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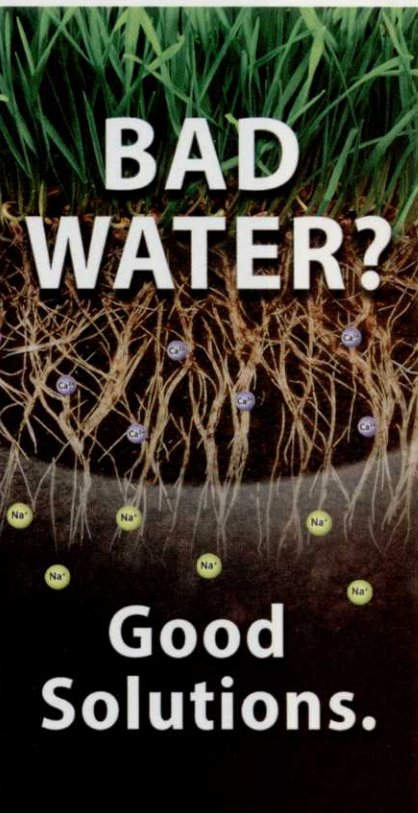
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# More than a HOLE IN ONE

When a colony of animals calls your golf course home, it may be easier to just move them. By Katie Tuttle

**A** golf course is often home to many different pests and obnoxious creatures that wreak havoc on the turf. A lot of times it is easier to try to get rid of them, but maybe that's not the right answer. Maybe you need to move them.

That's what The Heritage Golf Course at Westmoor did with the prairie dog colony thriving on the land the course was built on.

Prior to construction in 1998, Heritage worked with Audubon International to create a best management practices plan that would ensure the course be built Sanctuary Certified.

One of the issues with the land was that a prairie dog colony containing 100-150 prairie dogs was located on the front nine of the planned course.

"We thought instead of trying to work around the prairie dogs, we'd move them," says superintendent Lance Johnson.

An area of similar size to the colony was identified southeast of No. 5 and construction began. A contractor came to the course and made starter holes five to six feet deep for the prairie dogs to expand upon and create their own tunnel system. After the new habitat was created, they were able to start the relocation process.

A prairie dog specialist came out to humanely remove the prairie dogs from their holes. Using a 250-gallon water trailer filled with water and

dish soap, the specialist stuck the hose in the holes and filled them with soapy water. The soap would irritate the prairie dog's eyes and they would crawl out slowly, making it easier to catch them. The process took a few weeks and they ended up catching 120-130 of them.

Since the relocation, the colony has existed, even though the size has dwindled. A bubonic plague outbreak down the road within the last few years traveled to Heritage's colony, resulting in the loss of some of the prairie dogs. Currently, there are 20 to 30 left.

Despite the new holes, some of the prairie dogs did continue to come out onto the course. To discourage that, Heritage put in a buried chain link fence, roughly 600 feet long. The fence was eight feet tall, and they put about five feet of it into the ground. They also used straw bales and native grass to build a better environment to keep them there.

"We were trying to create a visual barrier, because if a prairie dog can't see it, they won't go there," Johnson says.

The habitat isn't perfect, but Johnson says it gets the job done.

"Every now and then we get a couple coming across," he says. "As the years have gone by, they're less and less interested in coming to the golf course." **GCI**

*Katie Tuttle is GCI's assistant editor.*



The course had a contractor make starter holes for the prairie dogs to expand upon.



**Jeffrey D. Brauer** is a licensed golf course architect and president of GolfScapes, a golf course design firm in Arlington, Texas. Brauer, a past president of the American Society of Golf Course Architects, can be reached at [jeff@jeffreybrauer.com](mailto:jeff@jeffreybrauer.com).



DESIGN CONCEPTS

## BETTER PRACTICE RANGES

A PGA pro once told me, “If the last decade was the construction decade, this one should be the instruction decade.” I thought of that during Masters Week, while looking at their new and improved practice range. Like most things at Augusta, it sets the standards others will shortly follow.

