

## Nitrogen Fertility Timing Study - 1978

The 1978 Anthracnose (Colletotrichum graminicola) fertility study was established at Burroughs Farms Golf Course, Brighton, MI on a well-maintained annual bluegrass fairway. The fairway received normal maintenance except for fungicide and fertilizer treatments, which were applied only in conjunction with the experiment.

Fertility treatments were applied on June 2, July 6, August 8 and September 8. Tersan 1991 at 1 oz/1000 ft<sup>2</sup> was applied on July 6 to one-half the study.

Granular applications were made with a Scotts drop-type spreader while the Tersan 1991 was applied with a CO<sub>2</sub> small plot sprayer at a volume of 40 gal/acre.

The quality ratings were made on October 10.

Results: LLSE-Anthracnose Study, Burroughs Farms

### Study # 1:

There was no significant improvement in turf quality in the LLSE-treated plots compared to the check, which received three monthly applications of 1/2 lb urea nitrogen/1000 ft<sup>2</sup> (6/2, 7/6, 8/8), a 1 oz/1000 ft<sup>2</sup> Tersan 1991 application, and no LLSE.

### Study # 2:

There was no significant improvement between LLSE, applied in combination with 1 lb urea nitrogen/1000 ft<sup>2</sup> applied monthly (6/2, 7/6, 8/8) and 1 oz/1000 ft<sup>2</sup> of Tersan 1991 applied on 7/6, and the untreated checks, which received only the urea and Tersan 1991 treatments.

### Study #3:

There was no significant improvement in the LLSE-treated plots compared to the check, which received 3 monthly applications of 1/2 lb urea nitrogen/1000 ft<sup>2</sup> (6/2, 7/6, 8/8) and no LLSE.

### Study # 4:

There was no significant improvement in the LLSE-treated plots which received 3 monthly applications of 1 lb urea nitrogen/1000 ft<sup>2</sup> (6/2, 7/6, 8/8) when they were compared to those plots receiving only the urea.

Nitrogen Fertility Timing Study with Fungicide - 1978  
Burroughs Farms Golf Course

Plot area treated with Tersan 1991 (1 oz/1000 ft<sup>2</sup>) 7/6

<u>Treatment</u>	<u>Rate/1000 ft<sup>2</sup></u>	<u>Turf Quality</u>			AVE	(DMR)
		I	II	III		
IBDU (fine)	1 lb. N	1	3	1	1.7	A
IBDU (coarse)	1 lb. N	1	2	2	1.7	A
Urea	1 lb. N	3	3	3	3	AB
IBDU (Coarse)	1/2 lb. N	3	4	4	3.7	BC
IBDU (Fine)	1/2 lb. N	2	4	5	3.7	BC
Urea	1/2 lb. N	5	6	4	5	C

Note: Treatments followed by the same letter are not significantly different at the 5% level.

Nitrogen Fertility Timing Study without Fungicide  
1978  
Burroughs Farms Golf Course

<u>Treatment</u>	<u>Rate/1000 ft<sup>2</sup></u>	<u>Turf Quality</u>			AVE	(DMR)
		I	II	III		
IBDU (Fine)	1 lb. N	2	2	1	1.7	A
IBDU (Coarse)	1 lb. N	4	2	1	2.3	A
IBDU (Fine)	1/2 lb. N	5	3	3	3.7	B
Urea	1 lb. N	5	3	4	4	B
IBDU (Coarse)	1/2 lb. N	5	5	3	4.3	B
Urea	1/2 lb. N	7	5	6	6	C

Note: Treatments followed by the same letter are not significantly different at the 5% level.

## Results: Nitrogen Fertility-Timing Study with Fungicide

After 4 fertility treatments, the turfgrass quality was best in those plots receiving 1 lb. N/1000 ft<sup>2</sup> of fine IBDU, 1 lb. N/1000 ft<sup>2</sup> of coarse IBDU, and 1 lb. N/1000 ft<sup>2</sup> of urea. Tersan 1991 was applied on July 6 to aid in the control of anthracnose and Sclerotinia dollar spot.

This is one of the first studies of nitrogen fertility timing on annual bluegrass turf.

## Nitrogen Fertility-Timing Study without Fungicide

The fine and coarse IBDU at the 1 lb. N/1000 ft<sup>2</sup> rate applied 4 times (6/2, 7/6, 8/8 and 9/8) had significantly improved the turfgrass quality over all other treatments when the readings were taken in October. This is only the first year of the study and there was little disease pressure, but it does demonstrate that improved turf quality is possible following multiple applications of IBDU at 1 lb. N/1000 ft<sup>2</sup>.

This nitrogen fertility test of nitrogen carriers is one of the first ever to be conducted on annual bluegrass turf.