DELTA WATERFOWL

MINNESOTA GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

BAYER

Bayer Environmental Science

March 10, 2014

MGCSA Assistants Meeting and Hen House Building Event

10,000 Duck Campaign + Education

Lunch provided by Mike Kelly and Bayer Environmental Science

Where? TPC Twin Cities Turf Management Center
Hosted by Assistant Mark Michalski from TPC Twin Cities

On Monday March 10th, MGCSA Assistant members will get together for a morning of agronomic education, learn about duck habitat and build a take home project...a mallard hen house... for placement in a water hazard on their course.

8:30-9:00	**Registration and Introduction**
9:00-10:00	**Ken Rost, Frost Services: Maximizing Your Spray System**
10:00- 11:00	**Aaron Johnsen, Winfield: De-mystifying Moisture Meters**
11:00 -11:30	**Delta Waterfowl Presentation**
11:30-12:15	**Lunch provided by Bayer Environmental Science**
12:15-?	**House Building Project with Delta Waterfowl**

Cost of the day including materials to build your own hen house: just $20

Prior to the Delta Waterfowl presentation and construction project there will be an educational session featuring Ken Rost and Aaron Johnsen. Thanks to Mike Kelly and Bayer Environmental Science for supporting this event.

Please use the Universal Registration form to sign up call or email Jack at 651 324 8873 or MGCSA.org for more information.

It just wouldn't be the same without you.

but we will pay special attention to those diseases for which you expressed concern. We will get this information to you as a professional turf disease IPM manual on our UMN Extension website, the UMN turf blog, and at outreach events. Although this is going to take some time to do well, we anticipate having the information up on the site by the end of this year.

What about management practices? I will be making recommendations based on scientific experiments performed by turf pathology colleagues at universities across the country. If I find that there is not sufficient or consistent information on a particular management issue, then we will conduct tests necessary to get this information for you.

One of the requests made was to have pictures of spores and fungal hyphae associated with our information and diagnostic aids on the website. I think this is a great idea. I have been to several courses that have microscopes and – since microscopy is one of my all-time favorite things – I would love to share what I'm seeing with you.

However, we also have to remember that seeing a specific type of spore, fruiting body, or fungal hypha doesn't mean that that is what is causing your disease. Many of these fungi are present at low levels all of the time. When I make a diagnosis, I need to see the organism in the right places, at the right levels, and with the right type of damage to plant parts to be comfortable making a diagnosis. So, I will post pictures of what I see when we look through that microscope, but remember to call if it gets tricky. If there is enough interest, perhaps a turf disease diagnosis workshop using microscopes could be planned in future years. If you see me this summer – let me know if you're interested.

Finally, it is my hope to conduct an initial survey of golf course diseases this summer. The survey, in addition to results from Plant Disease Clinic submissions, will help us to further understand your disease management needs. After all, in the words of James Horsfall (a famous plant pathologist):

"We must be curious to see if what we see is what we seem to see. We must analyze it, open it up, turn it over, look underneath it, and look behind."

I'd like to thank you again, for your overwhelming support and participation in this survey. Please contact me at any time to talk about the survey results, turf diseases, or management strategies: Angela Orshinsky, Assistant Professor and Extension Specialist, aorshins@umn.edu, 612-625-9274
Plant Disease Clinic – pdc.umn.edu, 612-625-1275

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Pre-registration closes on February 28, 2014

MGCSA *MEGA*- SEMINAR

March 5th and 6th, 2014
Brackett 's Crossing Club
17976 Judicial Road
Lakeville, MN 55044
Host Superintendent: Tom Proshek

John Spaulding
Regional Representative

The MEGA-Seminar sponsor, John Spaulding with Syngenta, is very excited about this year's format and quality speakers. It is expected this event will be well attended so register early. Thanks to Jeff Girard and Jake Schmitz, Co-Chairs of the MGCSA Educational Committee for their hard work in planning this great event and Sygenta for their support!

