



Photo by J. Kaminski

Seasonal concentrations of airborne *Pyricularia grisea* conidia

Gray leaf spot (*Pyricularia grisea*) is a major disease of perennial ryegrass turf. Conidia (fungal spores) are an important source of primary and secondary inoculum for gray leaf spot, but their seasonal distribution is unknown. Estimated concentrations of airborne gray leaf spot conidia were determined in the field between May and October from 2000 to 2004 in Maryland using a volumetric spore sampler. The greatest airborne concentration of gray leaf spot conidia occurred between mid-August and September. Disease severity in perennial ryegrass was not correlated with the total number of conidia collected in each season. However, spores were detected up to one month before symptom development, and their early presence and buildup generally resulted in increased turf loss. For this reason, preventive management of gray leaf spot is probably an important factor in reducing disease severity. — John Kaminski, Ph.D. (john.kaminski@uconn.edu), University of Connecticut and Pete Dernoeden, Ph.D., University of Maryland

Primo affects creeping bentgrass adaptation to summer stress

Because creeping bentgrass is subjected to heat and/or drought stress nearly every summer, improved management strategies for coping with these stresses would be helpful to superintendents. Primo (trinexapac-ethyl) has been shown to reduce leaf growth in numerous turfgrass species. The objective of this research was to determine whether applying Primo to L-93 creeping

bentgrass would alleviate heat and drought stress by slowing leaf growth and thereby reducing water demand. Turf was treated with three applications of Primo and placed in a growth chamber for exposure to heat and drought stress for 21 days. Turf treated with Primo had significantly higher visual quality and maintained higher relative water content during the stress period than did non-treated turf. These results indicate that Primo applications may alleviate or delay summer stress injury to creeping bentgrass. — Stephen E. McCann (semccann@eden.rutgers.edu) and Bingru Huang, Ph.D., Rutgers University



Photo by M. Goatley

Turf blankets modify late- and early-season bermudagrass growth

Using turf blankets in fall and spring to provide frost protection and modify temperature can extend the growing season and increase the playability of bermudagrass turf. Little information is available on the impact of blanket type and color on bermudagrass response. This research determined the impact of black polypropylene, white polypropylene and a reflective mesh netting on the performance of Riviera bermudagrass when covered immediately before killing frost from 2004 to 2006. All blankets provided acceptable turf quality and promoted late-season growth through November, but as the air temperature cooled during late fall, black blankets provided the highest turf quality. However, during spring green-up, turf covered with black blankets had significantly lower spring green-up, turf color and turf quality than turf covered with white or reflective blankets. Turf blankets can improve bermudagrass performance in fall and spring, but care must be taken to select the appropriate blanket for the season of the year and turf management objective. — Mike Goatley, Ph.D. (goatley@vt.edu), Virginia Tech

GCM

Clark Throssell is GCSAA's director of research.

Clark Throssell, Ph.D.