

# Golfdom

12.20

## *State of the Industry*

2020: The year weekdays were like weekends and weekends were like holidays

*Plus*

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## State of the Industry

2020: The year weekdays were like weekends and weekends were like holidays

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## Celebrating 10 years at Golfdom

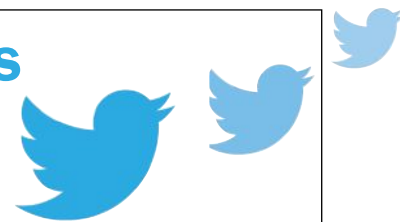
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# The 19<sup>th</sup> Hole

Jones Edition



## Seth Jones

EDITOR-IN-CHIEF // *Golfdom*, Eudora, Kan.



**What are you drinking?** Another Miller Lite, savior of my back nine.

**Can you believe this month marks 10 years you've been editor-in-chief of *Golfdom*?** The amount of gray hair on my head says 'yes!'

**How strange does it feel to be on the other side of a 19th Hole style interview?** After 107 in a row, it's a nice change. I was once interviewed 19th Hole style by the late Steve Wright, CGCS, at a Palm Beach GCSA chapter event, in front of the group. I remember struggling coming up with any good answers on the spot; I wish I could get that one back.

**Are there any issues of the magazine you wish you could get back?** Oh, yeah. There's always something that bothers me. I try to remind myself it's never perfect. Rarely does an issue feel like a victory. Mostly, it feels like the bell rang, the punching stops and you spit into a bucket. I'm sure *Golfdom* readers can relate.

**Who have been some of your favorite interviews over the years, both superintendent and otherwise?** My first interview for the 19th Hole was David Hay (Mission Hills CC, Rancho Mirage, Calif.), who has treated me like a son for 20-plus years. The first time we met, I knew we would get along when he had a 12 pack of Coors Light and an XM Radio receiver in his cart — back before Bluetooth speakers were common.

### // BEST ADVICE

**"JIMMY DEAN SAID, 'YOU GOTTA TRY YOUR LUCK AT LEAST ONCE A DAY, BECAUSE YOU COULD BE GOING AROUND LUCKY ALL DAY AND NOT EVEN KNOW IT.' I LIKE TO TEST MY LUCK BECAUSE ONE WAY OR THE OTHER, IT'LL LEAD TO A STORY."**



Celebrity wise, Samuel L. Jackson is my favorite. We had some laughs and talked Star Wars and comic books after the interview. I'm exceptionally proud that he didn't know Marvel Comics was using him as the likeness of Nick Fury until I told him. I wish I could have gotten a finder's fee on all those movies.



**How did your family celebrate Halloween this year?** We played some board games and wrapped up with a WWE wrestling match between me and the kids (Evey, 13, Boyd, 9). Boyd won,

and he has the championship belt currently, but I'll get it back.

**How do your Kansas Jayhawks look this year?** They're not projected to win the Big 12 ... but they'll win the Big 12.

**Seriously Jones, you have to be proud of some of the *Golfdom* issues over the last 10 years.** I am proud (see story, page 14)! I'm proud of the team, and I'm proud of the magazine we publish. When I took the job, I told myself I would be happy if I made it a year. To go 10 years ... I think of the many friends I've made along the way and the places I've gotten to visit, and it is a dream come true.

**Fill in the blank: The next 10 years of *Golfdom* \_\_\_\_\_?** Will age me by 20. I just hope the gray hair survives.

As interviewed by Abby Hart, Nov. 16, 2020.





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# Starter

NEWS, NOTES AND QUOTES



## //THE HIGH AND LOW OF TURF



Superintendents get a demo of the Air2G2 from inventor Glen Black (second from left) at a past *Golfdom* Summit.

## FOLEY CO. ACQUIRES ASSETS OF GT AIR INJECT

BY SARAH WEBB // Associate Editor

→ Foley Co. purchased the assets of GT Air Inject, owner of Air2G2.

Air2G2 was founded in northeast Florida by Glen Black in 2010. Air2G2 is the manufacturer of the Air2G2 336, Air2HP, Air2GO and Air2G2 436R products.

“We have a new company in Florida called Foley Air, and that’s a wholly owned subsidiary of Foley Co.,” said Paul Rauker, CEO and president. “Our philosophy moving forward is we’re focused on above the ground and below. With Air2G2 focused on a decompaction and soil porosity, if you take that with your traditional aeration approach, you’ve created a much better solution to the health of the grass.”

Foley Co. is located in Prescott,

Wis., and has designed and manufactured reel, bedknife and rotary blade sharpening equipment since 1926. The deal has been in the works for about 18 months.

“This was not a whimsical decision,” Rauker said. “It’s in line with a strategic plan that we have been executing here at Foley. As we move forward, this will not be the last one for us. We continue to look at organic growth, by us creating new products, and inorganic growth, like acquisitions that are a complement to our portfolio.”

He added, “We built a new global headquarters and moved on Oct. 26. This industry has a lot of life to it and a lot of opportunity, and in turn, this enables Foley to increase its manufacturing and engineering capabilities.”

## //HELLO FRIENDS

### JIM NANTZ TO RECEIVE 2021 OLD TOM MORRIS AWARD

Jim Nantz, a three-time Emmy winner and lead anchor of CBS’s golf coverage, has won the 2021 Old Tom Morris Award from GCSAA. The organization will present the award live on Feb. 2, 2021, during the Opening Session of the virtual 2021 Golf Industry Show.



Jim Nantz

“(The Old Tom Morris Award) is a big one,” Nantz said. “I treasure the relationship that I have with many superintendents around the country, and I value their efforts so much. They work so hard, and they don’t get the acclaim I feel they deserve. They’re so incredibly well educated and trained on all issues involving agronomy. It’s been an eye-opener for me the last 35 years.”

The award presentation and opening session will be part of the interactive events during the Feb. 2-4 virtual event, and also available to watch later as part of the extended show access.

## //MOVIN’ ON UP

### QUALI-PRO PROMOTES FULCHER TO VP

Control Solutions Inc. (CSI) promoted Allan Fulcher to VP of Turf/Quali-Pro.

Fulcher began his career at CSI as a territory manager in the lawn and garden/animal health division in 2005. He was promoted to the business director of tech in 2006, where he led the team in growing that division 700 percent in 14 years.

Fulcher will bring his 20-plus years of experience to the Turf/Quali-Pro team, leading the division to continue to grow its market share. His goal is to continue to provide the industry with the broadest portfolio by offering innovative and differentiated products to tackle the wide range of challenges faced in the market.



Allan Fulcher

## // VIRTUAL VOICES OF WISDOM

# Green Start Academy offers lessons in leadership, communication

BY ABBY HART // Senior Editor

➔ In its 15th year, the Green Start Academy (GSA) was hosted virtually by Bayer and John Deere throughout October and November. Weekly keynote speakers presented to 49 attendees of this year's class and 161 alumni attendees from past years. Attendees also had access to virtual mentoring group sessions.

Mike Hirvela, customer marketing manager for Bayer, said, "The attendees were very positive and thankful that Bayer and John Deere continued this initiative despite COVID and that we're continuing to give them development and career advancement opportunities."



Mike Hirvela

Attendees received a variety of sessions during the four weeks. Business growth expert Jeff Havens explained that there are two levels to leadership: Good leadership has to do with people skills, the things that make people feel like they are valued members of your organization. Great leadership has to do with your vision and your mission, where you get people aligned with your goals.

Alignment among crew members

was also a topic that Bellerive Country Club Assistant General Manager and Director of Agronomy Carlos Arraya, CGCS, touched on in his session. He stressed the keys to communication when leading a multicultural organization: improving communication with your team, creating an inclusive environment, clarifying your employees' responsibilities and learning by watching the people in your operation — and by watching your own tendencies.

Career coach Carol Rau advised that in a job interview, you should communicate what is different about you that would make people want to hire you, what your experience is as part of a team, how you drive success for your organization and why you want that specific job.

The virtual format is something that GSA could continue for future events.

"As assistants move up and on in organizations, it's been a challenge to connect to them after the event is over," Hirvela said. "Now that people are more accustomed to participating in virtual events, I could see broadcasting Green Start to (alumni). It's something that we could provide to alumni to take it to the next level."

## // UNDER NEW MANAGEMENT

# DAVEY GOLF TO MANAGE TURKEY CREEK G&CC

Davey Golf, a division of The Davey Tree Expert Co., has entered into a five-year contract with Turkey Creek Golf to operate and maintain the Turkey Creek G&CC in Alachua, Fla.

Davey Golf, which has decades of experience in course operations, will be responsible for the management and care of the course and will assume the operation of the clubhouse and golf shop. Renovation is nearly complete on the 18-hole course, featuring an expanded practice facility which opened in December 2019. As part of the contract, Davey will provide all necessary golf maintenance equipment including all mowers and trimmers, merchandise for the club shop and golf carts.

Turkey Creek is a private neighborhood located roughly 12 miles from downtown Gainesville, Fla. The course is currently owned by the Turkey Creek Master Owners Association.

## // NEW NAME, SAME GAME

# BILLY CASPER REBRANDS TO INDIGO GOLF PARTNERS

Billy Casper Golf has changed its name to Indigo Golf Partners, representing a new, modern brand aligned with golf's evolving landscape and the company's leadership in golf course ownership and operations.

The principles carried out by the company's nearly 7,000 passionate employees serving guests and members at more than 160 golf courses, country clubs and resorts in 29 states follow a "golf for everyone" theme. It is anchored by inclusion for all involved in owning, operating and frequenting Indigo Golf Partners-managed properties. Since its founding in 1989, Indigo Golf Partners' vision is to be the best operator in the history of golf; its mission is to create safe, fun and enjoyable experiences daily; and its responsibility is to generate healthy business returns for owners of daily-fee and private golf clubs.

Indigo Golf Partners added 21 properties to its portfolio and renewed 15 partnerships over the past 12 months. The company has also acquired and leased several courses.





“I think superintendents overall have adapted their management styles in some way or another over the years, especially as nearly all millennials are now in the workforce.”

**ALAN FITZGERALD**, *superintendent,*  
*LedgeRock GC, Mohnton, Pa.*

## The generation game

**I**n Pennsylvania, the unofficial signal that the season has ended is the Penn State Turf Conference — a fact proven, when in the middle of the dog days of summer, every superintendent in the area says, “can’t wait for Penn State” — a time when the mowing is done and the last battles of blowers versus the wind are occurring.

Except for 2020, which due to form, has managed to “cancel” the Penn State Turf Conference (at least in its traditional form). While struggling over the fact that I won’t be going to Happy Valley for education or football this fall, I reminisced over the good trips of the past and one class in particular that stood out. It was a preconference seminar on managing the different generations. To this day, it is one of the best educational events that I have participated in. Learning each generation’s mindset showed how it influenced the next, and once you understood where they were coming from, it showed how each should be managed.

The general consensus at the time was, “Millennials are

lazy and don’t want to work,” but the class taught me something different. We definitely had them all wrong, and as managers, we were generally failing them — not the other way around. I think superintendents overall have adapted their management styles in some way or another over the years, especially as nearly all millennials are now in the workforce. Now millennials are becoming the managers, so it was going to change whether we liked it or not.

This brings me to Generation Z.

I had not realized there was a new generation entering the workforce until this year. While 2020 dealt a lot of bad, I had one of the biggest turf teams I’ve ever had and one of the best, largely due to three

interns joining the team in the spring.

They all have varied backgrounds from this being their first greenkeeping job to having spent some time in various capacities at other clubs. I’m also fortunate to have two second assistant/spray tech/irrigation tech/gofers and a Matt (who doesn’t know it yet but he will be a successful superintendent). All six of them (along with the other high schoolers and college kids who worked here this summer) continually impress with their abilities, and the difference to similarly aged staff from just a few years ago is amazing.

Millennials are not lazy; it’s just that every step of a job has to be described in detail. Communication is very, very

important, so it gives the impression of them needing hand holding, even though a lot of actual work is getting done. The fact that they sat between each step of a job waiting for further instructions didn’t help that lazy narrative.

So, what about Gen Z?

While the older ones seem to have a mix of millennial and Gen Z characteristics, the younger ones show complete autonomy. It is interesting to see the transition. Overall, they are driven, extremely passionate about their work and they just get it. I quickly realized that they picked up new tasks quickly and then just got it done.

Their big test was rebuilding the turf nursery green. It started out a bit shaky as they worked out how to tackle it, but then it was done — and done well! And my proudest moment? Nursery maintenance is on autopilot. They have it mowed/rolled/top-dressed/fertilized/ whatever it needs before my assistant schedules it.

So, after all of the negativity that the new generations are going to ruin the world, I’m seeing the very opposite. If this bunch of young turfers are anything to go by, then the future looks bright.

And, if you ever get an applicant with LedgeRock and 2020 on their resumé, hire him or her; you won’t be disappointed! 📍

**Alan FitzGerald** ([alan@ledgerockgolf.com](mailto:alan@ledgerockgolf.com)) is superintendent at LedgeRock GC in Mohnton, Pa.

# The Golfdom

## F I L E S

FROM THE ARCHIVE

It's only fitting that the chaotic year of 2020 began with the coronavirus and is bookended by a contentious U.S. election. What this cultural and political moment has taught us is that whatever your personal views are, your participation in government is vital. In this article from the December 2001 issue of *Golfdom*, former columnist Joel Jackson, CGCS, advocates for superintendents to become involved in the political process and serve on local advisory boards. Some notable wins occurred in 2001: the reregistration of Nematicur (though we eventually said goodbye to that nematicide) and modifications to Florida's water supply regulation. These showed it's possible for the golf industry and regulators to come together on environmental issues — and that the work of educating legislators and the public must continue. To read the full article, visit [golfdom.com/exclusive](http://golfdom.com/exclusive).

