mid-Atlantic region, says soil-borne pythium diseases are also becoming more of a problem; these pests are often caused by the maintenance practices that today's golfers demand.

"The decline of the grass associated with these diseases generally occurs when the grass is being mowed low with intense mowing and rolling schedules," he explains. "However, this is not always the case. In general, the biggest problems we see are when the greens are being pushed for fast speeds under stressful weather conditions. That's when one of these 'diseases' shows up. Is it the disease or is it the physiological stress of intense maintenance? The answer is both. The grass has limits, and to date, Mother Nature is undefeated. When the weather is poor for cool season grass management, the golfers need to realize that we have to back-off on maintenance or suffer the potential negative consequences."

TAKING IT ALL AWAY. Thatch management is a key to combating bentgrass diseases and keeping these pests at bay says Katerina Serlemitsos-Jordan, an associate professor at the University of Guelph, in the school's plant agriculture department. She recently completed research on this topic. In her region (southern Ontario, Canada), take-all patch is the worst issue. Last spring, when it was very cool and wet, this bentgrass disease was rampant on many courses.

"It's partly the climate because we have extended periods of cool and wet weather, but take-all patch pathogens also do well in soils with high pH levels ... anything above 6.5," she says. "The soil pH levels in south-



ern Ontario are probably around 7.5 and sometimes get as high as 8, so we tend to see take-all patch visible for extended periods of time. It's a problem that usually attacks new greens, but if the conditions are right, we will sometimes see take-all patch on 10 to 15-year-old greens too."

So, how do superintendents battle take-all patch and make sure it doesn't become an intrusive invader? Serlemitsos-Jordan says fertilizers such as ammonium sulphate are one option. "Some go as far as acidifying their irrigation source, but I don't know how effective that is," she adds.

The best way to prevent these unwanted guests from making a home on your greens is by managing the thatch – increasing the health of the turf, so these pathogens never have a chance to establish themselves in the first place.

"Thatch-management is huge," says Serlemitsos-Jordan. "Anything we can do to promote healthy root growth such as core aeration, even solid tine aeration just to open up the channels where the roots can actually grow, is beneficial. One of the best ways to manage this disease is to keep the plant as healthy as possible, but you can also change the environment.

"The other thing superintendents can do is to monitor their irrigation," she says. "There are still guys out there that water 10 minutes a day. What that creates is a three-prong negative effect. First, it increases thatch levels; studies show that shallow, frequent watering will increase thatch levels. Second,



Pythium, like several bentgrass diseases, can usually be at least slowed by keeping turf well-drained and aerated.

it also promotes shallow rooting because you are constantly keeping the top three to five centimeters of the root zone moist, so the roots have no need to grow any deeper as they are happy in those shallow layers. Finally, by keeping the soil moist, you are creating a very conducive environment for the pathogen because they like moisture."

Meanwhile, out in California, where courses often deal with dry conditions, Pat Gross, says all is "quiet on the western front." The director for the USGA, southwest region, who joined the Green Section staff back in 1991, advises courses in his region on current agronomic trends, sharing practical information on golf course maintenance issues to greenkeepers in California, Nevada and Mexico.

"If there was something moving through I would be hearing about it and my phone would be ringing off the hook," he jokes.

While there are no major issues or trends when it comes to bentgrass diseases in his region, one new disease that popped up at a few locations in 2011 is something Gross says superintendents need to monitor closely. The

"Control of fairy rings is made **extremely difficult** due to the hydrophobic nature of the infested soil."

— Peter Dernoeden, University of Maryland

disease, called thatch collapse, or artillery or cannonball fungus, decomposes areas of thatch and can be deadly to a greens' playability.

"It shows up in round circles the size of a coffee cup and it becomes depressed," explains Gross. "This disease really impacts the putting quality. What's most concerning about thatch-collapse is that there is very little known as to why this pathogen has arrived."

The only research conducted to date is by academics in New Zealand. These findings were first described in the May, 2011 issue of the New Zealand Turf Management Journal. The article describes how this disease was discovered at several courses down under in 2009 on both New Zealand's north and south islands. The name artillery fungus comes from the fungus' ability to propel spore masses as far as three metres. Since the publication of this journal article, turf researchers from around the globe have become interested in learning more about this fungus as it has been spotted at several courses in the United States. The disease is most notable for its activity well into the winter months.

"Most thatch collapses occur in the summer, so this makes artillery fungus quite unusual," according to the article.

Other than this nasty, mysterious new predator, are there any other bentgrass disease trends Gross is seeing in the southwest?

"Not much that is causing widespread damage," he says. "What I can tell you is that the newer courses with bentgrass greens or courses that have rebuilt their greens with creeping bentgrass generally have far fewer disease problems. I'm making frequent visits to the Olympic Club in San Francisco, Calif. in preparation for the 2012 U.S. Open and they haven't sprayed a fungicide this year."

Back in the Midwest, Darin Bevard offers a couple comments about bacterial wilt.

"One problem that continues to be discussed more often is the decline of creeping bentgrass on greens caused by bacterial related organisms," he concludes. "There is not total agreement in the academic community

about these problems, but something is going on. The USGA has committed significant research to fund this issue. The term used is bacterial wilt. We see yellowing, elongated growth of individual bentgrass tillers and this is often associated with thinning grass, especially under hot, wet conditions." **GCI**

Jeffrey D. Brauer is a licensed golf course architect and president of GolfScapes, a golf course design firm in Arlington, Texas. Brauer, a past president of the American Society of Golf Course Architects, can be reached at jeff@jeffreydrauer.com.



GLAD TIDINGS... AND GOOD NEWS

In a recent presentation to attain funding for their proposed golf renovation project, one authority announced her intent to vote “no” because she had read “golf was dying”. I couldn’t blame her if her only exposure to golf was reading the papers. We’ve had three years of reported gloom and doom, with news of another high-end course facing foreclosure just that morning.

However, while many “trophy courses” publicly struggle, there are numerous success stories that have gone unreported from mid-level courses and clubs. These type courses constitute the bulk of golf – if not golf reporting – in the United States. In just my little cross section of the golf world, success stories seem to outweigh tales of woe. Some examples: Three of my courses designed in the early 2000s (in Minnesota, Kansas and Texas, a nice cross section of the country) are now under management by Kemper Sports and each increased play by a few thousand rounds last year.

I also have designed and redesigned many courses that EAGLE Golf now manages. In 2004, we renovated the Indian Creek Golf Courses for the City of Carrollton, Texas, and they took over management. They had a dramatic turnaround the first year, at first attributed to golfers “trying out” the new look. While some courses recede to previous play levels, Indian Creek has continued to improve in financial performance, according to Richard Ellis, VP of Business Development at EAGLE. They have nearly restored rounds played from 50,000 when they took over to more than 90,000 rounds now – comparable to peak play of the late 1990s. He notes revenues are now \$2 million per year above the pre-reconstruction levels.

Ellis detailed other success stories that never make the typical media focus, on both the public and private courses they manage. From media reports, would you expect private clubs in the Phoenix area to have a waiting list? EAGLE manages Arrowhead Country Club in Glendale, and it does. All told, EAGLE’s three private courses in Phoenix area have increased revenues 21 percent this year.

Ellis says the successful courses are simply providing the “forgotten element of more value. “Families “do the math” and if a public course

like Indian Creek feels like a \$100 course and charges \$50, they will beat down the door (It does and they do).

If a club offers variety of family-friendly recreation like dining, kids’ sports and a health club, with a dues structure that is comparable to playing high-end public golf, many will join the club. More importantly, EAGLE strives to make their clubs “the place to be” with a traditional (yet modernized) sense of “I belong here” by stressing the social interactions and ability to make new friends.

It doesn’t take professional management companies to succeed, just professional grade management to get improved results. The City of Mesquite, Texas, has tremendously improved their performance by taking out native areas (originally let grow long to save money), improving the greens, bringing in a friendlier pro shop

I suspect it’s harder for those who complain of the ‘**new normal**,’ than those who realize it’s just ‘normal.’

staff and in turn have brought back long-time and new customers, many of whom believed there was no reason to go back.

These examples are a roadmap to success right now and in the future. To many golf managers, it seems the quality and value bar is still rising, while revenues are not. No doubt, it’s hard to find the right combination of design, service and conditions that creates that value for today’s golfer. I suspect it’s harder for those who complain of the “new normal,” than those who realize it’s just “normal.”

Value, whoda thunk it? Begun by frugal Scots in about 1457 AD, golf wouldn’t have survived periodic tough times for centuries if it didn’t have value in its DNA. As Ellis says, “In hindsight, “it’s really a basic plan with tremendous results.

Here’s to a great holiday season and a more prosperous and golf filled 2012. **GCI**



The dirt on
SOIL

THINKSTOCK

DOWN AND DIRTY

An understanding of the basic tenets of proper soil testing gives turf a solid base to grow. by Sam Ferro

Soil testing reports can be the turf manager's best ally when evaluating the golf course, or it can be a confusing jumble of numbers and charts.

To ensure you get the most out of your soil tests it is important to understand some of the basics tenets of proper soil testing.

