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PESTICIDE RECERTIFICATION

CATEGORIES: A (CORE) & E (TURF AND ORNAMENTAL)

NOVEMBER 19, 2010 9am - 3:45pm University of Minnesota Continuing Education and Conference Center, St. Paul

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THE THAYER TWINS

The Legends' Superintendent Scott Thayer and his wife Rosalyn proudly announce the birth of their twins. The twins were born on August 1_{-} , $2_{-}1_{-}$ at 1:45 p.m. The girl, Reese Anderson Thayer, was 5 lbs.,11 oz. and 18.5" long at birth. The boy, Graham David Thayer was 6 lbs.,1 oz. and 19" long at birth. All are well.

MGCSA EVENTS

September 20 **MGCSA Research Scramble** The Classic at Madden's Brainerd Host: Scott Hoffmann, CGCS

September 27 Wee One Golf Event North Oaks Golf Club North Oaks Host: Jack MacKenzie CGCS

October 4 **MGCSA Fall Mixer** Minnesota Horse & Hunt Club Prior Lake Host: Tom Proshek

December 8 **Awards & Recognition Banquet** Southview CC South St. Paul Host: Jeramie Gossman

January 4, 2011 Super Tuesday Minneapolis Convention Center Minneapolis

January 5-7, 2011 **Northern Green Expo** Minneapolis Convention Center Minneapolis

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ABOUT THE COVER

Jeff Pint, Superintendent at New Prague Golf Club, won his 5th MGCSA Championship at The Jewel on August 16.

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PRESIDENT'S MESSAGE



2010: The Summer of Discontent

By Paul Diegnau CGCS

By the time you read this one can only hope that the "perfect storm" of 2010 has wound down and the temperate days of fall are upon us. Let me share with you what we experienced here at Keller GC over the past three months. I am sure that many of you can relate. To this point, we have experienced: Seven plant pathogens along with the proverbial "the poa annua just checked out"; fried solenoids on many heads in three or four fairways due to lightning; rain, rain, rain; oppressive heat and humidity, and heavy cart traffic and tournaments at the most inopportune times, resulting in wet wilt and heatrelated injury.

In late August, I had the opportunity to catch a Dr. Frank Rossi seminar via Turfnet titled 2010: *Summer of Stress* and *What's Next*. One hundred and sixty five participants listened for over an hour as he reviewed the lessons learned from this past summer. According to the weather data presented by Dr. Rossi, Minnesota was in the region that was the second warmest and the second wettest in the nation between January and the end of July, 2010. Our region, for the same time frame, was the seventh warmest and the ninth wettest for the last 116 years. Some other highlights worth sharing included stay on your growth regulator program during times of stress to avoid growth flushes; get familiar with the symptoms and conditions favorable for Pythium Root Dysfunction (including its preference for well-drained greens) and Bacterial Wilt is showing up in annual bluegrass and on newer varieties of bentgrass. As trying as our summer has been, the northeastern U. S. experienced conditions far more severe, as witnessed by a number of high-end private clubs closing their doors to re-grass. Let's hope for a more moderate summer in 2011.

Recently, a vendor rep brought the new industry tax to my attention and asked that I pass the information along to the membership. As of January 1 of this year, a new tax on pesticide sales was enacted as part of legislation affecting pesticide dealers. The legislation requires any person selling restricted use pesticide, bulk pesticide or agricultural pesticide needs a Pesticide Dealer License issued by MDA. In addition, the dealer must collect a .65% on all pesticide sales excluding seed and fertilizer. This tax is mandatory and applies to everyone. If this additional burden upsets you, make sure to let your representatives in the state legislature know how you feel.

Good news! I attended a Nursery and Landscape Committee meeting at the MDA and as of mid-August, no new EAB beetles were found outside of previously infested areas. Keep in mind that the purple monitoring traps used by the MDA throughout the state are highly ineffective in attracting EAB but they are currently the only viable monitoring method available. MDA staff said they think the adult beetles actually wander into the traps accidently. Several bio-control options from Asia are showing promise and could be in the country within the year.

MNLA/MTGF are teaming up to offer a Pesticide Recertification class on November 19 at the UM Continuing Education and Conference Center in St. Paul. Go to www.mgcsa.org for more information.