## A good time to get political

I will always remember 2001 as the year in the young 21st century when we learned a lot about the world, our government, our fellow citizens and ourselves.

Many of us probably learned that we must be more involved in the decisions of our government if we want to live in a true democracy.

Everything we do is based on the workings of a free society, but sometimes we take that for granted. We don't participate in the process as fully or as often as we could. It's easy to get tunnel vision and focus on our immediate daily concerns and forget that we can make a difference in the big picture with a little effort and a sense of purpose.

That purpose became clear to me in 2001 as I discovered an enormous lack of knowledge about golf course operations among the ranks of legislators and regulators at all government levels. Travel budgets don't allow them to get out from their desks like they should, so the gap between reality and their perception is huge. Their understanding is formed by computer models based on assumptions and activist groups.



With just a little effort, however, superintendents can help bridge that gap with real-world facts. When I meet with government leaders, I don't hesitate to remind them that they serve all citizens — including those who use chemicals, fertilizers and water in their businesses. I also know that many government people are starved for information, and most will not shrink from the facts when they're informed with them.

In fact, grassroots input from super-

intendents changed many government people's assumptions in 2001. Case in the point: the reregistration of the nematicide Nematicur in early 2001. As superintendents told their stories to the EPA about using the chemical primarily for treating tees, greens and spot treating fairways, the EPA revised the acreage and pounds of product it had assumed were used on 150-acre golf courses. EPA's models hadn't been done with real numbers. Now, its leaders know the risk is considerably less than they imagined. They also learned that superintendents understand environmental concerns.

Another case in point: in Florida, like many states, drought-induced water shortages were in 2001 the year's biggest news, as arbitrary day-of-the-week watering restrictions handcuffed turf and landscape managers. Inaccurately labeled as "big water users," golf courses became easy political targets for restrictive measures.

To challenge these perceptions, several superintendents sought to fill that knowledge gap by serving on district water advisory boards. Their input and cooperation with water-management authorities was instrumental in changing attitudes among compliance and water supply managers. The superintendents secured modifications to the rules.

Once the crisis is over, the superintendents hope to make permanent changes to the emergency rules that will make good business and conservation sense for all.

Superintendents should always choose to be involved with the actions of their local governments, particularly when their livelihoods are at stake. Their ongoing involvement in their local governments will be required to educate new politicians and regulators who come and go. 🗣️

SPONSORED CONTENT

# QUALI-PRO



Quali-Pro Academy starts Jan 2021.

## BEHIND THE SCIENCE

# YOUR GUIDE TO SUCCESS

**The revamped Quali-Pro Academy training program helps superintendents navigate Quali-Pro's expansive portfolio**

**T**he Quali-Pro team prides themselves on their ability to take industry challenges and develop new products

to help superintendents overcome them. That's how they have built one of the largest product portfolios in the turf industry.

With so many options available, Quali-Pro wanted to find a way to improve customers' overall knowledge of the products best suited for their needs. That's when the company launched the Quali-Pro Academy.

Now in its fourth year, Quali-Pro Academy is a web-based training course that lets superintendents get a closer look at the company's various products, learning about key features, benefits, application use and much more along the way.

"This program gives superintendents a chance to know what we're about and how we go about developing products they can

potentially use to not only be more successful in managing their turf, but to do it in an economical way," says Ian Rodriguez, Ph.D., technical services manager for Quali-Pro.

The 2021 program received a refresh with a brand-new slate of videos focusing on new combination chemistries as well as some of the company's most popular offerings. Even better, the program will take less than 45 minutes to complete, making it easier to fit into busy schedules.

Whether a superintendent in the South is looking to learn more about Doxem IG against mole crickets or a director of agronomy in the Transition Zone wants to learn more about Enclave for dollar spot, Quali-Pro Academy has something for everyone.

### Making the most of downtime

For Ian Daniels, superintendent at Teugega CC in Rome, N.Y., no one is going to learn too much in the turf industry. That's why he's always seeking out new educational opportunities and resources. When he found Quali-Pro Academy, it seemed like a win-win.

"Quali-Pro Academy is at a good time of year, and you can get it done pretty quickly," says Daniels, adding that the \$50 gift card superintendents receive for the completing the course

is a nice perk.

Daniels uses several Quali-Pro products already — including Enclave, T-NEX and Tebuconazole — so he knew what he was on the lookout for. However, he thinks this isn't just for those already familiar with the brand.

"If you weren't already using Quali-Pro products, this gives you a bit of education on the products to see whether you want to try them out or not," he says.

### More than the products

At the end of the day, this program is another way Quali-Pro displays its commitment to superintendents. Quali-Pro Academy goes beyond the science of simply creating herbicides and fungicides to partnering with superintendents and getting them the tools and resources necessary to maintain high-quality turf.

"We hope this will give superintendents a better feel for our company and the way that we operate," Rodriguez says. "We help them by standing behind our products and developing new products to meet their needs."

To register for Quali-Pro Academy, visit [qualiproacademy.com](http://qualiproacademy.com). 



Ian Rodriguez



Ian Daniels



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# The icing for the EIC: Celebrating a decade at *Golfdom*

BY SETH JONES

*Golfdom* EIC  
Seth Jones  
takes a stroll  
down memory  
lane as he  
celebrates  
10 years

**H**as it really been 10 years that I've had this job? Where does the time go? OK, 2020 has been a long year. It felt like three years in itself. If I were to have charted my golf course visits over the last 20 years in the industry (I wish I would have), 2020 would definitely have seen a spike downward. But, it still feels good to look back and reflect on all the courses — and the people caring for those courses — I've visited over the last 10 years.

To celebrate my 10-year anniversary with the magazine and to wrap up this strange 2020, I thought I'd take a look back at some of my favorite covers of the magazine ... and some I wish I could get back. Oh, and the team here at *Golfdom* thought it would be fun to ask some of the regulars in my life to give some feedback on how these 10 years went, from longtime supers to my longtime bartender.

Thank you to everyone who made these 10 years on the magazine possible, especially my family at home and my family in Cleveland at North Coast Media headquarters.





### My three favorite covers

#### October 2016 — A tribute to the King

This is one of the issues I'm most proud of, even though I didn't write much of it. The sad news that Arnold Palmer had passed came only a few days before we were to go to press. We had a cover story about the long history golf has had with American presidents. In a quick pivot, Pete Seltzer, art director, found this great photo of Mr. Palmer with President Dwight Eisenhower. In another pivot, five of us — Mark Woodward, Joel Jackson, Steve Wright, Karl Danneberger, Ph.D., and myself, all wrote tributes to the King. In a small golf world moment, Joel and Steve retold their stories of when they interviewed with Mr. Palmer — for the same job! As an added bonus, having Eisenhower on the cover was a thrill.

#### October 2013 —

#### 5 keys to picking up women

I remember when this story was submitted, the working title was "Play like a girl!" The story was about how the National



Women's Golf Alliance (NWGA) wanted to help golf courses get better at attracting female golfers with these five key criteria. A spark went off, and I had a new headline. The cover turned heads, won awards and made some folks plenty mad, which is an editor's version of hitting for the cycle. I knew we were on the right track when we shared the cover with the NWGA before going to press to get their take, and the response was, "love it, can we get extra copies?"



#### November 2018 — Distance Education

In my mind, *Golfdom* is as cool and slick as any magazine you'd find on the newsstand. For this issue, we swung for the fences and reached out to Andrew DeGraff, an illustrator whose work you can find in *Sports Illustrated* and the *New York Times*. He created this illustration of a superintendent traveling in a quest for knowledge, and it just blew me away. We could feature a golf course beauty shot every month, and that would look great, but it is work like this that I believe makes us stand out.

### Three covers I'd like to get back

#### ③ June 2014

You might remember several years ago, we would do an annual three-part series on plant health. Let me tell you, writing about plant health in back-to-back-to-back issues will just about drive a person mad.



And, trying to make an interesting cover based on that three-part series? In 2014, we went with this slick-looking image of some grass in test tubes. But then, a researcher called us out for using an image of wheatgrass (I think) on the cover of a golf mag. But, I still think it looks cool.

#### ② October 2015

I fondly recall working on this month's cover story about "online tee time brokers" — which, only five years later, I would simply call "apps." But how do you visualize such a story? We came up with this clever package of a hand holding a phone on the first tee of a picturesque mountainside golf course. The cover popped further when we decked out the logo in pink in honor of breast cancer awareness month. A few weeks after the issue came out, I was given



Continued on page 16

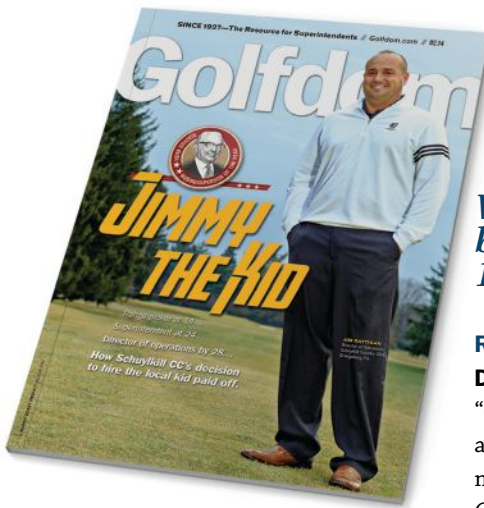
## // 10 FUN YEARS

Continued from page 15

a compliment on the cover, the concept and the color scheme ... and as an extra touch, using a woman's hand to hold the phone. The only problem? *It was my hand.*

### 1 February 2014

I enjoyed everything about working on this cover story on the 2014 Herb Graffis Businessperson of the Year Award winner, Jim Rattigan, then superintendent at Schuylkill CC in Orwigsburg, Pa. (Jim is now a Florida-based sales rep for the Plant Food Co. and making big strides in the Florida golf market for the company.) I enjoyed my visit and playing the course with Jim and one of his members. I enjoyed the tour of the oldest brewery in America and meeting the owner, Dick Yuengling of Yuengling beer. I was even put up by one of the members in their guest room and made new friends with him and his family.



Being from Kansas, the name Schuylkill was foreign to me, and I was so worried I'd misspell it. The magazine came out, and a few days later I walk into my local bar. The bar owner greets me with, "How was your trip to ... Orwigs-BRUG?" Turns out in my fear of misspelling Schuylkill, I instead had a blatant misspelling of Jim's hometown on the cover. I was horrified. A typo on the cover, the biggest fear of any editor. It still haunts me.

*We asked ... can you believe Seth made it 10 years?*

**REES JONES, architect, "The Open Doctor," Montclair, N.J.**

"Congratulations on reaching your 10th anniversary milestone leading *Golfdom* magazine back into prominence. The Graffis brothers would be so pleased if they could see what you have accomplished for the publication that they founded. I look forward to observing the work you will continue to perform that will lead *Golfdom* to even greater success."

**ANTHONY WILLIAMS, CGCS, Four Seasons Golf and Sports Club, Irving, Texas**

"I probably would still be struggling to

*Continued on page 18*

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## In The Field!



Continued from page 16

write my first article if Seth hadn't mentored me. He made the trip to the 2017 Byron Nelson, and that was when I had moved from Georgia to Dallas to take over the Four Seasons. He did a great story. Him taking the time to come down and personally be at the tournament and meet my guys and put one of my guys on the cover at 3:00 a.m. getting ready for the tournament to start the next day ... Seth is in the trenches. He's doing all of the stuff that a lot of guys wouldn't take the time to do, but that's just Seth. He is 100 percent committed to the industry, to the magazine, to telling great stories."

**CLARK THROSSELL, Ph.D., turfgrass professor and longtime *Golfdom* research editor, Billings, Mont.**

"I've known Seth 20 years now. I always liked his positive spirit. Whatever the situation, he seems to be right at home. The same with people. He's really good with people. With talking to him over the years and reading the interviews he's done with whom I would think of are very famous people, he seems equally at home with them as he would be with me or anybody else. One other thing about Seth I always really like is he doesn't take himself too seriously. He has the ability to laugh at himself. He takes his work quite seriously, but he doesn't take himself so seriously."

**CRAIG MACGREGOR, Publisher, *Golfdom*, Cleveland**

"I first met Seth when he was in Cleveland from Kansas City for a meeting. I had heard plenty about 'The Seth Jones' but had never met or even seen his picture. I came into work and noticed



Jones with his superintendent dad, David Hay, CGCS, at a past *Golfdom* Summit.

**Quick stats**

A look at how quickly some things add up over 10 years for Jones

- 0 Cups of coffee
- 0 Holes-in-one
- 4 "Deleted" interview recordings on his iPhone
- 25 American Majors attended
- 85 Notebooks recycled
- 120 Issues as *Golfdom* EIC
- 351 Interview recordings on his iPhone
- 475 Crew lunches bought
- 1,200+ Five-Hour Energy Drinks
- 416,829 Southwest frequent flier miles
- ?? Rounds bought for himself and the crew



an elderly man sitting in the cube across from me and took the opportunity to introduce myself. After providing his name, I couldn't stop myself from asking how old he was! This was our first impression of one another and the start of a great work relationship and even better friendship. Seth has made my time at *Golfdom* a great learning experience, interesting and most of all fun. Seth embodies what *Golfdom* is. By the way, it turns out I am five years older than him!"


