

RESEARCH STATUS REPORT

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Management of Emerging Pathogens on Bentgrass Putting Greens.

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Sclerotinia homoeocarpa. Ten different isolates of dollar spot (*Sclerotinia homoeocarpa*) initially identified as "fall strains", difficult to control, were tested for fungicide resistance. These isolates were selected from golf courses that were having extreme difficulty in managing these particular strains of dollar spot, regardless of rate or type of fungicide used. Isolates were tested in the laboratory for resistance to Banner, Bayleton, Emerald, Chipco 26GT and Daconil. None of the isolates demonstrated any significant level of fungicide resistance. Although some strains were slightly less sensitive to Emerald, all chemicals tested were still capable of provide substantial control of the fungus.

Currently, experiments are underway to determine if these problematic strains of the fungus are actually more aggressive than typical strains. Testing will begin with growth rate experiments, followed by pathogenicity trials. If these strains are more aggressive than typical strains, an accelerated growth rate may explain why they cannot be easily controlled, that is, by the time chemical applications have been initiated, that pathogen has already caused substantial damage and spread rapidly. Often, these strains are being observed in the fall, from mid to late September and October. We will also be attempting to determine if these strains prefer colder temperatures. During periods of cold weather, systemic fungicides are less likely to be translocated throughout the plant and may also explain why these fungicides are having being less effective against these strains.

Microdochium bolleyi. Six putative isolates of *Microdochium bolleyi* have been collected and their DNA sequences have been identified. Of these, two of the samples are actually *Gaeumannomyces graminis* while the other four are *Microdochium bolleyi*. Isolates of the fungus have been inoculated onto bentgrass in the greenhouse and are will be rated for pathogenicity once disease becomes apparent. Fungicide trials to determine chemical susceptibility will begin this summer. In addition to this fungus, a bacterial pathogen was identified on G-series bentgrass in North Carolina this past fall that mimics the symptoms of this *Microdochium bolleyi*. It appears likely that this bacterium may be causing additional damage that has not yet been attributed to a pathogen. This summer we will begin sampling for this new pathogen (currently assumed to belong to the genus *Acidiovax*) and comparing it to disease caused by *Microdochium bolleyi*.