The original Augusta layout was like many early 20th century routings, and its practice areas were almost afterthoughts. Like the hockey goalie mask, it took far too long for an obviously good idea to become standard practice. However, driving ranges eventually became standard features, and later, practice sand bunkers, chipping areas, and target greens.

The evolution continues, and a modern practice facility, epitomized by Augusta National, seeks to truly recreate a multitude of conditions you might experience on the course.

Range design has become a lot more complicated. The new features also require more land – an increase from about 10 acres to over 15.

With 99 percent of golfers spending the most time just “banging balls” the basics remain the same – big tees and wide landing areas. Practice range tees need 20-30 days for turf recovery, so we design practice tees at least 30 yards deep, and prefer more.

Tee width should accommodate the weekend morning or shotgun tournament. Allowing an hour of practice before the tee time means accommodating 20-28 players, and shotgun tournaments might accommodate a quarter of the 144 players, if done in shifts. With 10-12 foot-wide stalls, your tee should be 240-360 feet wide.

The landing zone should be at least 300 yards long and 500 feet wide. 330 yards and the tee should gently curve to help aim all golfers to the middle. 330 yards long and 600 feet wide is



preferred to contain nearly all shots. The ideal practice range plays into the prevailing wind, which accentuates missed shots. It may help shorten the range, but require widening. A few ranges have multiple tees at different wind angles, with the ultimate being a full circle practice area allowing golfers to practice in any wind direction.

The true practice value comes from adding details:

**Target Greens.** Placed at a variety of distances, and looking more like real greens and less like little dirt humps. Augusta actually replicates on course greens closely. However, it's more important that you provide opportunities to practice to “tucked pins” on all corners of a green.

**Target Fairway.** Augusta actually has two target fairways, split with a line of trees, with one set up for hooks/draws and the other for fade tee shots.

**Variable Hitting Conditions.** Rather than a flat tee of fairway grass, golfers need both rough and fairway grasses for full practice. Since fairway lies are rarely flat, some tee areas ought to have gentle slopes in all directions. Of course, this includes a

fairway sand bunker, and grass bunkers, mounds, and other conditions found on the course, down to hitting from under a typical tree. Where possible, shots to severely uphill or downhill greens should be recreated.

**Short Game Area.** The putting green should be carefully crafted to resemble the slopes on the course greens.

The chipping green should be similar in size to on course greens, and with a variety of typical hazards so golfers can practice any recovery shot they will likely encounter on the golf course including green side sand and grass bunkers, rough and fairway height chipping areas, and some mounds and valleys to negotiate. The green should have a variety of slopes towards and away to recreate almost any combination of hazard shot to green slope, replicating high lobs, chip and run, short and long bunker shots, deep bunker shots, and shots from any unusual lies.

**Distance Control Area.** At one area, placing a line of markers at 10-yard intervals from 40-110 yards so golfers can practice precise distance control for short approaches. **GCI**



# A journey, not a *destination*

GCI's Bruce Williams outlines a practical guide to adopting sustainability principles at your course.

by Bruce Williams

**T**he concept of sustainability in golf has been developing over the last couple of decades. Early origins came from across the pond as the term “sustainability” was being used more frequently in the UK. While it was a slow process, the terminology and concept has slowly grown in North America to the point that a variety of organizations have embraced the concept.

Most of the regional golf turf conferences have presentations that cover this subject. As golf evolves to find its “new normal” it will be important for the game and business to support sustainability.

**SUSTAINABILITY?** Each golf course can implement sustainable natural resource management in all facets of the business. It is important to note that the concept of sustainability is not about reaching specific criteria in a short period of time but more importantly having a plan that makes progress to ensure a golf course utilizes efficient and environmentally friendly practices. Those practices are broad and several different organizations have written criteria and checklists to guide a facility through the process.