**RICK YOUNGER, owner, Rick's Place, Lawrence, Kan.**

"I've known him ever since he was going to the University of Kansas. I was a journalism student back in the '60s. I remember he used to come in, and he would give me his articles. To this day, I still grade them and look at them. The kid writes a run-on sentence like there's no tomorrow. 'Where are your commas?' Seth is just a good cat. I get his magazine every month, and he's done a really, really, really good job. He's good with human beings. He's always been good with human beings."

**RHETT EVANS, CEO, GCSAA**

"Absolutely, I can believe it! Seth has a real passion for the industry, and he certainly appreciates what superintendents do. I would assume having that passion that it's easy to get up every day and talk about what superintendents are doing day in and day out at golf courses. So, congratulations, Seth, great job, keep up the great work, appreciate it!"

**DAVID HAY, CGCS, Mission Hills CC, Rancho Mirage, Calif.**

"Seth did an article on me back in 2002-2003, back when I was still hosting the Bob Hope event for the PGA Tour. We spent a day and played golf. I got to know him a little bit and really liked him, and we kept in touch. One year, the (Golf Industry) Show was in Florida, he asked to come over to my hotel and talk to me. When he got there, he said, 'Hey man, I got an offer (to be the Editor-in-Chief of *Golfdom*) — and I'm just wondering what you might say.' I told him that I have every bit of confidence if you just do what you do, you'll be fine. That was 10 years ago — hard to believe it's been that long. He's a good kid; every time he's out this way, he stops by here, in the desert. He's just like a son to me." 

A SUPPLEMENT TO

**Golfdom**

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# *State of the Industry*

2020: The year weekdays were like  
weekends and weekends  
were like holidays



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# State of the Industry

## A Word from Our Sponsor

# Rising to the challenges of 2020 and beyond

If people had told us in January that we'd have two or three normal months and spend the rest of the year socially distanced, wearing masks and sanitizing everything in sight, we would have said they were crazy. But, that's what happened. And, just as our everyday lives have changed, so has the way we do business. Including new safety measures, staggered office hours and virtual trade shows, the industry has adapted to meet the challenges we've faced this year.

What hasn't changed is Nufarm's commitment to putting you, the customer, first. Our goal is to be easy to do business with while delivering a strong innovative pipeline that solves the turf challenges you face on a daily basis. We recently announced a partnership agreement with Nichino America to develop, market and sell the novel fungicide active ingredient pyraziflumid for the turf market — an important tool for the management of turf disease, coming early 2022.

Giving back to the industry is more important than ever, and Nufarm is continuing our commitment to the Excel Leadership Program in collaboration with Golf Course Superintendents Association of America. This program is an investment in the future of golf course management, helping assistant superintendents gain targeted professional development from the industry's top leaders. In the first three years, 10 of 29 Excel

Leadership Program recipients have been promoted to superintendent.

Nufarm is also proud to be a lead sponsor of GreenCare for Troops, linking lawn care professionals with opportunities to give back to their community by providing lawn care services to the families of our deployed military. The program has helped more than 11,000 military families gain peace of mind by a network of more than 6,000 lawn care volunteers in all 50 states.

This year went differently than anyone planned, but you have stepped up to the challenge, and at Nufarm, we're right beside you. Whatever it takes to reach your goals in 2021, Nufarm is here to help. We are proud to be a part of this industry.

Kind regards,



Cam Copley  
Golf National Accounts Manager



Cam Copley



## A year when weekdays were weekends, weekends were holidays

Record-breaking rounds played, crews shut down with positive coronavirus cases and wild weather abounds in a crazy year

By the *Golfdom* Staff

2020 will be a year everyone will remember.

The season was off to a strong start, even in places like Minnesota, which experienced an early spring. And then, something called COVID-19 stole the spotlight and temporarily closed courses across the country, forcing them to reevaluate their safety protocols and ask, “are we essential?”

Thankfully, courses would soon reopen with basic elements of the game changed or removed. Water coolers and bunker rakes were suddenly a thing of the past. Touching the flagstick was verboten. So was the simple premise of two workers to a cart or a lunch break taken together with the crew.

For our 2020 State of the Industry report, sponsored by Nufarm, we once again spoke to Golf Course Superintendents Association of America chapter presidents and representatives across the country to see what the “new normal” was in each region. This report features interviews from 12 states. For additional reports and the full-length versions of the interviews featured here, visit [Golfdom.com](http://Golfdom.com).

### Tom Fisher

**PRESIDENT**, Greater Pittsburgh GCSA

**SUPERINTENDENT**, Wildwood GC, Hampton, Pa.

#### *Generally speaking, how was the 2020 golf season in your region?*

This summer, the weather was just about perfect in our region. It was really dry, hot and just busy all summer.



Tom Fisher

This summer, the way I described it, we had a captive audience because right from the get-go people weren't allowed to do much of anything except go outside. Golf was really strong in that regard once it was allowed here in Pennsylvania.

Rounds for us were up 20 percent over last year, and that was even without April and May. Even on a 10-month calendar, we beat last year's 12-month calendar by 20 percent. I feel like that number is mirrored in a lot of courses around the area. It

seemed like every day was a weekend and every weekend was a holiday.

#### *What was labor like?*

Early on, March, April and May, we were cautious in our hiring. We have a handful of retired guys on our staff, and members of our staff care for elderly parents, so we had to be cautious. But, we quickly realized that we could do our job well and stay distant from each other.

We also picked up a few professionals who had their normal day job careers scaled back or they had been furloughed. They just wanted to come on board and do something new, fill some time and get a paycheck. It was an interesting crop of good employees we brought on, these adult professionals.

#### *What did you hear from local chapter members about how COVID-19 impacted their year?*

It seems like pretty early on, everyone figured out how to operate under the mandates and suggestions from above. Everybody had an air of optimism about being able to get out and work. I do know that at times, if some-



body had exposure or tested positive, there were entire operations that went down to skeleton crews right in the middle of golf season, while they sorted everything out with contact tracing. That was a challenge — one day you have a full staff, the next day you only have two or three guys in taking care of everything.

### *Any success stories from your chapter?*

Back in March, members of our local chapter got together and made conference calls with other chapters in our state so we could get all of our ducks in a row. We got signatures on letters to state representatives to outline who we are, why we're here and why we need to work. It wasn't like we were fighting for our right to work; to be honest, I'm not sure that was ever in question.

### *What are your expectations for 2021?*

Just talking to professionals outside our industry, the 9-to-5 people who report to offices ... it sounds like a lot of the offices in the area, no one is hurrying to get back. I think that plays to golf's favor. I have a feeling the captive audience will remain.

— S.J.

### **Tim Davis**

**PRESIDENT**, Rocky Mountain GCSA  
**SUPERINTENDENT**, Legacy Ridge GC, Westminster, Colo.

### *Generally speaking, how was the golf season in your region?*

Definitely some uncertainty at the beginning, but generally most golf courses had a very strong season out here in Colorado. Most municipal golf courses were shut down

the longest. We were shut down for two months. Ever since we've opened, we've had record-breaking months. Those courses that were privately owned that were able to stay open are absolutely smashing it this year.

### *How was the weather for your area this year?*

Difficult drought conditions for growing turf, but they allowed for many days of great golfing weather. And, the drought was so bad. Some courses rely on mountain runoff, and they just depleted their water storage systems faster than normal because the rain fills up their ponds and reservoirs.



Tim Davis

The wildfires we experienced were crazy and unlike anything Coloradans have ever seen. It didn't affect this course all that much. It was very smoky and hazy. There were a couple of golf courses that were in the path of the fire, and one did get consumed by the fire.

### *How was your experience with labor this year?*

What I've heard from other superintendents is that their crews were really strong this year. There was just a lot of very good qualified people looking for jobs. And, with school being basically canceled last spring, they were able to bring people in more in the shoulder seasons and keep people longer in Colorado.

Here at the city of Westminster,

we reappropriated rec staff instead of furloughing employees. So, we had librarians, lifeguards, rec staff, weight room attendants ... it was a lot of training, but (we had) really high-quality individuals working for us.

One of the librarians, she's one of the best employees I've ever had. We could put her on any piece of equipment, and it just clicked. She's picked up some hours here permanently, so she's doing both (working at the library and the golf course).

### *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

I don't know of a lot of operations that were affected by COVID specifically. Certainly, we had to take precautions, like putting pool noodles or putting some sort of contraption in the cup, pulling bunker rakes. But other than that, I don't know of anybody that's had it go through their operation and mess it up.

### *Were there notable success stories from your area/chapter this year?*

I think our leadership did a great job getting clear direction on how we can proceed with golf in the state of Colorado and how to do it safely, between our governor and our health departments. We made tough decisions early on to cancel our annual turfgrass conference, networking events and golf tournaments. I think our chapter did a great job of just limiting financial impact to the association.

### *What are your expectations for 2021?*

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# State of the Industry

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I see more of the same in terms of the amount of golf and the amount of revenue golf courses are making right now. Even if there is a full shutdown, I think golf is one of the things that you can do safely, be outside and do it right.

— A.H.

## John Temme

**FORMER PRESIDENT**, Iowa GCSA  
**SUPERINTENDENT**, Wakonda Club,  
Des Moines, Iowa

### Generally speaking, how was the golf season in your region?

We're up 20 percent from last year, and last year was a record-breaking year. Being an 18-hole private club, we're not extremely busy during the week. But, this year, sun up to sundown, it seems like every tee time was full. It seemed like right there everybody was either working from home or had flex schedules, and a place to social distance was the golf course. And, they were definitely taking advantage of it.



John Temme

### How was your experience with labor this year?

We usually open the golf course around spring break, but with COVID-19 and the restaurant being shut down, I wasn't given the opportunity to hire anybody except for my full-time staff. So, we were at six full-time staff instead of 23 for March, April and May. And then, I was able to bring on some staff June 1. We just did bare bones on the golf course with six of us. I've never Triplexed greens

before, but we did it this year because I didn't have the labor to walk mow them. I had to borrow some cutting heads from a neighboring superintendent who had Triplex heads I could use. That took us up through June. And then, when I was able to hire staff, the U.S./Mexico border was still closed at that point, so guys that have six-month visas with me didn't come up from Mexico this year, so I was short about three guys there. Then, a lot of my senior citizens, my old retired staff that mow fairways for me, with COVID, they didn't want to be around other people. So, all said and done, I think I got up to about 15 people instead of 23. I was eight people short through the heart of the summer. I'm really proud of the way the golf course held in there with limited staff. The expectations were lower this year, obviously, from my membership. They were very understanding in what we were going through. And actually, a lot of them volunteered to come out and help.

### Were there notable success stories from your area/chapter this year?

I think the derecho on Aug. 10 really brought out the good in everybody. If we had extra equipment that we weren't using, we were dragging it over to a fellow golf course. Central Iowa, all the way over to Cedar Rapids, was where it was the hardest effected with this derecho. My colleagues from out of town, they were definitely here to help me.

### What are your expectations for 2021?

Oh, it's got to be a lot better than this year. I just hope to get back to normal. I hope to have a full crew, have all positions filled on my staff. You don't real-

ize how important your staff is until they're gone and you don't have them.

— S.W.

## Andrew Jorgensen, CGCS

**VICE PRESIDENT**, Florida GCSA

**DIRECTOR**, Golf Maintenance Operations, On Top of the World Communities & Related Entities, Ocala, Fla.

### Generally speaking, how was the golf season in your region?

We are seeing a ton of play not just here, but all around us. Everyone I have spoken with has reported higher than normal rounds. Some have put off normal cultural practices to keep the cash register ringing.



Andrew Jorgensen

### How was your experience with labor this year?

Labor continues to be an issue — quantity and quality. Market value for the green industry, in general, has driven up wages to attract qualified candidates. That being said, we continue to have open positions on our staff.

### What were some things that you heard from chapter members about how COVID-19 impacted their year?

Mostly all positive. Those that remained open report increases in rounds played, while those that were forced to close report that they were able to get planned projects completed ahead of schedule. Regardless, COVID-19 has impacted everyone

Continued on page SO18

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# State of the Industry

Continued from page SO16

one way or another. Staggering start times, limiting employee interactions and the repetitive sanitation of equipment and facilities, we all have had to go through. Some things were to our benefit, like no water coolers or bunker rakes on the course. We hope that trend continues. The downside is the effect that the increased golf cart traffic will have on our facilities heading into the cooler weather.

## Were there notable success stories from your area/chapter this year?

The Florida GCSA partnered with the Florida Turfgrass Association last year and contracted with The Southern Group, a lobbyist firm based in Tallahassee. The Southern Group was instrumental in keeping golf open as much as possible during the quarantine. They were keeping us updated on a daily basis from a state standpoint and provided resources we could use on a local, county level to ensure we remained operating in some sort of capacity. Keeping golf open has provided safe recreation during this period, and superintendents were on the front lines evolving course setup and maintenance practices and communicating to officials on why golf should remain open for business.

## What are your expectations for 2021?

I think we are going to see much of the same for 2021. As more and more companies realize that employees don't need an office to get their work done, we're going to see rounds climb as these employees can hit the links while still conducting business remotely. We have adjusted our maintenance practices accordingly — improvise, adapt and overcome — I don't

see a lot of this changing.

— C.H.