Don't forget about the Fall Mixer coming up on October 4. This is the second annual sporting clays shoot at the Prior Lake Horse and Hunt Club. I attended last year and it was a blast! What a great way to tune up for bird hunting this fall. If we are able to secure the use of the pistol range, we will send out an email prior to the event letting everyone know.

Congratulations to Jeff Pint on capturing his fifth MGCSA Championship! Hats off to Doug Mahal, CGCS, and his staff for providing a beautiful and challenging golf course. In spite of the challenging summer weather, the golf course was in excellent shape. Thank you for making your facility available to the MGCSA.

The MGCSA Harold Stodola Research Scramble will be held at The Classic in Brainerd on September 20. The host Superintendent and architect of this award-winning layout is Scott Hoffmann, CGCS. I hope to see you there supporting MGCSA-sponsored Turfgrass research.

The 1st Annual Wee One Tournament will take place September 27 on behalf of MGCSA member Tom Fuller who is awaiting a lung transplant. North Oaks GC has graciously agreed to host this tournament. The format of the event is a two-man scramble, so grab a partner and come have a great time. If successful, we hope to make this an annual event. Remember...all MGCSA-related events are listed or linked to on the mgcsa.org website.

Applications for the 2010 GCSAA/Golf Digest Environmental Leaders in Golf Awards are now available online. The ELGAs, presented in partnership with Syngenta and Rain Bird Golf Division, recognize superintendents and golf courses for their commitment to environmental stewardship. The deadline for applications is October 24. We all know that many Minnesota facilities are very active in the environmental arena. It would be nice to get some well-deserved national publicity on behalf of our efforts. I challenge you to take the first step and fill out an application.

I believe the leaf drop this fall will be extra special, if you know what I mean. Enjoy it!

Until next month, Paul Diegnau CGCS

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Jeff Pint Wins His 5th MGCSA Championship At The Jewel Golf Club in Lake City

Jeff Pint, Superintendent at New Prague Golf Club, handled the green speed and wind better than anyone and



JEFF PINT 5-TIME CHAMP New Prague GC

shot 74 to win this year's MGCSA Championship at The Jewel in Lake City on August 16. Dave Johnson, Rich Spring Golf Club, finished second four shots behind. Tom Notch, Bent Creek Golf Club, finished third shooting an 79. Pint shot 38-36. Johnson opened

with a 43 but came in with 35. The par 4, third hole was pivotal in the outcome of the Championship. Pint made par but Johnson took a quadruple bogey. Those four strokes were the margin of victory.

First Flight

Andy Clauson, Victory Links Golf Course, won the First Flight using a scorecard playoff. Clauson and David Thalberg, Prestwick Golf Club, tied with net scores of 70. James Bade, Somerset Country Club was third at 71.

Senior Division

The new Senior Champion is Ron Manske, Versatile Vehicles, Inc. Manske shot a net 73. Jeff Minske, Eastwood Golf Course, was second at 75.



KURT KNOX, Island View GC Superintendent, displays good take-away form at the MGCSA



THE HOSTS AT THE JEWEL

Doug Mahal CGCS, center, with his assistants Nick Lewison, left, and Chad Setter. They dealt with a sizeable rainstorm just days before the Championship and were able to present the course in beautiful, championship shape. Sixty-eight members played in the MGCSA Championship.

Callaway Flight

Joe Churchill, Reinders, won the Callaway Flight with a net 71. Aaron Johnsen, Winfield Solutions, was second with a net 74.

Field Events

The 2010 MGCSA Long Drive Champion is Gary Deters, St. Cloud Country Club. James Bade and Tom Notch sank the longest putts of the day. The four closest-to-the-pin winners were Tom Bjornberg, Yamaha Golf & Utility, 4'-11"; Craig Hendrickson, Oak Ridge Country Club, 5'-0"; Mike Kelly, Bayer Environmental Science, 7'-11", and John Steiner CGCS, White Bear Yacht Club, stuck it 37'-6."

Sponsors

The following companies sponsored the MGCSA Championship: Duininck Golf, MTI Distributing Inc., Syngenta Professional Products, Precision Turf & Chemical Inc., Hartman Companies Inc., Bayer Environmental Science, Becker Underwood, CycleWorks Golf Supply, Superior Turf Services Inc., Excel Turf & Ornamental, The Tessman Company, Versatile Vehicles Inc., and Par Aide Products Co. These companies have sponsored all of our 2010 events.

