

1978 SNOW MOLD REPORT

Dr. Ward C. Stienstra

Snow mold test plots were established at Pierz 10/20, Duluth 10/24, International Falls 10/25, Roseau 1/25, Fargo 10/26, Detroit Lakes 10/26, Bemidji 10/27, Rochester 11/7, Chaska 11/8, and St. Paul Compus 11/9 on golf course greens or green nurseries. Each treatment measured 4x11 ft. and was replicated 31 times. The fungicides were applied in five gallon water/1000 sq. ft. using a carbon dioxide powered wheel mounted boom sprayer at 40 PSI. Granules and fertilizers were applied with a 3 ft. wide drop spreader. Data are recorded as % Disease (Table 1).

Primary interest was on chloroneb, pentachloronitrobenzene and mercury or combination of these compounds and in late fall or dormant applications of nitrogen. The combination of Caloclor and Tersan SP or Caloclor and PCNB was better than Tersan SP and PCNB and slightly better than Caloclor alone. The use of nitrogen at the date of chemical application improved the color and growth in every location and did not increase disease. The slow release products performed poorer in general than the water soluble material. The sulfur containing product performed better in areas known to be sulfur deficient. This is the fourth season with good to excellent results with nitrogen fertilizers applied late in the fall.

Snow mold results at most other locations were poor. Jeffrey Buettner at Bemidji had snow cover on the test plot longer than any others with the exception of International Falls. Jeff provided good readings on the treatments as every time I stopped at the Bemidji Town and Country Club the green was covered with snow. At International Falls the weather remained warm and sunny until November 8 when rain and snow fell. Some icing developed and November 20, twelve inches of snow fell on unfrozen ground. During December and January, some rain fell compacting the snow and very little new snow fell through the rest of January. The test plot area was examined on April 21 by Don Petman and Frank Larson, the county agent and golf course superintendent respectively, who reported very heavy snow mold damage on the check plots and extensive mouse damage to the fungicide plots. I also observed the treatments and damage on April 27. On May 2 the International Falls golf course opened for play which was only one week later than the earliest season on record, 1977. The pictures of that test plot will interest most superintendents this fall. Little to no snow mold developed at the campus, Duluth, Fargo, Chaska or Pierz snow mold plot locations. However, treatments at each of these locations with one pound of actual nitrogen all looked very good. The plot at Roseau was inadvertently oversprayed by the new golf course superintendent and all ratings there were good to excellent.

Golf Green covers. This issue is far from dead and many again report excellent color, survival and growth with the covers. Portions of a green in Duluth and International Falls were covered with the 1976 wood fiber mat. The International Falls location is exposed to the northwest so the wind can (and does) come out of Canada across the Rainy River and over the green. The lower 1/3 was covered. On April 27, the date the mat was removed, approximately 1/2 inch of growth had occurred under the mat and a few diseased spots had developed. No snow mold was seen on the uncovered part. The entire green was treated on October 29 with a Caloclor-PCNB fungicide spray. The collar under the mat was the only area damaged by mice. This green is well drained and with the sunny conditions in April the turf under the mat remained quite dry. The back 1/3 which is the highest portion of the green did show some winter injury. At Duluth a high corner of the #14 green was covered with a mat while other portions received brush. No snow was trapped in the brush so direct comparison cannot be made. The area under the mat, most prone to winter kill, was on April 28 in excellent condition and the other section of the green while not severely damaged did not appear as vigorous. The superintendent, Eino Maki, said after two to three weeks the difference was gone and the entire green was in good shape.

