

TURFGRASS DISEASE PROBLEMS - BENZIMIDAZOLE
RESISTANT DOLLAR SPOT, FUSARIUM BLIGHT, SNOW
MOLD, MELTING-OUT, AND ANTHRACNOSE

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Snow Mold Studies

INTRODUCTION:

The 1977 snow mold fungicide evaluation trials were conducted at the Boyne Highlands Resort, Harbor Springs, Michigan, on Penncross creeping bentgrass fairways mowed at 1/2 inch. No fungicides were applied to the test area during the growing season. The wettable powder and liquid fungicides were applied with a CO₂ small plot sprayer and the granular fungicide with a 3 foot Scott's drop type spreader. The fertilizers were also applied with a 3 foot Scott's drop type spreader. The plots were 6 X 6 ft and the treatments were replicated 3 times in a random block design. There were two separate studies. Study A consisted of fungicide evaluation only for the control of the snow molds. Study B consisted of an evaluation of the fungicides Calo Gran and Calo Clor, alone, and in combination with nitrogen carriers. All treatments were applied on October 28, 1976 and the readings were taken on March 31, 1977.

RESULTS: Study A

The results show the primary snow mold present in the study was Typhula blight caused by Typhula incarnata. A second snow mold fungus, as yet unidentified, produced tiny black sclerotia (TBS) and was present in certain plots as indicated. Those fungicides which ranked highest were all combinations of Daconil 2787 and RP 26019, Scott's F + F at the 1X and 2X rates, Tersan SP at the 9 oz rate, Calo Gran at the 8 lb rate, Terraclor at the 8 oz rate, RP 26019 at the 8 oz rate and Daconil 2787 at the 16 oz rate. This years study is in marked contrast to 1976 when only the mercury fungicides, Calo Gran and Calo Clor gave effective control.

RESULTS: Study B

In study B, the snow mold present was Typhula blight caused by Typhula incarnata. The study was conducted to determine if nitrogen fertility could alleviate the mild phytotoxicity caused by Calo Gran and Calo Clor when they are applied for snow mold control. The best treatments in this respect were the urea fertility treatments at either the 1/2 or 1 lb rate of nitrogen/1000 sq. ft. The combinations of Calo Gran and Calo Clor with either urea or IBDU had no effect on the amount of Typhula blight control. It would appear that a 1/2 to 1 lb application of urea, along with Calo Clor or Calo Gran, would be beneficial, especially from a quality standpoint.

Table 2. Boyne Highlands Snowmold: Fertility-Fungicide Study 1977
& area infested

Treatment	Rate/1000 ft ²	Rep.			Average (DMR)	
		I	II	III		
Calo Clor + Urea	4 oz + 1/2 lb.	5	0	0	1.7	A
Calo Clor + IBDU	4 oz + 1/2 lb.	0	5	1	1.7	A
Calo Clor + IBDU	4 oz + 1 lb.	5	0	0	1.7	A
Calogran + Urea	8 lbs. + 1/2 lb.	5	0	0	1.7	A
Calogran + Urea	8 lbs. + 1 lb.	5	1	1	2.3	A
Calo Clor	4 oz	10	0	0	3.3	A
Calo Clor + Urea	4 oz + 1 lb.	10	0	5	5	A
Calogran + IBDU	8 lbs. + 1/2 lbs.	5	10	0	5	A
Calogran	8 lbs.	5	10	5	6.7	A
Calogran + IB	8 lbs. + 1 lb.	5	10	10	8.3	A
Urea	1 lb.	100	70	95	88.3	B
IBDU	1 lb.	100	80	90	90	B
Check	-	80	90	100	90	B
IBDU	1/2 lb.	100	50	100	93.3	B
Urea	1/2 lb.	100	90	95	95	B

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

Common Dollar Spot Study

The common (benzimidazole sensitive dollar spot (*Sclerotinia homeocarpa*) study was conducted on the MSU crop science research farm on an intensively maintained Toronto bentgrass green. The 3X6 ft plots were laid out in three replications in a randomized block design. All liquid fungicide applications were made with a CO₂ small-plot sprayer at a volume of about 40 gallons/acre. All dry fungicides were applied with a Scotts 3-foot drop-type spreader. The dollar spot infestation was allowed to spread freely until the first applications were made on July 21. Subsequent applications were made on a bi-weekly basis. Cleary's flowable thiram was applied weekly.

On August 19 the commercial Acti-dione RZ was replaced with an experimental Acti-dione RZ. Fe SO₄ was replaced with chelated iron. The low rate of Acti-dione TGF was also replaced with the experimental Acti-dione RZ. The reading was taken on August 19.