The Staff at The Jewel

Special thanks and appreciation to Doug Mahal, CGCS and the staff at The Jewel Golf Club for hosting the MGCSA Championship on August 16. The support from the club and the prime condition of the course made it a great day to play golf in Lake City.

Mahal, his assistants Chad Setter and Nick Lewison and the grounds staff provided championship conditions. The greens were firm and fast. The staff had a busy weekend prior to the tournament putting bunkers back together after a major rain storm.

Golf pro Kent Blaschko, Manager Cody Buck and their staffs were instrumental in pre-tournament preparations.

Upcoming Events

The UM/MTGF Field Day is set for September 16. The MGCSA Harold Stodola Research Scramble takes place on September 20. The 1st Annual Wee-One event is on September 27 at North Oaks Golf Club. The Fall Mixer will be held at the Horse and Hunt Club in Lakeville on October 4. The MGCSA Annual Awards Banquet takes place at Southview Country Club on December 8.

(Continued on Page 6)

MGCSA CHAMPIONSHIP RESULTS AUGUST 16, 2010 - THE JEWEL GOLF CLUB - LAKE CITY, MINNESOTA



GABY ACCAD, Versatile Vehicles, Inc., keeps his head down nicely as he escapes from a greenside bunker on No. 16 during the MGCSA Championship at The Jewel in Lake City.



CHARLIE MILLER, Goodrich GC, (in red), measures a closest-to-the-pin shot. Others in the photo, from left to right, are Jason Swanson Hidden Greens GC; James Bade, Somerset CC, and Dennis Salwei, Reinders Inc.



BRETT WENZEL, Keller GC, was the early leader in the Long Drive contest. 6 September 2010 Hole Notes

CHAMPIONSHIP FLIGHT - GROSS SCORES	
JEFF PINT, NEW PRAGUE GC	74
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DONNACHA O'CONNOR, ALEXANDRIA GC	82
JEFF BACKSTROM, CANNON GC	82
BROOKS ELLINGSON, ALBION RIDGES GC	83
JEFF SCHMIDT, REINDERS INC.	85
BILL BROOKS, ROSE LAKE GC	85
BILLIE MacDONALD, YAMAHA GOLF UTILITY	85 85
TOM PROSHEK, BRACKETT'S CROSSING CC JAMIE OLSEN, HELENA CHEMICAL CO.	86
CRAIG HENDRICKSON, OAK RIDGE CC	86
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ARIK HEMQUIST, BRACKETT'S CROSSING CC	87
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GARY DETERS, ST CLOUD CC	88
WES STONEBACK, THE WILDS	89
TOM MEIER, LESUEUR CC	91
JACOB KOCAK, PRESTWICK GC	91
LEIF ERICKSON, CITY OF ROCHESTER STEVE MAKOWSKE, INTERLACHEN CC	92 98
STEVE MAROWSKE, INTEREACTEN CC	90
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DAVID THALBERG, PRESTWICK GC	70
JAMES BADE, SOMERSET CC	71
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KYLE SCHAFLER, OAKDALE GC	81
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TOM BJORNBERG, YAMAHA GOLF UTILITY	82
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Fairy Ring Identification, Symptoms, Development And Cultural and Chemical Control

Courtesy North Carolina State University

SYMPTOMS

The symptoms of fairy ring (*Basidiomycetes*) appear in patches, rings, or arcs that are initially 1 foot or less in diameter, but expand in size year after year, reaching up to several hundred feet in diameter in old turf stands. Most fairy ring fungi do not infect or parasitize the turf.

Instead, growth of these fungi in the soil can indirectly affect, or even kill, the turfgrass above. Three types of fairy ring symptoms are observed in turfgrasses: Type I, Type II, and Type III. A Type I fairy ring causes the soil and thatch to become hydrophobic, killing the turf in patches, rings, or arcs. In areas affected by a Type I fairy ring, the thatch and soil are extremely dry and repel water. Type II fairy rings appear as rings or arcs of turf that are dark green and growing more quickly than the surrounding turf. In a Type III fairy ring, mushrooms or puffballs are produced in a ring or arc. The type of symptom expressed by a fairy ring may change during the year according to weather conditions. Type III fairy ring symptoms are more prevalent during extended periods of wet weather. Type I and Type II fairy ring symptoms are most common during hot, dry weather in the summer.

