



Photo by S. McDonald

Effect of irrigation and plant protection chemicals on dollar spot severity

This three-year field study assessed the influence of light, frequent evening irrigation vs. deep, infrequent morning irrigation and six chemical treatments on dollar spot severity on Crenshaw creeping bentgrass maintained as a fairway. Chemical treatments included Daconil Ultrex (chlorothalonil), Trimmit (paclobutrazol), Primer Select (a wetting agent), Daconil Ultrex plus Trimmit, Daconil Ultrex plus Primer Select, and Daconil Ultrex plus Trimmit plus Primer Select. In 2002 and 2004, dollar spot was more severe in late summer in plots receiving deep, infrequent morning irrigation vs. light, frequent evening irrigation. Soil moisture levels above the wilting point of the soil ($\geq 25\%$ by volume) were associated with greater dollar spot suppression in late summer by Daconil Ultrex, Trimmit and Primer Select. Soil moisture level had no impact on dollar spot severity earlier in the season when disease pressure was lower. — Steven McDonald, M.S. (turfgrassdisease solutions@yahoo.com), Turfgrass Disease Solutions, LLC; Peter Demoeden, Ph.D., University of Maryland; and Cale Bigelow, Ph.D., Purdue University



Photo by D. Martin

Evaluating bermudagrass cultivars for spring dead spot resistance

Spring dead spot caused by the fungus *Ophiostoma phaeoretzia* is a disease of intensively managed bermudagrass where bermudagrass experiences winter

dormancy. Seven local standards and 42 cultivars in the 2002 NTEP bermudagrass trial grown under simulated fairway conditions were evaluated for resistance to spring dead spot. The cultivars were inoculated in the field. Disease symptoms were measured in May 2004, 2005 and 2006. Ashmore, Midiron, Midlawn, OKC 70-18, Patriot, Riviera, TifSport and Yukon bermudagrasses and several different selections marketed as U-3 bermudagrass consistently had less spring dead spot. Arizona Common, Mohawk, NuMex Sahara, Panama, Princess-77, Southern Star and Transcontinental bermudagrasses often showed greater disease damage. Information from this study should be useful in making bermudagrass cultivar recommendations where spring dead spot is a concern. — Dennis Martin, Ph.D. (dennis.l.martin@okstate.edu), Oklahoma State University



Photo by A. Nichols

In-line drain filter to capture nutrients leaching from greens

Nitrates and phosphates have the potential to leach into the subsurface drainage system of sand-based putting greens, possibly contaminating surface and/or groundwater. Laboratory and greenhouse studies were conducted to determine whether a renewable in-line filter could capture nitrates and phosphates in the leachate. The greenhouse study simulated establishment of a creeping bentgrass green on five different root-zone mixes varying in sand and peat content. Laboratory trials indicated that the filter captured $\geq 99.9\%$ of the nitrates and phosphates through 25 gallons (95 liters) of leachate. In the greenhouse trials, the filter displayed at least 80% efficiency in capturing nitrates at the greatest peak of nitrate leaching in all root-zone mixes. The filter reduced nitrate levels below EPA-allowable concentrations for drinking water. Renewable, in-line drainage filters show promise in reducing nutrient contamination potential of watersheds, especially during establishment of sand-based putting greens. — Adam Nichols (adnichol@vt.edu); Erik Ervin, Ph.D.; Mike Goatley, Ph.D.; and Matt Eick, Ph.D., Virginia Tech



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