## Peter J. Rappoccio, CGCS

**PRESIDENT**, GCSA of New England  
**SUPERINTENDENT**, Concord (Mass.) CC

## Generally speaking, how was the golf season in your region?

Things here have been good; the golf business has been booming in the Northeast. Every club and facility I've talked to has been extremely busy. We average anywhere between 18,000 to 19,000 rounds a year. We're about to surpass 25,500, without the month of April and the first week of May. We've been busy. A huge uptick in young families playing golf, young people playing golf, husbands and wives playing golf. It's been great.

## Were there notable success stories from your club this year?

We maintained the standard of conditions on the course along with how busy we have been. The club, once we started letting guests in, we had the best guest revenue we've ever had. Our cart revenue has been great. There are a lot of people playing golf here. And, the club was great to its employees; they did a nice job keeping everyone safe, keep everybody healthy. Members were supportive about doing their part — supporting the course, the staff, supporting operations. It's been a good success this year. I think 2020 ... everything that's happened, it's sad that so many people have lost their lives, but looking back, we took some success out of a trying year.

## How about success stories for the chapter?

We were able to host a golf event in

August, that was a success, to get together for the first time which was good. A lot of the local tournaments that were being held throughout the state, were able to go on without issue. It was a good year for golf in the state of Massachusetts.

## What are your expectations for 2021?

I think golf is here to stay. I think the bug is in people's ears. They're going to continue to play, whether they go back to work or not. We have a lot of people who drive to Boston for work, and when they get home, they're home at 6 o'clock and they stay home. Now that they're working from home, they're done at 3 o'clock, and they're heading to the golf course. Our busiest time was from 3 o'clock to 7 o'clock. We've got a lot of families, a lot of juniors. Our junior program is through the roof. We've added nine and dine events, we've add glow-ball events and we've added family events. We're going to grow the game we love and also grow our operations.

— S.J.

## Brian Stiehler, CGCS, MG

**PRESIDENT**, Carolinas GCSA  
**SUPERINTENDENT**, Highlands (N.C.) CC

## Generally speaking, how was the golf season in your region?



Brian Stiehler

For the most part, daily fee courses seemed to have very successful seasons. The fact that many people were either working from

home or temporarily off work as offices closed, more time could be de-

voted to the game.

Golf was, in many cases, one of the few things that could be done legally in North and South Carolina due to government-ordered closings of other recreational activities. Private golf clubs also seemed to have successful seasons as members are using the facilities at a higher-than-normal amount. Even in cases where guest play was limited, the number of rounds played often exceeded that of past years.

The one segment of the industry that didn't do so well was facilities dependent on hotels and tourism. The state legislature limited hotel stays for essential business only and even municipal governments enacted their own level of restrictions to eliminate the chance of tourists bringing the virus into their towns and counties.

### *How was the weather for your area this year?*

In western North Carolina, some record rainfall continued to fall through the autumn season. Highlands, N.C., recorded 123 inches of rain by Oct. 31. Many records will be broken in the two states. The hurricane season was also more active this year, bringing more heavy rain events to the Carolinas.

### *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

People, in general, had more time on their hands, and golf benefitted from that. Except for the tourism-dependent facilities, golf did very well. I think most superintendents are pleased with the season but remain skeptical about the lasting impacts of this rise in play.

### *Were there notable success stories from your area/chapter this year?*

There are always positives that come out of every crisis. We became more efficient. We learned to network without the advantage of being face to face.

This year, we learned as an association just how effective our legislative efforts have been over the last 15-20 years. This year, we relied on those relationships, our lobbyists and our association member contacts. It was a fight I will never forget and one I'm proud to have been a part of.

This year, we also learned how creative we can be after deciding to cancel our 2020 Conference and Show, traditionally held in November. Instead, we created "Conference Comes to You," a 30-seminars-in-30-days event where we partnered with 40 GCSAA chapters and BIGGA (British and International Golf Greenkeepers Association).

And, most importantly, 2020 made me recognize just how critical our sponsors and industry partners are.

### *What are your expectations for 2021?*

This is a tough one. It's my opinion that we can only hope for an effective vaccine that allows us to return to some resemblance of normalcy. Whatever that turns out to be. I think I speak for most of us when I say there isn't much that can surprise us at this point. It was an interesting year at best, and I hope 2021 brings good weather, the return of camaraderie and healthy turf to the members of the Carolinas GCSA and the industry as a whole.

— C.H.

## **Mark Woodward, CGCS**

**PRESIDENT**, Cactus and Pine GCSA  
**DIRECTOR OF AGRONOMY**, Whisper Rock GC, Scottsdale, Ariz.

### *Generally speaking, how was the golf season in your region?*

The golf season in Arizona was actually very good for many people. Now,



Mark Woodward

certain parts of golf operations were significantly affected, like food and beverage, lodging and other amenities, but in terms of golf

rounds, many golf courses did very well. In some cases, golf courses had a record number of rounds during the early months of COVID-19. Most golf courses implemented many COVID-19 measures to keep people safe yet still allow golfers to play.

### *How was the weather for your area this year?*

The weather in Arizona this year has been extremely dry. We've had very little rain throughout the entire state. These dry conditions not only affected the golf industry in terms of no rain, not much humidity and low dew points this past summer, but they have also wreaked havoc with the wildfires throughout the state. Additionally, right now in early November, we're still having temperatures in the low to mid 90s. Very hot and dry.

### *How was your experience with labor this year?*

Overall, our course has done fairly well with labor this year. We've been able to fill vacancies fairly quickly just on word of mouth alone. Most of the

*Continued on page SOI10*

# State of the Industry

*Continued from page SO19*

time, we've been able to maintain our staffing levels at or near our budgeted amount. I do know other golf courses in our area have struggled to maintain full staffing. You have to remember that with other industries basically paying the same wage as golf course laborers, people can work for the same wage closer to home in air conditioning using less fuel to get to work, etc.

## *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

COVID has affected everyone in the world, and golf is no exception. We've heard of a number of incidences where someone was potentially exposed and had to self-quarantine. To complicate that, in some cases, the exposed person would be in a carpool with someone else, which meant that person would also have to self-quarantine.

## *Were there notable success stories from your area/chapter this year?*

Other than the success of golf in our area in terms of rounds being up in most cases, our chapter has obviously been affected by the pandemic, but we've made a concerted effort to keep our members engaged as much as possible. We've conducted several virtual meetings including our annual meeting. We've also held virtual webinars and educational meetings so our members can not only stay engaged but also earn continuing education units. Our chapter is also heavily involved in the creation of a new entity in Arizona called the Arizona Alliance for Golf, which is bringing all the allied associations together so we have "strength in numbers" when it comes to legislative and regulatory

issues that potentially could impact our industry.

## *What are your expectations for 2021?*

I'm afraid the early months of 2021 are going to be very similar to 2020. With that said, I think many golf courses are returning to the relatively new normal and slowly and cautiously opening up their total operations with the appropriate safety measures put into place.

— S.J.

## **Jeffrey Whitmire, CGCS**

**VICE PRESIDENT**, Virginia GCSA  
**SUPERINTENDENT**, Williamsburg GC, Williamsburg, Va.

## *Generally speaking, how was the golf season in your region?*

As far as play, it has been outstanding. Everybody I've talked to except resort golf courses, rounds are up. They're up a lot. Memberships are growing at clubs, public courses have had more play and private courses are being used more by the membership.



Jeffrey Whitmire

## *How was the weather for your area this year?*

Potentially, we are going to have a record rainfall year here in eastern Virginia. Our year-to-date total is 67 inches. The normal annual rainfall total is around 44 or 45 inches.

## *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

With the exception of resort golf courses, everybody's experience is they've been busier than they've ever been in the recent past. They face the same challenges of being able to find labor.

You had to make changes in your staffing, social distance everybody. We don't allow any of our employees to ride in the same cart. They all had their own utility vehicles.

The other challenge was just getting the supplies. You couldn't rely on the companies to bring it to you. Just like we're facing at home with toilet paper and paper towels, (there's the) same issue as getting other stuff that we use on a daily basis.

## *Were there notable success stories from your area/chapter this year?*

We finished our BMPs this year. We were one of the first states to do it, but we had to redo ours in the model of GCSAA. Our committee chairman and board member Tim Durand took that up. We're seeing some investment (in golf), which is good.

The First Tee Belmont Golf Course in Richmond which was an old Tillinghast golf course owned by the county. The First Tee of Richmond took it over and remodeled it and reopened it as a 12-hole facility with a practice facility. In Richmond, they're going to have a great facility for junior golf to grow the game.

In Portsmouth, Elizabeth Manor Golf & Country Club was getting ready to close. It's home to the Eastern Amateur tournament, which, years ago, was one of the premier amateur tournaments. My group came in, and we bought it and reopened it after \$3 or \$4 million in renovations there.



Golf courses such as Williamsburg GC (above) have seen huge upticks in rounds as more people work from home and more families get out to play what's been deemed a safe and socially distant activity.

### *What are your expectations for 2021?*

I hope golf keeps growing. I think people have rediscovered the good things golf offers and the benefits of the game. It's becoming more of a family activity than it was before, which is great.

I'm very positive about golf next year and in the coming years. It's been down for so many years. I'm seeing a trend toward playable golf courses not just trying to build the toughest, meanest golf course, which is impossible to play on and impossible to maintain. That is going to make golf more affordable and more accessible.

— C.H.

### **Scott Thayer**

**PRESIDENT**, Minnesota GCSA

**SUPERINTENDENT**, Legends Club, Prior Lake, Minn.

### *Generally speaking, how was the golf season in your region?*

The golf season was record setting in our region, from municipal, daily fee and private courses. Our year started a little odd because of COVID-19, and due to a warm March, most courses were



Scott Thayer

ready to open at the end of March, but our governor shut golf down. Superintendents couldn't even take care of their courses during the shelter in place the governor instated. The governor allowed golf on April 18, and ever since that day, golf was booming in Minnesota, nothing like I have ever seen in my 15 years. It was hard to get things done on the course, but we always figured out how to accomplish everything we need to do.

### *How was your experience with labor this year?*

*Continued on page SOI12*

# State of the Industry

*Continued from page SOI11*

I was restricted to how many guys I could hire due to having one person per vehicle and no sharing of vehicles because of COVID-19 protocols. I was limited to the amount that I usually hire, but I had a lot of applications this year and more interest than ever before. I had two of my employees contract COVID-19 at the end of June, and then, even harder, their dads worked for us as well, so I lost four employees for two weeks in the middle of the year. We figured it all out and made it work, but not without a fantastic staff to step up when it was really needed.

## *Were there notable success stories from your area/chapter this year?*

The MGCSA hosted its fifth Allied Golf Association Day on The Hill event in St. Paul just one week prior to the governor-mandated state shutdown. We used our recent physical presence to push hard for first maintenance and the play of golf as it is a socially distanced safe activity. We also advocated for a bill to define the right for 16- and 17-year-old young adults to work on golf courses. The bill passed the House and Senate and was signed into law by the governor late May.

## *What are your expectations for 2021?*

Next year will be a lot like this year for golf and golf maintenance unless a vaccine is found for COVID-19. Unfortunately, the numbers for infected are not going down, and the hospitals are filling up, at least here in Minnesota. Golf will be up again next year in my opinion. Courses will be busy again, and the challenge will be, can we keep it up all year once again? Even if things

start opening up again, I feel this pandemic has changed and will change our country forever, and people will be doing things much differently than they did before the pandemic.

— S.W.

## **Jason Hollen**

**PRESIDENT**, West Virginia GCSA  
**GOLF COURSE AND GROUNDS SUPERINTENDENT**, Stonewall Resort, Roanoke, W.Va.

## *Generally speaking, how was the golf season in your region?*

For the situation, it was good. Good to very good. We were able to have some



Jason Hollen

record-breaking rounds. Part of that was twofold: The weather was a big issue, and obviously, with the pandemic pushing people

outside so they weren't going crazy inside helped.

## *How was your experience with labor this year?*

When the shutdown came in our state, golf was determined to be essential. A portion of my crew was furloughed, and the other portion was reduced in hours. We were going to open at the end of March, and we did open on time. We did it with a reduction in hours, which I picked up a majority of those hours. Some of our furloughed employees were able to return. Those guys were able to go back up to full hours.

A lot of local (courses) had similar stories. Staff had gotten cut to the point where the superintendent and sometimes the golf pro would be mowing the place.

## *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

Play was up. We doubled cart traffic for about two months. It was an increase in play, but it came at a little bit of a cost.

The labor issue is everybody being cut to the bone. I think a lot of people did a very, very good job. I know the fear among different people that talk to us, they hope ownership and management don't go 'they did a great job with 3 people, why do they need 9 people?' Hopefully, a lot of people understand that it was some kind of anomaly.

## *What are your expectations for 2021?*

The weather has always been a factor. If we have a similar type of weather, are (rounds) going to be above what we experienced this summer? I don't know. I think I would prudent to budget a bit more.

We're not going to get 100 percent retention. If you're able to retain some of these folks that came out for the first time, wow, what a step forward.

Labor will be a challenge. It's always going to be a challenge.

I'm not super bullish on 2021. This will be a good year to gain some kind of traction and build it in 2021 for the entire industry. Looking into next year, we have to be realistic.

— C.H.