Whether performing routine testing for fertilizer recommendations, diagnosing turf problems, or anything in between, the most important role of the turf manager is to ensure proper samples are taken.

We recently worked with a golf course that was having problems with poor drainage. They couldn't understand why their new greens weren't draining, even though they had test results showing a sand with high drainage rates. Turned out the sand that was purchased by the golf course was different than the sand that they had test results for. Appropriate sampling and testing of the actual sand delivered to the golf course would have allowed the golf course to reject the sand prior to placing it.

Proper sample collection procedures vary based on the type of material being tested and the location of the material during sampling. In order to get a truly representative sample, a composite sampling technique is most desirable. A composite sample is comprised of material obtained from multiple locations that are combined to create a single sample.

Golf greens should be divided into sam-

pling subunits based on topography or directional areas. If there is concern about an entire green, the green can be divided into four to eight segments. Subsamples are then taken from each of the segments. The subsamples can be collected with a cup cutter, soil probe or shovel and combined in a plastic bucket. The combined sample is then mixed thoroughly to create the composite sample.

Large sample areas, such as fairways, should be divided into separate sampling units based on topography, vegetative cover, previous use, soil color and other visual differences. Small, non-uniform areas such as wet, rocky or eroded spots should always be a separate sampling unit.

When purchasing bunker sand, topdress sand or any high volume material that is stored in a stockpile, the stockpile should be tested before delivery to the golf course. A composite sample should be comprised of at least eight sampling locations. The eight locations should vary from the top to bottom and all around the pile. At least half of the samples should be taken from the lower third of the stockpile.

Most tissue samples are collected from mower clippings. To help prevent contamination wait at least two weeks from the last top dress application before sampling. Samples should be collected on actively growing turf. If growth patterns (yellow to lighter green color) are apparent, sample separately from "normal" growing areas. Let samples dry overnight to remove excess moisture before packing. Tissue samples should be shipped to the laboratory as soon as possible.

Once samples have been obtained, they should be labeled and a record of the samples should be kept by the golf course. The record should include sample locations and depths, and a map of sample locations. Sample names and identification should be written in permanent ink on the outside of each sample bag, bottle or container.

Sample submissions should include a letter or testing request form. Most laboratories can provide sample submittal forms and shipping labels that will help insure the sample submission process goes smoothly. Communicating with the lab can often help the lab to better tailor tests and reports to address golf course needs or concerns.

Lab test reports typically include an ex-

planation of tests results and recommendations for action. Therefore, samples should be sent to laboratories that specialize in the demands associated with growing and maintaining a golf course.

With proper sampling techniques and lab testing, you can be confident that the information contained in the test reports accurately reflects the conditions of the material that was sampled. The information gained from the report can then be combined with on-site observations to make knowledgeable golf management decisions. **GCI**

Sam Ferro is president of Turf Diagnostics & Design (TDD), an accredited soil physical testing laboratory serving golf, sports turf and landscapes world-wide.



LIST OF INGREDIENTS

Soil content affects soil behavior, including the retention capacity for nutrients and water. By Chris Wilczynski

Each and every golf course that exists in this world has some form of vegetation. Vegetation comes in many different forms: turfgrasses, trees, agricultural crops, etc. One element all vegetation requires for establishment is soil. There are many soil types, but for growing purposes there are three main soil compositions: sand, silt and clay. Soil content affects soil behavior, including the retention capacity for nutrients and water.

Clay soils are heavier and tend to stay wet. Sandy soils

are lighter and dry out quicker. Silt is more or less a combination of sand and clay, the ideal growing medium for vegetation. The soil composition plays a very important role in the health and success of the plant. The care for the plant can vary widely depending on the type of soil that exists.

Golf courses typically have 25-30 acres of tee, fairway and green grasses and another 40-60 acres of rough and native grasses. Some golf courses are treeless, but most have several different coniferous and deciduous tree species. Anyone who cares for such a diverse landscape knows how much the soil effects the day-to-day maintenance and health of the plant. The more consistent soil, whether it is sand or clay, the better. Having multiple soil compositions throughout any

landscape will test the best of any agronomic professional. Having one or two soil types on a golf course that are consistent from the first to the 18th hole is the goal.

When completing golf course construction projects, whether constructing a new golf course or renovating an existing golf course, one of the most critical steps to success is to manage the existing topsoil. The goal is to have a consistent growing medium throughout the entire project site upon the completion of the project. Prior to any excavation, grading or shaping, 4 to 6 inches of topsoil should be stripped from the affected area and stockpiled away from the area in which the construction work will take place.

Upon the completion of the

construction, the same topsoil that was removed should be replaced prior to the seedbed preparation work and grassing. Again, the intent is to have consistency throughout the entire managed turfgrass area. This effort takes time and money, but it also creates positive results and success.

In the fall of 2010 my firm and Eagle Golf Construction completed a four-hole renovation project at Wanakah Country Club in Buffalo, N.Y. Wanakah sits just a few hundred feet away from the shores of Lake Erie. The soil at Wanakah is heavy clay, typical western New York soil. It is not the ideal growing medium but the golf course superintendent, Gale Hultquist, who has managed the grounds at Wanakah for over 30 years, knows the soil

and knows how it needs to be managed. The first step of the renovation project following the removal of the existing turfgrass was to strip 6 inches of topsoil from all of the areas that were to be disturbed and graded. The topsoil was stripped and stockpiled along the sides of the affected areas.

Upon completion of the project, the same topsoil that was stripped was replaced over all of the disturbed and graded areas. The goal was to create a consistent 6-inch depth of topsoil. What did this create? Consistency! Can you imagine trying to grow turfgrass on the varied composition of the subsoil? In some areas we made 3 to 6-foot cuts into the heavy clay, and the deeper we cut the worse the clay became. This patch-quilt effect



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of different soil compositions would be endless if the existing topsoil was not stripped and replaced. Just think how much fun it would be to manage the new turfgrass within all of the different soil compositions. This area needs a little bit of water but not much fertilizer, this area doesn't grow anything and this area needs a lot of fertilizer and four to five aerifications per year to loosen the soil. This is what it can be like with varying, inconsistent soil types. I have seen it first-hand.

In the early 2000's I worked on a new golf course construction project with Arthur Hills in Yorba Linda, Calif. The golf course is called Black Gold Golf Club and it was devel-


oped by the City of Yorba Linda, Calif. and the Aera Energy Company. The property was an old oil field that was managed by Shell Oil. The project included an 18-hole golf course and an upscale residential development that was developed by Toll Brothers. The area that the golf course and residential development was to be developed was rugged and severely undulating. For the entire project, 13 million cubic yards of soil were excavated. 3 million cubic yards were moved on the golf course. In some instances, there were 60- to 80-foot cuts into the existing soil and 50- to 80-foot fills. We strongly recommended that the existing topsoil be stripped and stockpiled, and replaced within the golf course. But, for whatever reason this never happened. The

golf course turned out great and the residential development was very successful due to the timing of the real estate market. But, the golf course turfgrass has suffered from day one because of the inconsistent soil composition. Just about every soil type that exists can be found throughout the golf course. In the heat of the summer the cool season grasses really struggle. The heat plays a factor in this but the inconsistent soils play a larger factor. The golf course turfgrass will struggle into the foreseeable future. The cost to maintain the turfgrass on the inconsistent soil will eventually far exceed the initial cost to strip and replace the topsoil. In hindsight, everyone knows what should have happened.


The two projects that were cited vary greatly in scope and

cost. But, the one thing that should have taken place regardless of the type of project was to strip and replace the existing topsoil. Let's face it, managing a landscape and hundreds of acres of turfgrass is not easy, especially given the crazy weather that most regions experienced in 2011. Let's not make it any harder than it has to be. Let's do the right thing and start off with a good consistent foundation. Just like the importance of a foundation to a home or building, the soil is the foundation for the vegetation. The foundation needs to be consistent. **GCI**


Chris Wilczynski, ASGCA, is the founder of C.W. Golf Architecture and is based in Ann Arbor, Mich., and is a frequent GCI contributor.



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Don't worry... BE HAPPY

More work, more responsibilities... less time. GCI's Bruce Williams offers some keys to develop a plan that balances the scales in your life.

Growing up as the son of a golf course superintendent I've seen many changes over the last half decade. Most of our more-experienced superintendents can remember an era when superintendents and their crews worked seven days a week, from dawn until dusk. Weekends and holidays were a busy time as many golfers frequented the facilities superintendents managed.

The term "workaholic" comes to mind for many in this business. At a minimum, it was the norm to have 60-plus hour work weeks. While workaholics can't let their job go, it was more of a case of superintendents feeling obligated to be there. Anyone working a 40-hour work week was working a short week.

So how did this affect superintendents' family lives? No doubt many superintendents spent more time on their job than with their families. Most came home weeknights at the dinner hour and were in bed by 9 p.m. After reading the newspaper and watching the nightly news there was little time for quality family interaction. Saturdays, Sundays and holidays were a bit better as most superintendents only worked a half a day and came home after about six hours on the job. And then there were nights when a superintendent had to return to check on the night watermen or set the timers on the irrigation clocks.

Trends have changed over the years and are reflective of our society in general. Overall, parents are more involved in the family than ever before.