The types of initiatives should include:

- Recycling
- Use of energy renewable resources
- Utilizing environmentally friendly pest control inputs

- Irrigation management to reduce overall reduction in water usage
- Zero Waste generation
- Continuing education for staff and communication to golfers and the community

It is easy to understand that moving toward sustainability is a project that can take many years and the process is never ending. It is all about setting goals for the short, medium and long term. As science and technology advance there will always be new ways to do things more economically and efficiently. Through continued advances in science and research the bar will always move higher in creating opportunities for facilities to be environmentally friendly.



ation

## Reasons for sustainability

- Real results based on science, technology and proven case studies
- Credibility through certification and validation of standards
- Good for the game and the image we portray around the globe
- Stakeholder trust through involving staff, golfers and the community to promote environmentally friendly programs
- Continual improvement through a journey rather than a destination
- Creating efficiencies with a golf facility that is all important for economic survival

A good way to look at becoming sustainable is to develop a plan that may not be achievable in the short term but a plan that is carried out over time. Most certification programs have components that not only measure progress but they also ensure that each recertification period must show improved sustainability from previous years.

**ZERO WASTE.** One of the most aggressive programs for sustainability is the Zero Waste Program undertaken by the Dairy Creek Golf Club operated by the County of San Luis Obispo in California. Led by, Josh Heptig, director of golf operations the goal was simply to manage all inputs on the property and achieve a goal of no waste.

As stated earlier facilities go through a process. Dairy Creek GC was no different. Their initial steps were to analyze the situation and develop a game plan. Part of that process was to find solutions and also to develop partners to collaborate with to achieve their lofty goals. San Luis Obispo County's Integrated Waste Management Authority stepped up and provided two vessel composters to get the ball rolling. Seeing the potential at several golf courses owned by the county, a \$220,000 grant from CalRecycle became a reality to provide recycling containers for all the golf facilities managed by the County of SLO. Soon after the initiation of the program a local Eco-Rotary Club joined forces with the county golf courses and assisted with volunteers who

contributed time and funds to support this effort. Over several months compost bins were constructed and many hours of managing food wastes to create compost helped to make the program a success.

All materials used in the processing or consumption of foods and goods are managed with a logical flow. This would include processing food waste, recycling items like plastic, glass, cardboard, aluminum, batteries, oil, etc. The amount of material that cannot be recycled is minimal to none so it has resulted in achieving the zero waste goal.

**THE GEO PLAN.** A comprehensive program for sustainability exists with GEO. While there are others, it is easy to focus on one program

and allow for a comparison to others out there such as ISC-Audubon. The first steps are to do your homework and research. Evaluate the GEO program by going to the website and take an hour or so to surf the site. At some point there will be a request to fill in some information identifying your type of facility. Once you see if you fall into the arena of golf course construction or existing golf course operations you will see what criteria is required for you to participate in advancing your efforts for sustainability and hopefully achieving certification.

Establish an online club profile with GEO. Next, a Sustainability Statement for your facility is developed by working with GEO staff and the team at your facility. Online input continues with establishing what good things you are currently doing and then setting goals to achieve and understanding the gap in between to develop a road map for success. For certification there are minimal standards that are required but the key is to be committed to improving sustainability over time. Certification periods are three years and then the renewal process starts over again for the next three-year cycle.

Eventually an on-site visit will be scheduled with a GEO sustainability associate. Those individuals appraise your application, give ideas for future improvements, factor in regional differences and write a summary. A visit takes a half day to complete. Upon



Each golf course can implement sustainable natural resource management in all facets of the business.

completing the visit and writing a summary report the associate verifies the information, meeting of the standards and then makes a recommendation for awarding the Ecolabel.

Many facilities find value in the achievement and share that information with the golfing community in their region. They proudly display their certificate prominently. If improvement projects are a part of your plan then they will need to be scheduled and completed. By instituting previously mentioned processes it should be easy to track your results allowing a facility to qualify any expenses and to evaluate the return on investment of this program.