## **Ryan Semritc**

**PRESIDENT**, Western Washington GCSA  
**SUPERINTENDENT**, Willows Run Golf Course, Redmond, Wash.

## *Generally speaking, how was the golf season in your region?*

It's a story of two worlds here. The

*Continued on page SOI14*



# NATURALIZED AREAS

## Q&A WITH AARON HATHAWAY

Technical Services Manager, Turf & Ornamental, Nufarm



Questions regarding naturalized areas or reduced input areas don't only cover how to increase aesthetic quality or increase playability but how to accomplish these things with the fewest inputs as possible. This means thinking about the relative cost of inputs, the time it takes to provide an input, and which inputs are worth that time and money. In the end, the goal is to provide the beauty of contrasting tan colors and inflorescence in the summer with few inputs. However, success will be accomplished by developing a plan to include the most necessary inputs.

### 1 WHICH INPUTS ARE MOST IMPORTANT IN NATURALIZED AREAS?

Because these areas aren't mowed regularly, weeds can get out of hand quickly. Herbicide applications are the most important input to maintain pure stands of whatever was established. When perennial weeds with vast networks of vegetative reproductive parts, like common milkweed and Canada thistle, are left untreated they get stronger and multiply quickly. Turf managers should make time to treat these areas at least once per year; it won't make a huge difference whether it is in the spring when weeds wake up or in the fall as they prepare for winter – consistency is key because weed pressure is constant.

### 2 WHICH HERBICIDES WILL BE MOST VALUABLE IN NATURALIZED AREAS?

Millennium Ultra® 2 is a broad-spectrum herbicide that consistently provides great broadleaf weed control on golf courses, including in naturalized areas. Some weeds emerge late and some areas have high weed pressure and require some spot treatments mid-season. Sure Power® will burndown these weeds quickly and provides activity on a range of mid-season weeds including broadleaves, annual grasses, and many sedges. Those who have established these areas with fine fescues have a huge advantage when it comes to control of perennial grasses – sethoxydim and fluazifop can be applied over the top of fine fescue species to provide selective control of many perennial grassy weeds like quackgrass, reed canarygrass, etc.

### 3 HOW ARE NATURALIZED AREAS ESTABLISHED AROUND IN-PLAY AREAS?

At establishment, seeding grasses at a low rate is key. A playable naturalized area may have 1 large plant per 1 square foot of area. This is a huge difference from the hundreds or thousands of grass plants in the same area mowed from 0.125 – 4 inches, and may call for a vast departure from what we are used to. Accomplishing such a sparse stand of plants is easier said than done, but here are some tips.

- 1 Choose plant species that are clump-forming and won't spread via stolons, rhizomes, or other vegetative structures into open voids. If you are seeding fine fescue species, this may include hard and sheep fescues versus creeping red fescues.
- 2 Decrease your seeding rate. For fine fescues, 10 lbs of seed per acre, or even less, may be sufficient. Set up a few test plots and compare a few low rates so you become comfortable with rates much lower than commonly used.
- 3 Add some annual ryegrass to the mix to provide some quick cover and competition for your desired species – this is a good way to ensure a thinner stand.

### 4 HOW CAN ESTABLISHED NATURALIZED AREAS BE THINNED TO INCREASE PLAYABILITY?

Once these areas are established, they become much more difficult to thin out, so starting thin is key. These options

for stand thinning should be tested as research in small areas as they are few and inconclusive. Keeping these areas thin will help increase plant aesthetics because they aren't competing as much with each other, but thin stands increase the likelihood of weed infiltration, so, again, weed control is key.

- 1 Use PGRs. There is anecdotal evidence of superintendents using PGRs such as trinexapac-ethyl and prohexadione-Ca (Anuew™) to thin stands, but little conclusive research. PGRs are used in grass seed production fields to reduce lodging (plants falling over) and increase seed production, but not necessarily to thin turf stands.
- 2 Use preemergence herbicides. Because naturalized areas produce seed each and every year, a huge amount of seed is being added to the soil seed bank. If these seeds are allowed to germinate and recruit, they may increase density over time. A preemergence herbicide application may limit survival.
- 3 Nonselective herbicides like glyphosate or glufosinate (Cheetah® Pro) could possibly be used in creative ways to thin out naturalized areas. Perhaps a boom sprayer could be used with every other nozzle turned off and a random pattern through the areas. This may seem like an odd method, but it would get the job done quickly.

# State of the Industry

*Continued from page SOI12*

public golf courses have been absolutely jam-packed. I'm at a 45-hole public facility, and we have had our best year since I've been here.

There are a few public golf courses who have really struggled. They're mostly ones that really catered to having events and had events every day, and that's really stung for them. But, I would say, 90 percent of the golf courses, public golf courses, have had the best year they've had in a decade.

## *How was the weather for your area this year?*

We had the best April weather we've probably ever had. And, we were closed the entire time. I think it didn't rain here for three weeks. Summer was pretty mild. The big story here was the smoke in September. We actually closed our golf course for two days. There was a good two weeks in September where it would have been 85 and sunny, and we couldn't see down the parking lot.

## *How was your experience with labor this year?*

I had no problems finding labor. Ten of my 12 seasonal guys were all cooks from kitchens. We actually had a bigger labor market to pick from just because we were one of the only activities that were allowed. Labor this year was not nearly as much of a struggle as it has been in years past.

I do know that there were a lot of golf courses here who were on, we'll call them reduced skeleton crews, for the summer, just to try to make up for what was lost. There was a large number of people whose budgets were reduced. I was fortunate that didn't happen here, but I know that surrounding our region, that was a serious problem.

## *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

In the beginning of it, we had one golf course that had everybody quarantined for two weeks. But after that, I didn't hear of anybody who actually had to close for any extended period of time because of COVID.

I'll say everybody was really proactive in doing things that were keeping their crews safe and also getting the job done. We had an awful lot of superintendents who were at the beginning speaking up about the importance of keeping everybody safe, which I found pretty refreshing.

## *Were there any notable success stories from your chapter this year?*

There's a big one: The superintendent's name is Marcus Harness at Sand Point Country Club. They had a complete remodel from David McLay Kidd. They were finishing construction and finishing renovations right up to when golf courses were closing. They got it done at the end of June. This was his first season — they're opening a new golf course, COVID (hit) and he had a brand-new baby. His circumstances were particularly difficult to navigate there.

## *What are your expectations for 2021?*

We were pretty proactive as an association. In April, we decided to make our big winter meeting in December, the Washington Turf and Landscape Show, virtual. And, we had decided then to basically plan on having everything being virtual up until the middle of 2021.

The biggest challenge has been continuing to give members a rea-

son to be members of our association. We've been fortunate that our Executive Director Bill Ackerley has been a shining star of leadership through this. With the circumstances of 2020, the cream has risen to the top, so to speak.

— A.H.

## **Joe Aholt**

**PRESIDENT**, Idaho GCSA

**SUPERINTENDENT**, Hillcrest Country Club, Boise, Idaho

## *Generally speaking, how was the golf season in your region?*

Rounds just went up. We average about 28,000; we're going to end up with 38,000 rounds. And then, we personally have 30 members on the waiting list. We were probably a few short prior to COVID. I know all the clubs in this valley experienced similar numbers of rounds played.

## *How was the weather for your area this year?*

It was ideal in most of the summer. Idaho is a fairly big state, but I know in the Treasure Valley, within 50 miles of here, spring and early summer were wet and mild, and we didn't have any temperature extremes where we had the extreme heat. It was ideal growing conditions for the extra golfing rounds that we've had.

## *How was your experience with labor this year?*

We kept our numbers intentionally low at the beginning. I didn't want to have 30 people in the shop all at once. We ramped up and had our normal numbers later in the season.

During the golfing season we had, including part time, we'll have up to 30. With COVID going, not knowing what was going on, we were trying to



With COVID-19 restrictions in place, some courses such as Hillcrest CC (above) added more single-rider carts, which, in turn, could lead to more cart damage along the course.

maintain the golf course with 18, and we were cutting a few corners at the very beginning.

### *What were some things that you heard from chapter members about how COVID-19 impacted their year?*

We talked rounds and everybody's up 25 percent to probably 40 percent on rounds. Not only did we get more rounds, but we also got more carts. We had single-rider carts. What we're seeing is the entrance and exit points next to greens where carts would go, we had much more compaction. We're going to have to come in and aerate and do some things in those areas this fall and next spring as well. I've seen more cart damage this year than

in previous years because of more rounds and more single-riders.

We still aerated, we still did all the things we needed to do agronomically, other than addressing the car path situations, but we're all tired. We're going to have close to 200 players today, in November, which I'm sure is going to be close to a record, almost our record high. We've had great weather.

### *Were there notable success stories from your area/chapter this year?*

As far as income revenue, I think everybody's very high that way. That's what drives everything, is income coming in. Everybody's a little different on how they prepare for COVID, but I haven't heard of an entire grounds crew or bunch of superin-

tenents getting sick. I'd count that as a success.

### *What are your expectations for 2021?*

I think we have to deal with more scatter signs, more play control where (golfers) can come and go on the golf course. Other than that, it's fairly similar. Budgets, they're going to be adequate just because of rounds played and the demand. I don't think anybody's budget is going to drop next year, which is nice. **G**

— A.H.

# RESULTS

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# Top tweets of 2020

A challenging year brought the best out of us,  
in person and on Twitter

BY THE TURF TWITTERVERSE (all content reposted with permission)

**F**or the past few months, *Golfdom* has reposted our favorite tweet from the month in the magazine. Now, *Golfdom*, in partnership with Syngenta, will make this tradition official starting next month with the launch of #TurfTweetoftheMonth.

Each month, we'll share what the team at *Golfdom* and the team at Syngenta believed to be the best tweet of the month. We hope Turf Twitter will help us find the best ones by tagging potential winners with #TurfTweetoftheMonth. At the end of the year, we'll let Twitter decide via an online poll which month's top tweet was the tweet of the year. And, the person with the winning tweet will score some sweet swag. In honor of this program, we thought we'd share some of our favorite tweets and accounts from 2020.

## Way too talented for Twitter

**Paul and Kristie Hurst, GreensPro, St. Louis, Mo.**  
**@GreensPro and @KristieHurst5**

Paul Hurst, a former superintendent and now co-owner of GreensPro, a Missouri-based distributor of turf products, and his wife, Kristie, form the musical duo known as Midlife. The pandemic shut down their ability to perform live music locally, so they took their music to Twitter.

The couple has posted more than 50 videos and counting (Kristie on lead vocals, Paul on acoustic guitar), most of them requests from Turf Twitter. Their songs get upward of 3,000 views on Twitter and led to them booking a gig at the Carolinas GCSA show, before the in-person event was canceled.

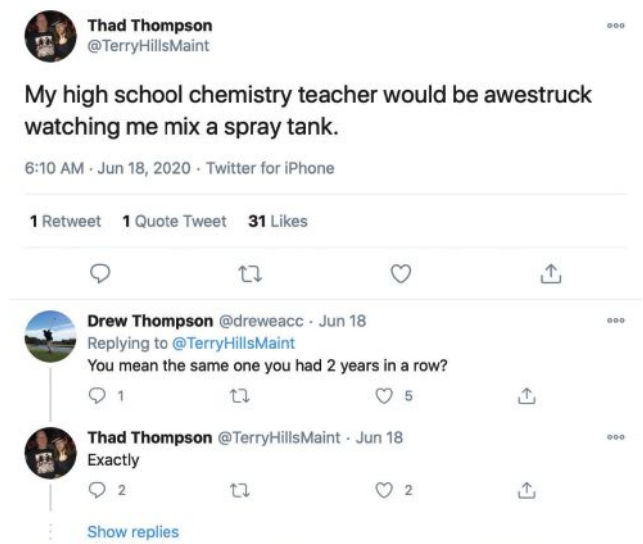
## Most lovable Twitter bros

**The Thompsons, Thad and Drew**  
**@TerryHillsMaint and @dreweacc**

Our friends Thad and Drew, superintendent brothers in western New York, make for a fun duo. One is well known for his friendliness and sentimentality (Thad), and the other once tweeted a photo of *Golfdom* in his trash can (Drew, and yes, we deserved it).

Both shine a spotlight on the superintendent lifestyle on

*Continued on page 36*





Continued from page 35

Twitter and are fun follows. Thad is especially active and has built up his following to 3,401 followers ... one day we hope to catch an Invictra concert with this proud dad.

**Most unlikely union — Legos, turf and Twitter**

**Ben McGraw, Ph.D.**

**@TurfLego**

Ben McGraw, associate professor of turfgrass science at Penn State, uses Legos to “provide low-quality video productions and bad humor.” To be interviewed by Lego McGraw is a new industry status symbol no one could have ever imagined ... until now.

**Tell it like it is**

**John Reilly, Longboat Key (Fla.) Club**

**@turfmonkeyboy**

There are some absurdities that superintendents find themselves faced with from time to time. Keeping a poker face throughout those encounters is a skill of a good superintendent.

Retelling those stories on Twitter — with photos — is a rare talent. Reilly can retell an absurd story and get a laugh out of it. Better than a cry.



**Best mix of dog content and desert golf**

**Jared Stanek, Toscana CC, Indian Wells, Calif.**

**@WyoJared**

We're happy to say we knew Jared when he was still a turf student, and now he's a proud father of two with a great golf course pup at a fabulous desert golf course location. Stanek's Twitter account stands out because of his eye for photography, and he's in a target-rich environment.

And, the screenshots of 120-degree temperatures in September make us feel better about the weather where we live.

*Continued on page 38*

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THE LEADER.



Continued from page 36



Jared Stanek  
@WyoJared

Final round of aerification for the summer today! I'll be glad to move on to #overseed2020 soon!