Our children are a greater focus in our daily lives. Couples often are both working and there are more shared duties with the home and the family than ever before. Many of my peers are now involved in their children's activities, such as coaching sports and assisting with after-school activities and programs.

The ancient Greek tragedian, Euripedes, said it is best and safest to keep a balance in one's life. Some 2,500 years later, the need and importance of maintaining balance in our lives has not changed, but the challenges we face certainly have, and they seem to be growing at an exponential rate.

Here are some keys to keep your life in balance.

WHAT'S SUCCESS? The definition of success is different today than ever before. Success is not just having the nicest house and the best car. Instead, it is having a wonderful family and having the time

to do and share the many things we love outside of our work. With the current economy there is more to do and fewer people to do things, which creates a challenge for all golf course superintendents. However, challenges are nothing new for us. We need to look at solutions to the

challenges we face.

Develop a schedule that creates balance. What is a reasonable amount of time to spend at work? While we all have a definitive start time do we have a specific time to complete our work each day? When one considers a defined workday it is amazing

"Scheduling today is not the typical workweek it was decades ago."



“Anyone working a 40-hour work week was working a short week.”

how much we can get accomplished in a set amount of time.

Build family time and personal time into your schedule. Some of us use a daily planner or other tools to organize our schedules. We place appointments, meetings and tasks on that list. Take the time to also place family activities on the same list and adhere to the list. Work may not always allow us to get to every single school-related activity but we can surely schedule the more important functions. Date night and family nights are in vogue and a wonderful time to wind down from the stress of work. If it is on the schedule it is likely everyone will look forward to these events.

While random activities are great, sometimes higher priorities with work tend to take precedence. Scheduling activities outside of

work also allows you to look forward to those events as the week progresses.

GET ORGANIZED. Often, organization leads to stress reduction. Getting organized is the key to managing your time. With so many tools to help get and keep us organized, we can accomplish so much more in less time. Today's technology provides us with some amazing tools. Much of our administrative work is accomplished and stored on computers. Payroll, HR, inventory and staffing records are all maintained and updated on computers. Weather station information, irrigation programming, soil test results and pesticide application records can all be managed online, as well. Budgets are easier to formulate using Excel spreadsheets allowing accurate forecast updates as the year progresses.

Filing cabinets are less utilized as we now store our documents and communication digitally. How many of you used to cut articles out of trade publications and file them away for future review? Now we can easily Google the topic and find a plethora of information on topics to help us do our jobs better.

SAYING “NO.” One reason we spend more time at work than at home is we often take on more than we can accomplish during any given day. Superintendents always want to please their golfers and employers. As a result, we have a tough time saying “No” when asked to take on more responsibility. There are several ways to overcome that.

Simply don't take on more than you can complete in any given day. It may not be essential that additional work be accomplished immediately. Rather, it can be completed over time allowing for adjustments later in the week. When other people's priorities become your priorities it leads to 60-hour work weeks.

Take some of the weight off of your shoulders by delegating projects and assignments to others. We should all have a team that we work with that can take on various tasks. In fact, it is healthy for those we coach, manage and lead to take on greater responsibility. So when any of us are stressed over more to do than we have time to do it in, then we should be delegating that to others.

Some alternatives to delegation might include assigning work to other departments when your plate is full. Outside contractors are another consideration to fill the gap when additional work is created.

ALLOW FOR PERSONAL TIME. Imagine a couple of decades ago when there were no computers, no cell phones, no blogs, no digital cameras and no PowerPoints. Information exchange took place in a very different way. The good news is significant advancements have given us the tools to stay in touch with our golfers and employers. Communication today is 24/7/365 and can be done in a variety of ways to better manage your time.

Recently, I visited a golf course that had received 5 inches of rain overnight that created some major play and maintenance issues.

(BE HAPPY continued from page 49)



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Henry DeLozier, a principal in the Global Golf Advisors consultancy. DeLozier joined Global Golf Advisors in 2008 after nine years as the vice president of golf of Pulte Homes. He is a past president of the National Golf Course Owners Association's board of directors and serves on the PGA of America's Employers Advisory Council.



FORECAST FOR 2012

If it's true that we cannot know where we're going until we know where we've been, here are five takeaways from 2011 that foreshadow what the golf industry can expect in the coming year.

1. FLIGHT TO QUALITY. Our recessionary economy rewards excellence while punishing mediocrity. Businesses that reinvested in their futures through capital improvements and product introductions are growing and increasing earning power. Golf-related businesses that chose to hunker down are being clobbered by value-driven consumers who are intolerant of under-performance. This characteristic seems to span every segment of golf, from the most modest of municipal courses to the highest and mightiest of private clubs.

Clubs prosper where continuous improvement is evident. New programs and investment in the lifestyle of the club are being rewarded. Because the growth of clubs tied to residential communities is driven largely by women, programs that emphasize family, fun and fitness have emerged as competitive advantages. In order to hold position, established brands must continue to improve product performance and customer service. In a zero-sum game, there are winners and losers. Golf growth has slowed and now stabilized. With very little organic growth in new golfers and new golf facilities, the top performers are today's – and tomorrow's – winners.

2. INTERNATIONAL SUPERIORITY. Competitively speaking, a large proportion of top performing golfers are citizens of the world. On the course, the U.S. PGA Tour is challenged as never before by the European Tour. On the business side, the European Tour already may have overtaken the U.S. Tour for its ability to attract sponsors and fans. Clearly the economic health of the European Union influences the global business community far more than the capabilities of international players. However, there is no denying that companies hoping to appeal to golf-conscious demographic segments can reach a broader audience internationally. For American companies seeking female golfers, the emerging markets are in Europe, Scandinavia and East Asia. Manufacturers and suppliers of goods and services report revenue and unit-count growth in Asia and parts of the EU. Performance indicators for the international hospitality segments are trending upward.

3. U.S. MISTAKES SPREADING. Golf development outside the

U.S. has followed the American model and, as a result, is being hurt by the same factors of oversupply in unproven and brittle markets. As in America, many new project planners and investors have not identified audiences with adequate depth and breadth to sustain start-up and standalone enterprises. In a difficult global economy, the small range of economic tolerance for golf communities, resorts and projects has shrunk to the point that only carefully planned and extremely well-capitalized projects in highly attractive locales will be successful.

“In a difficult global economy, the small range of economic tolerance for golf communities, resorts and projects has shrunk to the point that only carefully planned and extremely well-capitalized projects in highly attractive locales will be successful.”

4. DUMB MONEY DRYING UP. Seated at tables where deal-making is being done, one understands that new capital is evaluating golf-related opportunities for land acquisition, new concept and product introductions and property development or re-development. Meanwhile, many uninitiated observers believe there is no investment money available to golf. The truth is that there is little or no dumb money looking at golf-oriented investments. New capital sources have emerged, and they are highly skeptical and extremely discerning.

5. GROWING THE GAME? Maybe. Golf and golfers have long talked a better game than they played. The allied associations and interests within golf segments have talked endlessly about the need to grow the game; every group has its own version of what should be done to increase participation. Golf 2.0, the PGA of America grow-the-game initiative, may just be an answer that works. The program has been carefully studied and is being properly measured for actionable tactics. The program drives accountability down to the point of attack, which includes everyone who plays, promotes and uses the game of golf. PGA of America CEO Joe Steranka has brought to bear great resources of funding, organizational energy and engagement. Others will follow. Engaging non-golfers to play and encouraging existing golfers to play more remains a top priority for us all. **GCI**

BUGG'N

Sure-fire ways to stomp out nematodes, mole crickets and other subsurface critters attacking your course's turf. By David McPherson



Get the “BugDoc” – David Shetlar – talking about billbugs and you’re apt to learn more in 15 minutes of conversation regarding these nasty critters that feed on turf than this scribe ever imagined he would know.

The professor of urban landscape entomology at Ohio State University knows his bugs; he offers a wealth of information on billbugs for skeptical superintendents who may not realize the fortitude and determination of these subsurface turf critters.

“The key to battling billbugs is to first understand their biology,” Shetlar says. “The cool season ones can not overwinter except in the adult stage, so every year they start over again. In the spring, the successfully overwintered adults become active and the females chew a bit on the grass blades and stems to lay eggs. Then, usually about the time the seed head stems start to form, she will pick those stems. It’s well known that the female billbug picks the stem that has the largest diameter.

“She then chews a little hole in the stem and sticks what look like little jelly beans – little white eggs – into

Billbugs feed primarily on fairways and roughs, but are commonly missed in collars of greens and bunker surrounds.

OUT



Mole crickets and white grubs attack quality turf, but go after wet conditions, which are best for egg-laying and survival.

that hole; one week to 10 days later that egg hatches out billbug larvae, which burrows up and down the stem until it reaches the crown. The crown is big enough to hold it until it grows bigger and then it drops out and feeds on nearby crowns.”

Shetlar says here's where the real problems start for superintendents trying to battle these pests. The billbugs reach the crown usually in the first or second weekend in June — right at the same time when normally a Kentucky bluegrass plant or perennial ryegrass plant have made new tillers and superintendents have cut off the head of the seed stem. Here's where the professor proceeds to give me a little turf “sex ed.”

