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IMAGE 4: Plot overview photo at 3 WAS (University of Minnesota Les Bolstad Golf Course, St. Paul, MN. Photo: Sam Bauer)

Trends in turfgrass quality ratings beyond five weeks after seeding reflected the amount of creeping bentgrass present; plots that had more creeping bentgrass received higher turfgrass quality ratings. This turfgrass quality difference based on glyphosate rate was statistically significant in Michigan, but not in Minnesota.

Effect of application time

Turfgrass quality as affected by glyphosate application time showed similar trends for both locations, with the 14 days before seeding application having the longest duration of unacceptable turfgrass quality. In Michigan, turfgrass quality

levels based on the timing of glyphosate application were not significantly different by five weeks after seeding. Although, on the final rating date, applications at zero and seven days before seeding had significantly higher turfgrass quality values than the application 14 days before seeding, which is reflected in the higher level of creeping bentgrass in these plots. In Minnesota, the timing of glyphosate application did not have a significant effect on turfgrass quality beyond four weeks after seeding.

Conclusions and recommendations

Results from this study demonstrate



NORTHERN GREEN EXPO

JANUARY 9-11, 2013
MINNEAPOLIS CONVENTION CENTER

Incredible educational value at Northern Green Expo 2013 – just look at these golf course speakers!

Erik Christiansen is president of EC Design Group, Ltd., an irrigation design and water management resource company with over 30 years of turf and irrigation related experience backed by over 400 projects. For over 30 years, Christiansen has been actively involved in the golf and commercial irrigation industry. He started out in the golf course industry at Willow Creek Golf Club, a 36-hole operation, moving on to irrigation contracting and distribution of golf and commercial irrigation products before finally organizing EC Design Group, Ltd. in 1993. He holds several professional affiliations and certifications including: American Society of Irrigation Consultants, Golf Course Superintendents Association of America, Golf Course Builders Association of America, Minnesota Golf Course Superintendents Association, and the Texas Natural Resources Conservation Commission.



1 Performing a Golf Course Irrigation Evaluation & Analysis


This session will review a step-by-step process, broken down by major irrigation components to properly evaluate an existing irrigation system. This evaluation will be the basis for a properly constructed report to illustrate standards in design and will also deliver budgetary costs to aid any club in appropriating funds to implement an irrigation upgrade.

2 Preparing Your Club for an Irrigation Renovation

Accurate communication is key for any club to consider future irrigation upgrades. This workshop will focus on the importance of quality and factual information by illustrating the specific needs and costs associated with an irrigation renovation. Furthermore, this seminar will demonstrate the appropriate timing and potential impact of a qualified irrigation installation from start to finish.

3 Implementation of Irrigation Plans & Specifications

The proper process for quality design documents can aid any club in a successful irrigation installation. This class will take you through the steps in creating a custom irrigation bid documents that fit your particular club needs. By implementing these bid documents, both the club and contractor will clearly understand the scope expected of each other by minimizing unknowns.



Dr. Rob Golembiewski is a Greens Solutions Specialist for Bayer Environmental Science with the responsibility of providing technical expertise for the turf & ornamental industry. Most recently, he served as the Turfgrass Specialist at Oregon State University. Rob received his B.S. and M.S. from Michigan State University and his Ph.D. from The Ohio State University. Golembiewski's career has included positions with Montana State University, Dow AgroSciences, Paramount Landscape, and the University of Minnesota, Crookston.

Plus many more great seminars and speakers! To view the entire preliminary schedule-at-a-glance, visit www.NorthernGreenExpo.org.

Join the conversation on Twitter [#GreenExpo13](https://twitter.com/GreenExpo13).

1 Enhancing Turf Performance with Soil Amendments

Minimizing turf irrigation needs has been a long sought after goal for turfgrass managers. It is more evident today than ever before that the goal of saving water is a necessity. Along with the innovations in new drought tolerant turf species, soil amendments continue to improve and show potential for water management and enhanced turf quality. Soil amendments can be defined as any additive placed directly into the soil profile which can create a better growing environment for the turf by modifying the soil. This presentation will focus on types of soil amendments available, their characteristics, uses, and research evaluating their potential in divot mixes and fairway incorporation trials.

2 Interseeding into Established Greens - Truth or Fiction?

Seed companies continue to develop and market new creeping bentgrass cultivars that are said to be more aggressive and capable of being overseeded into existing creeping bentgrass and/or annual bluegrass putting greens. But is it really possible to interseed into an existing green and change that population without completely renovating the green? This presentation will review research trials from around the country that have tried to answer this very question. At the conclusion, you will decide if the money spent on seed and labor could be better used elsewhere.

that summer glyphosate application and slit-seeding has the potential to increase creeping bentgrass populations in annual bluegrass fairways, while keeping the golf course open for play. The control plots that were not treated with glyphosate showed a bentgrass increase of less than 5%, which indicates that interseeding without suppressing the existing turf is an ineffective technique. Other researchers have shown that creeping bentgrass has the potential to increase over time after the initial seeding (7,10), although our results showed a reduction over time, which may be due to competition with annual bluegrass.