1:23 PM · Aug 11, 2020 · Twitter for Android

**Live from Rush Creek, it's Maintenance Monday**

Matt Cavanaugh, Rush Creek GC, Maple Grove, Minn.  
@CavanaughTurf and @RushCreekGC

Hat's off (and golf cart tires only on concrete) to Matt Cavanaugh and his team at Rush Creek for making Maintenance Monday, a series of whimsical videos portraying what goes on behind the scenes at the maintenance facility. It's like golf maintenance's version of Saturday Night Live sketches.

The crew at Rush Creek not only does a fine job taking care of the course, but they've got some acting and skit writing chops as well.



Rush Creek Golf Club  
@RushCreekGC

Maintenance Monday! Adam takes his act solo.



10:10 PM · Aug 10, 2020 · Twitter for iPhone

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# Super Science

## // TALKING TURF

### A MEETING OF THE TURFGRASS MINDS

By Kevin Morris and Mike Kenna, Ph.D.

**O**n Oct. 20-22, 2020, the National Turfgrass Federation (NTF) and the Foundation for Food and Agriculture Research (FFAR) partnered to review the September 2017 national turfgrass workshop's accomplishments.


The virtual workshop is the third national meeting to discuss the need for collaborative research among universities, federal agencies and the industry. The first meeting in Dallas, held on Jan. 22-25, 2002, resulted in the Turfgrass Research Initiative. The turfgrass industry's estimated annual value was \$40 billion at that long-ago time. Turfgrass covers an estimated 50 million acres in the U.S., making it the fourth-largest crop.

In this year's workshop, the 55 attendees from academia, industry and government agencies set new research priorities for the future. Also, the summit attendees prioritized cooperative FFAR and industry research projects for funding.

The participants included selected stakeholder representatives from golf, sports turf, lawn care and grounds maintenance. University and USDA scientists, the USDA Agricultural Research Service and the National Institute of Food and Agriculture National Program leaders, turfgrass industry leaders, landscape architects, native plant specialists and environmental groups participated.

This event was a productive, interactive and engaging virtual meeting. It allowed participants to outline the priorities of the national turfgrass needs. The participants provided implementation strategies and identified potential funding mechanisms. The hope is turfgrass scientists and the turfgrass industry can collaborate with FFAR, USDA and other government agencies.

The National Turfgrass Research Initiative (NTRI) will be revised and updated. In summary, the goals and objectives of the meeting were as follows:

- 1 Provide a review and update on the research needs identified in 2017 and progress in securing funding to address research priorities.
- 2 Develop an understanding of research capabilities and locations within the federal, state, private and nonprofit sectors.
- 3 Prioritize and define turfgrass research needs on a regional and national basis.
- 4 Identify research capabilities within federal, state and nonprofit sources.
- 5 Consider a federal turfgrass competitive grants program, the mechanism for awards and organizational structure.
- 6 Organize a working group of stakeholders to advise and consult on national turfgrass research programs within federal or nonprofit funding sources.
- 7 Develop a strategy for implementation and funding of research needs. 

Morris, Kevin. 2006. The National Turfgrass Research Initiative. USGA Green Section Record. September-October, 2006, pp. 26-30.



Kevin Morris is the executive director of the National Turfgrass Evaluation Program. You can contact him at [kmorris@ntep.com](mailto:kmorris@ntep.com). Mike Kenna, Ph.D., is the research editor for *Golfdom* and can be reached at [mpkenna@gmail.com](mailto:mpkenna@gmail.com).

This project was funded in part by the USGA Green Section.

## NEWS UPDATES

### PROJECT DEMONSTRATES GOLF COURSE COOLING

Through funding provided by the United States Golf Association (USGA), researchers at the University of Minnesota and Michigan State University have demonstrated that properly managed golf courses provide the greatest amount of cooling among land uses, are more supportive of pollinators than urban residential or industrial areas and retain more nutrients from stormwater runoff than suburban or urban residential areas.

The Community Values of Golf Courses project quantified the environmental benefits of 135 golf courses in the Twin Cities metropolitan area as compared with five other land uses: natural areas, city parks, suburban residential zones, urban residential zones and industrial parks.

The research is part of the global Natural Capital Project, composed of groups that have developed a systematic approach that places a value on nature and the benefits it provides to people and their communities. Formed in 2006, key collaborators include the Nature Conservancy, World Wildlife Fund, Stanford University and the University of Minnesota's Institute on the Environment, among other leading sustainability organizations.

**I WANT TO LOOK BACK AT ALL THE GREAT INFORMATION PROVIDED BY TURFGRASS SCIENTISTS (IN 2020)."**

**Mike Kenna, Ph.D.**  
(see story on page 40)

//TURFGRASS TAKEAWAYS

# The year in review

**M**any will remember 2020 for COVID-19, protests and a contentious election. I want to look back at all the great information provided by turfgrass scientists. *Golfdom* offers an excellent platform for researchers to help you. I hope you find a summary of the research takeaways helpful as we wrap up 2020.

## Dollar spot susceptibility of bentgrasses

By Cole Thompson, Ph.D.

The turfgrass trials show that cultivar selection matters when considering dollar spot disease.

- Dollar spot severity varied for bentgrass cultivars within experiments and was generally less with fungicide applications and for the putting green study.

- Overall, however, a cultivar's relative susceptibility to dollar spot injury was similar in putting green and fairway experiments with or without fungicide applications.

- Kingpin and Memorial had the least dollar spot injury under all

scenarios (putting green and fairway, with and without fungicide).

- Crystal BlueLinks, Declaration, L-93 and SR1150 were consistently similar (Figure 1).

- Crenshaw and Century had the most dollar spot injury in all scenarios and were never in the same statistical group as the best cultivars.

- Further, dollar spot injury data were consistent in each experimental location and management scenario.

- Golf course superintendents should feel comfortable using the National Turfgrass Evaluation Program or similar data to assess relative dollar spot susceptibility of bentgrass cultivars, even when close-proximity data are not immediately available.

## Moving fungicides down in soil

By Wendell Hutchens, Travis Gannon, Ph.D., David Shew, Ph.D., Khaled Ahmed and Jim Kerns, Ph.D.

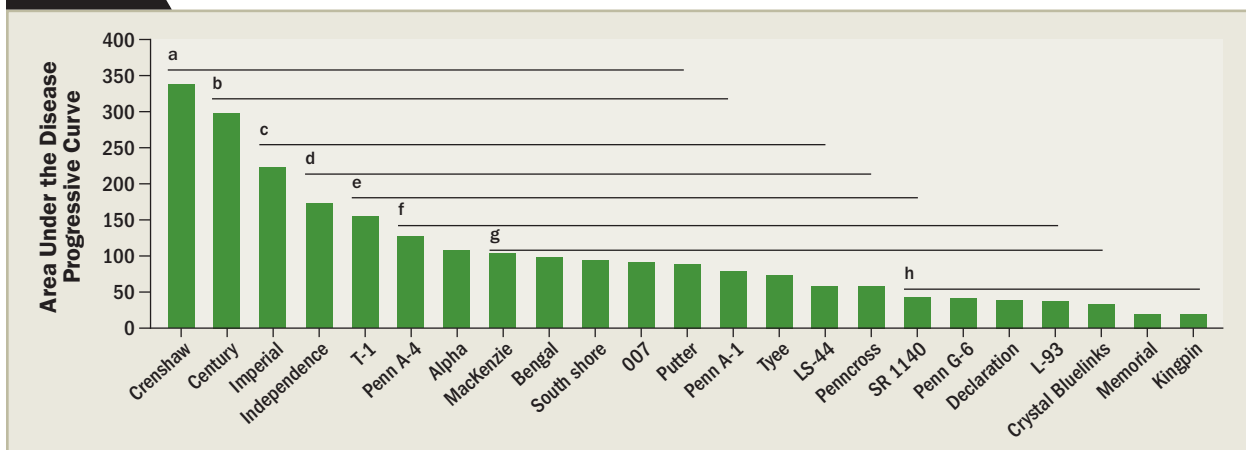
Soil surfactants can help get fungicides where the pathogen attacks the turfgrass (Photo 1).

- Diseases caused by crown- and root-infecting pathogens require products and methods that effectively aid their downward movement.

- Soil surfactants applied in combinations with fungicides increase the downward movement and efficacy for crown- and root-infecting pathogens.

- The research recommends applying fungicides with a water carrier volume of 2 to 4 gallons per 1,000 square feet with irrigation of 0.125 to 0.25 inch of water

FIGURE 1



Dollar spot injury (measured as an area under the disease progress curve) for bentgrass cultivars at putting green height and without fungicide treatment. These data are a mean of responses in Kansas and Wisconsin in 2009, as well as Kansas, Iowa, Oklahoma and Illinois in 2010. Means under the same horizontal bar are not statistically different according to Tukey's honest significant difference test ( $P \leq 0.05$ ).

PHOTO 1



Sectioning soil into 1-inch increments to recover applied  $^{14}\text{C}$ -fungicide.

immediately after fungicide application.

## A new pest in the desert Southwest

By Adam Van Dyke, M.S., CPAg, and Ben McGraw, Ph.D.

The two researchers discuss the emerging flea beetle pest problem.

- The Southwest U.S. has an emerging insect identified as *Chaetocnema minuta* Melsheimer or flea beetle.
- The flea beetle (Photo 2) is relatively

PHOTO 2



small — 0.08 to 0.12 inch in length — and has a dark metallic coloration.

- More research is needed to answer basic questions surrounding the pest's biology, ecology and management in turfgrass systems.
- Turf damage primarily on perennial ryegrass originates in the golf course rough that borders native areas.
- Limited data suggest adults lay eggs in the fall, and some eggs or larvae overwinter within the turf.
- The larval activity was detected in April but peaked in July in southern Utah.
- Controlling adult populations with contact insecticides will require extreme precision in timing.
- Larvae are less likely to be affected by contact insecticides as they are protected within the plant's stem, and preventive applications with systemic larvicides may be more appropriate.

## Product combos improve irrigation efficiency

By Marco Schiavon, Ph.D., and Jim Baird, Ph.D.

Using a plant growth regulator (PGR), soil surfactant and different nitrogen fertilizers can help improve water savings for bermudagrass fairways.

- Researchers tested a combination of PGRs, soil surfactants and sufficient nitrogen fertilization for water conservation on golf course fairways.
- None of the plots irrigated at 40 percent evapotranspiration (ETos) had acceptable turfgrass quality, normalized difference vegetation index (NDVI) or percent green cover comparable to those irrigated at 70 percent ETos.
- At 70 percent ETos, Primo Maxx, combined with Revolution, had the most positive effect on turfgrass quality, NDVI and percent green cover confirmed these findings.
- Except for May 2016 and 2017, bermudagrass irrigated at 70 percent ETos always provided acceptable quality.

## Controlling annual bluegrass on golf course putting greens

By Aaron J. Patton, Ross C. Braun, Geoffrey P. Schortgen, Daniel V. Weisenberger, Bruce E. Branham, Bill Sharp, Matthew D. Sousek, Roch E. Gaussoin and Zachary J. Reicher

A recent four-year experiment evaluated individual PGR and herbicide active ingredients applied up to 12 times per year in three U.S. states (Photo 3).

- Annual bluegrass (*Poa annua* L.; ABG) is among the most common weeds of highly maintained turf in the United States.
- In three Midwestern U.S. states, the researchers conducted a four-year systems approach experiment to control ABG on putting greens by examining seven season-long programs of plant growth regulators, herbicides and iron sulfate fertilizer with a July or September hollow tine aeration.
- Aeration timing did not influence annual bluegrass cover at the three locations.
- Monthly applications of iron sulfate alone did not effectively control ABG.
- The effectiveness of season-long treatments varied by location, but methiozolin, paclobutrazol or bispyribac-sodium consistently reduced ABG. None completely removed annual bluegrass.

## Tropical signalgrass — bringing an old foe to its knees?

By Bert McCarty, Ph.D.

Much research and product introduction have a problematic weed finally on the back burner.

- Tropical signalgrass is a warm-season perennial grass that spreads by stolons or seed and occurs when soil temperatures reach 77 degrees F (25 degrees C).

Continued on page 42

PHOTO 3



Study area being prepared for an application on Sept. 23, 2014. Three injured plots are evident from a late August application of Bensumec followed by early September Velocity applications. The treatment was discontinued shortly thereafter.

Continued from page 41

- Herbicide application timing is improved with a careful mapping of infested areas and recording spray applications.

- Fall herbicide applications are most effective, though, in many situations, interfere with fall overseeding or do not allow sufficient time for turf recovery before winter.

- All products and combinations will require multiple applications to achieve adequate control.

- To lengthen control, include a preemergence herbicide such as indaziflam, oxadiazon or proflamifen.

## ***BMPs for anthracnose on annual bluegrass putting greens***

By Bruce Clarke, Ph.D., James Murphy, Ph.D., and John Inguagiato, Ph.D.

Researchers at Rutgers University developed best management practices for anthracnose (Photo 4) while busting myths from the past.

- Plant nutrient deficiencies, ultralow mowing and excessively wet or dry

irrigation programs are critical stress factors that significantly increase the risk of severe damage from anthracnose.

- Avoiding deficiencies in nitrogen and potassium is critical to reducing anthracnose severity.

- The combination of three BMPs (increased nitrogen, higher mowing

and greater topdressing) can suppress anthracnose to acceptable levels without the use of fungicides.

- At lower mowing heights (<0.125 inch) to improve green speed, use higher nitrogen and routine topdressing practices to reduce anthracnose severity.

- Routine topdressing is most beneficial under conditions of lower mowing and lower nitrogen fertilization.

