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THE GRASS ROOTS

is the bimonthly publication of the Wisconsin Golf Course Superintendents Association. No part of the THE GRASS ROOTS may be used without the expressed written permission of the editor.

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ABOUT THE COVER

Cover artist Julie Moyer gives us a relaxing look at winter fun.

Somehow, not only for Christmas but all the long year through, The joy that you give to others is the joy that comes back to you. And the more you spend in blessing the poor and lonely and sad, the more of your heart's possessing returns to you glad.

By American Poet John Greenleaf Whittier, 1807-1892

This quote by Greenleaf reminds us to enjoy the giving to others.

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Another Year!

By Jeff Millies, Certified Golf Course Superintendent, Edgwood Golf Course

Another year is coming to an end, bringing a sigh of relief to many of us. This year has certainly had its challenges. It has been one of the coldest springs on record, followed by one of the hottest July's, and then one of the driest Augusts, these extremes always seem to average each other out; however, I'm not sure what an average year is anymore especially with the unseasonal weather we seem to always experience.

WGCSA has also had a busy year. Between golf meetings, Par 4 Research Auction, Symposium, Hospitality Room, environmental regulation meetings, GCSAA leadership conference and delegates meeting, scholarship and research, all of the board members have been busy. I would encourage all of you to consider serving on the board at some point of your career, even if it is only for a two-year term. It is an exciting and rewarding experience to be involved in running a successful chapter such as the WGCSA.

At the fall business meeting, WGCSA announced it was able to contribute \$45,925 to scholarship and research for 2011. The Par 4 Research Auction raised \$10,350. Please help support the effort by donating now for the 2012 Par 4 Research Online Auction. Additional information and donation forms can be found on the website, www.wgcsa.com

The Legacy Scholars Program was developed to recognize outstanding students and offer educational aid to children, stepchildren and grandchildren of WGCSA members. Congratulations to this year's winners of a \$500 scholarship: Eden Schaller daughter of Scott Schaller from North Shore Golf Course, Kayla Brandenburg daughter of David Brandenburg from Rolling Meadow Golf Course, and Danielle Schuld daughter of Daniel Schuld from Por-

tage Country Club.

I would like to thank Mark Storby for his time served on the WGCSA board. Mark has served on the board for the last 4 years and has been a valuable asset. Mark was the secretary this year and served on the environmental and governmental regulations committees. I would also like to welcome our newest board member Aaron Hodges from University Ridge Golf Course. I am looking forward to hearing Aaron's perspective on upcoming events.

This year's Wisconsin Golf Turf Symposium (A.K.A. the Milorganite Symposium) was outstanding. I would like to thank Milorganite Division-MMSD for their years of support. Since the conception of the Symposium in 1966 Milorganite has always been the title sponsor. They aimed their sights high at providing WGCSA members with a quality, thought provoking event that adds value in helping Superintendents not only advance practices on their courses, but in the industry as a whole. Back in 1966, no one ever imagined that this conference would grow into the event that it has become, attracting notable speakers in golf and turf science from all over the world. They were instrumental in making the Symposium into what it is today.

If you were unable to attend this year Symposium, we would still like to hear your suggestions for next years event. Please contact me or one of the board members. Someone once said, "You can't be better at anything without something changing," and I believe this also holds true for events as well as organizations.

As the year comes to an end, take some to enjoy the holidays with family and friends. Relax, reflect, and recharge for it won't be long before spring is here!





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Back to the Basics: Soils Influence on Turf Selection and Management

By Shane Griffith, Graduate Student, Department of Soil Science, University of Wisconsin - Madison

Editors Note: This month we welcome Shane Griffith a Graduate Student under Dr. Doug Soldat. Shane is researching the use of biosolids to produce Kentucky bluegrass sod and anticipates graduating in December.

One of the most important components of successfully maintaining a home lawn is selecting the best grass for the location. Are there shade issues? Is there a steep slope? Did the developer only cover the subsoil with two inches of good topsoil? Will my kids invite half the neighborhood over and trample everything in sight?

Once the proper grass is selected, the next key is adequate mowing, fertilizing, watering, etc. Unfortunately, new homeowners are often uninformed or even misguided when making decisions about what grass to plant. For example, my sister recently purchased a new house and went to Home Depot to buy grass seed. She selected annual ryegrass because the bag said it's great for a seasonal lawn, and in Wisconsin the lawns are always seasonal, right? Even educated turf managers can fall into the trap of choosing the wrong grass for a location. Often decisions may be made after consulting the UW-Madison Kentucky bluegrass NTEP trials. However, these plots are maintained as a golf course fairway at a 0.75 inch height of cut, watered three times weekly, and are well fertilized. Therefore, grasses that

look to be the right choice in the NTEP, may not be the best choice for a minimally managed home lawn or golf course rough.