“I irritate the agronomists a lot with this,”

he says. “Because the grass plant says ‘I’m going to have sex,’ you cut the seed heads off, so the plant says, ‘I guess you don’t want me to reproduce sexually, so I’ll reproduce asexually,’ which stimulates more tillering. I call them mother plants and daughter plants. By early- to mid June, the daughter plants are just establishing roots, so they can stand on their own. This billbug then comes in and kills the crown. And, if the daughter plant of the new tillers have not established well enough, you can get Kentucky bluegrass that is three inches in diameter that collapses and dies from all the bugs.”

Billbugs primarily feed on the fairways and the rough. But, Shetlar says one place most people completely miss is the collars

of greens — especially sand-based greens where a superintendent is not watching his irrigation close enough or there are water restrictions.

“All of a sudden the collars of the greens collapse because the superintendent did not realize that these billbug larvae had been chomping away at the turf,” he says.

That said, Shetlar says the bulk of billbug damage on golf courses is on another lesser known location — bunker surrounds.

“Many of the bunker surrounds, especially in the north, don’t get irrigation,” he explains. “I’ve had more and more superintendents that are absolutely amazed when I tell them they had billbugs around their bunkers. First, I ask them whether they



Having a detailed list of the species found on your course makes it easier to use the correct controls.

ever get grubs in those areas and they say no because that area is too dry. So, I reply, 'just humor me and apply your grub insecticide in late May or June when you normally do and put it on those bunker slopes and I'll talk to you later in the season.' When I talk to them in August and ask how their bunker slopes came out they all say their bunker slopes are the greenest and thickest they've ever had."

Rick Brandenburg, distinguished professor and co-director of the Center for Turfgrass Environmental Research and Education in the department of entomology at North Carolina State University, says white grubs and mole crickets attack finely manicured turf, but what they really thrive on are wet conditions.

"They enjoy high quality turf to feed on, but irrigation is also a key," he says. "Good soil moisture is critical to laying eggs and egg survival, as well as to the survival of the newly hatched insect, so irrigation on golf courses makes a great environment for these pests to enjoy."

Superintendents can't stop watering their

course, so one wonders what some of the ways are that they can help prevent these insects from causing damage to the turf, even before it happens?

Just like his fellow academic Shetlar, Brandenburg says the key is to have a good database of the species you have as well as knowing their lifecycle.

"These pests are under the ground being very subtle when they first hatch and that's the best time to control them, but this can vary a lot with the species and location," he explains. "There can be significant variation from one species to the other due to location. You must have localized information to use products effectively and get the maximum results and the lowest rates."

Recent research that Brandenburg and his colleagues have done on today's new products has shown that they are a little more sensitive to proper timing relative to the insect pests' life stage.

"That said, monitoring pests, especially the adults prior to egg laying, allows a superintendent to get great results," he adds. "Rainfall patterns can also influence timing. Drier weather usually delays egg laying and egg hatch, while wet weather may speed things along."

In the end, it's all about having a localized database for your pest species and knowing what is taking place under the soil. "Monitoring rainfall and temperature and egg hatch allow the superintendent to stay a step ahead of the pest and allows them to be as cost effective as possible."

Darin Bevard, senior agronomist for the USGA, mid-Atlantic region, says they don't really have a big problem with nematodes in their region. "They seem to cause problems when the grass is cut low or double cut," he explains. "This is not to say that there are not instances where nematodes are not a primary cause of decline. However, it is less common here compared to the southeast and Florida."

Bevard says with the long residual control products available now, white grub control is also less and less of an issue. One insect the agronomist says the golf industry needs to keep an eye out for is the annual bluegrass weevil.

"These little critters have been a problem for a long time, and, as their name suggests, *Poa annua* is their favored host," Bevard explains. "However, we have seen clear cases in recent years where they have used creeping bentgrass as a host and caused significant damage when *Poa annua* is not available.

"Monitoring rainfall and temperature and egg hatch allow the superintendent to stay a step ahead of the pest and allows them to be as cost effective as possible."

— Rick Brandenburg

When the damage has occurred on bentgrass, the first generation has pretty much avoided detection.

"When the potential damage period of the first generation occurs, the creeping bentgrass is healthy enough (late May into mid-June) to mask any damage that occurs, but populations increase dramatically between the first and second generations," he adds. "The damage period for the second generation is during the July/August heat depending on the location; the grass is already under stress and so the weevils cause significant damage."

The good news is that when it comes to the annual bluegrass weevil, there has been some research conducted recently by Pat Vittum of the University of Massachusetts and Dan

Peck of Cornell University on trapping methods to determine insect numbers and also to help determine spring migration timing — both of which help to target insecticide applications and timing.

Often, if these methods are used, targeted insecticide applications on the periphery of fairways and collars can be made which will prevent insect damage as well as minimize the amount of pest control product a superintendent needs to apply. **GCI**

David McPherson is a Toronto-based freelance writer and a frequent GCI contributor.

For more info...

Visit <http://bugs.osu.edu/~bugdoc/> to read more of Shetlar's latest research on billbugs and other turf diseases.



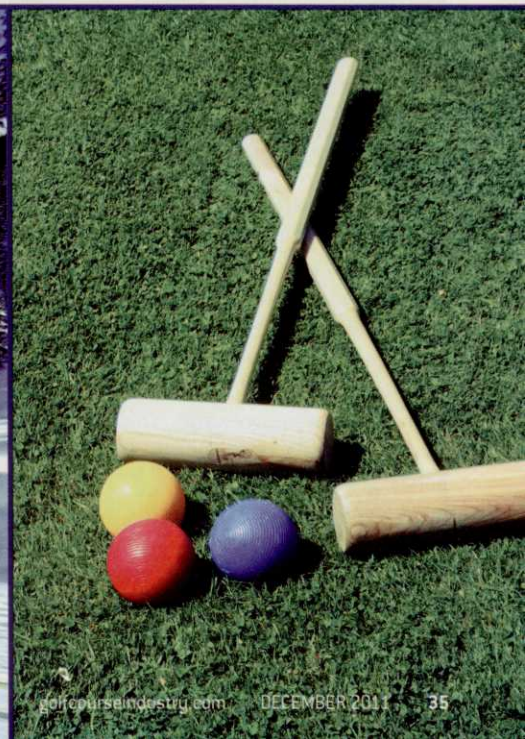
Beyond the turf

Don't want to go the way of the dinosaurs? Superintendents explain the diverse skill sets key to career longevity. By David McPherson

Skeet shooting. Cross-country skiing. Tennis. Croquet. Ice rinks. Pools and spas.

The list is endless, as if today's superintendents don't have enough to manage just trying to outwit Mother Nature and keep the turf green. The days of turfheads mowing grass 12 hours a day are long gone — especially in today's economic climate.

With budget cuts and reduced staff, superintendents are asked to manage more and more things outside their normal realm of expertise. Some surveyed estimate they now spend as





TOP: Green keepers expand their job skills to include the construction and maintenance of nature trails. LEFT: Anthony Williams, CGCS Director of Grounds at the Stone Mountain Golf Club by Marriott (left) shows off a pair of awards that were generated through the expansion of his duties as golf course superintendent.



much as 10 percent of their labor budget on non-golf items. As one seasoned super reasons, it's best to be a jack of all trades, and master of some, than a turf boss that is expendable. According to Anthony Williams, it's become common for superintendents to develop many sub-disciplines and take on managing the budget and labor for areas that traditionally was not a hat worn by the superintendent.

"A lot of guys have become progressive and understood that the more valuable you are the more safe and secure their job is," says Williams, CGCS and director of grounds at Stone Mountain Golf Club by Marriott in Stone

Mountain, Ga. "On the other side, you've got the guy who says, 'Don't they realize that turf is all about tees, fairways and greens and I don't care?' Well, most of those guys are dinosaurs that are becoming extinct."

A certified golf course superintendent since 1998, Williams became a certified arborist in 2008 to expand his skills and help stave off his "extinction." In his current role at Stone Mountain, this added expertise has come in handy since the golf course is located inside a state park where trees are sacred and native forest takes up more acreage than the manicured turf.

"Superintendents can wear a lot of hats, but it's sometimes difficult because we often get stereotyped to have a certain skill set," says Williams. "In these times we need to grow those skill sets, but sometimes you have to be willing to say, 'I am about as thin as I can get.' Five years ago I became a certified arborist, so I could perform all the arborist duties for the

park. This has been huge because it opened up new doors.

"My background is in agriculture and forestry, which helped, but there are not many turf guys who are also a tree guy," he adds. "I've been able to have a major influence on tree policies here at the park. It also gave me a different, deeper understanding of that discipline."

For other superintendents who subscribe to Williams' point of view and prefer not to go the way of the dodo bird: How can they expand their skills and prove their value, while making sure the golf operations don't suffer? And, how do they fit these non-golf duties into their shrinking capital and labor budgets? It's a balancing act, says Williams. But, like any other tough decision superintendents must make, one must weigh the positives and negatives and do a cost analysis to see whether it makes more sense to keep certain projects in-house or outsource them.