- Fungicide efficacy is improved, and a reduction in fungicide inputs (as much as 80 percent) is feasible with the adoption of BMPs.

- Following these BMPs with early-curative sprays can result in significant reductions in fungicide inputs and excellent disease control.

## ***Snow mold strikes again***

By Paul Koch, Ph.D.

Snow mold pressure was very high across Wisconsin and the Upper Midwest (Figure 2) showing minor environmental changes in a small area can lead to large changes in disease development.

- Snow mold breakthrough on

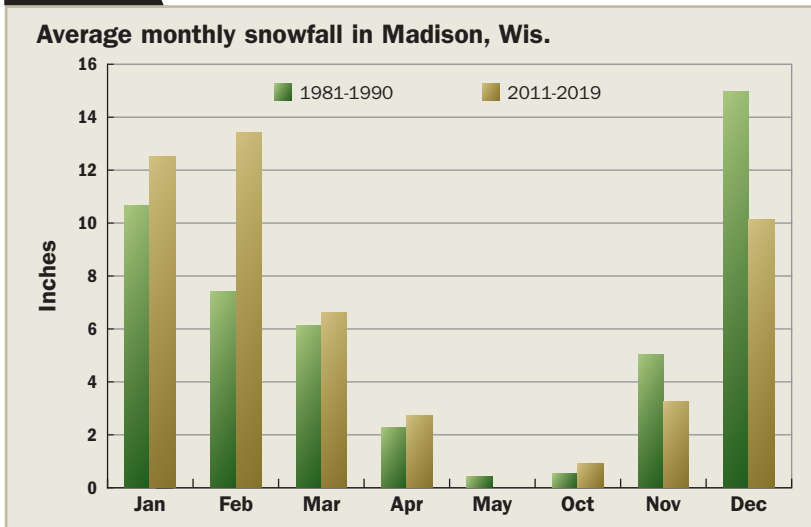
PHOTO 4



Researchers at Rutgers University have developed best management practices for anthracnose. In this photo, leaves have turned yellow to brown and are sprinkled with black spore-bearing structures.

PHOTOS BY: DANIEL WEISENBERGER (TOP), JAMES HEWPELUNG (LEFT)

FIGURE 2



Average monthly snowfall in Madison, Wis., has increased over the last 10 years in January and February but has fallen significantly in November and December. December is usually a critical time for snow mold development. The figure is taken from the website <https://news.wisc.edu/new-weather-normals-show-how-madisons-climate-has-changed-over-40-years/>.

fungicide-treated turf was very rare, suggesting that snow mold applications made in October and November knocked back the fungal population.

- We see increases in snow mold control when fungicide applications are made at heating degree day accumulations right around 100 (i.e., from July 1 of each year, record how much below 50 degrees F the average daily temperature was during the day).

- We have not found alternative methods (e.g., Civitas or phosphites) to control snow mold in areas where snow cover persists.

- The combination of three or more active ingredients applied at Marquette, Wis., resulted in 16 of 63 treatments with less than 5 percent disease, and at Wausau, Wis., 28 of the 63 treatments allowed less than 1 percent disease to occur.

- Almost all effective mixtures included a DMI fungicide (tebuconazole or propiconazole), a contact fungicide (chlorothalonil or PCNB) and an additional active ingredient such as pyraclostrobin, azoxystrobin or iprodione.

### Putting green management impact on golf cleat damage

By Thom Nikolai, Ph.D., and Doug Karcher, Ph.D.

The research answers a need for scientific evidence regarding how putting green

management may affect foot traffic's visible wear.

- Damage from golf cleats has become more noticeable with smoother putting green surfaces.

- Regular sand topdressing and grooming reduced damage from golf cleats.

- Higher nitrogen fertility and rolling increased visible damage from golf cleats.

- There was a correlation between visible wear damage from simulated golfer traffic and the volumetric moisture content in the surface of the putting green root zone.

### Annual bluegrass weevil sampling methods

Ana Luiza Sousa, Ph.D., Ryan Geisert, Ph.D., and Albrecht M. Koppenhofer, Ph.D.

Superintendents need to help delay annual bluegrass weevil (ABW) insecticide resistance by applying control products when and where they are necessary based on sampling (Photo 5).

Continued on page 44

PHOTO 5



Color-marked annual bluegrass weevil (ABW) adults released into a fairway-height creeping bentgrass plot.

Continued from page 43

- Adult ABW recovery in mower clippings from the putting green was 15 percent without and 24 percent with a brush attached in front of the mower.
- Mower clippings from a fairway only recovered 0.2 percent of ABW adults.
- Vacuuming with a leaf blower recovered only 4.5 percent of adults from a fairway but 31 percent from a green.
- Soap flushing with 16 fluid ounces of water containing 0.4 percent liquid dishwashing detergent applied twice recovered 83 percent of adults from a fairway within 20 minutes.
- Soap flushing was most effective with 16 ounces of water containing 0.8 percent dishwashing detergents applied twice and adults collected for 20 minutes.

## On-site testing for overseeded bermudagrass fairways

By Kevin Morris and Mike Kenna, Ph.D.

- Superintendents seek grasses that establish quickly, exhibit exceptional playability, are aesthetically pleasing and require fewer inputs.
- This trial focuses on the cultivar, blend and mixture performance of 25 entries, primarily under reduced (ET-based) water rates or saline (low-quality) irrigation water.
- Nine golf course sites, chosen based on geographic location and maintenance characteristics, were established in fall 2016 and 2017 in large plots on golf course fairways (Photo 6).
- Entries with perennial ryegrass had the best overall turfgrass quality in the fall and spring for both trial years.
- There was some variation in the performance of entries at the ET-based reduced irrigation locations versus the saline irrigation locations. **G**

PHOTO 6



Entries were established in 100-square-foot plots, replicated three times where fairway traffic is evident and outside of landing zones.

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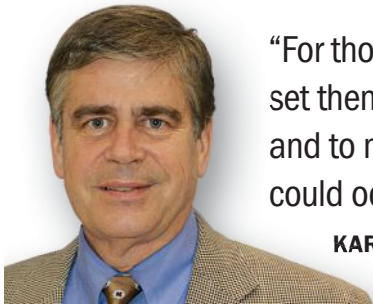
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PHOTO BY: DAVID GARDENER, PH.D.



“For those courses that will be open, set them up to be safe for the golfer and to minimize turf damage that could occur.”

KARL DANNEBERGER, PH.D., *Science Editor*

# Winter golf

**N**eedless to say, with winter’s arrival, the golf season ends for many northern golf courses. Although there are always a few die-hard golfers, the number of rounds fluctuates depending on weather conditions.

If we have a mild winter with warmer-than-normal temperatures and snowfall below averages, the number of rounds increases.

It is difficult to predict the upcoming winter season, and with the high probability of a La Niña occurring, the unpredictability increases. The coronavirus will contribute to the unpredictability by enhancing the number of golfers who want to play. Increasing COVID-19 infections, hospitalizations and deaths predicted through the winter puts more restrictions on movement, and increased confinement may cause a buildup of demand.

Similar to this past spring and summer, about the only activity that allowed you to get outside with a low risk of infection was golf. The desire to play winter golf will drive more golfers to play under marginal to normal winter conditions because there are so few options.

The advantages to winter play if snow is absent and temperatures are not too cold is the cheaper green fees and fewer golfers. Given the conditions, a round is quicker, often, fewer holes are played due to amount of day-

light and starts are pushed to later in the day due to frost. For single groups and groupings of more than four, winter rules (or COVID rules) have made winter golf the most open and free form of golf during the season.

Agronomically, keeping the golf course open for winter play is one of the more difficult decisions a golf course superintendent or owner will make. Turfgrass growth during the winter ceases. The lack of growth predisposes the turf to the potential of wear. Wear injury detrimentally impacts the turfgrass plant from the leaves to the crown to the roots. Additionally, wear areas, especially on tees and greens, are prone to *Poa annua* colonization.

Playing golf on dry unfrozen soil is probably the least likely to suffer wear injury. Precautions should still be taken to minimize wear injury. Reduce wear concentration on tees and greens by using temporary tees and greens. Locating tee markers at the start of the

fairway and the temporary green at the end of the fairway is a standard recommendation.

If temporary tees or greens are not an option, disperse traffic and wear patterns. This can include moving tee markers frequently or not having tee markers, changing cups relatively frequently and chaining or fencing off concentrated wear areas. Most importantly, you should be out monitoring the course looking for developing wear areas. Monitoring increases in importance if carts are allowed.

As the winter progresses, playing golf on frozen soils will result in increasing likelihood of wear injury compared to unfrozen soils, but little soil compaction will occur. The practices previously described should remain in place.

The riskiest agronomic situation to allow for winter play is on thawing soil (unfrozen wet surfaces) with the soil frozen below the surface. Both wear and soil compaction can occur. If possible, golfing under this type of situation should be avoided, but the decision can change daily.

For example, greens that are frozen in the morning may support play but could begin to thaw as temperatures rise during the day. The option of having temporary greens available can allow for a quick “course correction” by switching to a temporary green.

From an agronomic standpoint, winter play is not good for turf. The repercussion from minimal growth is little if any recovery from traffic or wear. If the weather cooperates and COVID-19 remains, golfing like this past summer is one of the few options for people to participate in a sport. For those courses that will be open, set them up to be safe for the golfer and to minimize turf damage that could occur. **G**

Karl Danneberger, Ph.D., *Golfdom's* science editor and a professor at The Ohio State University, can be reached at [danneberger.1@osu.edu](mailto:danneberger.1@osu.edu).



**Pythium blight** can largely be controlled using the ideology that an ounce of prevention equals a pound of cure.

## Be prepared, not scared

WHILE *PYTHIUM* BLIGHT CAN BE DEVASTATING TO TURFGRASS, PAYING CLOSE ATTENTION TO KEY TRIGGERS KEEPS SUPERS AHEAD OF THE GAME

When it comes to *Pythium* blight, be prepared, not scared, says John Kaminski, Ph.D., professor of turfgrass science at Penn State University. Yes, Kaminski says the disease can be devastating, but there are ways to stay ahead of the disease.

While fairways, tees and greens get preventive treatments, superintendents should scout areas where *Pythium* blight is more likely to occur, whether that's in the rough or areas with poor drainage.

"They still have to be paying attention and be aware of what's going on in areas more conducive for the disease," he says. "These areas can serve as indicators of more widespread outbreaks. These hot spots can give advanced notice and give them time to protect larger areas."

Superintendents might get complacent, he says, since

*Pythium* blight is not widespread or common, and they might try to stretch an application window.

As a graduate student, Kaminski says, one year, the disease occurred on generally less susceptible species, such as fine and tall fescues.

"Maybe the species isn't as susceptible as the other highly susceptible grasses, but there is the potential for it to come in and do damage in select years," he says.

There are key *Pythium* blight triggers. These include warmer nighttime temperatures, high relative humidity and extended leaf wetness of more than 12 hours.

"If you're in the 70s at night, and an afternoon or evening rainstorm occurs, it's a high probability that *Pythium* blight will show up," he says. "You've got to be covered." ©

PHOTO COURTESY OF: JOHN KAMINSKI, PH.D.



## Syngenta

**LANE TREDWAY, PH.D.**

Technical services manager



*Pythium* blight is a common problem on bermudagrass putting greens often misdiagnosed as leaf spot. On bermudagrass, it causes small brown to purple flecks or spots, which may spread in drainage or traffic patterns. Affected foliage has a greasy consistency when wet, but abundant mycelium is rarely observed. *Pythium* blight may also attack bermudagrass and zoysiagrass at fairway or rough height during prolonged periods of wet, cloudy weather. Areas that are poorly drained, shady or suffer from lack of air movement are likely to develop *Pythium* blight earlier than other areas. Monitoring areas regularly for symptoms can provide an early warning. Providing good soil drainage and air movement and avoiding overirrigation can help reduce disease pressure. However, when temperatures and moisture levels are highly conducive, preventive fungicide applications are needed. A *Pythium* prevention foundation is a phosphonate fungicide like Appear II fungicide tank mixed with an Action brand fungicide on a 14-day interval.

## PBI-Gordon Corp.

**BRIAN AYNARDI, PH.D.**

Northeast research scientist



In cool-season turfgrass stands, *Pythium* blight requires greater than 90 percent relative humidity for 14 consecutive hours, daytime temperatures in excess of 85 degrees F and temperatures higher than 65 degrees F at night to develop. *Pythium* blight is seen on warm-season turfgrass under less restrictive environmental parameters, especially on bermudagrass greens. Symptoms start as dark-colored, water-soaked pockets or spots on turf that have a “greasy” feel. A smoke ring may also be present at the edge of affected turf, which becomes bronze or tan in color. Cottony aerial mycelium is a characteristic sign, which is often followed by rapid death (blighting) of turf. Monitoring for conducive environmental conditions is key to deploying effective preventive fungicidal measures. Promote air movement by pruning shrubs and trees, avoid overfertilization and select fungicides that include any of the following active ingredients: cyazofamid, azoxystrobin, propamocarb and mefenoxam. Additionally, preventive applications of phosphites aid in control.