A multi-year study was just finished at the OJ Noer Turfgrass Research and Education Facility that investigated common home lawn grasses maintained with different mowing heights and fertilizer rates. An elite and common variety of Kentucky bluegrass, fine fescue, tall fescue, perennial ryegrass, and the Madison Parks mix (KBG, FF, and PRG) were all established in fall of 2007. Plots were mowed at 1.5, 2.5, or 3.5 inches and fertilized with 0, 2, or 4 lbs N/M/year. Q4® Turf Herbicide was applied during establishment, but no further chemical applications were made to manage weeds or diseases.

Results of the study take us back to Turf Management 101. Regardless of what grass was planted, plots mowed at 1.5 inches were full of weeds by the 2010 season (crabgrass, creeping bentgrass, and dandelion). Once again my sister (I hope she never reads this) serves as a great example of how this plays out in the real world. I watched her mow her new lawn with a rotary set as low as it can go (she claimed it was one click above the lowest setting!). A year later she was asking me for the best way to kill the crabgrass in her lawn...it was a good teaching moment. A second, not surprising, result was that fertilized grass had fewer weeds than unfertilized grass. However, no difference was found between 2 and 4 lb N/M suggesting that some fertilizer is necessary, but more is not necessarily better when growing a lightly-trafficked lawn.

Back to the title 'Soils influence on turf selection', we lucked out and had a difference in soil quality from one replication of the study to the other. One set of plots is on a slope that was subject to erosion of the top soil when it was under a corn/soybean rotation over 20 years ago. The other set of plots were at the bottom of this slope, and had good black top soil to a two foot depth. This gave us the opportunity to see how different grasses performed based on inherent soil fertility. On a low fertility soil elite Kentucky bluegrass had a big response to applied fertilizers, with 0 lb N/M resulting in weak turf and 4 lb N/M resulting in dark green color and little weed pressure (Fig. 1).

On a high fertility soil, bluegrass looked weak at 0 but fantastic at 2 and 4 lb N/M. Tall fescue on the other hand looked fantastic on both the low and high fertility soils independent of fertilizer application rate (Fig. 2).



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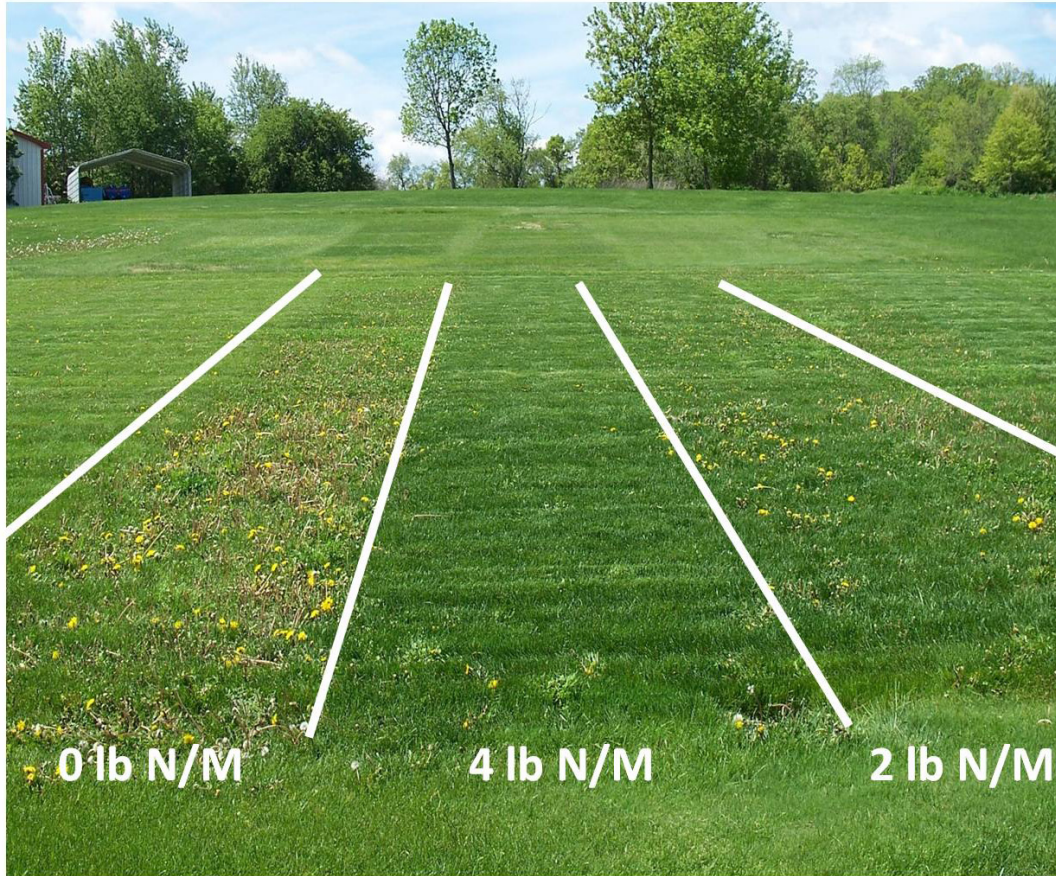
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Fig. 1. Elite Kentucky bluegrass ('Kingfisher') grown on eroded top soil needs 4 lb N/M/yr to maintain density and keep weeds out.



