

The Effect of Low Rate Nitrogen Applications and Primo on Green Speed

Dr. Kevin W. Frank, Thomas A. Nikolai, Ronald N. Calhoun, Jeff M. Bryan, and Norm Dufrin
Department of Crop and Soil Sciences

Spoon feeding programs using liquid fertilizers have become the status quo for fertilization of golf course putting greens. The objectives of spoon feeding programs are to satisfy the nutritional needs of the plant by applying light, frequent applications of balanced nutrient solutions. Additionally, spoon feeding programs are popular because they maintain control over growth and are believed to result in faster and more consistent green speeds throughout the season. A preliminary study conducted at Michigan State in the summer of 2000 indicated that turfgrass quality and color at low nitrogen rates were improved by applying Primo to the mixture (Nikolai et al., Golf Course Management, Jan. 2001). With the even lower nitrogen rates now being applied by golf course superintendents it would be valuable to determine if at these ultra-low N rates if Primo can produce similar results.

Objective:

Determine the effect of "low rate" nitrogen applications with or without Primo on green speed, quality, and color throughout the summer.

Materials and Methods

Four different rates of Emerald Isle NutriRational Foliar fertilizers were applied to an A4 creeping bentgrass putting green at the Hancock Turfgrass Research Center. Total nitrogen rates for the treatments are 0.046, 0.059, 0.084, and 0.108 lbs. N/1000 sq. ft./2 weeks. These treatments were applied alone and with Primo at 0.06 fl. oz./1000 sq. ft./2 weeks. Two experimental fertilizer products and a control plot are also included in the study. Turfgrass is rated weekly for color and quality and green speed is measured 5 days a week.

Results

Initial results indicate relatively little difference in green speed due to either nitrogen rate of Primo application. The study will conclude in September.