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Mary Corcoran captured this crew heading out for a day's work at dusk. We think the photograph gives off an aura of hope.



Turfgrass Trends

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thing in their arsenal — from

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Pesticide Programs and Pesos - Todd Mayhew, a regional field development manager for Valent Professional Products, discusses pesticide programs and money in this podcast interview with Golfdom Editor in Chief Larry Aylward.



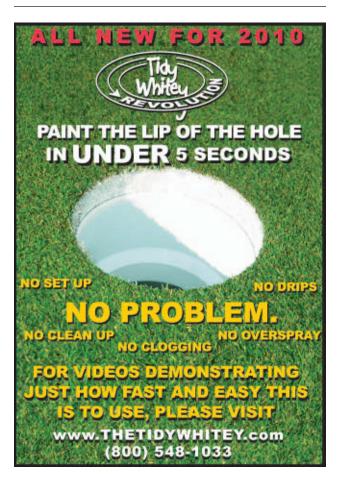
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Larry Aylward EDITOR IN CHIEF 216-706-3737

Seven-time winner of the national Folio: Award for editorial excellence

EDITORIAL STAFF

Dan Jacobs Assistant Editor 216-706-3754 Carrie Parkhill ART DIRECTOR 216-706-3780 Geoff Shackelford CONTRIBUTING EDITOR Joel Jackson Contributing Editor Anthony Pioppi CONTRIBUTING EDITOR Ron Furlong Contributing Editor Christopher S. Gray CONTRIBUTING EDITOR John Walsh Contributing Editor Jim Black CONTRIBUTING EDITOR Karl Danneberger SCIENCE EDITOR Mike Klemme PHOTOGRAPHER

laylward@questex.com djacobs@questex.com cparkhill@questex.com geoffshackelford@aol.com flarn@aol.com apioppi@earthlink.net rfurlong5@gmail.com cgray@marvelgolf.com iwalsheditor@gmail.com greenkeeperjim@yahoo.com danneberger.1@osu.edu mike@golfoto.com

BUSINESS STAFF

CLEVELAND HEADQUARTERS

600 SUPERIOR AVENUE, EAST, SUITE 1100 CLEVELAND, OH 44114, FAX: 216-706-3712

Patrick Roberts PUBLISHER 216-706-3736 proberts@questex.com Dave Huisman NATIONAL SALES MANAGER 732-493-4951 dhuisman@questex.com Cate Olszewski SALES REPRESENTATIVE 216-706-3746 colszewski@questex.com Brian Olesinski sales representative 216-706-3722 holesinski@questex.com Kevin Stoltman GROUP PUBLISHER 216-706-3740 kstoltman@questex.com Petra Turko SALES ASSISTANT 216-706-3768 pturko@auestex.com aterch@auestex.com

Amber L. Terch PRODUCTION MANAGER 218-279-8835 Jamie Kleist PRODUCTION DIRECTOR 218-279-8855

Antoinette Sanchez-Perkins AUDIENCE DEVELOPMENT 216-706-3750

asanchez-perkins@questex.com

ikleist@auestex.com

GOLFDOM ADVISORY STAFF

Jim Barrett, ASIC JAMES BARRETT ASSOC

Pat Blum COLONIAL ACRES GC

Joe Boe WINDERMERE GC

Terry Bonar, cgcs Canterbury GC

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MARKETING/MAGAZINE SERVICES

Reprints 800-290-5460 ext. 100

Ilene Schwartz CIRC. LIST RENTAL 216-371-1667 Subscriber, Customer Service

866-344-1315; 847-763-9594 OUTSIDE THE U.S

golfdom@theygsgroup.com ilene@krolldirect.com

chatcher@questex.com

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Kerry C. Gumas PRESIDENT & CEO Tom Caridi executive vice president & CFO Tony D'Avino executive vice president Gideon Dean EXECUTIVE VICE PRESIDENT