**THE RIGHT THING.** At this point it may not be a requirement for any existing facility to have a plan for sustainability. However, it is often a requirement for permitting for any new golf course development. Also there are smaller components that have become requirements in various regions. If we use water reduction in drought-stricken areas, or the use of recycled water, as a requirement rather than a request it is obvious that society and government are steering us in that direction. Mandatory recycling of green waste is an adjustment that has been made at many golf courses and what was once thought as onerous is now just a normal way of doing business. **GCI**

## Who is on board?

Through the Environmental Institute for Golf, GCSAA is a strong supporter of continuing education for golf course superintendents by providing the latest environmental and agronomic techniques to maintain healthy turfgrass and protect environmental resources through sustainable practices. GCSAA has members at a large percentage of golf courses in North America. Through their magazine and online presence they provide monthly information on sustainable practices.

The United States Golf Association has a team of agronomists that conduct Turfgrass Advisory Visits all across North America. As a part of that process those agronomists give advice and share tips on how to develop more sustainable practices for each and every facility. Additionally the USGA has long championed the cause through both Green Section Journal articles and also through a couple decades of support and collaboration with programs like the Audubon Cooperative Sanctuary Program.

The Audubon Cooperative Sanctuary Program was, and continues to be, a very positive program embraced by many golf courses. Ron Dodson has led that organization since its infancy. Just this past month Ron has stepped down from that leadership position and has now taken on a similar role with the International Sustainability Council. We can expect to hear great things from this group in the upcoming months.

The ISC-Audubon mission is to foster sustainable living and lifestyles

at home, work and play. They accomplish this through a number of award winning education and certification programs. The vision of ISC-Audubon is to help create a more sustainable world. They assist people and their businesses then discover and implement sustainability solutions that are reliable, practical, efficient and that reduce risk.

GEO is a global Golf Environmental Organization that is based in Scotland. While the original outreach was in the UK and Europe it has expanded rapidly to the rest of the globe. GEO offers training and certification of sustainable facilities as does ISC-Audubon. GEO also has a number of allies in the industry and those include GCSAA, Royal and Ancient, CMAA, American Society of Golf Course Architects and the Golf Course Builders Association of America.

Through working together the industry has several programs to choose from for your facility. Some have certification programs and all provide tips and education. Certifications have a cost and need to be considered as a part of the evolution to sustainability.

It is recommended that golf facilities join these organizations and support them so that you can have a thorough evaluation of what fits best for your facility.

**For more information contact:**

GCSAA: [www.gcsaa.org](http://www.gcsaa.org)

GEO: [www.golfenvironment.org](http://www.golfenvironment.org)

USGA: [.usga.org](http://.usga.org)

ISC-Audubon: [www.isc-audubon.org](http://www.isc-audubon.org)

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



## RIGHT ON

“**E**fficiency is doing things right; effectiveness is doing the right things,”

according to Peter Drucker, the Austrian-born management consultant, educator and author who many consider the father of modern management thought leadership.

I'm constantly drawn to Drucker's teachings because of their simplicity. Drucker said the essential work of leaders – regardless of the business or industry in which they worked – could be pared to the way they

If, as Drucker said, “Efficiency is doing things right and effectiveness is doing the right things,” I'd add that great management is doing both at the same time.

managed three key areas: resources, information and anxiety.

We see management's challenges for those of us in the golf business in each of those areas, which are ingrained in four of Drucker's most honored teachings.

**SERVING THE CUSTOMER IS THE PRIORITY OF EVERY BUSINESS.** The starting point for every business opportunity and obligation is the customer – and, at private clubs, the member. Do you know what you customers and members want? As the golf season launches in the northern tier, club managers and leaders must reconnect with their customers and members and seek answers to three questions:

- What services will add to their enjoyment?

- What reasons can we provide to encourage them to bring friends to the club?

- What are their “hot buttons,” the things they want and need most from their club experience?

**PLANNED ABANDONMENT.** Drucker urged managers to develop the wisdom and courage to look candidly at their organizations to decide which parts should be abandoned. Many clubs rely too heavily on past practices that should be jettisoned to make way for a new operating model. The recessionary cycle revealed some of the most flawed perceptions:

- Membership communications and marketing were unnecessary for private clubs. In fact, in the midst of the Information Age, clubs and golf courses must maintain regular and meaningful communication to remain relevant.

