



Photo by Jinmin Fu

Effect of summer irrigation and aeration on rooting in creeping bentgrass

Root growth of creeping bentgrass in response to summer aeration and irrigation management has received little study. Two field studies are being conducted to assess rooting in creeping bentgrass in response to two irrigation management (deep and infrequent versus light and frequent) and aeration regimes (spring only versus spring plus summer). Both studies are being conducted on Providence creeping bentgrass maintained as a putting green grown on a sand-based root zone built to USGA recommendations. Clear butyrate tubes were inserted into plots, and rooting was quantified to a 9.25-inch (23.5-centimeter) depth using the mini-rhizitron imaging technique. Soil moisture and temperature, photosynthesis, respiration and thatch production were monitored. More than 15,000 high-magnification rooting images were obtained. Data will provide valuable insight into physiological processes as well as root production and mortality as influenced by the aforementioned irrigation and aeration practices in summer. This project has received funding from the USGA. — Jinmin Fu, Ph.D., and Peter Dernoeden, Ph.D. (pd@umd.edu), University of Maryland

Impact of foliar nitrogen source and Primo on creeping bentgrass in shade

Shade stress on turfgrass causes leaf elongation, reduced energy for growth, decreased disease resistance and poor playing surfaces on golf courses. Reduced light intensity and quality cause an increase in the production of gibberellic acid

and a reduction in available carbohydrates. The objectives of this study are to determine whether nitrogen source and applications of Primo (trinex-epac-ethyl) can improve turf quality in shade. Field studies on Penncross creeping bentgrass grown under three light intensities and maintained at 0.75 inch (1.9 centimeters) mowing height are treated with three nitrogen sources and Primo applications. Nitrogen source has a significant effect on the quality of shaded creeping bentgrass. Results suggest that Primo

and urea used in combination can preserve turfgrass quality in shaded environments. Among the plots that did not receive Primo, we observed that applying 0.75 pound nitrogen/1,000 square feet (3.7 grams/square meter) before tree leaf emergence resulted in better turf cover through the season. — Edward Nangle and David Gardner, Ph.D. (gardner.254@osu.edu), Ohio State University

Clumpy ryegrass control with Revolver and additives

Revolver (foramsulfuron) is used to control clumpy, volunteer perennial ryegrass in bermudagrass. Control decreases when air temperatures are less than 64 F (18 C). The objective of this field study was to determine whether methylated seed oil or ammonium sulfate added to Revolver could improve control of clumpy perennial ryegrass when applied during cool conditions. Applications of Revolver alone, Revolver + methylated seed oil, Revolver + ammonium sulfate, and Revolver + methylated seed oil + ammonium sulfate were made in late February 2006. Control ratings were made on May 3, 2006. Results indicate that Revolver + methylated seed oil + ammonium sulfate provided 80% control of clumpy perennial ryegrass. Other treatments provided much less control. Although we only have one year of data, our results indicate that superintendents may be able to control clumpy perennial ryegrass with Revolver + methylated seed oil + ammonium sulfate when applied when temperatures are cool. — Steve Borst and Scott McElroy, Ph.D. (mcelroy@utk.edu), University of Tennessee



Photo by S. McElroy



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