Tee to Green

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MEETING NOTICE

Date:	July 20th
Place:	Mt. Kisco Country Club
Golf:	12:00 Superintendents' Championship (Golf for everybody)
Lunch:	Available in Grill Room
Cocktails:	6:00
Dinner:	7:00 Sharp
Speaker:	Dr. Joseph Troll and Dean Denison "Stockbridge" School
Host:	Fred Scheyhing. Fred has been an active member of MGCSA serving as Vice President and on many committees, Program, Field Day. Fred is a graduate of the University of Massachusetts 2 year turf school – one of Dr. Troll's boys. Fred and his wife Judy live with their daughter in Katonah, N.Y. Fred is a very active bowler and maintains a high average in the Mt. Kisco Classic league.
Directions:	Taylor Road off Route 117 in Mt. Kisco.

COMING EVENTS

August 10	Rutgers University Field Day
August 24	Silver Spring C.C.
Sept. 11	Field Day, Brae Burn C.C. Contact Dom DiMarzo Chairman
Sept. 21	Invitational, Whippoorwill Club
October 4	Sunningdale Golf Club
Nov. 16	Lake Isle C.C. Annual Meeting

MGCSA News:

Past President John Madden had the golf course in super condition for the joint meeting with Long Island. It was too bad that so many weren't able to make it due to the heavy rains of June. Turf from tee to green was in excellent condition considering all the rains. Engineers put out a great hors d'oeuvres spread folllowed by an excellent steak dinner. It was just too bad the dinner got started so late as the program of the evening didn't start until after 10. Mr. Starner gave an excellent presentation on some new insights to preventing Dutch Elm Disease, surprisingly enough the material which is showing great promise is one of the new systemics Tersan 1991 "Benolate."

Kay Oviam presented Ben Zukosky and Garry Crothers with their certification plaques. Surprisingly enough Ben Zukosky has been a Superintendent 50 years this September at the same club – The Links. Ben took some courses at night school which he felt helped him in his certification exam. It's never too late to stop learning.

It would be interesting to hear the different amounts of rainfall recorded in June. It would probably range from 10 to 20 inches. Apawamis recorded 15.5". Even though we all are extremely wet we can be thankful we haven't had any hot weather because certainly a lot of grass would have been cooked by now. We all thought we had enough drainage put in last fall but we have found out otherwise. We certainly can't forget the one big key to good turf is drainage.

GCSAA HEADQUARTERS – Readers of THE GOLF SUPERINTENDENT are reminded that because the 44th GCSAA Conference and Show will be held January 7-12, 1973, in Boston, Massachusetts, a month earlier than in past years, it has become necessary to change the publication's schedule.

It will be issued as follows for the remainder of the year: July, August/September, October/November and December (Special show issue). The journal will continue to follow its rigid mailing schedule of the first week of each publishing month and readers can still expect to receive their copies early in July, August, October and December.

Chapters planning to run an ad in the Conference issue must get their material to Headquarters (THE GOLF SUPERINTENDENT – 3158 Des Plaines Avenue, Des Plaines, Illinois 60018) no later than November 1.

Insect stings are a common warm weather hazard to you as well as to your men. A possible life savings addition to your first aid kit at home or on the golf course might be a small bottle of meat tenderizer you can buy in a grocery store (Adolf's Meat Tenderizer).

The doctor's prescription is to dissolve ¼ teaspoon of tenderizer in one or two teaspoons of water and rub over the bite. The doctor explains the tenderizer is rich in papain, a protein dissolving enzyme which breaks down the venom. He says a dose of this will stop the pain of most insect stings in seconds if applied immediately. Only in case of serious shock, should a doctor's service be needed.

from The Importance of Water Management, Part I,

by Fred V. Grau, Consulting Agronomist, College Park, Maryland

Drought years in 1963, 1964, and 1965 in the Northeast created an upsurge in the installation of irrigation systems. Water was thought to be the answer to the problem. A survey conducted in 1968 by Dr. Harper, Penn State, showed that irrigation produced a whole new set of problems.

77% reported decrease in Kentucky blue and red fescue
81% reported increase in Poa annua (some indicated 90 to 100%)
Height of cut had to be lowered
78% said that mowings were doubled
22% said that mowings were tripled
Weeds increased, there was more thatch build-up, new grasses had to be introduced, renovation became necessary, fungicide use increased, and fertilizer requirements doubled and trebled.

Water provides films around solid particles which act as a lubricant. With traffic the soil particles become rearranged in the direction of more compaction. Pore spaces were reduced from 33.1% to 6.1% in one study. The weight of the non-compacted soil was 68 pounds per cubic foot. After compaction the same soil weighed 112 pounds.

Roots of turfgrasses have been found at considerable depths when there is good sub-surface drainage, where the soil is permeable and water has been used in moderation. In California the roots of Merion bluegrass were drawing moisture below 3 feet. Roots of bentgrasses on putting greens have been found to be active below 12 inches. The secret is permeability, good drainage, and good water management.