Notice the green color of tall fescue and limited weeds in the photograph taken three years after establishment at 0 lb N/M.

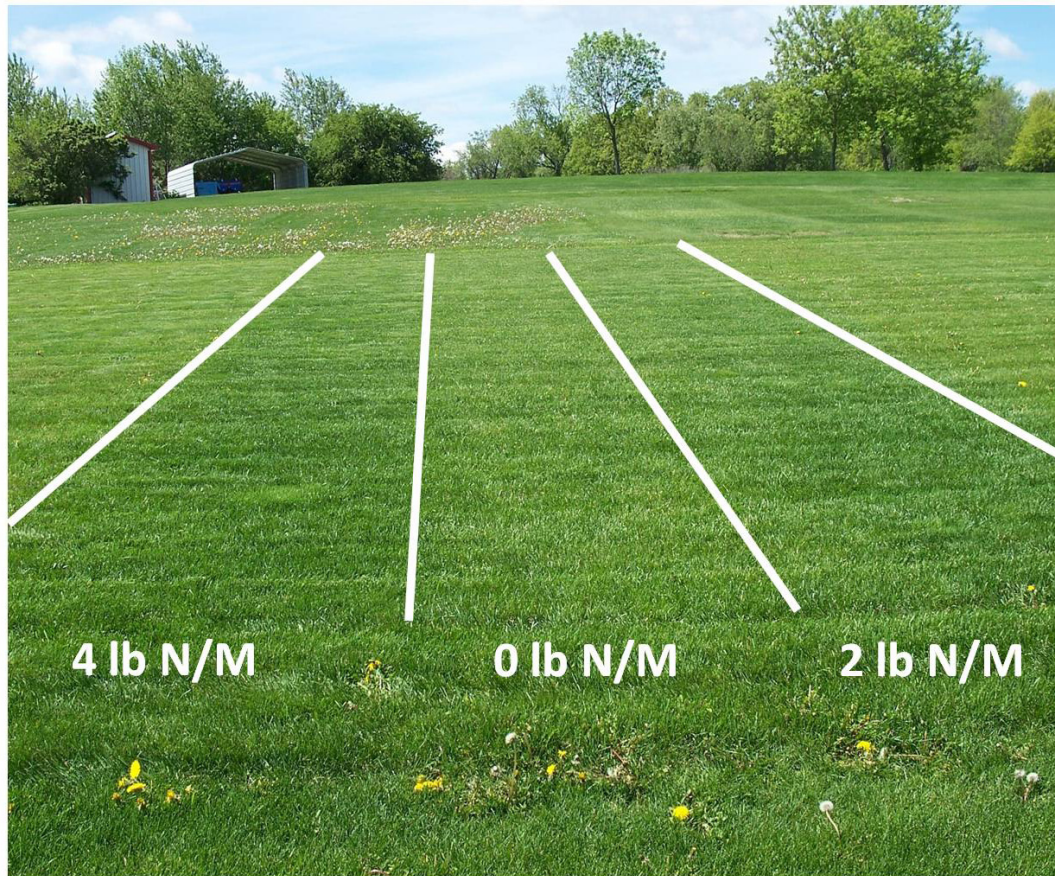
So what's the point? More often than not new home lawns are established on a thin layer of nutrient rich topsoil (2 inches?). More information is needed about home lawn fertilization practices in Wisconsin, but a study in Maryland has showed that 24-48% of lawns are do-it-yourself, 20-31% are fertilized by a professional company, and 32-44% of lawns are unfertilized (Law et al., 2004). This says that approximately 1/3 of lawns are unfertilized and another 1/3 are self-fertilized. Most homeowners I know say they fertilize, but only actually do it once per year, usually in late fall when recent studies suggest fertilizer uptake may not be optimal (Lloyd et al., 2011). In Wisconsin, lawns established from sod are almost exclusively composed of elite Kentucky bluegrass cultivars. Lawns established from seed are usually a contractor's mix similar to the Madison Parks mix (KBG, FF, PRG). Our results suggest that it is time to reconsider the

