

# TURFGRASS TRENDS

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## TURF DISEASE MANAGEMENT

### Remote diagnostics in turfgrass

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An education project at the University of Georgia, College of Agricultural and Environmental Sciences is using technology to save turf managers and agricultural producers millions of dollars from damage and crop loss by providing a more efficient and effective mechanism for plant problem diagnostics.

The Distance Diagnostics through Digital Imaging Project, a joint venture implemented by the College's Plant Pathology Department & Office of Information Technology, developed a Internet based program and equipped county Extension faculty in Georgia with computers, digital cameras, and microscopes and trains these faculty to use these tools in assessing factors leading to crop losses due to plant disease and pest infestations.

#### 920 turf samples

Each year, Georgia turf managers and farmers through county Extension faculty submit more than 3,000 plant problem samples to the Plant Pathology Plant Disease Clinics for diagnosis. Of those, 920 were turfgrass samples in 2000. Traditionally, plant samples are mailed or hand-delivered for analysis.

*Distance Diagnostics through Digital Imaging saved Georgia growers over \$17.7 million.*

The samples are catalogued and examined by plant pathologists, who then communicate back the diagnosis and educational recommendations to the county Extension office. This process typically could take from two to four days. A large number of the samples are destroyed or deteriorate en-route, making an accurate diagnosis sometimes difficult.

Computer equipment was provided by the private foundation -funded project. Extension county faculty at these agricultural imaging stations can take digital images of the diseased or pest-infested plant sample, and transmit those images along with grower information through the Internet to UGA scientists who can make an assessment and recommend treatment in a timely manner.

The decrease in diagnostic turnaround time alone potentially saves millions of dollars for Georgia agriculture. Turfgrass diseases on fine turf can cause damage in a short period of time and an expedient diagnosis can be the difference between success and failure. At the time of discovery, early detection and confirmation of a turf disease or pest infestation can be localized.

With the traditional turnaround time of three or four days, plant disease can spread quickly. Treatment may have escalated to a curative chemical remedy sprayed over a large area. This new program not only saves money and time to turf managers, but also has a positive environmental effect as a result. This is "prescription agriculture," diagnosing the problem so a control manage-

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