- Refundable memberships were the wave of the future. Assuming that there will be more people seeking to buy memberships than there are people who wish to leave the club proved an error in judgment.

- Superior course conditioning is an option. Golfers proved just the opposite: care and upkeep are critical to the market attractiveness of every golf facility. Deferring maintenance – such as seasonal aeration and turf repair – has an adverse multiplying effect.

- Assumptions accurately inform next year's budget. Last year's budget is a starting point, but zero-based budgeting is essential to operational efficiency and innovation. Overreliance on assumptions ensures a repeat of past mistakes.

**ATTITUDE IS KING.** The people who are customer-facing make all the difference. Hire the best people available and hire for attitude. You can teach

tactics and procedures, but a positive attitude, which makes customers and members glad they came to the course, comes naturally – or not. Empower employees who serve customers and members to make decisions that create raving fans of the club. Celebrate their innovative ideas and solutions that earn recognition and appreciation from customers and members. Drucker taught that a primary duty of the manager is to prepare workers to perform well and to give them the freedom to do so. Ask yourself, how do you increase the value of your team?

**KNOW YOUR MARKET AND OUR CUSTOMER.** Many of the problems plaguing the golf business – especially those involving development and membership – stem from inadequate planning and ill-informed market knowledge. Many courses and clubs lack real market data. They do not know where to find more customers or members, and they lack an understanding of how to communicate successfully with prospects. Lacking enough market information, too many clubs introduce new promotions and pricing plans that miss the market. There is no substitute for a patient and deliberate approach to collecting market information.

To take advantage of Drucker's teaching, we must remember the critical importance of the three core ingredients of business management success: that resources require constant vigilance, support and nurturing; that information must be coordinated, repetitive and simple to apply, and that anxiety can be managed up or down, depending on circumstances.

If, as Drucker said, “Efficiency is doing things right and effectiveness is doing the right things,” I'd add that great management is doing both at the same time. **GCI**



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## The Starting Rotation

2012 evaluation of fungicides and fungicide rotation programs for the control of anthracnose and effects on turf quality on an annual bluegrass putting green.

The purpose of this trial was to evaluate the effectiveness of various fungicides and fungicide rotations in controlling anthracnose (*Colletotrichum cereale*) and maintaining plot quality on an annual bluegrass (*Poa annua*) putting green.

was installed on top of the sub grade. Annual bluegrass sod (no known resistance issues) from Bos Sod Farms from Canada was placed over the sand.

The trial area was not inoculated with the anthracnose fungal pathogen before the trial, and therefore, the general

goal of turf cultural practices was to encourage the natural onset of the disease by stressing the turf with low mowing heights, limited nitrogen, and either too little or too much water. However, stressing the plots too much can cause all the plots to deteriorate, thus losing

any ability to distinguish plot quality differences resulting from the fungicide treatments. Therefore, the stress had to be balanced with a minimum acceptable level of plot quality.

With this goal in mind, the plots were mowed Monday through Friday using a Toro

**MATERIALS AND METHODS.** The trial was initiated on June 14th, 2012. Treatments 1 through 14 were applied six times on a two-week interval with the last treatment date being Aug. 23rd. Treatments 15 and 16 were applied three times on a four-week interval with the last treatment date being Aug. 9th. The trial was conducted on an annual bluegrass putting green located at the OSU Lewis-Brown Horticulture Farm in Corvallis, Ore., which is approximately 60 miles south of Portland. The green was built in April 2009 using the California Method (12 inches of USGA sand placed over a soil sub grade). Flat drainage

