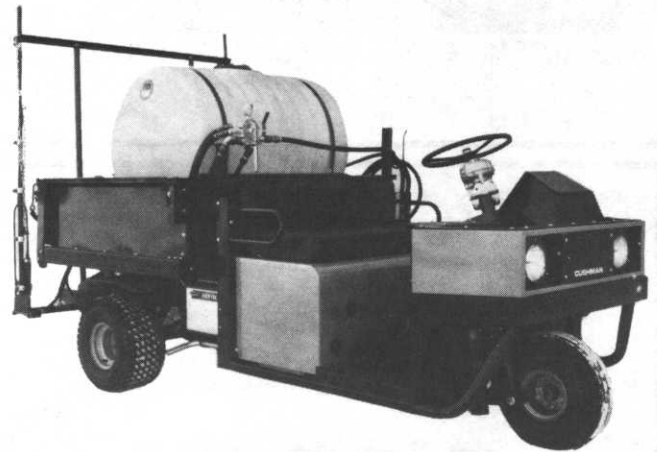
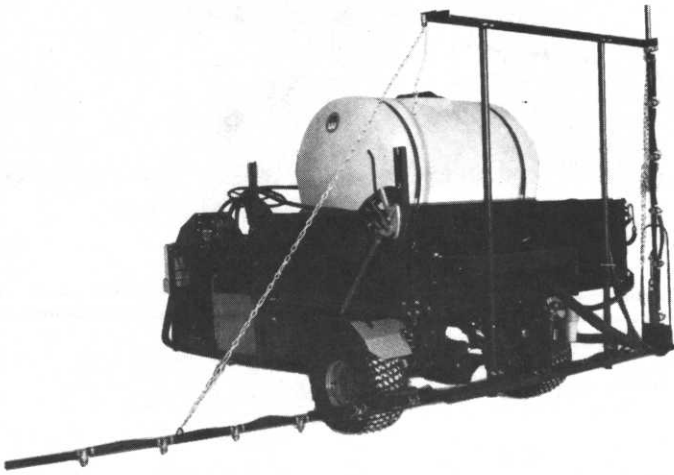




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Official publication of the MINNESOTA  
GOLF COURSE SUPERINTENDENTS' ASSOCIATION.

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## FROM THE PRESIDENT'S DESK

JOHN NYLUND

The winter season is almost history and soon we will all be back on our courses preparing for another season.

Last month our G.C.S.A.A. in Atlanta provided us with lots of excitement. It definitely was a learning experience for me. The conference will be reported in greater depth in our April issue of HOLE NOTES.

On a sad note, last month we lost a very valuable and active Life Member of our association. John Lightfoot from Cloquet, Minnesota passed away. He had been a member of the M.G.C.S.A. for over thirty years. A long time superintendent at the Cloquet Country Club, he retired several years ago. He was also very active in the Arrowhead Association and will truly be missed by all of us. Our sympathy to his wife, Edith, and his entire family.

The U.S.G.A. Seminar will be a great asset for all superintendents and club officials. Our thanks to Stanley Zontek of the U.S.G.A. and the M.G.A. staff for arranging a fine program. Also thanks to Midland Hills Country Club for allowing us the use of their fine facilities for the day.

I hope you notice the distinct new look of HOLE NOTES. Boots Fuller, the Editorial Chairman, is determined to make our publication a vehicle for the exchange of educational ideas among our members. You saw many articles by our locals last month and you will see many more this month. Get out your pen and start listing ideas you want to write about because Boots will find you sooner or later.

On April 11 we will be at Mankato Country Club. Hopefully, it will be pleasant weather so golf will be possible.

# ICE ON PUTTING GREENS

by Mark Smith, Superintendent, Minneapolis Golf Club



A group of seventeen concerned superintendents met with Dr. White and Dr. Stienstra at Southview Country Club on February 2, 1983 to discuss the ice coverage on putting greens throughout parts of Minnesota. Most superintendents reported ice buildup of 1/4"-1", the result of Christmas rains that dumped about 2" of rain at the Minneapolis-St. Paul International Airport.