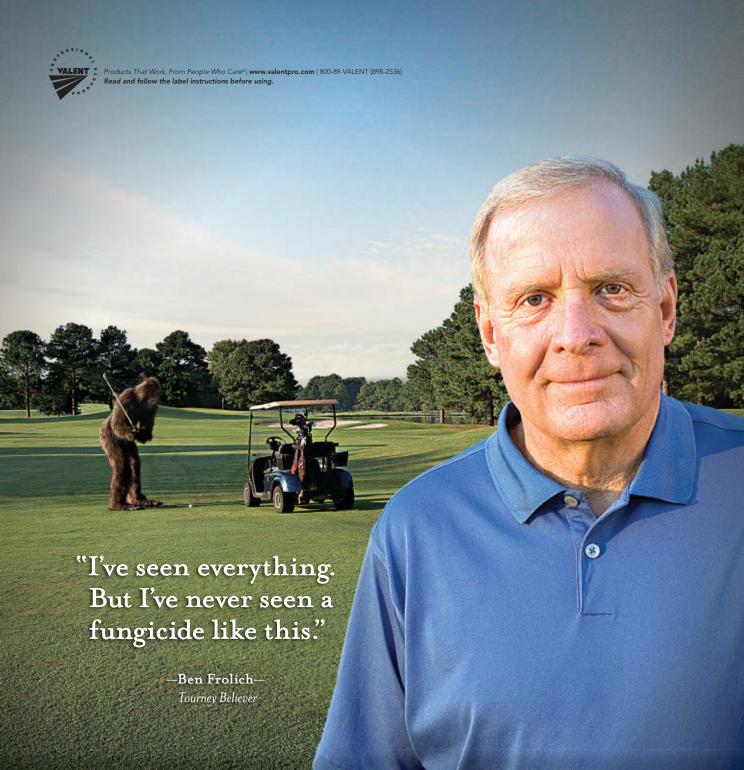
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Pin High EDITOR'S COMMENTARY

as the Golf Industry Show seen better days? In case you haven't noticed, the show is in decline on at least two fronts.

Two years ago in Orlando, the show attracted 26,000 attendees and exhibitors accounted for about 301,000 square feet. Last month in San Diego, the show attracted 16,000 people and exhibitors accounted for about 204,000 square feet.

This is not good, considering the Golf Course Superintendents Association of America gets about 40 percent of its annual revenue from the show. Declines in attendance and exhibitors mean less receipts. Alas, a few questions arise: Can the show make a New Orleans Saints-like come back? And if it can't, can the show survive as a lesser event? More importantly, can the GCSAA function solidly with less revenue coming from the show?

This is not to point fingers at the GCSAA for the show's decline. It's not the association's fault. Let's not forget the catalyst in this is the big pink elephant known as the Great Recession. The lousy economy hasn't spared the golf industry.

But some people think there's more to this equation than just blaming the GIS's decline on the sour economy. These people think trade shows, in general, are dinosaurs and are slowly becoming extinct. That's why they think the GIS is on a down-bound train. Only time will tell if they're correct.

I contacted GCSAA CEO Mark Woodward a few days after the show to talk about the state of the show and some of the rumors ("Hey, did you hear the show is gonna be every two years?") flying around San Diego last month.

Woodward realizes the GCSAA must find other sources to gain revenue it's losing from the show. It's a big concern, Woodward says, and the wheels are spinning inside the GCSAA headquarters in Lawrence, Kan. They're looking for ways to create new business, some of which could come from online programs and environmental initiatives.

"It's a daily conversation around here," Woodward says.

The State of the Golf Industry Show

BY LARRY AYLWARD



THE CATALYST
IN THIS IS THE
PINK ELEPHANT
KNOWN AS THE
GREAT RECESSION

Despite the show's declines, Woodward points out that it's still a big revenue producer and is vitally important to the GCSAA's success. Yeah, he believes some trade shows are dinosaurs, but not the Golf Industry Show. He says the GIS is "evolving" and is not going anywhere.

That said, realizing the expense outlay for exhibitors and attendees to travel to and stay in cities like San Diego, Woodward doesn't rule out less-expensive future show destinations to ease costs on exhibitors and attendees. In fact, Woodward told me a "deep-dive discussion" is set for this month with GCSAA representatives, its partners and the board of directors to "talk about everything and anything" related to the show.

One thing is certain for the time being: The GCSAA is committed to holding the show annually, Woodward says. There's no big push to have it every two years.

Woodward didn't dismiss another idea being floated — a merger of the GIS with the PGA Merchandise Show. If it's worth discussing, it will be discussed, he says.

Woodward is an optimist, but even he can't guarantee the show can come back to its 2008 level, especially now that the Club Managers Association of America has dropped out. But despite the show's diminution, Woodward believes it can function successfully as a smaller event.

