

Natural Organic Trial 1992 Iowa State University

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A natural organic nitrogen (N) trial was established in 1989 on a four-year-old 'Park' Kentucky bluegrass (*Poa pratensis*) stand. The grass was mowed weekly with clippings removed, dried, and weights recorded. Irrigation was applied at a rate of 1 in of water/week. In 1991, rainfall was excessive from May through June.

The purpose of this study was to compare nine natural organic fertilizers to urea. Treatments included BioTurf 10-4-4, Sustane medium grade 5-2-4, Sustane fine grade 5-2-4, ISU experimental (10% N), Milorganite 6-2-0, Natures Preference 5-3-5, Ringer 10-2-6, Ringer 6-1-3, Howe 5-2-5 (added in 1990), Urea 46-0-0, and a control. All fertilizers were applied at 1 lb N/1000 ft² on May 15, June 15, August 15, and September 15, 1989. This study was replicated three times in a randomized complete-block design. Individual plot dimensions are 5 ft by 10 ft.

Data collected during the summer of 1991 included visual quality and clipping yields. All plots were rated weekly on a visual scale of 9 to 1. A rating of 9 is equal to a dark-green, dense turf, whereas a rating of 1 is equal to a straw-brown Turfgrass stand. A rating of 6.0 was used as the minimum acceptable level of quality. Clipping yields were collected on a weekly basis or when enough grass was present to collect. Clippings were collected by removing all the leaf tissue above 2 in within a 21 in by 10 ft area (17.5 ft²) down the center of each plot. Clippings were placed in paper sacks and dried. Weights were recorded as grams per 17.5 ft².

Visual quality ratings are presented in Tables 30 and 31. Urea had the overall highest quality while the control and Natures preference had the lowest quality rating. **Sustane fine had the best overall quality rating of the natural organic fertilizers.** Following the May application, only plots treated with Natures Preference consistently had quality ratings at less than an acceptable level.

Clipping yield data is presented in Tables 32 and 33. Plots fertilized with urea produced the most clippings. Unfertilized control and plots fertilized with Natures Preference produced the least amount of clippings. For other fertilizers, Ringer products, Sustane fine, and ISU Experimental produced high quantities of clippings; Milorganite and BioTurf produced moderate amounts of clippings; and Sustane medium and Howe 5-2-5 produced the least amount of clippings.