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Bermudagrass Decline Increasing?

James B Beard

Major problems have occurred with Tifdwarf hybrid bermudagrass (*Cynodon dactylon* x *Cynodon transvaalensis*) putting greens in the southern and southeastern regions of the United States. Much of the summer was characterized by an extended drought period followed by very intense rainfall in the latter part of the summer. The problem has been attributed to bermudagrass decline caused by *Gaeumannomyces graminis* var. *graminis*. There have been difficulties in bringing the problem under control. As with many stresses, the problem is probably a combination of waterlogged soils, high atmospheric humidities, high temperatures and a causal pathogen, assuming the diagnosis that has been made is correct.

Bermudagrass decline attacks primarily the roots. Visual symptoms first appear as a rotting of the roots. There are no lesions visible on the leaves, with the older, lower leaves gradually becoming chlorotic and senescing. The shoots then turn to dark-brown followed by a serious thinning of the turf in non-distinct patches ranging from 0.5 to 3 feet (0.15 to 1 m) in diameter. These patches may coalesce to form larger, irregular-shaped areas. Bermudagrass decline typically appears in late summer through late autumn or in early spring, and is most severe during periods of intense rainfall on closely mowed putting green turfs.

Cultural controls should include practices that will encourage regrowth of the root system. This includes moderate nitrogen levels and high potassium levels, possibly by weekly foliar feeding; plus raising of the cutting height. **It also is important to maintain a positive plant water balance, usually through timely manual watering of the patches as visual wilt of the leaves occurs.** This is because the turf is especially prone to drought stress due to the lack of a root system. There are no known bermudagrass cultivars that are resistant to the causal pathogen of bermudagrass decline. Some turfgrass pathologists indicate that there are no preventive or curative fungicide treatments that are effective. Others are of the opinion that bermudagrass decline can be brought under reasonable control via the use of triadimefon (Bayleton® 25WP). **It should be noted that the pathogen attacks the root system first and that it is at this time that the application of a fungicide probably would be most effective.** The actual thinning and loss of the aboveground grass shoots may occur at a later time during periods of atmospheric water stress. Obviously, more research needs to be conducted concerning the *Gaeumannomyces* pathogen on bermudagrasses.