But it's safe to say nobody wants to see it get smaller. And most everyone wants a strong show. Alas, next year's show in Orlando will be a telltale sign regarding the health of the event. Orlando is a favored site and most always draws well. It's also an easier place to get to because most courses are located on the east side of the Mississispipi River.

We'll know a lot more about the state of the Golf Industry Show a year from now.

Aylward can be reached at laylward@questex.com.

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From the Back Tees

OPINION

he phrase "four-letter word" usually denotes a cuss word. But not in all cases. For instance, I recently heard a story about a nature cruise along Florida's southwest coast. The tour guide launched into a presentation about threats to the local estuary - one of them being red tide, a toxic algae bloom. These outbreaks have been reported in Florida and elsewhere since the 1800s. But on this day, the tour guide said without pause that "90 percent of the red tide was caused by golf courses using fertilizer." Period. End of story. "Golf" was definitely a bad four-letter word to her.

Upon reflection, there are many more beneficial four-letter words synonymous with what the game and industry brings to people and places around the world. Words like "earn," "give," "live," "save," "care," "play," "calm" and "cool" come to mind.

Golf is a \$76 billion industry in the United States and helps two million people earn a living. It also gives more charitable donations than any other sports-related industry. The biodiverse ecology and habitats on a golf course offer unique environmentally friendly green space.

When modern golf courses are designed with wildlife corridors, wetlands and lakes, buffer areas and native landscaping, locally threatened and endangered species like bald eagles, eastern bluebirds, fox squirrels and gopher tortoises have thrived and multiplied. Hence, words like "save" and "care" are demonstrated time and again on golf course properties. More and more older golf courses are being retro-fitted with more native areas and low-input management regimens.

For example, while playing in a local chapter research tournament on an urban golf course surrounded by residential and commercial development, I enjoyed a bald eagle soaring overhead in lazy figure-eight patterns; an osprey perched in a treetop eating a fish; three raccoons checking out our golf cars for snacks; downy and red-bellied woodpeckers seeking food in a snag; and, last but not least, 18 cormorants hunkered down in the sun along a

'Golf' Is Not a Four-Letter Word

BY JOEL JACKSON



GOLF CAN BE A PASSION, A PASTIME OR A PROFESSION. IT CAN BE A LIVELIHOOD OR A LEISURELY PURSUIT

lake bank while a great white heron waded by looking for a meal.

As for the words "live" and "play," the slogan "Golf — The Game of a Lifetime" has been used to promote the game for some time now. As our society becomes so time-crunched and focused on instant gratification through our time-saving (or is it our time-wasting) devices and gadgets, we begrudge a few hours spent outdoors on the verdant swards of grass as a burden rather than a respite in our helterskelter lives. You can learn to play golf as a junior and continue right up into your golden senior years. My parents didn't take up the game until my dad retired at age 65, but they joined a small nine-hole club near Crescent City, Fla., where they played two to three times a week, made new friends and enjoyed an active social life for the next 20 years.

Golf can be a passion, a pastime or a profession. It can be a livelihood or a leisurely pursuit for millions. Golf can be a maddening habit or a thriving habitat. It can heat up competition or cool down the planet by sequestering millions of tons of carbon. Golf courses use one-half of one percent of the water pumped in the United States for irrigation, while at the same time they "save" resources by capturing, filtering, storing and recharging millions of gallons of rainfall and help prevent runoff and erosion.

Golf may be a lot of things, and mostly misunderstood, but one thing is for sure — golf is definitely not just a bad four-letter word.

We need to shout out the right word about golf for all, especially for misguided tour guides, to hear.

Certified Superintendent Joel Jackson is executive director of the Florida GCSA.

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Turf M.D.

THE DOCTOR IS IN THE HOUSE

t this time of the year, discussion of "growing degree days" is often synonymous with *Poa annua* seedhead control. Originally, growing degree-day (GDD) models were developed to predict when *Poa annua* seedheads would emerge and when their peak production period would occur.

The practical application for a *Poa annua* GDD model was to time mefluidide applications for seedhead control. Lately, the concept of GDD has been expanded and used for other PGR combinations. Since the idea of using GDD for *Poa annua* seedhead control originated more than 20 years ago, there has always been some degree of confusion of what they are and how they should be used. In this article, I hope to clarify (or add more confusion to) the concept of using GDD.