Tee to Green

Editorial Staff

Garry Crothers	*Co-Editor*
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Wasps & Honey Bees
by Stanley Rachesky, Entomologist, University of Illinois

For control of either wasps or bees:

1. Use one of the following insecticides: Sevin (carbaryl) 5% dust or Malathion 4% dust. These insecticides are readily obtainable at your local garden center, hardware store or farm supply.
2. Dusts are the best fromulation to use for they disperse better.
3. Apply the dust first through the entrance hole after dark – Bee careful!
4. Drill a ¼" hole in the wall above the colony and inject the insecticide through it. Seal the hole and all other escape holes.
5. Large colonies may require repeat treatments in about 10 days to eliminate emerging bees and wasps.
6. In approximately 2 weeks all buzzing activity should have stopped. Removal of the dead insects is next. When the nest is removed it should be discarded in such a manner so as not to attract other insects of the same species.
7. After removal of the nest treat the area with a spray of Diazinon 0.5% in oil to eliminate chances of a secondary insect problem.
8. Control of a beehive or wasp nest located in a tree or shrub can be done by using a hose-end sprayer (the little bottle that fits on the end of your garden hose) or power sprayer and/or one of the following chemicals: Sevin 50% wettable powder or Malathion 57% emulsifiable concentrate (mix with water) plus DDVP or Pyrethrin.

Malathion will give a residual of about 3-5 days and either the DDVP or Pyrethrin is used as a quick knock-down. Once again do your control work at night when the nest activity is low. And once again BEE CAREFUL!

Bee and wasp nests located in the ground can be quickly erradicated by using Chlordane. Mix a gallon or two according to label directions on the bottle. Pour directly over the nest site. Once again do your control work at night. After treatment place a few shovelfulls of dirt over the treated area.

– **Read the label before using any pesticide.**

NY State Turf Grass Research Fund to MGCSA

Last spring you sent us your check for $100.00 to help us in our effort to collect a $10,000 fund for Turfgrass research. We had been assured by our administration that if this sum could be obtained we would be able to hire a new turfgrass research man this year. It now is evident that we will not attain this goal and will not be able to fill the position until July 1, 1973.

These dollars have been held in a separate account that is specifically designated for Turfgrass research. With our present budget situation as tight as it is and with no foreseeable change in the future you may rest assured that when the new turf research man is here, after July 1, 1973 we will probably appeal again for outside funds to help in getting supplies, assistance and equipment to make his work most effective.

We are most grateful for your tangible expression of support and are only sorry that we have not been able to complete our plan. Since we will not be able to use your contribution for the intended purpose we will return it to you at once if you so desire. Or should we keep it on hand for our new man? Please let us know how you want us to proceed?

Sincerely yours,
James W. Boodley
Professor and Chairman of Department

RESEARCH REVIEW by Wayne C. Morgan

"Nitrogen Carriers and Turgfrass Diseases"

There are persons responsible for the care of turfgrass areas who believe the use of natural organic materials such as manures and sewage sludges will increase disease incidence. Although it may be completely true that at a given time when one of these materials were applied, there could have been an increase in disease, there may have also been other conditions present which would lead to the primary cause other than just the use of a given material.

Fresh manures and poorly and/or incompletely processed sludges could be responsible for disease occurrence, but evidence to be presented in this information would indicate that a quality material may actually produce the opposite effects with reduced disease. Nutrient imbalance, which may be emphasized by the release of available nitrogen, can significantly increase disease potential. Succulence caused by over stimulation of growth, especially when higher populations of disease organisms are present from previous disease occurrences and/or remaining in thick thatch layers, can greatly increase disease occurrence. Irrigation practices which result in excessively wet conditions are often the major cause of disease activity, and the application of a natural organic material may erroneously be blamed for disease when in reality it is only a secondary contributor.

Information presented in this review comes from articles by Dr. Eliot C. Roberts and Flave E. Markland while at Iowa State University, Dr. R. N. Cook, Dr. R. E. Engel, and Dr. S. Backdder of Rutgers University, and Dr. Houston B. Couch of Washington State University.

Turf treated with high nitrogen and frequent mowing

essentially never matures and remains soft and succulent. These conditions often lead to an increase in disease. However, one common disease of bentgrass greens, dollar spot, caused by the fungus **Scierotinia homoeocarpa** is known to be worse on underfertilized turf than on well-fed turf.

Bentgrass Resistance to Dollar Spot

Dollar spot resistance in bentgrasses may be divided into two categories. The first category may be referred to as genetic resistance. This involves the classification of strains of bentgrasses into groups which demonstrate a natural resistance to the disease. For example, at Ames, Iowa, Penncross bentgrass is less susceptible than Washington bentgrass to dollar spot. The second category may be called managed resistance to dollar spot.

Factors commonly associated with management include fungicide application to remove the disease organism, sanitation which helps prevent the entry of the disease, moisture regulation which may prevent infection, and finally fertilization which helps prevent spread of disease.

Effect of Nitrogen Fertilization of Turf on Dollar Spot

Emphasis in this paper will be confined to nitrogen fertilization and its effect on dollar spot resistance in bentgrass. The important aspects are source, amount and frequency of application.