Wednesday, March 5th:

7:00- 8:00 ***Registration/Networking with assorted pastries and coffee***

8:00 - 9:00 ***Dr. Joe Vargas:*** ***Black Layer, Wetting Agents, Bacterial Wilt and Bacterial Etiolation***

9:00 -10:15 ***Dr. Joe Vargas:*** ***Pesticides; Perception vs. Reality***

10:15 - 10:30 ***Break***

10:30-11:00 ***Dr. Bruce Branham:*** ***Why Poa Should Be Eliminated***

11:00 - 11:30 ***Dr. Joe Vargas:*** ***Why Poa Should Be Managed***

11:30 - 12:30 Lunch and Networking Break

12:30 - 1:30 ***Dr. Bruce Branham:*** ***Poa Annua Control***

1:30 - 2:30 ***Dr. Joe Vargas:*** ***Poa Annua Managment***

2:30- 3:00 ***The Poa/Bent Debate and Discussion***

3:00 ***Cash Bar Available***

GCSAA CEUS available for this one day or both days of the Mega Seminar Event.
Cost for this one day event is $80, both days are discounted at $140.
Please use Universal Registration form at mgcsa.org

SPECIAL NAME TAG PREMIUM FOR THE FIRST 75 TWO-DAY REGISTRATIONS

Registration Closes on February 28th, 2013

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syngenta

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Thursday, March 6th:

7:00- 8:00	***Registration/Networking with assorted pastries and coffee***
8:00 - 9:00	*Dr. Bruce Branham:* ***Sustainability and Climate Change - How Golf Courses Can Make Proactive Changes***
9:00-10:00	*Dr. Bruce Branham:* ***Foliar Fertilization***
10:00 - 10:30	*Break*
10:30 - 11:30	*Sam Bauer:* ***Regional Conditions From Across the State***
11:30- 12:30	*Lunch and Networking*
12:30 -2:00	*Patrick McGuiness:* ***How to Handle Problem Employees***
2:00-3:00	*Dr. Brian Horgan:* ***Practical Use of Growing Degree Days***
3:00	*Cash Bar Available*

Special Name Tag Premium for the first 75 two-day registrations
Please use the Universal Registration form to sign up for this event at mgcsa.org

GCSAA CEUS available for this one day or both days of the Mega Seminar Event.
Cost for this one day event is $80, both days are discounted at $140.

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PDC

Not Just A Catchy Acronym

by

Brett Arenz, Director Plant Disease Clinic

Greetings esteemed readers! Please allow me to introduce myself, my name is Brett Arenz and I am the new director of the Plant Disease Clinic at the University of Minnesota. Although I was born in the homeland of golf, Scotland, I spent most of my life growing up near Bemidji, Minnesota. I have much respect for those with the skill and dedication to succeed in this sport, but must confess to being bestowed with neither. Indeed, the most time I've spent lately on a golf course is in the winter on skis.

However there is something I'll wager we do have in common: a mutual interest in plant diseases and more importantly, a desire for their effects to be minimized. For any effective and efficient management strategy to be developed and implemented, the first priority must be placed on accurate disease diagnosis. To that end, I feel that the PDC provides an essential component to the long term goal of healthy and beautiful fairways and greens. With this in mind, I am excited to announce that the PDC will be partnering with Dr. Angela Orshinsky, a new faculty member in the Department of Plant Pathology, in diagnosis of turfgrass samples. To take advantage of her expertise, simply submit your turfgrass sample to the PDC.

At the risk of stating the obvious, it should also be acknowledged that a golf course for which the only plants are grass species would be exceedingly monotonous. High value shade trees, shrubs, flowers and other ornamentals all contribute to an enjoyable day out on the links and make your course memorable to patrons. Don't be resigned to suffer the effects of chronic plant diseases that deplete your time and budget. Accurate diagnosis can allow you to develop a management plan that reduces sleepless nights (perhaps having a 9 month old child is causing me to project here).

The PDC at the University of Minnesota accepts all types of plant samples and utilizes both traditional and cutting-edge molecular techniques in disease diagnosis. In some cases, the combination of signs (visible evidence of the pathogen) and symptoms (damage to the plant) are enough to make a conclusive diagnosis. In other cases, diseased tissue needs to be isolated on growth media that allow causative pathogens to sporulate and be subsequently identified.

PDC director, Brett Arenz, analyzing a leaf sample for signs and symptoms.