"Sometimes things are outside your area of expertise," says Bruce Williams, principal, Bruce Williams Golf Consulting, Manhattan Beach, Calif. "For example, if you only lay lines down on the tennis courts once per year, maybe someone can do it better and cheaper. You need to do a cost analysis. Like all business plans, you have to analyze how it fits in for your particular situation and what advantages there are for outsourcing versus keeping it in house. You still have to manage the duties whether you outsource them or not."

Williams recalls one of his early jobs as an assistant where his boss estimated only 20 percent of his time was spent on managing golf and turf operations; the balance was spent managing curling, skeet shooting, clubhouse maintenance, water plant, clay tennis courts, clubhouse grounds and even vegetable gardens.

Skeet shooting was one pastime Bob Maibusch knew very little about before taking the job at Hinsdale Golf Club in the small village of Clarendon Hills, Ill.. While he does not shoot skeet, his crew is responsible for setting up and taking down the club's skeet-shooting range, which goes over their ninth green. It's a lot of labor for a short season (November to February, Saturdays only from 11 a.m. to 3 p.m. due to local bylaws). It's certainly not a labor of love, but it's a job Maibusch accepts as part of his overall role.

It's not a difficult job – Maibusch equates putting it together like "Tinker Toys" – but it is labor intensive. "In late October, it takes four or five days for six people to set it all up," he explains. "Then, come early March, it takes a full week for eight people to clean it up and remove the fields. It's a substantial hit on our payroll and it's a complete mess to clean up in the spring."

Because of this added budget line, Maibusch breaks out this cost for presentations to his board of directors or other committees, so everyone understands that while other clubs may be doing more with less, they don't have this added expense.

"I probably spend about 6-8 percent of my labor budget on non-golf items," he says. "That's why, when general club surveys are done by the Chicago Golf Association, for example, and they are distributed to our board of directors, I can remind them why our expenses are higher. It's a constant educating process."

Maibusch also has some obligations to remove snow from the heated platform tennis courts during the winter months, which is an-

other hit to his budget. In the past, his department maintained six clay tennis courts, but fortunately, he says, 10 years ago the grounds department divorced themselves from that responsibility, as they had to resurface them every year in the spring, which is the busiest time to get the golf course open.

Last year, Hinsdale Golf Club built a new platform tennis facility and warming house, more like a clubhouse, with an indoor and outdoor fireplace. Once again, Maibusch and his crew were part of this project. "We did all the site work ... the grading and the drainage," he explains. "The project probably cost half a million and we knocked that price down by a couple hundred thousand through the work we did."

If that was not enough, they installed an elevator in the clubhouse. With a limited work space, it took his crew three weeks to haul dirt out; they hand-dug the hole using five-gallon buckets. "It becomes a juggling act when you are doing things during the golf season," he says. "You have to explain to people why some of the detail work didn't get done on the golf course because you are saving them quite a bit of money somewhere else. At the end of the day though, it justifies us having extra staff and it saves the club money. Like most everybody else, if something needs to be done they usually come to us first. It keeps things interesting."

For Williams, taking on other duties as assigned outside the normal scope of a superintendent's work is rewarding. It allows the environmentalist to integrate some of the programs he's implemented on the golf course to other areas of Marriott's operations.

"The term I always use is environomics," he says. "We are blending our environmental

programs directly into the business plan. It's having a huge impact and adding value to the bottom line. It would be easier for them to dismiss our contributions if golf was our only contribution.

"Sometimes guys might say, 'I've got more than I can handle on the golf course.' I ask, is this really true or is it how you see it? I could spend every second on the golf course and my job will never be done. But, if I don't get progressive enough five years from now how are they going to evaluate whether I'm valuable as an asset or not an asset any longer?"

Now the seasoned veteran, who has lived through the ups and downs of the economy, Williams passes on this advice to his crew and to fellow superintendents.

"I encourage my guys and teach them to have that jack of all trades, master of some skill set," he says. "Most say, you are a master of none, but that's not what we are doing. What we are saying is we want to have the highest credentials in the key areas, but we want this other subset of skills... handle minor electricity, basic carpentry and plumbing. This allows you to add value to the organization and when you demonstrate a lot of different ways you add value then that speaks volumes when they start downsizing or restructuring. At its peak, when golf was booming, you could subcontract a lot of different things and it made sense, but now everything is scrutinized. You can't just say because we've always done it a certain way that that's OK." **GCI**

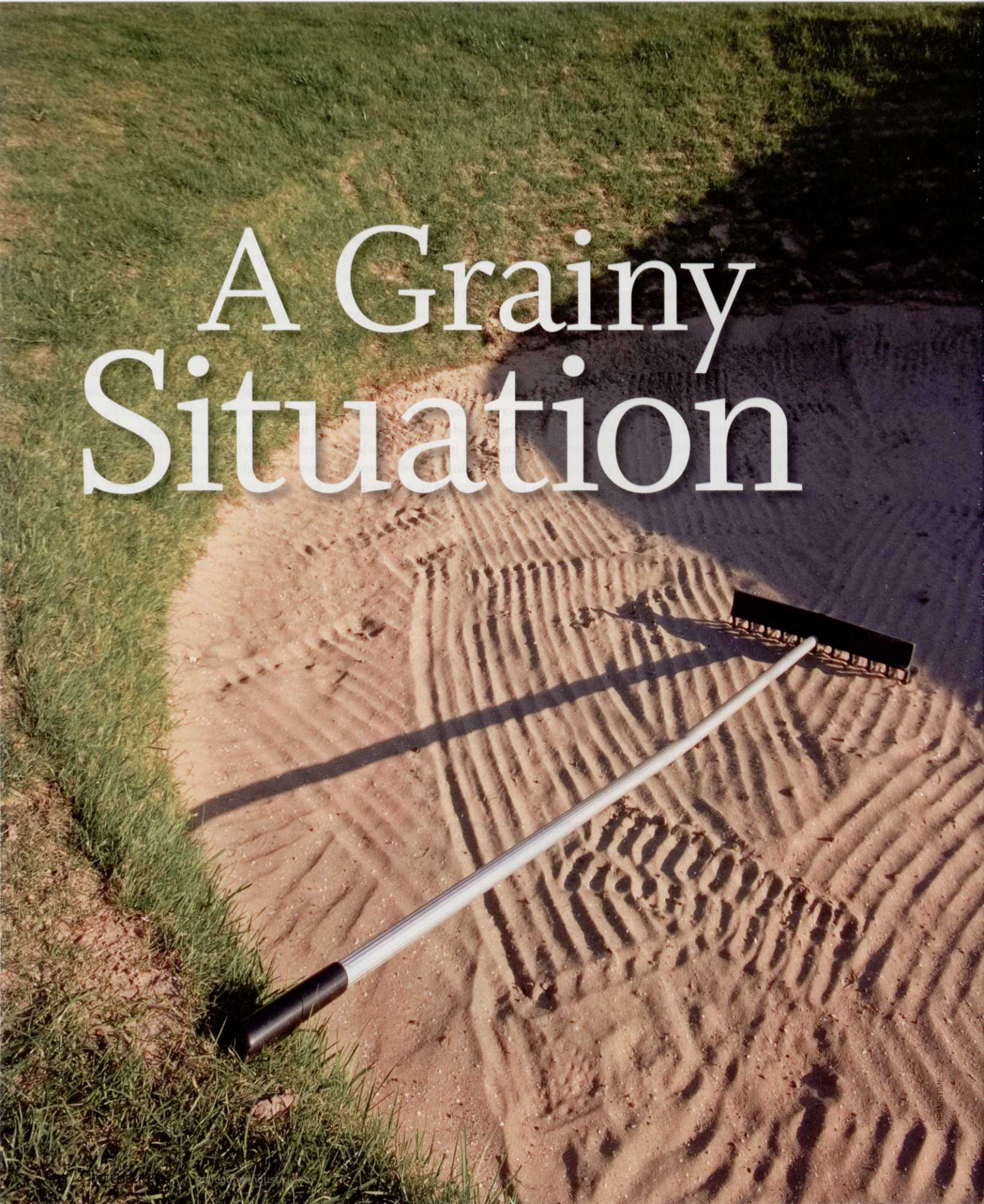
David McPherson is a Toronto-based freelance writer.



The skeet range that Bob Maibusch, CGCS, Hinsdale Golf Club, set up/take down and clean up. It shoots over the facilities 9th and 18th greens so all the bunkers need to be covered on those holes.



A Grainy Situation



by Jason Stahl

Selecting sand for your bunkers is a highly subjective and difficult process, but there are some guidelines to help... if you want them.

So you've been pondering what kind of sand you should use in the bunkers on your course.

Well, you could visit the USGA's Greens Section (www.usga.org) where there are literally hundreds of articles on bunkers. But even if you ignored all that advice, including the seven factors you should consider before deciding on your sand (particle size, particle shape and penetrometer value, crusting potential, chemical reaction and hardness, infiltration rate, color and overall playing quality), you wouldn't offend Jim Moore.

"The reason is because there is absolutely no decision made on a golf course that is more subjective than selecting sand for bunkers," says director of the USGA Green Section's Construction Education Program, "All golfers are absolutely crazy when it comes to bunkers. What one guy likes, the next guy hates. It's the most difficult issue our staff deals with when it comes to getting golfers what they want. And as a result, it's the most difficult issue superintendents deal with, too. It's like art: what you think looks good, I think looks like someone scribbled a crayon. That's the issue."