**Table 1.** Plot and Surface Quality without Regard to Color

Trt #	Product (s)	Rates (oz./M)	Plot Qual. 6/27	Surf. Qual. 7/12	Surf. Qual. 7/25	Surf. Qual. 8/09	Surf. Qual. 8/23	Surf. Qual. 9/6	Surf. Qual. Avg.
1	Untreated	na	5.9	7.5	7.0	6.3	5.3	4.8	6.2
2	Briskway alternated w/ Daconil Action	.62/3.5	6.6	7.6	7.9	7.8	7.9	8.0	7.8
3	Briskway alternated w/ Daconil Action	.50/3.5	6.0	7.1	7.6	7.4	7.8	7.5	7.5
4	A8574D	0.22	5.9	7.4	7.6	7.5	7.6	6.8	7.4
5	A8574D	0.42	6.0	7.9	7.8	7.4	7.0	6.5	7.3
6	A18281A	1.0	5.9	7.8	7.5	7.5	7.5	7.4	7.5
7	A19858A	0.6	6.1	7.4	7.3	7.0	7.3	7.1	7.2
8	Briskway + Daconil Action	.62+3.5	6.5	7.6	7.8	7.9	7.9	7.6	7.8
9	Briskway + Daconil Action	.50+3.5	6.3	7.6	7.9	8.0	7.8	8.0	7.9
10	Bayer Rotation 1	See Above	6.8	7.8	7.6	7.9	7.9	8.0	7.8
11	Bayer Rotation 2	See Above	6.9	8.0	7.9	7.8	7.9	8.0	7.9
12	Torque + Spectro alt. with Affirm + Spectro	.60+3.75/.90+3.75	6.0	7.6	7.8	8.0	7.9	7.8	7.8
13	BASF Rotation 1	See Above	5.9	7.5	7.8	7.8	7.8	7.5	7.7
14	Fertilizer Check	.20 lbs. N	7.0	7.9	7.4	7.8	6.5	6.3	7.2
15	BASF - Pillar G (48 oz)	48	6.0	7.4	7.5	7.0	7.0	6.8	7.1
16	BASF - Headway G (64 oz)	64	5.9	7.4	7.0	6.5	7.1	6.8	7.0
		<b>LSD@ .05</b>	<b>0.6</b>	<b>ns</b>	<b>0.5</b>	<b>0.5</b>	<b>0.7</b>	<b>0.9</b>	<b>na</b>



Flex walking greens mower set to a bench height of .105 inches. The plots were double mowed beginning the third week of July until the end of August. Irrigation was applied using a Rain Bird irrigation system with Hunter I-20 heads. At the onset of the trial, the irrigation system was set to apply 60 percent of ET (calculated from an on-site weather station). Irrigation was subsequently reduced until drought symptoms began appearing in the afternoon at which time the dry spots were hand watered. Following the drying out period, the irrigation was then set to apply 140 percent of ET for approximately two weeks. The cycle of drying followed by over irrigating continued throughout the trial. The plots were fairly lean when the trial started and were not fertilized until Aug. 8th when 0.20lbs per 1,000 sq. ft. of soluble nitrogen from UMAXX (urea) along with 6 ounces of Foltec foliar fertilizer (The Andersons) was applied.

As a result of the stress applied, the leaves began turning brown and the plot color approached the minimum acceptable level in the first week of August (see color ratings on Aug. 9th). After the fertilizer application, the turf color improved on most plots noted by the ratings on Aug. 23rd.

The treatments applied are listed below:

Trt #	Treatment	Rate (oz./1,000ft <sup>2</sup> )
1	Untreated	na
2	Briskway alternated with Daconil Action	.62/3.5
3	Briskway alternated with Daconil Action	.50/3.5
4	A8574D	0.22
5	A8574D	0.42
6	A18281A	1.0
7	A19858A	0.6
8	Briskway + Daconil Action	.62+3.5
9	Briskway + Daconil Action	.50+3.5
10	Bayer Rotation 1	See Below
11	Bayer Rotation 2	See Below
12	Torque + Spectro alternated with Affirm + Spectro	.60+3.75/.90+3.75
13	BASF Rotation 1	See Below
14	Ammonium Sulfate alternated with Calcium Nitrate*	3.2 (of N)
15	Pillar G**	48
16	Headway G**	64

\*0.20 lbs. of total nitrogen was applied per application.  
\*\* Pillar G and Headway G were applied every 4 weeks.