Characteristic	Description	
Host Grass Species	all	t
Month(s) with symptoms	all	h
Stand Symptoms	patches (1-3 feet), rings	li

Note: Still not sure if this is the right disease? The Turfgrass Disease Identification program may be helpful. Or consult the experts at the Turf Diagnostics Lab. Check the TurfFiles glossary for definitions of unfamiliar terms.

FACTORS AFFECTING DISEASE DEVELOPMENT

Fungi that cause fairy rings are common inhabitants of forested areas. These fungi begin growing on a source of organic matter, such as an old stump, waste lumber, or dead tree roots in the soil. Once established, the turf produces thatch and organic matter, which provides a source of food for continued expansion of the fairy ring.

On golf course putting greens, fairy rings are often observed spreading into the root zone mix from the surrounding native soil. Mushroom fungi are also prolific spore producers and may be spread into putting greens by wind, water, or other means.

Type I fairy rings are most damaging to turf and are encouraged by drought stress, inadequate irrigation, and infrequent aerification.

Type II fairy ring symptoms are a result of the release of nitrogen and other nutrients into the soil as organic matter is degraded by the fairy ring fungi. These symptoms are most evident in turf that is deficient of nutrients, especially nitrogen and iron.

Type III fairy rings are encouraged by over-irrigation or poor soil drainage.

CULTURAL CONTROL

The most effective means for control is to prevent the fairy ring fungi from becoming established in the turf. Remove large pieces of woody material (stumps, waste lumber, and dead tree roots) before turf is planted to prevent the establishment of fairy rings. Landscape contractors should remove this debris around new construction sites before seeding or sodding.

Installation of a plastic barrier between the root zone mix and surrounding native soil may limit the spread of fairy ring into

Foliar Symptoms Location/Shape	dieback from leaf tip, no distinct leaf symptoms
Foliar Symptoms Color	tan, yellow, orange
Root/Crown Symptoms	none
Fungal Signs	mushrooms, puffballs, none

golf course putting greens.

Power raking or vertical mowing to remove excessive thatch will help to minimize fairy ring problems. Golf course superintendents should regularly aerify and topdress putting greens to prevent thatch buildup and maintain soil aeration. Avoid extremes in soil moisture (too wet, too dry), apply nitrogen based on local University recommendations, and ensure balanced fertility through regular soil testing.

Once a fairy ring appears, the best management practices depend on the type of symptom that is observed. To control a Type I fairy ring, the water-repellent thatch and soil beneath the affected turf must be re-wet. Hollow-tine aerification, spiking, water-injection, application of soil surfactants, and heavy irrigation are effective strategies for re-wetting this hydrophobic layer. Affected areas should be hand-watered to prevent over-watering of the unaffected turf.

Symptoms of a Type II fairy ring can be masked with an application of nitrogen or iron. This will cause the surrounding turf to green-up, making the affected turf less evident. Collect soil or tissue samples for nutrient analysis from the turf immediately surrounding the Type II fairy rings, and correct any nutrient imbalances as recommended. Use caution when applying nitrogen to mask Type II fairy ring symptoms on cool-season grasses during the summer. Too much nitrogen may

(Continued on Page 10)

MGCSA FALL MIXER AT THE HORSE AND HUNT CLUB

Fairy Ring-

(Continued from Page 9)

over-stimulate the grass and lead to the development of more serious diseases. In this case, iron should be used to increase turf color without causing excessive foliar growth.

Drastic methods for control of fairy rings, such as soil fumigation, removal of infested soil, or turf renovation by tilling and mixing the soil may be effective in the short-term, but the fairy rings usually become re-established over a period of years.

CHEMICAL CONTROL

Over 60 species of fungi have been associated with fairy ring symptoms in turfgrasses, and these species likely vary in their sensitivity to fungicides. Control of fairy rings with fungicides is a site-specific venture for this reason. Turfgrass managers should experiment with different products to identify those that will control the disease in their location. Fungicides are most effective for fairy ring control when used on a preventative basis. Curative applications have little effect because the symptoms are caused by a change in the soil environment, and fungicides do nothing to change the soil. A preventative fungicide program should be initiated in the spring when mean daily soil temperatures are consistently above 55°F. Regular use of soil surfactants will help to maintain uniform soil moisture and may reduce the appearance of Type I fairy ring symptoms.