The other reason Moore doesn't mind if superintendents don't follow

all his tips on choosing bunker sand is because, unlike green construction, it's not as big a deal if they don't follow them to a tee.

"If you look at the specifications, they're very wide, and that's on purpose," he says. "A lot of people will read an article like that and say, 'Well, if it doesn't fall within what the USGA says, we can't use it.' That's not the case when it comes to bunker sand. People use sand well outside those guidelines all the time and love it. Then there are people who follow those guidelines that then absolutely hate the end product."

The easiest way for superintendents to avoid all this subjectivity is to simply

says. "Maybe I'm biased because I'm a decent player and it's an advantage for me. But I think one of the most boring things on TV now is bunker shots because, on the courses the pros play, all bunkers are 100 percent uniform and manicured."

The only way to achieve such consistency and help golfers avoid the dreaded "fried egg" lie, Moore says, is through an inordinate amount of labor and spending a fortune on sand. Over the last six to eight years, Moore says the most popular sand choice has been manufactured sand, or sand that's run through a mechanical crusher to make it less rounded and more angular so it locks

"...it's the most difficult issue superintendents deal with, too. It's like art – what you think looks good, I think looks like someone scribbled a crayon."

— Jim Moore, USGA Green Section

select the sand that the course owner and/or membership desires, which Moore says is usually what happens.

But there is a disturbing trend going on, he says: the militant pursuit of consistency in bunkers, which he feels defeats the purpose of having these penalizing hazards.

"Every hazard is different on the course I play, and that's okay because they're supposed to be a hazard," he

together. Problem is, sometimes that kind of sand is not available through a local supplier, so superintendents are forced to seek it out-of-state. Not only is the manufactured sand double the cost of regular sand due to the energy it takes to crush it, trucking it in from out-of-state tacks on more cost. In the end, it costs five times more. Granted, manufactured sand has become more readily available throughout the country

COURSE CONDITIONS

due to its popularity, but it still can be looked at as cost-prohibitive.

"It's not uncommon at all for me to see courses spending more money per ton for sand in bunkers than they do for greens," says Moore. "That's just as crazy as it is to spend more on maintaining bunkers than maintaining greens."

This aside, superintendents still have to pick the sand they feel is right for their courses. Moore says the first step would be to make sure it falls within the limited guidelines the USGA has. Once they find two to three potential types, then it becomes a matter of getting member feedback. He advises that they create test bunkers for each type of sand they feel meets their physical and agronomic needs and have members vote on which they like best. But there is still potential for dispute.

"If one-third of your membership likes Sand A, one-third likes Sand B, and one-third

likes Sand C, and you pick Sand B, you still upset two-thirds of your membership," he says.

Did you hear that word, "agronomic?" Yes, there is an agronomic discussion here when it comes to sand selection. As superintendents know, a lot of bunker sand ends up getting thrown onto a green. If it drains more slowly than the sand in the greens, then it can seal off the top of the green and cause drainage problems.

"If the owner tells the superintendent that that's the type of sand he or she wants, then I would make an extra pass or two with my aerator on that portion of the green and pull as much of that sand out as I could, then backfill the holes with sand that drains better," says Moore.

Playability seems to be the main concern for most superintendents when it comes to choosing bunker sand.

"Price is always a consideration, but playability always wins out at the end of the day,"

says Pat Gradoville, director of golf course and grounds at Palos Verdes Golf Club in Palos Verdes Estates, Calif. "The sand reacts differently with each season. We rely on irrigation for most of the year, but we use much less water from November through April. During those months, the sand tends to play much drier, and member comments are much more positive. But during the summer when irrigation runs almost every night, we hear the sand is always wet and difficult to play from."

The issue with moisture levels in bunkers, Moore says, ties into maintaining them with the goal of avoiding the fried egg lie.

"In order to get a one-inch layer of sand on a face that might have a 45-degree angle, somebody has to fill the sand there and pack it down pretty much on a daily basis. But then on the bottom, you want the sand to be deeper," says Moore. "Irrigation systems are designed to apply water evenly to turfgrass, not bunkers, and one inch of sand holds a lot

5 tips for sand selection

- Select sand that the course owner and/or membership desire.
- Create test bunkers and have members vote on their favorite variety.
- Consider the impact on playability throughout the year.
- Consult USGA sand recommendations.
- Don't forget particle size, particle shape and penetrometer value, crusting potential, chemical reaction and hardness, infiltration rate, color and overall playing quality.



less water than six inches ... but it holds it much closer to the surface. Therefore, you will have varying moisture levels in bunkers.”

Gary Myers, manager of golf course maintenance operations at Walt Disney World Resort in Orlando, Fla., echoed Gradoville's comments that pricing is a consideration but playability is king.

“Playability is the main component, and a supply that isn't going away,” Myers says.

Myers says his choice of sand is guided by neither the ownership nor membership but rather the USGA recommendations. When he started working at his multi-course facility, different courses were using different sands. Two of the courses had changed from the original sand, but after some testing, he concluded that the original sand was the best product, so those two courses reverted back to the original sand.

In Gradoville's case, the membership was the primary driver of the sand decision. Several clubs in his area had had good success with sand that was 50 percent crushed marble and 50 percent desert tan.

“The sand plays well, and we tried it in a few bunkers. Our members liked the way it played, so we installed it in all 75 of our bunkers,” he says.

Gradoville often hears from members that “the sand across town is better than ours,” and Moore says that's not uncommon. In fact, it's evidence that you just can't please everyone.

“You're the owner and you play somewhere else and you like their sand and you come back and say, 'I want their sand.' The end user golfer bases their decision not on technical data but on the sand they played somewhere else,” says Moore. “But when sand goes into a bunker, it evolves. It will play differently that day than it will a month later or six months later or two to three years later. It gets contaminated with stuff from the air, mixes with the underlying soil, etc. So it's almost impossible to buy exactly the same sand someone else has unless you buy it a few months after they did.”

Still, Gradoville lends a respectful ear to members and tries to adjust his maintenance based on their comments.

“Many times, it's just a matter of moving sand or adding new sand to high-play areas,” he says. “The bottom line is that we normally hear that the sand across town is better than ours, and when the members of those other courses across town play our course, they like our sand better than their own.” **GCI**

CONSIDERING SAND COST

By Bob Lohmann



To flash or not to flash, that is the question. Whether 'tis aesthetically pleasing enough to show golfers some sand, when every superintendent knows that it'll mean more work, especially after a rain event.

More and more, we're seeing superintendents address this question not exclusively via bunker design, or even bunker-lining products like Klingstone or Sportcrete, but with the sand itself. Spending money on sand with enough angularity to hold its shape, to hold its place better on the bunker face, even after a downpour, is ultimately a time-and-money-saver, especially if you've made the aesthetic decision to flash golfers a bit of sand.

We just redid the bunkers at Indian Creek Golf Club in Elkhorn, Neb., where superintendent Jim Nedrow and his owners spent top dollar on some high-angularity sand from Arkansas. This stuff is quite white, though color was a secondary consideration; they wanted to mitigate clean-up after rains. Well, Jim and his team couldn't be happier with the results. He reports no clean-up at all after big rains, whereas pushing the old sand (a less-angular local sand) back up would have taken them a couple days each time.

Chalk up some of that to the Sandtrapper lining, but Jim feels the sand upgrade has also had a huge impact. He hasn't run the numbers yet to see if the cost of the sand will ultimately be paid for by the savings in sand-pushing labor. The new bunker style requires more handwork on the banks, after all, and one must factor in the cost of the liners and transport from Arkansas. But it's been a huge time-saver, and here's an interesting addendum: Jim used to send two guys out, one on a machine and one with a rake, as part of their regular bunker-raking rounds. Now he sends two guys out with rakes only and

it takes them less time. They only rake the top half-inch, to keep the sand firm.

And there is an aesthetic payoff: the new bunkers are great-looking and Jim feels the white sand really does set Indian Creek apart from the competition in Greater Omaha.

Different situation at Mt. Hawley Country Club in Peoria, Illinois, where we renovated the bunkers about 7 years ago. We made a conscious decision to flash the sand up, so that golfers could see the bunkers on their approach and tee shots. At the time, the USGA had recommended a variety of sand where the angularity better held itself in place. But Mt. Hawley was not in the position to foot that bill, according to superintendent Pete Clarno, CGCS.

“We actually placed four different types of sand in a test bunker, so that members could give us their feedback,” Pete recalls. “Ultimately, the board went with the more economical sand and it's been okay. It's increased our bunker-repair time after rains. Part of me thinks, if we did it again, it would be more economical to roll down the faces on the bunkers and then use the cheaper sand.”

I'm not in the habit of quoting people as they paraphrase my own thoughts, but I'll make an exception for Pete: “It's like you've always said, Bob — whatever new sand you put in there, the members seem to hate it. When the silt builds up and the new sand firms up, they love it! Then, over time you get too much silt, they don't drain properly, the bunkers get mucky and they hate it again.”

Ain't that the truth.