A few summary thoughts on covers. In areas that regularly are damaged by winter kill, covers should be considered. This does not usually mean all 18 greens. For best results, the site should receive the recommended fungicide program. Don't try to reduce any fungicide treatments under the covers because those areas are most prone to disease development. The covered areas should have good surface drainage and tend to dry (internal drainage and direct exposure to spring sun) quickly in the spring. The cover should be placed on the green as late as possible to allow winter dormancy to develop and to promote surface drying. Areas that tend to accumulate water will be problem sites with covers. Removal of covers too early will permit spring low temperature kill. Remember the grass under the cover is more susceptible to spring temperature fluctuations than turf not covered. Late removal rather than early appears to have fewer problems. The exception to this statement is areas which remain wet or areas where snow mold has developed under the cover. Removing the cover to promote drying of the green and the mat for a day or two when the temperature is expected to remain above freezing and then replacing the dry mat on the dry green surface has also been successful. Others also report removing snow from the mat has hastened drying and reduced wet disease conditions.

Continued on Page 5

 * MARK YOUR CALENDAR *
 * 1978 G.C.S.A.A. FALL SEMINAR *
 * SUBJECT-MANAGEMENT II *
 * MINNEAPOLIS, MINN., OCT. 25-26 *
 * COST \$80.00 MEMBER *
 * \$115.00 Non-member *

OUR 29th YEAR

WE SELL THE BEST

CUSHMAN®
TURF-CARE
EQUIPMENT



3 & 4 wheel turf trucksters

Club Car®



"America's Fastest Growing Golf Car Company"

NATIONAL MOWER COMPANY



SINCE 1919



THE SNOW COMPANY

SNOWED®

OMAHA, NEBR. 68112

TILT DECK and RAMP LOADING TRAILERS

Exide® Willard®

THE BEST ELECTRIC VEHICLE BATTERIES
 IN THE INDUSTRY

GOOD YEAR

GOLF CARS, TRUCKSTERS, INDUSTRIAL TIRES

PARTS • SALES • SERVICE

CUSHMAN MOTOR CO., INC.

2909 E. FRANKLIN AVENUE • MINNEAPOLIS, MINNESOTA • PHONE: (612) 333-3487

TABLE 1

RESULTS OF SNOW MOLD TEST AT
ROCHESTER AND DETROIT LAKES

PRODUCTS	RATE	% DISEASE	
		ROCHESTER	DETROIT LAKES
Caloclor	3 oz.	0	.25
Caloclor	5 oz.	0	0
Tersan SP	4 oz.	.75	5.5
Tersan SP	8 oz.	2.5	3.5
PCNB	4 oz.	6	12.75
RP 26019	8 oz.	1.25	7.5
RP 26019	16 oz.	1.25	3
MF 582	9 oz.	.25	.5
MF 582	12 oz.	0	.5
Caloclor & Tersan SP	3 & 4 oz.	0	0
Caloclor & PCNB	3 & 4 oz.	0	0
Tersan SP & PCNB	4 & 4 oz.	.25	7
Caloclor & Tersan SP & Daconil	3 & 4 oz. & 8 f oz.	0	0
Caloclor & PCNB & Daconil	3 & 4 oz. & 8 f oz.	0	0
Tersan SP & PCNB & Daconil	4 & 4 oz. & 8 f oz.	0	1.75
Daconil	8 f oz.	3.25	4
Daconil	12 f oz.	.5	2
Daconil & Exhalt 800	8 f oz.	.75	1.75
Daconil & Exhalt 800	12 f oz.	.5	.25
GA 1-105	10 g	2.75	--
GA 1-105	25 g	.75	--
Ga 1-105	50 g	0	--
Calogran	6 lbs.	4.5	.5
Calogran	10 lbs.	--	.5
Scotts FFII	N	.5	1.5
Scotts FFII	D	--	0
Scotts FII	N	1.5	10.75
Scotts FII	D	--	2.5
PCNB	3 oz. ai	6.75	2.5
Scotts FII & Calogran	N & 6 lbs.	.25	.75
#30 & Milorganite	1# N	6.25	0
#30 & IBDU	2# N	7.25	0
#30 & N-NO ₃	1# N	3.5	0
#30 & N-SO ₄	1# N	1.75	.75
check		33.8	30.7