Because fairy ring fungi are in the thatch and soil, fungicides must be watered-in or applied in large volumes of water for best results. Applications in 2 gallons H2O per 1000 ft2 followed by 0.25" of irrigation have provided excellent results in research trials at NC State University. Irrigation must be applied immediately before the spray begins to dry on the turfgrass foliage. Tank-mixing some fungicides with a soil penetrant may also enhance movement into the soil and improve fairy ring control.

Fungicide	Efficacy (1)	Resistance/Risk (2)	Class (3)	Products (4)
triadimefon	++++	2	DMI	Bayleton
metconazole	+++	2	DMI	Tourney
azoxystrobin	+++	3	QoI	Heritage
pyraclostrobin	+++	3	QoI	Insignia
azoxystrobin + propiconazole	+++	3	QoI + DMI	Headway
flutolanil	++	2	carboxamide	ProStar
flutolanil +	++	2	carboxamide +	SysStar
thiophanate-met	nyl		benzimidazole	
polyoxin D	++	2	polyoxins	Endorse

Efficacy Codes:

++++ excellent control when conditions are highly favorable for disease development

- +++ good control when disease pressure is high, excellent control when disease pressure is moderate
- good control when disease pressure is moderate, excellent control when disease pressure is low good control when disease pressure is low
- 0 does not provide adequate control under any conditions
- ? cannot be rated due to insufficient data

Resistance Risk:

- Rotating and tank-mixing not necessary, but recommended to avoid potential side effects from continuous use of same chemical class.
- 2 Rotate to different chemical class after 3-4 applications; tank-mixing not necessary.
- 3 Rotate to different chemical class after 2-3 applications; tank-mixing not necessary.
- 4 Rotate to different chemical class after 1-2 applications; tank-mixing not necessary.

6 Rotate to different chemical class after 1-2 applications; tank-mixing with low or moderate risk product recommended.

9 Rotate to different chemical class after EVERY application; tank-mix with low or moderate risk product for EVERY application.

Continual use of fungicides with similar control mechanisms (modes of action) can result in fungi that are resistant to some chemicals. Poor or ineffective disease control can be expected when this occurs. Managers can reduce the chances of this happening by mixing or alternating fungicides belonging to different chemical classes.

Recommendations of specific chemicals are based upon information on the manufacturer's label and performance in a limited number of trials. Because environmental conditions and methods of application may vary widely, performance of the chemical will not always conform to the safety and pest control standards indicated by experimental data. When more than one brand name exists for an agricultural chemical, the name of brand that first came onto the market is listed first. Otherwise, brand names are listed in alphabetical order. The order in which brand names are given is not an indication of a recommendation or criticism.

Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services does not imply endorsement by North Carolina State University or discrimination against similar products or services not mentioned. Other brand names may be labeled for use on turfgrasses. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact your county's Cooperative Extension agent.

The DMI fungicides provide excellent preventative control of the puffball fungi Lycoperdon perlatum and Vascellum pratense in golf course putting greens. Two applications on a 30 day interval, beginning in spring when 5-day average soil temperatures reach 55°F, have provided season-long control in many cases. The DMI fungicides, however, should not be tank-mixed with soil surfactants as this may reduce their efficacy and increase the potential for phytotoxicity.

(Editor's Note: © North Carolina State University. This information sheet was prepared by Lane P. Tredway, Gail G. Wilkerson, Bridget R. Lassiter, Jenifer J. Reynolds, and Gregory S. Buol. Departments of Plant Pathology and Crop Science, College of Agriculture & Life Sciences, North Carolina State University. Prepared March 23, 2009.

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	U	C1	C2			
a.	Total copies printed	850	850			
b.	Paid circulation:					
	1. Mail subscriptions	794	794			
	2. Sales through dealers					
	and carriers, street vendors					
		0	0			
0	and counter sales	794	794			
C.	Total paid circulation					
d.	Free distribution/ mail	0	0			
e.	Free distribution/ other	0	0			
f.	Total free distribution	0	0			
g. h.	Total distribution	794	794			
h.	Copies not distributed	56	56			
i.	Total	850	850			
j.	Percent paid and/or					
	requested circulation	100	100			

16. I certify that all information on this form is true and complete. - Signed by Scott Turtinen, Publisher