A degree day, also known as growing degree days and heat units, is a measure of heat above a threshold for one day. Growing degree accumulation is a reflection of the accumulated degree days, or growing degree days or heat units above a threshold for consecutive days.

The threshold temperature, or as it's commonly known as the base temperature, can vary depending on the organism or plant. However, the most common base temperature is 50 degrees Fahrenheit (10 Celsius).

A growing degree day can be calculated using various methods. One method is to use a sine curve as an approximation of a diurnal temperature curve (Baskerville and Emin, 1969; Danneberger and Vargas, 1984). Some of the weather stations on the market calculate GDD using this type of method or a version of it. However, the most common method for calculating GDD is:

GDD = (max + min)/2 - base

where

GDD = **Growing Degree Day**

max = maximum temperature for the given day

min = minimum temperature for the given day

base = base temperature

The Concept of GDD And How It's Used

BY KARL DANNEBERGER



THERE HAS ALWAYS
BEEN SOME
CONFUSION SINCE
THE IDEA OF USING
GROWING DEGREE
DAYS FOR POA
SEEDHEAD CONTROL
ORIGINATED

A sample calculation would look something like this:

maximum temperature of 66 F minimum of 54 F, base temperature of 50 F GDD = (66 + 54)/2 - 50 = 10

In calculating GDD, keep in mind:

- There are no negative GDD. In other words, if you were to make a GDD calculation and the number was less than 0, the GDD for that day would equal 0.
- GDD from each day are summed up across the days. For example, if on day one the GDD was 10 and the following day the GDD for the day was five, then the accumulated total for the two days would be 15. If on the third day the GDD was 0, then the accumulated GDD's would still be 15.
- Fahrenheit and Celsius are not the same. Depending on which temperature units are used, the GDD accumulation will be different. The table to the left provides a comparison between calculating GDD on Fahrenheit or Celsius. Notice that the difference between the two grows dramatically.
- The base temperature remains constant throughout the length of the GDD season. For example, if 50 F is used, it's used for all the calculation. Also, the base temperature needs to be consistent with the temperature units either Fahrenheit or Celsius.
- GDD models have no units. The accumulated number is useful in determining phonological stages of plant growth or stages in an organism's development.

Hopefully, I've clarified a few things.

Karl Danneberger, Ph.D., Golfdom's science editor and a turfgrass professor from The Ohio State University, can be reached at danneberger. 1@osu.edu.



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lot of golf course superintendents didn't make it to the Golf Industry Show last month in San Diego because their courses and clubs couldn't afford to send them in this tough economy. Not to rub it in, but they missed a good time in one of the nicest cities in the country and a good show at the San Diego Convention Center. No worries, though, you can read about what you missed right here.

For the record, attendance was 16,156, including 7,029 qualified buy-

Mike Ditka shakes hands with Mark Salisbury, certified golf course superintendent of Starr Pass in Tucson, Ariz. Ditka appeared at the BASF booth and drew a huge crowd for autographs. (Below) Chris Gardner makes a point during his keynote address.

ers, during the two-day trade-show portion of the event held Feb. 8-12. But that was down from the 17,151 who attended last year's show in New Orleans, which was down from the year before because of the Great Recession. Booth space square footage dropped from 257,900 in New Orleans to 204,300 in San Diego.

economy, but the

Golf Industry Show

still packed a punch

BY GOLFDOM STAFF

The Golf Course Superintendents Association of America, however, expressed delight with attendance because it was expecting about 15,000. The aisles on the show floor certainly appeared more crowded. In fact, Christopher S. Gray Sr., superintendent and general manager of the Marvel Golf Club in Benton, Ky., and a *Golfdom* contributing editor, could've sworn the aisles were narrower, considering the constant congestion he was running into. But the GCSAA says the aisles were as wide as they normally are.

There were fewer social events at the show than in years past, but there was still plenty to do, considering the abundance of nightlife in the nearby Gaslamp Quarter. During the day, the *Golfdom* staff was running to cover seminars, press conferences and other activities to bring you this report:

Homeless, but not hopeless

"Every time I see the movie 'The Pursuit of Happyness,' I'm absolutely amazed. How did those people spend \$70 million to tell a story about what I did with nothing?" jokes Chris Gardner, who

Continued on page 12