stop #7

NITROGEN FERTILIZER EVALUATIONS

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A good turf fertility program should include the application of the proper balance of nutrients at times which are appropriate for a given turf. All fertilizer nutrients are important and too frequently phosphate and potassium are disregarded. These should be applied as needed based on soil tests. But the key to fertilizing for maintaining a quality, stress tolerant turf is the response to nitrogen. This requires an understanding of how the turf plant responds to environmental conditions during the growing season and when nitrogen is needed to achieve the desired response. This requires a good understanding of the nitrogen carrier(s) being applied.

Several studies of nitrogen responses from different carriers were conducted in 1988. Data from one are presented in Table 4. The grass was Challenger Kentucky bluegrass. Nitrogen was applied at 1 lb per 1000 sq. ft. on July 8, 1988. Plot size was 4 feet by 12 feet with 3 replications.

Turf quality ratings in Table 4 indicate IBDU and N-Sure responded somewhat more slowly than some other materials 12 days after application. Twenty-one days after application (July 29) IBDU continued to respond somewhat slowly compared to other carriers but by August 16 all materials resulted in excellent quality turf. No practical differences occurred with August evaluations. By late October IBDU-Coarse and a CIL Experimental ranked highest while most other materials performed adequately. While there were no surprises in these results, they verify that most carriers perform well and that one should understand what a typical response to a given carrier should be. Then one can decide how to mix various N sources to achieve the desired response.

TABLE 4. 1988 Challenger Kentucky bluegrass nitrogen carrier study turfgrass quality ratings. N applied at 1 lb per 1000 sq. ft. July 8, 1988,

	Quality ratings (9 = excellent; 1 = brown)				
	7/20	7/29	8/16	8/30	10/26
Sustane-Medium	9.0a*	8.3ab	8.0ab	9.0a	7.3a-d
Milorganite	8.3a-c	8.3ab	8.7ab	9.0a	8.0ab
Turf Restore	8.3a-c	8.7ab	8.7ab	9.0a	7.7a-c
S. Coated Urea-CIL	9.0a	8.3ab	8.7ab	9.0a	8.0ab
Andersons 9-3-6	9.0a	8.7ab	8.0ab	9.0ab	6.7b-d
Andersons 20-0-0	9.0a	8.7ab	7.7b	8.7a	6.3cd
N-Sure	7.7c	8.0a-c	8.3ab	9.0a	7.3a-d
IBDU-Coarse	7.7c	7.0c	8.0ab	9.0a	8.3a
CIL Experimental	8.7ab	8.7ab	8.3ab	8.7a	8.7a

* numbers in columns followed by the same letter are not significantly different from each other at the 5% level using Duncan's Multiple Range Test.