Winter injury to turfgrass can occur a number of ways. Extensive damage occurred on many golf courses in the metropolitan area during the winter of 1979-80 mainly due to crown hydration. This winter the concern at this point centers on the prolonged period of ice coverage rather than hydrated crowns. Although the potential for injury due to crown hydration was great after the Christmas rains, examination of plugs from putting greens taken in January indicates that major damage did not occur at that time.

While it is generally accepted that damage can occur from the ice layer on *Poa annua* after 50-60 days<sup>1</sup> due either to an accumulation of toxic gases or a lack of oxygen under the ice, Dr. White pointed out that this work, accomplished by Dr. James Beard, was under laboratory conditions. It is unlikely that our field conditions are as severe as the laboratory conditions of the experiment. Furthermore, direct translation of the number of days established in the experiment to the field cannot be exact. We very likely have more than 60 days in our situation as it exists this winter. Dr. Stienstra seemed to concur. Dr. White went on to point out that the temperature under the insulating blanket of snow will remain a fairly constant 25 degrees during the winter, regardless of fluctuations in air temperature. This, of course, is quite desirable.

Kurt Erdmann at Rochester Country Club claimed some success in reducing the ice layer by removing snow with a four wheel drive pickup and snowplow and applying Milorganite in January. Kurt has decided to suspend his efforts to remove the ice due to recent snows. He points out that exposed greens during cold temperatures is also a very real concern. Other methods of dealing with the ice buildup discussed at the meeting were mechanically trying to crack the ice, melting the ice with materials such as Milorganite, powdered carbon, topdressing, muriate of potash, urea, and ammonium nitrate, and artificially heating the greens with propane heaters and tarps.

It is interesting to note that of the superintendents present, nobody reported ever having saved turf by removing the snow and ice. Most superintendents left the meeting having decided not to attempt to remove the ice at this time. Most superintendents, however, were going to do everything possible (plowing, shoveling, or chipping drainage channels) to expedite the removal of the snow, water, and ice once the spring melt begins. Superintendents were encouraged to monitor the situation by being alert to any putrid odor that may exist at the green surface which would be an indication of possible damage, and to remove plugs from the greens and bring them inside to see if growth occurs.

A big thank you to Roger Kisch for arranging the meeting and the staff at Southview for a delicious noon buffet. We would also like to thank Dr. White and Dr. Stienstra for taking time out from their busy schedules to attend the meeting. Let's hope that this meeting results in more green turf when the snow melts.

---

1. Beard, Dr. James. 1973. Turfgrass Science and Culture. Prentice-Hall, Inc. Englewood Cliffs, New Jersey. p. 248.

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# IT'S THE LITTLE THINGS

by Lyle Olson, Superintendent  
Forest Hills Golf Club



I have found that over the years it is always the little things that make the difference. This was again the case when I started at Forest Hills. Many of the little things had been overlooked.

The first thing we did was to take all the ballwashers apart, including the posts and bases, and sandblasted them. Then we took all the metal patio furniture and the legs from our benches and sandblasted them. Because my mechanic, Bob Messerli, was excellent with a spray gun, we had everything painted in short time. Now we had new looking accessories with very little cost. No more chipped and peeling items out on the golf course.

The next items to change were the flags and flagpoles. Because of theft and vandalism there were all different types of flags and flagpoles. Our golf pro, Mike Retica, had a good looking bag tag with a club logo. I had a silk screen made and had all our flags silk screened with this new logo. I changed to tube type flags and cream colored poles so there's no painting poles. This enables us to have a couple of poles made up, enabling the crew to just put out a new flag and pole in a matter of minutes. No more looking through a box to find the right number flag and then finding a pole, a swivel and tying the new flag on. We also keep 18 painted cups on hand and every month they are switched so we always have nice looking cups.