Bob Lohmann, ASGCA, is founder, president and principal architect of Lohmann Golf Designs and a regular columnist and contributor to GCI.



Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

SMART CONTROLLERS

Smart controllers automatically adjust irrigation system schedules based on weather factors or soil moisture levels. These smart controllers are all the rage in landscape irrigation, but if you think about it, smart controllers have been available for golf course irrigation systems for decades.

Let's look at the weather-based controllers first. Weather-based controllers in golf course irrigation systems are nothing new. Ever since weather stations have been available, they have aided in the operation of golf irrigation systems. Initially, they just provided you with an evapotranspiration rate (ET) that would then be manually entered into the control software and the runtimes automatically adjusted based on the ET rate or you just used it to help you determine runtimes. As golf course irrigation central control systems have matured and technology advanced, stations have become more accurate and reliable, and some superintendents let the computer automatically set runtime based on the ET readings from the weather station. Additionally, it seems each year the central software is updated or the latest and greatest new golf irrigation control system is released which allows you to utilize more than just ET inputs, but also temperature, humidity and wind.

Soil moisture sensors have been around for more than half a century, but they have been accepted in the golf market only recently. With new sensor technologies soil moisture sensors have entered the market quickly and aggressively. Like weather stations, at first the soil moisture sensors were independent of the central control system

and had their own software program, much like pump station monitoring used to be. But again, technology has advanced and central control software has updated so soil moisture sensors – if the right ones are purchased – are able to fully interact with the central control system and automatically adjust the run times of the specific sprinklers they are assigned to control.

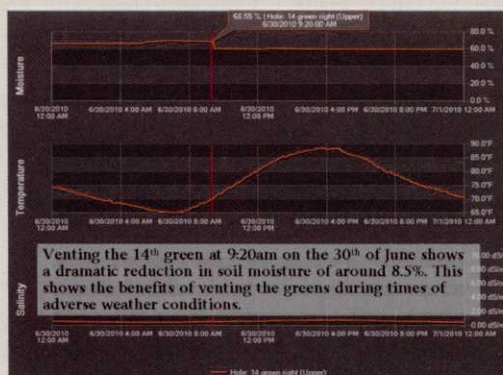
As familiar with weather-based or soil-based systems as you may be – or as good as both of these smart-type systems are – they are different. Whereas the weather-based system will water to a certain ET if irrigation is needed, the soil-moisture-based system can be programmed for both a high and low setting (see figures). This means there is no irrigation if the soil moisture is above a certain

“The central computer cannot get fired, but you can.”

level and will only water to a certain point if the soil moisture indicates irrigation is needed. As a result, the soil-moisture system can maintain soil moisture within a specific range.

However, this technology and control does not come without a cost. Weather stations have become mostly standard on an irrigation system and there may be more than one weather station. Their one-time costs are not significant, but they do need to be maintained to be accurate. Because they are new, interactive soil-moisture sensors are at this point pretty expensive. The big decision is how many to install. To do all 18 greens, tees and fairways – or even just 18 of each – is cost-prohibitive. As a result, it is difficult to have a fully interactive system. You can move the sensors around, but then they will not be interactive.

It is important to understand this technology completely and what it is doing if you are going to rely on it. The central computer cannot get fired, but you can. I have always been a believer that the weather station should never be allowed to set runtimes without oversight, but with soil moisture sensors I am not so sure. Once you have determined the optimum soil moisture range, why not let the system automatically keep the moisture within that range. It's certainly something to think about. **GCI**



A soil-moisture-based system can be programmed for both high and low evapotranspiration settings.

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RAIN BIRD



Using the same brand of power equipment can end up saving money by reusing parts from old machines to extend the life of a newer one.

MAKING THE GRADE

There are more factors than cost when deciding between commercial- or consumer-grade handheld equipment.

by Andy Klein

Commercial-grade or consumer-grade?

This is the most basic choice when deciding to purchase handheld power equipment for golf course maintenance. As every maintenance property is different, it is important to first evaluate which type of equipment will better fit your operation to determine the best buy.

At Kansas City Country Club, spending the extra money upfront to buy commercial-grade power equipment is the best choice since we are a park-style golf course that has approximately 2,500 trees on the property. As a result, a large amount of time is spent on leaf clean up, trimming and maintenance of our tree inventory. Having a reliable and durable fleet of handheld power equipment is vital to completing the day-to-day maintenance at our club.

Our fleet of power equipment consists of approximately 10 backpack blowers, 10 string trimmers and seven chainsaws. We try to stay consistent with the same brand. Generally speaking, we try to get three to five years of use out of each piece of equipment and replacement is determined by when the repair cost exceeds 40 percent of the equipment cost.

A big key is to have a fixed budget line to replace equipment to ensure reliability of the fleet of power equipment.

A qualified mechanic on staff at your course is essential when dealing with the preventative maintenance that is involved with keeping commercial grade power equipment working as long as possible. Our mechanic has been in the mechanics industry for more than 30 years; he prefers commercial grade equipment because in general, it just lasts longer than residential-grade equipment. Commercial-grade equipment is built specifically for everyday use where residential is designed for use one to two times per week.

Another plus with commercial equipment is that it often has more serviceable parts and replacement parts can usually be easily obtained through local licensed service dealers. These dealers generally require certified mechanics be on staff to help out with any issues with the brands they carry. Residential grade equipment is often constructed with a lot of molded parts and can be much harder if not impossible to service.

Preventative maintenance for a mechanic is also easier when dealing with commercial grade equipment. The main repairs are usu-



ally in two groups, mechanical and operator use. The mechanical portion includes filters, spark plugs and other expendables that will usually last a season with an occasional light cleaning. Blades, bars and chains need to be checked periodically depending on use and replaced when necessary. The second group of maintenance is dependent on the operator. It becomes a struggle to keep equipment running properly if you have an operator who is abusive to and who does not take proper care of the equipment. Examples include a broken throttle cable or deteriorated fuel line, this type of breakdown happens maybe a couple times a year on a 1- to 2-year-old piece of equipment. Costs can be minimized by performing quick inspections during the busy season and more detailed inspections in the off season which will give you a more intense look into your equipment.

When the equipment is no longer economical to use we try and reclaim parts that can be used on our other pieces of equipment. If this cannot be done then the item is recycled or discarded. When your fleet is of the same brand it can be of benefit to save some used parts off of an old machine and also gives the facility the ability to use up parts inventory on the remaining equipment that is still in use. This is another way to keep expenses to a minimum on your inventory. **GCI**

Andy J. Klein is assistant superintendent at Kansas City Country Club in Mission Hills, Kan., and is a frequent GCI contributor.

Commercial-grade equipment is built to be used daily, while residential equipment is designed to be used a few times a week.

Keys to handheld equipment

Evaluate what equipment best fits the requirements of your course.

Will a qualified mechanic be on hand to maintain the equipment? Are parts readily available? If no to either of these questions, then perhaps a one-season, "disposable" unit is more appropriate.

Replace a unit when the repair cost exceeds 40 percent of the equipment cost.

Before disposing a worn out unit, evaluate any parts that can be recycled for future use.



by Brian DeVries

Tracking tools

Assistant superintendent Brian DeVries shares a sure-fire way to account for who has done what with which tools.

We've all experienced the end-of-year inventory of our hand tools and asked ourselves the question "Where did they go?" A season in this industry almost seems insurmountable from the perspective of an oft-used hand tool. To help ease the pain and take out some of the perplexity involved with the end of the year order, I am thankful to have been exposed to a hand tool check-out system. When I was an assistant at TPC Summerlin in Las Vegas, one of my responsibilities was to ensure the upkeep and inventory of our hand tools through a simple check-out routine. I know many golf courses around the country use a similar practice for hand tools and other equipment around their facilities, but I want to account my experiences with this type of approach and highlight the benefits of its use.

How does it work?

First, you need to locate an area in your shop where hand tools are easily accessible and hold known locations, i.e. hand saws go on this rack, hammers go on that rack.

Make sure the locations of where tools go are also clearly labeled, maybe even add Spanish to these labels for any Hispanic workers on staff. We even used pictures for some of our larger tools. Next, devise a list of employees and assign them a number. These numbers correlate to tabs with that same number on it that the employee will use when he checks out a hand tool. For larger items like a shovel, rake, or chainsaw, have a check-out sheet, where the employee can sign out and sign in



DeVries

a particular tool. Now the hard part: ensuring that everyone is playing by the rules. When you send the crew out in the morning, make sure you or a key member of the staff is around to see that tabs are used to replace the hand tools, and check out sheets are being used for larger tools. Bottom line, make sure the crew understands the importance of the system, why you use it.

What are the benefits you ask? Well, it's a great way to track the use of hand tools. If the hammer is missing, but the number 13 tag is hanging in its place, we know who to has it. Additionally, if the chainsaw comes back and it's dirty, we can use the check out sheet as a log to look back at the users. Also, it could help keep inventory at satisfactory levels. When the crew knows where a tool came from and where it goes, it is much easier to maintain inventory and keep the shop organized. More importantly, the system as a whole gives the crew some sense of ownership and the need to take more care in the tools they use, for when they check out a tool, their name is attached to that tool, and it becomes their responsibility.

