

**Research Topic:
Tifeagle Bermudagrass Response to Selected N Sources (2007), J. Sartain,
University of Florida**

Tifeagle is a relatively new ultradwarf bermudagrass that is becoming the turfgrass of choice on putting greens of high-end golf courses in Florida. This new turfgrass requires intensive management practices to limit thatch accumulation and maintain superior turfgrass quality and putting conditions. A nitrogen source capable of limiting growth and consequently thatch development while maintaining high quality would ease the management difficulties of this turfgrass. Turfgrasses respond differentially to N sources depending on its solubility and release characteristics. The objective of this study was to evaluate the influence of different soluble and controlled release N sources on visual quality, growth, and N uptake.

Five N sources (Green Spec 16-4-8 and 7-7-7, ammonium sulfate (AS), 60% IBDU & 40% AS, and GreenEdge (a bio-solid)) were applied at 1.0 lb N/1000 sq ft/30 days to Tifeagle bermudagrass. Plots (6 by 9 ft) were arranged in a randomized complete block design and replicated four times. Visual ratings and chlorophyll meter readings were taken weekly. Clippings were collected every 30 days for growth rate and N uptake estimates. The study was run for three 30 day evaluation periods.

The mean growth rate of Tifeagle Bermudagrass was significantly higher for the AS compared to all of the other N sources. Each of the N sources provided slightly higher growth rate than the untreated control but were not statistically different (Figure 4). In general, the *Green Spec 7-7-7* provide the best turf quality compared to the other N sources (Figure 7), and the mean turf quality over the entire study was significantly higher for the 7-7-7 source compared to the traditional slow release source (IBDU/AS) and organic bio-solid (Green Edge). In addition, the *Green Spec 7-7-7* and AS provided the highest mean chlorophyll meter readings over the entire 90 day evaluation period (Figure 15).

As has been observed in the past and in this study, AS applied on a 30 day basis produced the most rapidly growing turfgrass while accumulating the largest quantity of N. This may not be the most desirable response as excessive growth may contribute to thatch accumulation and increase mowing frequency. The most desirable attribute of a N source is its ability to maintain turfgrass quality. Based on visual quality ratings and chlorophyll meter readings, the *Green Spec 7-7-7* material produced this result. Considering all parameters evaluated, the *Green Spec 7-7-7* material is the most desirable N source in this study for maintaining high turfgrass quality and sufficient growth to sustain it.

FIGURE 4.
INFLUENCE OF N SOURCE ON MEAN GROWTH RATE

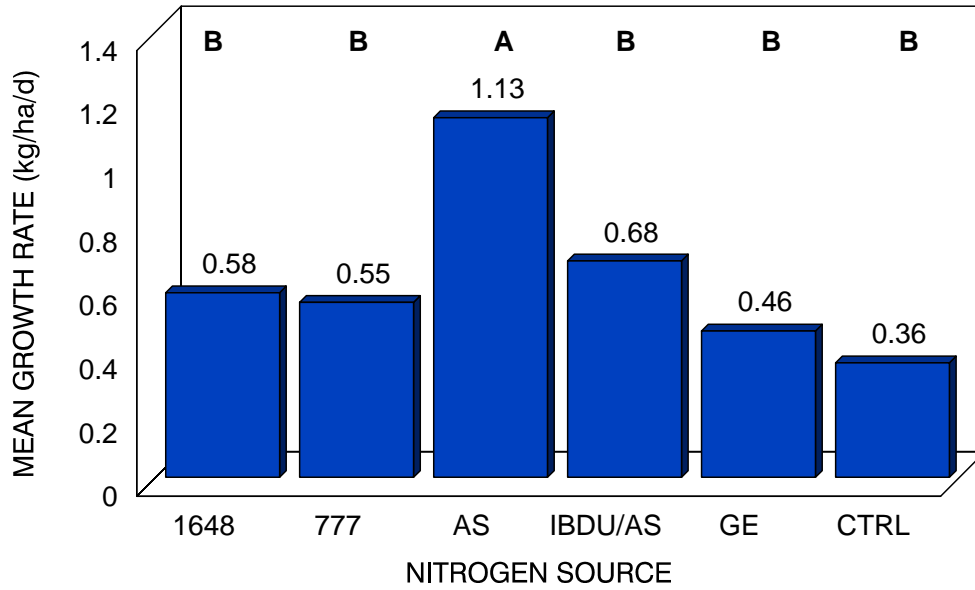


FIGURE 7.
INFLUENCE OF N SOURCE ON VISUAL QUALITY OVER TIME

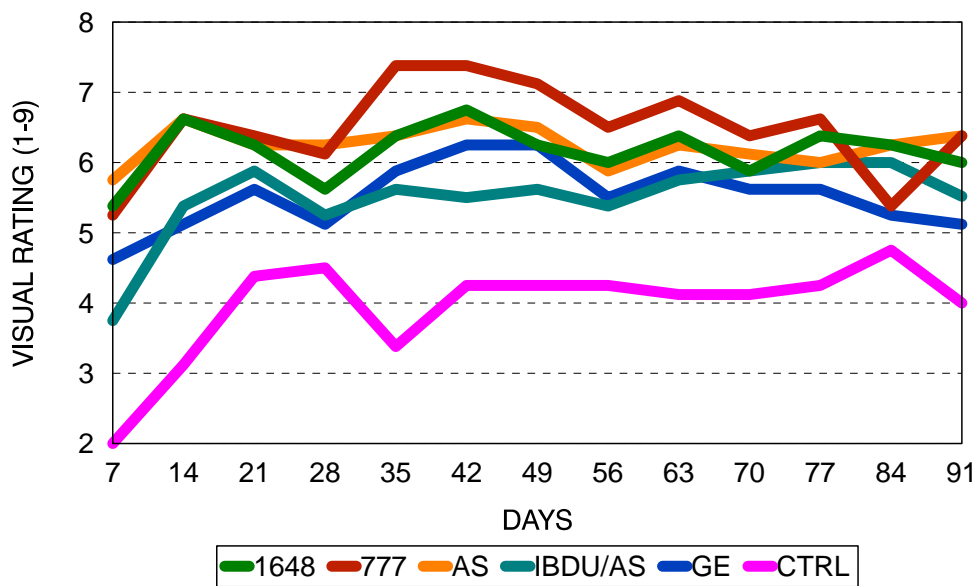


FIGURE 15.

INFLUENCE OF N SOURCE ON MEAN CHLOROPHYLL METER READINGS OVER ENTIRE 90 DAY PERIOD