This combination gives your course a touch of class. If you make your crew wear shirts you might want to silk screen these so they take more pride in their appearance. We also put the "Repair Ball Mark" type pin locators on the flagpoles; thus eliminating signs around the greens.

The next problem was a lack of signs. When I saw the nice entrance sign Castlewood Golf Course had put up, I immediately called the superintendent, Jake Jacobson, and asked who put up the sign. After a phone call and one meeting, we had a new entrance sign. This led to an idea for tee signs. Because we didn't have \$1,000.00 for new tee signs, I went back to an old idea I had used often. I had one tee sign made up and put a "donated by" sign on it and had it at our annual board meeting in November. Beside it I had a sign up sheet with 18 spaces. That night all 18 signs had donors plus they get advertising out of the deal. We have since bought a router and have made directional and next tee signs ourselves.

One other thing that may make your job a little easier. How many times have you sent your crew out with your irrigation map only to have it come back torn, full of mud or a soggy mess that nobody can read? I solved this problem years ago by taking my best "as is" plan and have it printed on mylar plastic at a blueprint shop. It usually costs less than \$25.00 and it won't tear and can be washed off.

I guess I have always felt that it's the little things that make one country club look better than another. It's not always the budget that makes a difference but what you do with your budget. None of the items I mentioned are expensive to do but they can pay large dividends down the road. Because I feel that when the little things are done, the golfers tend to enjoy the course more; thus making your job easier.

I hope some of these ideas will help other superintendents in the future.

# THE ASSOCIATES' CORNER

by Gordy Miller, R. L. Gould Company

St. Paul's R. L. Gould Company exemplifies the tremendous growth in the turf industry since the early part of this century. The original company was located next to the Farmer's Market and known as the M. J. Smith Fruit & Produce Co. The name changed to R. L. Gould in 1907.

Originating as a produce company, Gould's had continuous contact with the truck gardener and soon recognized his need for a supply source.

These gardeners were shortly making a headquarters out of Gould's for seed, fertilizer and self-powered equipment like the Planet Jr. cultivator. The path had already been set for Gould's when the 1930's saw the development of a turf industry. They were set to evaluate the equipment and materials coming from numerous manufacturers and with an ear to the Golf Course Superintendent, they made their decisions. The first Turf Equipment Division at Gould's was a one man operation and his name was Paul Miller. Two generations, Gordon and Dan, are following in the department which has subdivided into sales, service and parts; each with its respective managers and staff.

Gould's preoccupation with the Golf Course Industry could be traced through its association with the Minnesota Golf Course Association. Paul joined in 1937 and was out there in the early years stumping for members. Gordon became a member in 1949, Dan in '79 and mention should be made of Allen Gerdin, long standing member of both Gould's turf division and of the Minnesota Golf Course Superintendents' Association.

This totals out to many years of association between Gould's and the M.G.C.S.A. And Gould's enthusiasm is in no way diminishing. They are arranging for the flight to Atlanta for the thirteenth time!

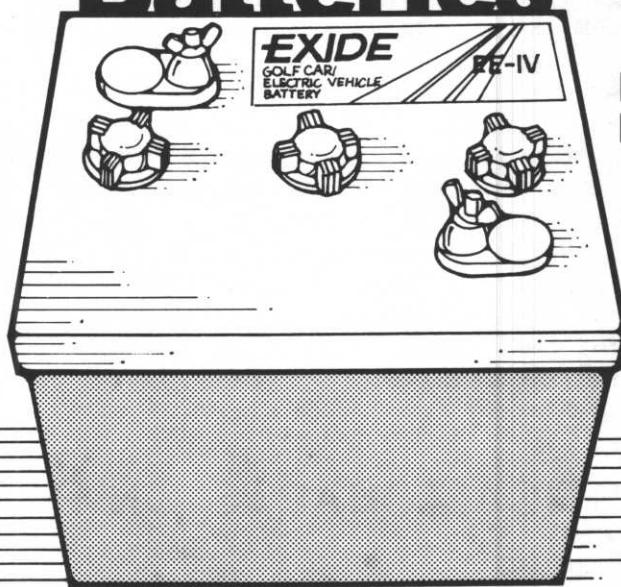
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## Pathological Pointers