However, there are many other pathogens that require additional zsteps to arrive at reliable diagnosis. Bacterial pathogens lack discernible morphological characteristics that can be used to easily separate them from one another. In many of these cases, specialized types of growth media and other chemical tests must be used to distinguish individual species. For example, many bacterial pathogens in the genus Pseudomonas will produce a pigment that fluoresces under ultraviolet light when grown on a particular type of media.

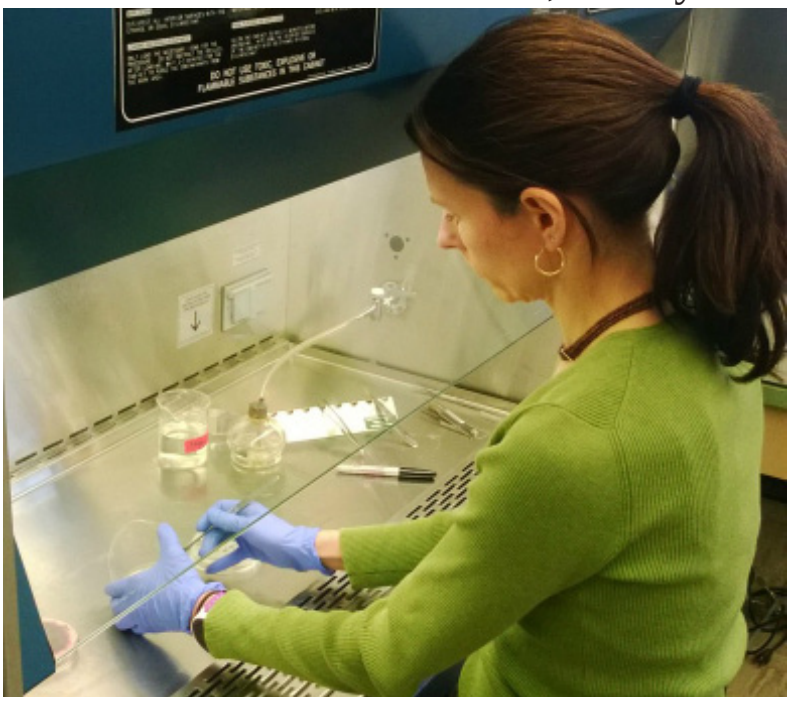
Some pathogens, such as viruses and phytoplasmas, do not grow at all in artificial growth media and more advanced techniques must be used to identify them. In some of the cases, serological tests that work much like over-the-counter pregnancy tests are available that specifically target antigens of these organisms. Otherwise the DNA itself can be used as a basis for identification and, as sequencing technologies have dramatically improved in the last two decades, so too has our capacity to accurately diagnose a wider range of pathogens.

When submitting plant disease samples to the clinic, please bear in mind that the accuracy of diagnosis can be very dependent on the quality of samples received.

First, it is almost impossible to diagnose plants that are completely dead as decomposer microorganisms have likely begun to take over the plant material.

Second, if possible, it is always best to submit multiple plants or parts of plants representing different stages of the disease to show the full range of symptoms.

Third, in many cases, above-ground symptoms are caused by pathogens affecting the roots of the plant, but this can't be discovered unless the roots (along with some soil) are also submitted with the rest of the plant. If possible, it is always best to submit the whole plant. Obviously this is not feasible with many tree diseases. In suspected cases of Dutch Elm Disease or Oak Wilt, symptomatic branches with a diameter of at least ½ inch should be submitted.



Jennifer Flynn, transfers a culture in a laminar flow hood to avoid contamination

For instructions on how to submit turfgrass samples, you can refer to Angela Orshinsky's article on turf grass diagnostics in this issue. You are always welcome to personally drop off samples at the Plant Disease Clinic and our lab is easily accessible on the 1st floor of Stakman Hall just off Gortner Avenue on the Saint Paul Campus of the University of Minnesota.

We also welcome samples sent by mail, but bear in mind that samples can deteriorate significantly if left in the mail system for too long. Avoid sending samples at the end of the week, as they will not be delivered until Monday. When sending samples by mail it is best to use cardboard boxes and to cushion or wrap above ground tissues in newspaper. Only root tissue should be wrapped in plastic to prevent them from drying out. Wrapping the whole plant in plastic will cause the sample to decompose rapidly due to high humidity and saprophytic fungi.

Finally, it is important to provide as much background information as possible about the potential disease when submitting a sample. How