### Spray Programs:

Bayer Rotation 1-Trt 10	Rate (oz./1,000ft <sup>2</sup> )	Date of Application
Reserve	3.6	June 14 <sup>th</sup>
Signature + Daconil Ultrex	4.0+3.2	June 27 <sup>th</sup>
Insignia + Daconil Ultrex	0.90+3.2	July 12 <sup>th</sup>
Reserve	3.6	July 25 <sup>th</sup>
Signature + Daconil Ultrex	4.0+3.2	August 9 <sup>th</sup>
Reserve	3.6	August 23 <sup>rd</sup>

Bayer Rotation 1-Trt 11	Rate (oz./1,000ft <sup>2</sup> )	Date of Application
Reserve	3.6	June 14 <sup>th</sup>
Signature + Daconil Ultrex	4.0+3.2	June 27 <sup>th</sup>
Reserve	3.6	July 12 <sup>th</sup>
Signature + Daconil Ultrex	4.0+3.2	July 25 <sup>th</sup>
Reserve	3.6	August 9 <sup>th</sup>
Reserve	3.6	August 23 <sup>rd</sup>

Bayer Rotation 1-Trt 13	Rate (oz./1,000ft <sup>2</sup> )	Date of Application
Trinity	1.0	June 14 <sup>th</sup>
Insignia SC + Trinity	0.54+1.0	June 27 <sup>th</sup>
Honor	1.1	July 12 <sup>th</sup>
Trinity	1.0	July 25 <sup>th</sup>
Insignia SC + Trinity	0.54+1.0	August 9 <sup>th</sup>
Honor	1.1	August 23 <sup>rd</sup>

Daily high temperatures and relative humidity at the time of high temperature for the dates of applications are listed in the table below:

Date	High Temp	RH at time of High Temp
6/14	70	49%
6/27	77	36%
7/12	78	52%
7/25	84	49%
8/09	82	46%
8/23	73	43%

The individual plots measured 25 square feet (5 ft x 5 ft). The products were applied with a CO<sub>2</sub>-powered sprayer using TeeJet 80015 nozzles at 30 psi producing a total spray volume of two gallons per 1,000 sq. ft. The speed was calibrated with an electronic metronome. Visual disease severity, color, and surface quality (without regard to color – i.e. uniformity, texture, and density) ratings were taken every two weeks. Additionally, plot quality ratings were taken on June 27th – two weeks after the first application. Ratings were taken the day of, or the day preceding, the fungicide application. Data from each rating date were subjected to analysis of variance using a randomized complete block design with four replications. Differences between means were determined by Fisher's LSD at the 5% level. The data and LSD values are displayed in Tables 1 through 3.

**RESULTS.** Overall, the disease pressure was moderate to low with untreated check plots receiving average disease cover ratings of 8.0 percent on Sept. 6th – 14 days after the final treatment. Additionally, the fertilizer check treatment (Trt 14) had disease cover ratings averaging 4.8 percent on Sept. 6th. This treatment had a total of 0.20 lbs. of total nitrogen per 1,000 sq. ft. applied per application.

The plots were rated for both color and surface quality (without regard for color) separately. The reason for the two ratings is that stressing the turf for anthracnose trials often results in poor color but not necessarily poor surface quality (without regard to color) if the fungicides applied are effective. This method of rating allows us to distinguish those plots that have otherwise good turf quality (with maybe not so good color) from those plots where both the turf color and the quality are poor. Using this method, surface quality will track pretty closely with the inverse of percent disease cover because the turf density gets negatively impacted by disease. Additionally, sometimes the fungicides themselves either improve turf quality or have a negative effect (e.g. DMI's tend to cause leaf texture to widen) which can impact surface quality.

There were no statistical differences between plots treated with fungicides for percent disease cover. Additionally, all fungicide treatments were statistically better than both the untreated control