# CAMPUS DOLLAR SPOT TESTS

by Ward C. Stienstra, Extension Plant Pathologist  
Dept. of Plant Pathology, University of Minnesota

The dollar spot epidemic did not start on campus as early in 1982; disease symptoms were about one month later than the 1981 season. This may be due to the change in the chemical approach to dollar spot control and the level of control at the end of the 1981 season. In 1980 and 1981 no treatments were applied until symptoms were present and then the disease had a good start. Each year after 1980 treatment application began earlier 6/23/81 and 6/7/82. While in 1980 the first application was 7/29. This observation, delayed symptom development, while somewhat dependent on the environment also serves to remind us about inoculum pressure. This concept can be reduced to the number of infective units in the area. If more infective units, i.e. propagules are present disease pressure is higher and disease symptom level is greater and/or starts earlier. The amount of disease pressure in 1980 and 1981 was greater than the corrective pressure of contact fungicides, i.e. Actidione + Daconil and even that of the systemics at low rates. The Golf Course Superintendent has the tendency to choose the best product from tests like this and use it in his disease control program. While this may insure a successful program, products other than the best may also perform well under your disease pressure conditions. Careful attention to product selection for your disease conditions may save you fungicide dollars.

In the 1982 results please note the significant change in RP26019 performance. This is, I believe due to using a new product. The supply I used in 1980 and 1981 was old material. It was stored in a heated building, under dry conditions yet activity was lost. I can't explain what happened but when a new supply of RP26019 was used the results were excellent at either the 1 oz or 2 oz rate applied every 14 days.

The results from this test reflect control of dollar spot under a non-use condition and adequate to low fertility programs. The plot area does have significant thatch build-up which should favor disease development and the plot has no history of systemic fungicide resistance. All materials were applied in 5 gal water/1000 sq ft with two passes over the plot area when applying fungicide. Pressure in the tank is about 45 to 50 PSI but the operating pressure at the boom is at least 1/2 the tank pressure. This is a low pressure-reduced drift situation.

Another study compared Daconil F and Ciba Geigy 64250 (Banner), a flowable and a liquid (ec) at 4, 2 + 1 gal/1000 sq ft. The results are no different from the 5 gal/1000 sq ft plots. Substantial saving can result when using low gallonage treatments. If you have not reduced water volumes for summer foliar problems, or have, may I suggest that you do but test your sprayer first. Operating pressure and nozzle placement is much more critical under low volume treatments. Nozzle over-lap and wind effects are greater when applying less water. Chemical burn potential is also greater when applying products in a more concentrated form. This may become even a greater problem with EC formulations or tank mixes of two products.

**SEE STATISTICAL CHARTS ON PAGES 8 & 9**

1980

## DOLLAR SPOT

PRODUCT	RATE/1000 SQ FT	AVERAGE # SPOTS/44 SQ FT																
		JUNE				JULY				AUG				SEPT				
		WEEKS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Actidione TGF 1 oz.						15					1	26	36	40	53	49	--	23
Actidione TGF 2 oz.						15					2	12	30	29	74	78	--	23
Daconil 2787 W 1 oz						36					14	56	49	54	101	72	--	65
Daconil 2787 W 2 oz.						20					3	17	24	24	71	67	--	37
ATGF + D 2787 1 oz + 1 oz						11					3	6	7	8	31	46	--	26
Bayleton 0.5 oz						7					5	3	1	2	26	21	--	7
ATGF + Bayleton 1 oz + 0.5 oz						3					3	2	0	1	15	16	--	2
Tersan 1991 1 oz						11					5	1	0	2	10	25	--	1
RP260192 oz						4					1	4	12	14	47	56	--	21
Daconil F 3 Fl oz						8					3	7	5	6	24	36	--	14
Daconil F 6 Fl oz						4					4	2	3	2	16	20	--	6
Ciba Geigy 2 gms ai						9					5	0	0	0	6	5	--	2
Ciba Geigy 4 gms ai						10					3	2	0	1	2	6	--	0
Fore 4 oz						13					4	6	13	13	45	43	--	42
Cleary 3336 2 oz						13					2	0	1	1	22	23	--	2
Check --						31					17	37	43	47	74	86	--	72
Above Treatments applied 1980											T				T			T