Aggressive creeping bentgrass varieties, such as T-1, have been shown to outcompete annual bluegrass (2). However, this result probably depends on altering management practices to favor creeping bentgrass over annual bluegrass, including collecting clippings, reducing irrigation frequency (6), alleviating soil compaction, improving drainage, using lightweight equipment, decreasing shade and minimizing soil disturbance (3).

Annual bluegrass reduction programs have proved successful for selective control of annual bluegrass in creeping bentgrass fairways (6,8), but implementing a reduction program requires a moderate population of creeping bentgrass in order to maintain turfgrass quality and encourage creeping bentgrass growth and

development.

The glyphosate and interseeding approach appears to be a good strategy to quickly increase creeping bentgrass populations when initial populations are low. A specific recommendation based on this study would be to apply glyphosate at 1.5 pounds ai/acre (1.68 kilograms ai/hectare) or greater zero to seven days before seeding, while interseeding creeping bentgrass at a rate of 65.1 pounds/acre (73 kilograms/hectare) during mid-summer high-stress periods. Lower rates of glyphosate will benefit turfgrass quality, but these rates will also reduce creeping bentgrass establishment. Since annual bluegrass fairways typically decline in summer in the Midwest, summer is an optimal time to increase creeping bentgrass populations. Timing glyphosate application from zero to seven days before seeding will maximize the duration of acceptable turfgrass quality and provide a greater increase in creeping bentgrass populations.

The research says

- Summer glyphosate application and slit-seeding has the potential to increase creeping bentgrass populations in annual bluegrass fairways, while keeping the golf course open for play.
- Apply glyphosate at 1.5 pounds ai/acre or greater at zero to seven days before seeding; interseed creeping



MGCSA FALL MIXER HORSE AND HUNT CLUB

“Trading Sticks for Guns in Prior Lake”

MONDAY, OCTOBER 15, 2012

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This year’s Fall Mixer will again be a friendly, sporting clay shoot.

The Gun Raffle drawing will take place. SHOOTING
FIELD LIMITED TO 100 PARTICIPANTS

More than 100 people can attend the educational and meal portions of this event.

Cost for the event: **\$40.00**
and includes one raffle ticket per
entry

Additional costs include ammunition, along with gun rental if you or your team can not provide a gun. It is suggested to buy your own ammo beforehand at your local gun supply store. Our goal is to have at least one experienced hunter in each group. We are shooting (no pun intended) for 20 teams of 5 shooters on each team. Only one gun is needed per group.

AGENDA

9:30 – 10:00 a.m.	Registration
10:00 – 11:00 a.m.	SPEAKER: Scottie Hines CGCS
	Topic: Gun Cleaning
11:00 – 11:02 a.m.	Drawing for the over-under shotgun, \$2,500 value
11:00 – 12:00 noon	Lunch
12:00 – 3:00 p.m.	Sporting Clay Shoot

PLEASE CIRCLE YOUR EXPERIENCE LEVEL. “1” IS A BEGINNER AND “5” IS AN EXPERT

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IMAGE 5: Plot overview photo at 4 WAS. (Michigan State University Hancock Turfgrass Research Facility, East Lansing, MI. Photo: Aaron Hathaway)

bentgrass at 65.1 pounds/acre during mid-summer high-stress periods.

- Lower rates of glyphosate will benefit turfgrass quality, but will reduce creeping bentgrass establishment.
- Timing glyphosate application from zero to seven days before seeding will maximize the duration of acceptable turfgrass quality and provide a greater increase in creeping bentgrass populations.

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Power-Drainage!!!!

Tools To Make Your Job Easier



By Pete VanDeHey, Golf Course Superintendent and Owner, Mid Vallee Golf Club

Being the superintendent at Mid Vallee Golf Course for the past 35 years and putting up with flooded fairways, ice damaged in spring, cancelled golf outings, and course closures; I decided to do something about it.

Mid Vallee Golf Course has many fairways that have no slope to promote natural drainage. Much of the course was built on cornfields that were worked up and seeded as this was the common way

to build golf courses in the 1960's. Add in the fact that the course sits on heavy soil and the two factors add up to severe drainage problems.

As we know, the problem with installing drain tile is the fact that it is very labor intensive and time consuming. That made it nearly impossible to do during the golf season, until now. By purchasing some key equipment, I am able to install tile at an incredibly speedy rate.

We have 4 key pieces of equipment:

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Since owning all these pieces of equipment is quite expensive, I thought it might be beneficial to other courses with similar problems if you could rent our equipment instead of purchasing them.

Here is how I envision it to work: I would deliver the equipment to your course, and I would spend a day or whatever it would take to get someone accustomed to the operation, and also

share all the secrets I have learned over the past 3 years. I would be willing to offer my help in the design of your drainage system, or better yet, have an outside firm implement a design for your particular problem.

For more information, e-mail me at Pete@midvallee.com or call 920-621-5605. I would be glad to help you with your drainage problems.



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