



Photo by L. Miller

Fungi associated with fairy ring on greens

More than 60 different basidiomycete fungi are associated with fairy rings in turf, but we do not know which fungi are specific to putting greens. These fungi are identified solely by the characteristics of their basidiocarp (mushroom or puffball), which may not develop or do not reach maturity because of turf management practices. The objective of this research was to develop molecular methods to aid in identifying fungi that cause fairy rings on greens. We recovered 47 samples from soil and basidiocarps from five bermudagrass and four bentgrass putting greens in North Carolina, South Carolina, Florida and Hawaii. DNA fragments were amplified, sequenced and compared to an online database with known DNA sequences; 88% of DNA fragments were nearly identical to either *Vascelum pratense* or *Lycoperdon pusillum*, two puffball-forming species associated with fairy ring in Japan. DNA analysis may aid in detection of specific fairy ring fungi and allow for site-specific recommendations based on the biology of the causal fungus. — Lee Miller and Lane Tredway, Ph.D. (lane_tredway@ncsu.edu), North Carolina State University



Photo by J. Fry

Lateral growth and leaf texture of diverse zoysiagrass progeny

Freezing tolerance, lateral growth characteristics and leaf texture are important factors to consider in developing a new zoysiagrass cultivar for the transition zone. Thirty-one zoysiagrasses, most of which were progeny from a *Z. japonica* × *Z. matrella* cross, were evaluated for stolon and rhizome growth characteristics, rate of coverage and leaf texture over two growing seasons and two locations in eastern Kansas. Compared

to Meyer zoysiagrass, several progeny having the parents Cavalier (*Z. matrella*) × Chinese common (*Z. japonica*) exhibited a faster rate of stolon elongation, a greater number of branches and a faster rate of coverage than Meyer at five to seven weeks after planting. Some of the progeny with improved lateral growth characteristics also had a finer leaf texture than Meyer, and one or more may have potential for release as a new cultivar for transition zone use. — David Okeyo and Jack Fry, Ph.D. (jfry@oznet.ksu.edu), Kansas State University



Photo courtesy of University of Kentucky Turf Science Program

Controlling perennial annual bluegrass

Perennial annual bluegrass remains a difficult weed problem in creeping bentgrass (*Agrostis palustris*). Options for selective and unobtrusive annual bluegrass (*Poa annua*) control are limited. Same-site studies were conducted near Lexington, Ky., from 2005 to 2007 on fairway-height (24 treatments) and greens-height (16 treatments) creeping bentgrass to test the effects of one herbicide and three plant growth regulators for gradual reduction of annual bluegrass. Both Trimmit (paclobutrazol) and Cutless (flurprimidol) significantly reduced annual bluegrass and also had a significant positive effect on creeping bentgrass quality. Primo (trinexapac-ethyl) increased overall quality of the creeping bentgrass-annual bluegrass turf, but increased annual bluegrass in all tests. Velocity (bispyribac-sodium) had no significant effect on long-term reduction of annual bluegrass without producing undesirable effects on creeping bentgrass. Consistent, long-term applications of either Cutless or Trimmit can significantly and selectively reduce annual bluegrass in creeping bentgrass at both heights tested. — Michael Deaton; David Williams, Ph.D. (dwilliam@uky.edu); and A.J. Powell Jr., Ph.D., University of Kentucky

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