

Impact of foliar nitrogen and Trinexepac-ethyl on quality of creeping bentgrass *Agrostis palustris* in 3 light environments.

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Shade stress on turfgrass causes elongation of plants, reduced energy availability for growth, lower levels of disease resistance and poor surfaces on golf courses. The quantity and quality of the light have effects on the morphology of turfgrass plants due to increased production of Giberellic acid and reduction in available carbohydrate levels. The object of the study is to determine which source of N is best suited to increasing turfgrass quality in shade affected turfgrass sites and to see if trinexepac-ethyl can improve tillering and decrease elongation in reduced R:FR light conditions. The research shall take place at the OTF research center. Three light environments shall be created. Plots are currently being excavated to depths of 12 inches in line with USGA greens recommendations. Rootzone mix of 85/15 sand/peat is to be added to plots. 'Pencross' creeping bentgrass will be established on plots and allowed to acclimate. Applications of CaNO_3 , Urea and NH_4SO_4 will be made on bi weekly schedules at rates equivalent to 0.1lb/M. This will also occur with applications of trinexepac ethyl. Data to be collected include clipping yield, verdure, density and assays for total not structural carbohydrates which will indicate plant health. We hypothesize that frequent low rate applications of trinexepac ethyl and ammonium sulfate will result in higher quality creeping bentgrass surfaces in shade.