## DOLLAR SPOT

1981

PRODUCT	RATE/1000 SQ FT	AVERAGE # SPOTS/44 SQ FT																
		JUNE				JULY				AUG				SEPT				
		WEEKS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Actidione TGF 2 oz						39	16	32			4	17	31	44	45	28		
Daconil 2787 W 2 oz						58	37	76			64	97	103	124	144	68		
ATGF + D2787 1 oz + 1 oz						25	18	47			5	23	46	54	54	22		
Daconil F 4.5 Fl oz						47	60	75			18	60	65	82	92	32		
Daconil F 6. Fl oz						6	17	23			2	21	21	21	20	11		
Bayleton 0.5 oz						0	0	0			0	0	0	1	4	0		
Bayleton 1.0 oz						0	0	0			1	0	0	0	0	0		
Tersan 1991 1 oz						2	2	1			1	1	1	0	0	1		
Cleary 3336 2 oz						0	1	0			0	0	0	0	0	1		
RP26019 1 oz						32	9	33			69	74	80	97	104	78		
RP26019 2 oz						27	55	64			4	12	21	35	48	21		
Ciba Geigy 64251 1 Fl oz						0	0	0			1	0	0	0	0	0		
Fore 4 oz						160	144	151			164	156	166	167	200	162		
Check						126	85	138			140	141	150	180	BAD	127		
Treatments applied 1981											T				T			T



DOLLAR SPOT

1982

PRODUCT	RATE/1000 SQ FT	AVERAGE # SPOTS/44 SQ FT															
		JUNE				JULY				AUG				SEPT			
		WEEKS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
Actidione TGF 2 oz		0	0	0	0	0	0	0	0	0	0	--		4	1	0	
Daconil F 3 Fl oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Above Treatment applied																	
1982		T	T	T	T	T	T	T	T	T	T	--		T	T	0	
Banner 0.5 Fl oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Banner 1.0 Fl oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
RP26019 1 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
RP26019 2 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Tersan 1991 1 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Vorlan 2 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Above Treatment applied																	
1982		T	-	T	-	T	T			T	-	T	--	T	-	T	
Bayleton 0.5 oz		0	0	0	0	0	0	0	0	0	0	--		1	0	0	
Bayleton 1.0 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Bayleton 2.0 oz		0	0	0	0	0	0	0	0	0	0	--		0	0	0	
Above Treatment applied																	
1982		T								T				T			
Check		0	0	0	0	0	0	0	0	7	10	--		49	57	97	

DOLLAR SPOT - WATER VOLUME STUDY

TREATMENT	WEEKS	AVERAGE # SPOTS/44 SQ FT															
		JUNE				JULY				AUG				SEPT			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Daconil F 3 Fl oz																	
in 4 gal		0	0	0	0	0	0	0	0	0	0	-	0	0	0		
in 2 gal		0	0	0	0	0	0	0	0	0	0	-	0	0	1		
in 1 gal		0	0	0	0	0	0	0	0	0	0	-	0	0	0		
Banner 1 Fl oz																	
in 4 gal		0	0	0	0	0	0	0	0	0	0	-	0	0	0		
in 2 gal		0	0	0	0	0	0	0	0	1	1	-	0	0	0		
in 1 gal		0	0	0	0	0	0	0	0	0	0	-	0	0	0		
Above Treatments applied																	
1982		T	-	T	-	T	T	-	T	-	T	-	T	-	T		
Check		0	0	0	0	0	0	0	0	8	10	-	72	68	84		

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