In my experience, I feel this type of system is fairly easy to maintain. The benefits of the numbered tabs speak for themselves and the check out sheet gives you a very useful log for some of the more expensive hand tools. I wanted to share this management tip to illustrate an effective way to help keep inventories at a suitable level. I hope other courses can see the benefits of the use of a check-out system. On a personal note, I have used this technique with great results in a practical setting. In short, it certainly has my stamp of approval, and is a method I will employ as I go forward in my career. **GCI**

Brian DeVries is assistant superintendent at Cascade Hills Country Club in Grand Rapids, Mich., and is a frequent GCI contributor.



To use a tool check-out system, start by keeping hand tools all in one place where missing tools can be noticed at a glance.

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Travels With Terry

Globetrotting consulting agronomist Terry Buchen visits many golf courses annually with his digital camera in hand. He will share helpful ideas relating to maintenance equipment from the golf course superintendents he visits – as well as a few ideas of his own – with timely photos and captions that explore the changing world of golf course management.

ALGAE EATER

A 2005 John Deere 220B walk behind greens mower groomer reel, which was mounted to an old push mower handle, is used to aggressively remove surface algae on a creeping bentgrass putting surface. The “spline end” at the snap ring groove was removed and a 5/16 x 1 1/4-inch bolt head was welded to each end of the shaft, with the threads facing outward. A John Deere Model #2776 housing was placed onto both ends of the shaft to hold the groomer reel in place. A handle from an old Sears manual push-type reel mower was in inventory. The handle was re-bent to the proper width of the groomer reel and the shaft housing was bolted to the handle. It took about 1.5 hours to put it together and all of the parts were used and were in inventory. George Heron, assistant superintendent, at The Members Club at Grande Dunes in Myrtle Beach, S.C., conceived the idea and Joe Corsetti, equipment manager, built it.



SAND LEVELER

An old bent-up landscape scraper box and a piece of 4-inch square metal tubing extending out on both ends was mounted to the bottom for this leveling device. This simple but effective idea is used to spread straight sand that is applied heavily on the Tifway 419 Bermudagrass driving range tee to fill the divots and to further level the tee on a weekly basis. The square tubing extends out about 2 feet on either side and a 45-degree angle was cut off with a torch on each end so it would not dig into the turf when making a turn. The leftover 45-degree pieces were then welded on both sides of the landscape box and to the square tubing for added structural integrity. The turnbuckle on the three-point hitch is adjusted so the square tubing leading edge is at a 5-degree angle so the sand works in better into the turf. All of the used materials were in inventory and it took about two hours labor time to modify. Robert Gamble, golf course superintendent, at the 36-hole Myrtlewood Golf Club in Myrtle Beach, S.C., conceived the idea and Scott Holman, equipment manager, modified it. **GCI**



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GOLF COURSE INDUSTRY.

The golf course superintendent immediately assessed the damage and took pictures. He sent that info out on a blog to his membership and within minutes they knew the course would be closed that day while drainage and repairs were underway. That blog had pictures and was updated during the day. The info on that blog was also uploaded to a set of talking picture frames in the pro shop and locker rooms. This eliminated the need for the superintendent to spend time communicating his message at the various points of contact. His time was better spent out on the golf course managing the processes necessary to get the course open and functional again. It also allowed the superintendent to work a normal workday and be home with his family at a "normal" time that afternoon.

Cell phones allow us to stay in touch with our office, golf course and team while off the property. Every superintendent should play golf and check out the competition. This is much easier

while golf course crews may work long days that can still be done with 40-hour workweeks for both the staff and management. A scenario that might work is that the assistant superintendent comes in at 5 a.m. and gets the staff started. The superintendent might arrive at 7 a.m. and stay until 4 p.m. while the assistant goes home a few hours earlier. Weekends with days off can be exchanged for a weekday for not only staff but management, as well.

Schedule a vacation and make it work for both your employer and family. I had only taken one summer vacation until I moved to California and then realized that with a well-trained staff I could actually get away almost any time of the year.

As a matter of fact, my employer suggested that I have scheduled days off and periodic vacations. He knew I would be much more productive that way and avoid burnout.



BE HAPPY. Take the time to take a step back and evaluate your work and your life. What brings you happiness? Periodic evaluations of how you value your time and how you are spending it may reveal a lot. Be honest with yourself.

"While random activities are great, sometimes higher priorities with work tend to take precedence."

The best summary I have is a quick story that I share in my Time Management seminar. When your career is over and done, and you are near the end of your life, what would you want your epitaph to say?

Many of us would qualify for a headstone that says "He Was One Heck of a Golf Course Superintendent That Wished He Would Have Spent More Time With His Wife and Kids." I would much rather have lived a life worthy of a tombstone that says: "He Was a Great Father and a Wonderful Husband." **GCI**

to do when you have the technology to stay in touch. The same is true when attending a baseball game or going on a family camping trip. We can actually check on the weather station at our properties and pump logs to have a greater comfort level that things went well on our days off.

DEVELOP A PLAN. Scheduling today is not the typical workweek it was decades ago. Flexible and rotating schedules are the norm,

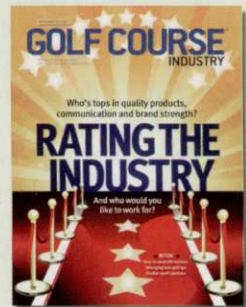
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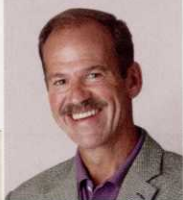
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MAYOR MCTURF

One of the many pals I bumped into at last month's Carolinas GCSA Conference & Show gave me a new – and hopefully temporary – nickname. We were chatting on the show floor and he was picking my brain about what's going on around the industry. As always, I invented some credible-sounding information out of thin air and he eagerly...and foolishly...believed every word.

He said, "Dude...you know a lot of stuff...you're like the Mayor of Turftown."

Unfortunately, he spat that little gem out in front of a bunch of folks and soon perfect strangers were approaching me and saying, "Hey, I hear you're the Mayor of Turftown."

Well...*har-dee-har-har*.

My unease at having been being elected Mayor McTurf (as one Golden-Arches-loving guy who'd had a couple of beers later called me) gradually evolved into a question in the back of my goofy little brain: What would I do if I was in charge of all of Turftown for a day?

Thus, by the power invested in me by a couple of drunks in Myrtle Beach, I hereby decree the following:

Henceforth, all turfheads shall live in peace and cooperation. For example, superintendent groups shall not throw their lawncare brethren under the bus when regulatory or legislative issues threaten to divide us. This happens all-too-often when cosmetic use restrictions, drought regulations or other proposed rules have the potential to divide us because golf can often get an exemption. I'm not saying you shouldn't work hard against onerous regulations... I'm just saying we shouldn't do so by pointing fingers at other turf professionals.

December 23 shall forevermore be known as "Official Crew Appreciation Day." This shall be the day when the facility ownership provides them with a nice little bonus, a spiral-cut ham or some other token of appreciation in recognition of the other 364 days they work their butts off for \$11.50 an hour. This would be a good day to distribute the dollars raised during your "Greenkeeper's Revenge" tournament or other club-wide staff appreciation fundraiser. Residents of Turftown need to take better care of the folks who work for them.

"He said, 'Dude...you know a lot of stuff... you're like the Mayor of Turftown.'"

All citizens of Turftown are required to know the economic, environmental and social benefits of turfgrass. Everyone in the city limits should be able to recite the facts about these plants we grow any place, any time, at any opportunity. It's like picking up litter and using your damned turn signal: It's everyone's job.

From this day forth, it is mandatory for residents who attend industry conferences to set aside time to visit with the trade show exhibitors. You say you don't like wasting your time by going to the trade show for a couple of hours? Don't worry, it'll go away. And with it will go lower dues, affordable education, lobbying and everything else that industry helps to subsidize by buying booth space.

Turftown municipal taxes – in the form of a nice logo golf shirt from the taxpayer's facility – shall be remitted annually to the Mayor's office. Size medium, please.

Any superintendent who is considering crossing over to "the

dark side" of industry sales must first spend a week shadowing a local sales rep. If you think it's a cushy alternative to growing grass on a golf course, you need a reality check. There are more reps selling more different products out there than ever before, price competition is fierce and it's not fun to be the new guy, no matter how well-connected and sales-oriented you think you might be. You have been warned by the Mayor.

Citizens who participate in fantasy football leagues are strictly prohibited from boring the living crap

out of everyone with details. Anyone who violates the rule by spewing endlessly about their last-minute trade for Wes Welker will be confined to the Turftown Correctional Facility for 30 days and forced to watch gymnastics and ice dancing.

All citizens are urged to support their local Turftown businesses.

Remember to buy from the companies that support our community, our chapters and our profession. They can be easily identified by looking at the ads in this magazine.

During my brief tenure as Mayor McTurf, I've tried hard to make Turftown a better place. Unfortunately, my scandal-plagued administration must come to an end due to some misunderstanding about donations to the "Mayor's Las Vegas Fund." So, with that, I resign as your leader to devote more time to my family and my real job.

Oh, you still have to pay those municipal taxes though! Even ex-mayors need new golf shirts. **GCI**

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