

TURFGRASS DISEASE MANAGEMENT

DISEASES OF COOL- AND WARM-SEASON PUTTING GREENS

By John C. Inguagiato, Ph.D. and S. Bruce Martin, Ph.D.



Severe Pythium root dysfunction in July.

There is an amazing amount of knowledge available about what causes and controls many turfgrass diseases, but the success we have had in applying that knowledge certainly has not changed human nature. As turf pathologists, we have witnessed situations in which superintendents have worked tirelessly to combat disease outbreaks that still can occur unexpectedly and cause severe damage. In almost all cases, disease outbreaks can be traced to changes in components of the classic disease triangle - diseases result from an interaction between susceptible hosts, favorable environments and virulent pathogens. Disease epidemics happen in the context of time. Some diseases - such as Pythium blight or rapid blight - literally can destroy stands of turf overnight, while other diseases become progressively worse as infestation levels of pathogenic organisms increase over time.

Fundamental stuff, right? While the concept of the disease triangle is simple, when one closely examines the detailed interactions that can occur, and considers the demand for perfect playing conditions that many golfers have, complicated and often confounding factors result in situations where golf courses are managing turf 'on the edge' of potential disease outbreaks. Riding the fine line between disease outbreaks and healthy turf, golf course superintendents do an amazing job managing playing surfaces. Fortunately, there is a lot of science behind the tools superintendents use to control diseases. However, a tremendous amount of knowledge and skill also plays a role in the art of managing turfgrass diseases and other pests, especially when golfers have high and, in some cases, unreasonable playing-quality demands.

In this article we will discuss diseases that continually challenge superintendents. We will discuss progress, areas in which more research is needed to assist our understanding of diseases and provide solutions or approaches to disease management. We will focus our discussion on putting greens, but readers also will surely be reminded of similar disease-management situations on tees and fairways. For the purpose of this article, we will discuss diseases on bentgrass, *Poa annua* and bermudagrass greens.

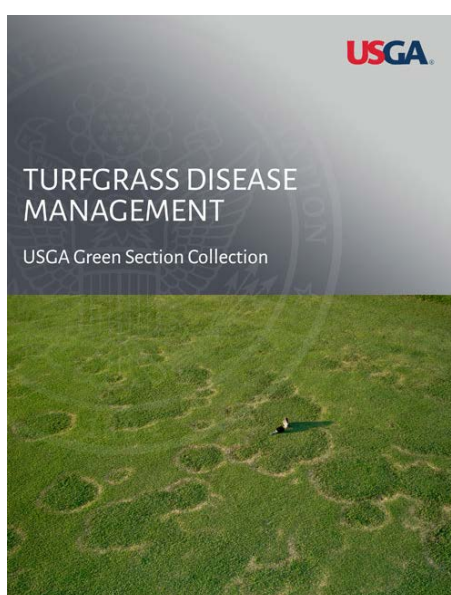
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DIGITAL COLLECTION: TURFGRASS DISEASE MANAGEMENT

A new USGA *Green Section Record* feature now includes an interactive digital collection of supporting materials. In addition to the major article, each digital collection includes supporting articles, a photo gallery and videos that provide additional, relevant information on the subject. The collections can be viewed online in a user-friendly digital magazine format, saved as a PDF or printed. We hope you find this new feature to be a useful resource.

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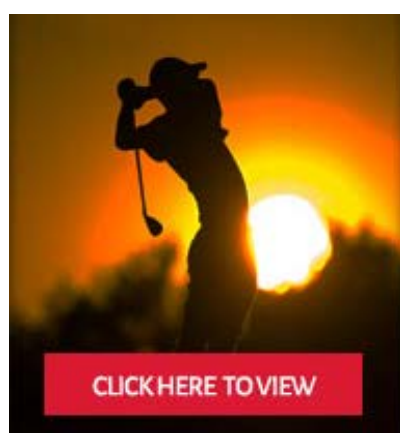
BLAKE MEENTEMEYER JOINS GREEN SECTION STAFF



Blake Meentemeyer has been named as an agronomist in the USGA Green Section's West Region. He is based in the Santa Ana, Calif., office and joins the West Region agronomy staff - Pat Gross, Larry Gilhuly and Brian Whitlark.

Blake brings to the USGA a rich background in academics and sound practical experience. Most recently, he was the golf course superintendent at the Torrey Pines South Course, where he led a staff that prepared the course for more than 60,000 rounds of golf per year and successfully hosted the 2014 and 2015 Farmers Insurance Open. Prior to Torrey Pines, he held a student internship at Bel-Air Country Club, later becoming the assistant golf course superintendent.

Blake has both a Bachelor of Science and Master of Science degree from the University of Illinois. Blake has a strong enthusiasm for the golf industry and has first-hand experience with the agronomic challenges facing golf courses in the West Region. He looks forward to sharing his expertise to bring both science-based and practical solutions to the West Region. We welcome Blake to the staff and wish him a long and successful tenure with the Green Section.

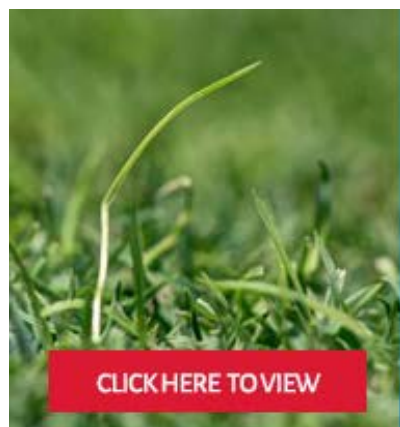


FOR THE GOLFER

Why should golfers be concerned about grasses getting sick?

Our experts explain three very good reasons why golfers should know about superintendents' efforts to manage turfgrass disease problems.

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RESEARCH YOU SHOULD KNOW

Bacterial Etiolation – More Positive Results

The USGA and concerned golf courses supported university studies of an unusual problem on bentgrass greens.

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REGIONAL UPDATES

The USGA Green Section is divided into four regions staffed by agronomists who work with golf facilities on care of the golf course. USGA agronomists provide regular regional updates outlining current issues and observations from the field. Be sure to view updates from multiple regions as featured ideas, techniques and solutions to problems often apply to other parts of the country.



NORTHEAST REGION

The true severity of last winter is being realized throughout the region, and golf courses with winter injury are not alone. This week's regional update provides answers to some FAQs about winter injury and may help you prevent future winter injury.

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SOUTHEAST REGION

Recently, the agronomists in the Southeast Region had the chance to collaborate and review items of interest occurring in the region. Their comments are shared in this update.

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WEST REGION

As the U.S. Open Championship at Chambers Bay in University Place, Wash., quickly approaches, discover the collaborative effort made by Chambers Bay staff, Kemper Sports and Pierce County to prepare for our national championship.

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CENTRAL REGION

Traffic is a constant concern on golf courses, especially when turfgrass recovery is paramount, and controlling traffic from golfers can be difficult. Discover the creative solution being used by one Central Region golf course to divert golfer traffic from sensitive areas.

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