



## Bentgrass Dead Spot: *Ophiosphaerella agrostis*

### Introduction

Bentgrass Deadspot is a fairly new disease that may be found developing on golf course greens or tees that have a sand-base. It has not been found to be an issue on fairways. The disease is caused by a fungus, *Ophiosphaerella agrostis*, and first appeared in Illinois in 1997. It moved quickly to other states, showing up in Maryland, Virginia, Pennsylvania, and Ohio in the early part of 1998 and in Georgia, Massachusetts, Missouri, North Carolina, South Carolina, and Texas by the end of 1998. It was reported in New Jersey in 1999. The disease appears to be more severe on newly established golf course greens under 4 years of age.

### Symptoms and Signs

The disease is commonly misdiagnosed due to the similar symptoms produced by a number of other causal agents. Spots may be similar and easily confused with Dollar Spot, but Bentgrass Dead Spot patches rarely coalesce. Symptoms may be similar to



Figure 1: Symptoms of Bentgrass Dead Spot (provided by Dr. Peter Dernoeden, University of Maryland)

Copper Spot, Dollar Spot, Pink Snow Mold, Black Cutworm damage and ball mark injury.

Initial symptoms appear as small reddish spots about 1-2 cm in diameter. Spots gradually enlarge to a maximum of approximately 6 cm and have a characteristic tan center with a reddish-brown margin (Fig. 1). Open, exposed areas also appear to be affected more severely. As far as is known at this point, all cultivars of bentgrass appear to be susceptible to infection by this pathogen.



Figure 2: Reproductive structures known as pseudothecia (provided by Dr. Peter Dernoeden, University of Maryland)

### Disease Cycle

The fungus invades the roots and crowns of susceptible species and affects the plants ability to transport water. Wilting occurs as a result of severe infection, especially during the heat of the summer. Reproductive structures known as pseudothecia (Fig. 2) may be found in infected leaf tissues and in dead tissues. These structures are black, flask shaped, and embedded in the plant tissue. They release spores that

cause new infections. Symptoms are more severe in hot and dry weather, but the fungus can remain active until a hard frost.

## Management Strategies

There are no known resistant cultivars of bentgrass available. Raising cutting heights when mowing may help reduce the severity of the disease. It has been documented that the closer the cutting height, the slower the recovery time.

Lowering the pH of the soil may help to reduce the incidence of several diseases, and the source of nitrogen applied to bentgrass has also been found to make a difference in the incidence of dead spot or recovery from dead spot. By using ammonium sulfate as the source of nitrogen, soil pH may be reduced, and recovery of turf from dead spot may be encouraged.

This disease is not known to be a problem on residential lawns. If needed on commercial sites, some have been found to reduce the severity of this disease when used preventatively. Professional applicators should refer to the appropriate pest management guidelines for their state for a current list of products that may be registered for this use.

## References:

*Compendium of Turfgrass Diseases*, Third Edition, 2005. R.W. Smiley, P.H. Dernoeden and B.B. Clarke. APS Press.

*Controlling Bentgrass Dead Spot*. Turf Magazine–(www.turfmagazine.com)-January 2011, D. Dale.

*Bentgrass Dead Spot*, J.E. Kaminski, Univ. Connecticut.

*Nitrogen source impact on dead spot Ophiosphaerella agrostis incidence and severity in creeping bentgrass*. International Turfgrass Society Research Journal vol. 10, 2005. J.E. Kaminski and P.H. Dernoeden.

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**READ THE LABEL BEFORE APPLYING ANY PESTICIDE!** Changes in pesticide regulations occur constantly. All pesticides distributed, sold, and/or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office.

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