use of elite Kentucky bluegrass when homeowners are not going to put the time, money, and effort into proper maintenance of their lawn. Instead, tall fescue should be considered. Of course, the great equalizer is soil quality. If lawns are established on lots of good topsoil, the chances of success are always greater.

The lawn industry should reconsider grass selection as a majority of home owners will not care for elite Kentucky bluegrass lawns with needed maintenance inputs, often leading to weak, weed-infested lawns. Tall fescue appears to be a great option for low-maintenance sites in Wisconsin. Of course, like any plant, tall fescue has its weaknesses such as poor winter survival if ice cover is present and high susceptibility to brown patch in the summer. Therefore, remember to step back, consider each lawn's unique characteristics (including likely management inputs), and make the decision that gives the best chance for a healthy lawn.

WISCONSIN SOILS REPORT

Fig. 2. Tall fescue ('Grande II') grown on eroded top soil shows little response to applied fertilizer and keeps out weeds with no fertility. Photos taken by B. Kreuser.



A special thanks to Brad DeBels, Mark Garrison, Bill Kreuser, Eric Melby, and Dr. Doug Soldat who all dedicated time to make this project a success. If interested in finding out more about what turf species performed the best in this study please contact segriffith@wisc.edu.

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Merry
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&
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A Single Application to Control Black Cutworm?

By P.J. Liesch and Dr. R. Chris Williamson, Department of Entomology, University of Wisconsin-Madison

Seen any cutworms lately? If you've spent any length of time on the bentgrass putting greens on your course in the early morning, you've likely encountered the black cutworm (*Agrotis ipsilon*), a common turfgrass caterpillar. Despite the amazing diversity of insects (~1,000,000 species have been recorded world-wide), the physical appearance of the black cutworm is nothing to write home about. The caterpillars are a dull olive-gray color with a few black spots along the topside of the body. Mature caterpillars can reach up to 2" long. The identifying characteristic of BCW larvae is the skin texture, which resembles a bumpy pebble road when viewed through a 10x hand lens. The green color and "pebbly" skin distinguish BCW from other common caterpillars of putting greens, such as the sod webworms (pale body color with many circular black spots).

So what's the big deal about BCW? Black cutworm caterpillars are nocturnal feeders and scurry off to their underground lairs in the morning like vampires avoiding the sun. Occasionally, you can find the caterpillars still wandering around on putting greens on overcast mornings. You may have also seen their tracks meandering across a dew-covered green. When they feed on putting greens, BCW larvae leave unsightly brownish pockmarks, which can resemble ball marks. Closer examination of these pockmarks can reveal the opening to cutworm's underground burrow. Because these insects hide in their burrows during the day, the easiest way to sample for cutworm larvae is to use a disclosing solution of soapy water, which irritates the caterpillars and forces them to the surface.

Black cutworm can be quite common in Wisconsin from May through September. A large population of BCW on a putting green can detract from aesthetics and gameplay due to the irregular appearance and texture. Luckily, there are a number of different products available to control BCW on golf courses. Commonly used insecticides include the synthetic pyrethroids (bifenthrin, cyfluthrin, deltamethrin, etc.), carbamates (carbaryl), organophosphates (trichlorfon), and oxadiazines (indoxacarb). However, a limitation of these products is that repeated applications may be required during the course of the summer to control BCW. A common neonicotinoid product for season-long grub control, imidacloprid (i.e., Merit), will only provide "suppression" of cutworm larvae.



Typical damage from black cutworms on a putting green. The larvae feed around the hole leaving brown spots in the turf.



ABOVE: Black Cutworm larvae can be seen crossing the green surface in the early morning or a soap flush can be used to bring them out of the soil/turf canopy.

BELOW: Black Cutworm adult moth.