## Quali-Pro

**IAN RODRIGUEZ, PH.D.**

Technical services manager



Early signs of *Pythium* blight are darkened leaves that may feel greasy to the touch. These leaves dry to form brown spots that can grow rapidly, even spreading in a directional pattern if moved by mowing or water. With continued heat and humidity, the diseased areas can develop a white fluffy mycelium. It can be an issue on bermudagrass in fall through spring, but it is typically a more serious issue in cool-season turf during warmer months. *Pythium* species are water molds and are associated with heavy rain or irrigation events followed by warm, humid days. When *Pythium*-favoring weather conditions are in the forecast, preventive fungicide applications are recommended. If an extended program is required, be sure to rotate between FRAC fungicide codes to lower the risk of selecting for resistance. Minimizing leaf wetness by watering in the morning, improving drainage and controlling thatch can also help.

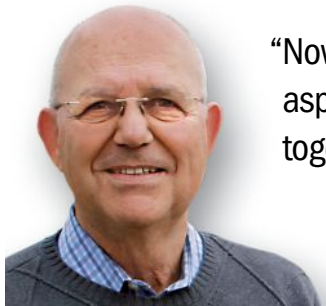
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**KEN HUTTO, PH.D.**

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For cool-season turfgrass, *Pythium* blight becomes a problem when environmental conditions are hot and humid (daytime highs in low to mid-90s and nighttime temps in mid-80s). This disease produces white, cottonlike mycelium, especially in poorly drained areas with little air circulation. Damage initially looks like water-soaked or greasy spots. Blighted, tan-colored turfgrass occurs in small circular patterns, which can follow drainage patterns. Improve air circulation by thinning trees or installing fans around troublesome greens. Avoid irrigating in late afternoon or early evening and avoid applying high amounts of nitrogen during hot, humid conditions. The most susceptible turfgrass to *Pythium* blight are perennial ryegrass, annual bluegrass, tall fescue and creeping bentgrass. In certain situations, ultradwarf bermudagrass can be susceptible. Fairways or greens cut into areas with low air circulation and poor drainage can be damaged more often than areas with good air circulation.



“Now is a crucial time that every aspect of turfgrass management join together to support research.”

MIKE KENNA, PH.D., *Research Editor*

## The Greek word for turf

**I**f you are reading this, you may be an agrostologist. Agrostology is from the Greek word *agrostis*, meaning a type of grass with *ology*, or study. I like to think that we are agrostologists first and then agronomists or plant scientists second.

So, agrostology is the branch of botany dealing with grasses. C.V. Piper and Russell A. Oakley, if asked, would have said they were USDA agrostologists, but by Nov. 20, 1920, they were the first USGA Green Section agronomists. Now that is much more comprehensive. Agronomists are “experts in the science of soil management and crop production.”

The USGA’s impact on turfgrass science received praise at the Turfgrass Stakeholder Summit II. On Oct. 20-22, 2020, the virtual meeting was a month shy of the 100th Anniversary of the USGA Green Section.

Since the beginning, the USGA Green Section has provided more than \$40 million in research grants. Most of this funding occurred since 1983 to support more than 600 projects at our land grant universities. Also, some of the money helped USDA-Agricultural Research Service (USDA-ARS) scientists focus on turfgrass problems.

The USGA, along with allied turfgrass trade organizations, worked to increase federal funding. In the late 1990s, an annual letter campaign to Congress kept the National Turfgrass Evaluation Program (NTEP) alive. We needed to do this

because a USDA-ARS leader tried to cut the remaining \$50,000 in-kind support for NTEP each year.

In 1998, USGA, NTEP, the Golf Course Superintendents Association of America (GCSAA), the Turfgrass Producers International (TPI) and other trade associations met with USDA-ARS leaders. This meeting led to the development of the National Turfgrass Research Initiative. Annual USDA-ARS funding for turfgrass increased to a little more than \$1 million. Since 2002, \$13 million has supported scientists at USDA-ARS for turfgrass research. The 2008 Farm Bill included the National Turfgrass Research Initiative. Also, TPI got the Office of Budget and Management to define turfgrass as a specialty crop. University turfgrass scientists now could apply for Specialty Crop Research Initiative (SCRI) grants. The USDA National Institute for Food and Agriculture runs SCRI. Since 2008, more than \$20 million has supported turfgrass research.

An additional \$3 million annually for the USDA-ARS is in the 2018 Farm Bill. The new money will provide funding for six locations throughout the U.S. Priorities are turfgrass drought, genomics

and ecosystem services. This Farm Bill funding is a significant breakthrough that will increase the number of turfgrass scientists in the USDA-ARS.

As the late USGA Green Section agronomist Stan Zontek used to say, “Golf is played on grass.” Golf has led the way in turfgrass research but has shared results and information with other turfgrass management areas. The impact turfgrass research has had on seed and sod production, sports turf, professional lawn care and even homeowners is significant.

Now is a crucial time that every aspect of turfgrass management join together to support research. Universities, government agencies, industry and nonprofits need to be at the same table working together. We need to learn more about the entire turfgrass industry’s acreage and economic impact.

We need to continually improve our important turfgrass species to tolerate environmental and biological stresses. How do we sustainably manage turfgrass across all of its essential uses? What is going on in the plant and soil microbiome?

What are the ecosystem services that golf courses and other landscapes with turfgrass provide to urban and suburban communities?

We need to implement best management practices and develop new technology to monitor and maintain turfgrass.

How do we help the seed and sod industry introduce and produce new cultivars that conserve water and have improved pest tolerance?

Even though we do not think of ourselves as agrostologists, the study of grasses that we use for golf, sports turf, lawns and right of ways needs to be supported. The allied trade associations, nonprofits, industry and government agencies need to make this happen. **©**

Mike Kenna, Ph.D., is the retired director of research, USGA Green Section. Contact him at [mpkenna@gmail.com](mailto:mpkenna@gmail.com).

# Coastal

HERBICIDE



## PROTECTING SOUTHERN TURF FROM COAST **TO** COAST

Turf professionals across the South are calling it the most all-encompassing and easy-to-use herbicide for southern turf available today. With three active ingredients, COASTAL™ outperforms the current industry leader on *Poa annua* with no tank-mixing required — a true one-jug solution. It also offers superior control of crabgrass and other hard-to-control weeds and can be used safely on all four of the major warm-season turf grasses. Ask your distributor about COASTAL. The ultimate, easy-to-use herbicide for southern turf.



**SIPCAM AGRO**  
USA, INC.

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# The Shop

// MUST-HAVE NEW PRODUCTS



1

## 1 ArborPlex

**ARBORJET**'s ArborPlex forms the foundation of the Arbor Rx Program. ArborPlex (14-4-5) is formulated with slow-release nitrogen from urea-triazone, high-quality phosphorus and potassium, as well as micronutrients. It is designed to provide consistent, extended feeding for trees and shrubs. It is an ideal solution for improving tree, shrub and ornamental development and vigor without excessive shoot growth.

[Arborjet.com](http://Arborjet.com)



2

## CHECK OUT MORE NEW EQUIPMENT ONLINE

To stay up to date on all the latest products and services, visit [golfdom.com/category/products](http://golfdom.com/category/products)

## 2 Jr. Sod Cutter – Hydro

The Jr. Sod Cutter – Hydro by **RYAN** features a variable speed hydrostatic transmission with forward and reverse drive. The transmission also runs independent of the cutting blade, providing a consistent, quality cut regardless of the drive speed. It comes in 18-inch and 24-inch cutting widths. The new models feature the signature Ryan cast-iron gear case that encloses oil-lubricated final drives to both wheels and the cutting blade.

[RyanTurf.com](http://RyanTurf.com)

## 3 Grapple Saw with Total Tree Control

**GMT EQUIPMENT**'s grapple saw with total tree control (TTC) can grasp the tree with the ability to keep or hold tree sections in position when removing them. The company fitted a double knee joint above the rotation section and the attachment to the crane or telescopic handler. Each knee joint has a hydraulic cylinder and brake linings, which are clamped in place by the hydraulic cylinder pushing both suspension lugs toward each other. One push of a button transforms the pivoting grapple saw into a fixed grapple saw. It's available in a 16-inch GMT035 TTC and a 20-inch GMT050 TTC (pictured) felling diameter.

[GMT-Equipment.com](http://GMT-Equipment.com)



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6

#### 4 | SmartPhos DG

SmartPhos DG by **THE ANDERSONS** provides plant-available phosphorus over an extended period of time, resulting in high availability and lower use rates. SmartPhos DG contains Struvite, a unique combination of recycled phosphorus and magnesium. SmartPhos DG also features dispersing granule (DG) technology, allowing each granule to disperse into thousands of microparticles with irrigation, resulting in improved playability. SmartPhos DG is safe for use on seedlings and established turf and will not alter soil pH.

[AndersonsInc.com](http://AndersonsInc.com)

#### 5 | Multifunctional Neck Gaiter

Made from a moisture-wicking, breathable blend of lightweight polyester and spandex, **MILWAUKEE TOOL**'s neck gaiter is designed to keep users dry and comfortable all day with an ultraviolet protection factor of 50-plus and odor-resistant technology. It can be worn as a face covering, headband, neck guard or any other adaptable solution. The breathable gaiter blocks harmful UV rays and prevents odor buildup with built-in sun protection and antimicrobial odor resistance. It's washer and dryer safe and is available in three colors: gray, high-visibility and red.

[MilwaukeeTool.com](http://MilwaukeeTool.com)

#### 6 | UTV Tool Rack

Standard Golf's Ultimate Utility Vehicle (UTV) Tool Racks give UTVs more functionality, according to the company. Users can customize the tools needed for the job without sacrificing the cargo capabilities of their UTV. A simple universal bracket can be added to the exterior box of the UTV to carry a hole cutter, hose, rope spindle, trash can or use two brackets and connect a mobile desk.

[StandardGolf.com](http://StandardGolf.com)

# The 19<sup>th</sup> Hole



## Tom Fisher

**SUPERINTENDENT** // Wildwood Golf Club, Allison Park, Pa.



**After 18 holes of golf, what can I get you to drink?** I'll take anything from the LaCroix vintage at this time. I've got a toddler and an infant, and the brain fog of a 2 a.m. bottle is never worth any type of libation. In my more formidable years, I'd have one of anything.



major, Andrew Dooley, and he said, 'why don't you go into this?' The rest is history.

**Tell me about your young family ...** We've got a little girl, two and a half years old, and a little boy about 6 months. My wife, Mary Katherine, works in the oil and gas industry in the Pittsburgh region. We've been married since 2012 and met at Penn State.

**Tell me about Wildwood GC.** Wildwood was founded in the 1960s. Prior to that, it was a golf course but had changed hands between the Boy Scouts of America and the University of Pittsburgh. It was designed and built by Emil Loeffler. He built and designed a lot of courses in the Pittsburgh area. We've had a U.S. Open qualifier and a U.S. Senior Open qualifier a few years ago. On paper, it's short, but it's got teeth. We just had a club pro event, and it wasn't too friendly to anyone.

**What drew you to Penn State?** I wanted to get into landscape architecture to build golf courses. They asked me for my portfolio, and I said, 'I don't have a portfolio.' My roommate at the time was a turf

**What's your favorite tool in the shop?** I have a cup cutter on me every day. I like to cut cups as often as possible. That way, I know the moisture of the greens, and if there's insect damage, I can dig right in. If

I could hook it on to my belt loop, I would.

**What was playing on the radio on the morning commute today?** WYEP is our local public radio music station. Every morning, they do a Grateful Dead tribute called 'Waking the Dead.' It goes really well with coffee.

**What was the coolest thing you saw in 2020?** The uptick in rounds. The weather was fantastic for getting outside and golf. It was great for the pandemic, keeping people outside. To have so many golfers who were appreciative to play in good weather with good conditions ... just a good summer.



**Do you have any holiday traditions you really enjoy?** On Christmas Eve, my buddies and I have breakfast at Piper's Pub on the south side of Pittsburgh. We'll sit there for four hours, and breakfast graduates to beers. I don't think that'll happen this year with the dining restrictions. Beyond that, my mom will do Seven Fishes — it's an Italian thing — on Christmas Eve. I'll go out and get two dozen oysters. Nobody else likes them, so I pretty much eat two dozen oysters on Christmas Eve.

As interviewed by Seth Jones, Nov. 10, 2020.

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PHOTO OF TOM FISHER BY ANNE HUTCHINSON

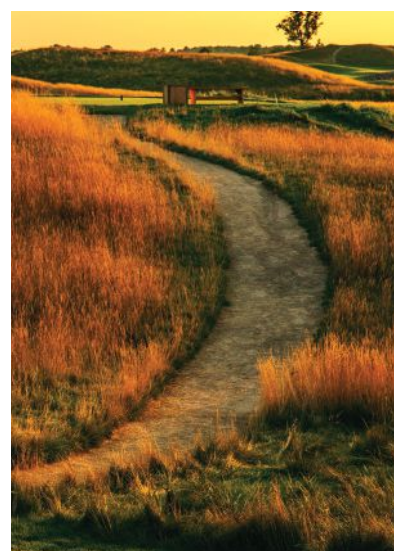
**// BEST ADVICE**

**"SOMETIMES, IT'S PARALYSIS BY ANALYSIS. YOU JUST NEED TO STEP BACK AND RELAX. DO WE TOPDRESS AGAIN? DO WE BREAK UP THE ICE? SOMETIMES, THE HARDEST THING TO DO IS NOTHING AT ALL."**



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# What if a Pythium Product Did More?



## **Union™ Fungicide SC:**

Dual mode-of-action control of all Pythium diseases and 17 other diseases in a single product.

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## **Union™ Eliminates:**

- All Pythium Diseases
  - Brown Patch
  - Summer Patch
  - 15 More Turf Diseases
- 

## **+Plus**

**Union also eliminates the time and labor needed to tank mix fungicides.**