Some nitrogen sources contain, in addition to nitrogen, potassium, phosophorus, and trace elements. Use of these fertilizers could lead to a more balanced nutrient status for the grass. This would increase growth and reduce dollar spot.

Direct fugicidal effects could arise from the presence of copper, zinc, chromium, iron, etc.

Increasing the total amount of nitrogen may stimulate the grass so that it simply outgrows the disease symptoms. The type of nitrogen may exert its influence by governing the rate of nitrogen release. Nitrogen sources most effective in disease control would supply nitrogen so as to maintain the grass in a vigorous, but not over-succulent state.

At the Iowa State University, an experimental putting green was established and maintained under simulated playing conditions. The following nitrogen sources were used in an experiment.

Experimental Methods and Materials

To investigate these nutrient-turf disease relationships, an experimental putting green of Washington bentgrass was established. It was maintianed under simulation playing conditions at Iowa State University. One hundred twenty 5' by 8' plots were arranged in eight blocks of 15 plots each. The following nitrogen sources were used: 1–activated sewage sludge; 2–processed tankage; 3–ureaform, urea, ammonium nitrate, ammonium sulfate; 4–sodium nitrate.

(Number 1 is Milorganite, a product of the Milwaukee Sewerage Commission, Milwaukee, Wis.; No. 2 is Agrinite, a product of the American Agricultural Chemical Company, New York, N.Y.; No. 3 is Nitroform (Blue Chip); a product of Hercules Powder Co., Wilmington, Del.; No. 4 is Chilean nitrate of soda, a natural product from Chile.)

Rates consisted of 5- and 10-pound actual nitrogen per 1000 square feet for the growing season. Each nitrogen source was applied in one-pound Nitrogen increments at two-week intervals for the ten-pound level, and every four weeks for the five-pound level. A plot without nitrogen (as a check) was included in each block. All plots received adequate amounts of phosphorus and potassium.

Treatments started the third week in May and continued until the third week of September during each year of the test.

The number of dollar spots per square foot varied with the nitrogen source. As yields increased the number of dollar spots decreased. Fertilizer materials applied in sufficient quantities to stimulate the production of high yields significantly reduced dollar spot. Per cent dry weight of foliage showed a direct relationship to dollar spot. As per cent dry weights increased, so did dollar spot. Nitrogen sources, when supplied in adequate amounts to stimulate vigorous growth, decreased food reserves (per cent dry weight) and decreased dollar spot.

No-nitrogen check plots always had more dollar spot. Plots receiving five pounds of nitrogen per year were less diseased than the check, but were still severely infected with dollar spot.

As yet, the nitrogen source has had no effect on disease when applied at the five-pound rate. At the ten-pound rate, the grass showed a marked reduction in dollar spot. The source of nitrogen used made the difference. In general processed tankage, ureaform, and ammonium nitrate failed to give satisfactory results. The least disease was noted where turf was fertilized with nitrate of soda and activated sewage sludge.

Results of these tests at Iowa State University show that nitrogen is an important factor in promoting dollar spot resistance in Washington bentgrass. When adequate nitrogen is available, yields increase and dollar spot decreases. Dollar spot incidence was extremely bad on the no-nitrogen checks. At the low rate of five pounds actual nitrogen per 1000 square feet during the seven-month growing season, dollar spot was bad but less than the checks. There were no marked differences between nitrogen sources. At the high rate of ten pounds actual nitrogen, there was appreciably less dollar spot and significant difference between the nitrogen sources.

The water soluble nitrogen sources (urea, ammonium nitrate, ammonium sulfate, and Chilean nitrate of soda) were similar in their effect in reducing dollar spot. The exception was ammonium nitrate. Dollar spot was consistently worse where it was used, compared to the other water solubles. Among the organics, activated sewage sludge plots had the least dollar spot. They were always equal to or better than the water solubles. In general, processed tankage and ureaform were less effective in suppressing dollar spot.

At Rutgers, the results of fertilizing with activated sewage sludge suggests that incidence of disease is lowered by this treatment. Research and field observations of disease reduction associated with activated sewage sludge and other fertilizers stimulated a study of disease and nitrogen carrier relationships. Davis and Engel observed lower readings for large brownpatch on bentgrass when fertilized with activated sewage sludge in comparison to results from a fertilizer containing nitrogen, phosphate, and potash. Wells reported that ryegrass plots receiving heavy rates of activated sewage sludge showed less damage from cottony blight than those receiving organic and inorganic nitrogen from other sources. Watson found that activated sewage sludge increased the effectiveness of phenylmercuric acetate as a preventive for snowmold.

A similar experiment to the one reported at Iowa was conducted. Dollar spot was presented throughout the 1957 and 1958 growing seasons and was the only disease present in large proportions. In 1957, the 11.25-pound rate of activated sewage sludge reduced disease incidence to 13% of the check. This was significantly less disease than was observed with any other nitrogen treatment. No other statistically significant differences were observed in 1957.

In 1958, the 11.25-pound rate of activated sewage sludge reduced disease severity to 20% of the check and plots fertilized with the 6.75-pound rate showed significantly less disease than comparable rates of ureaform, ammonium sulfate, or ammonium nitrate. These were the only two nitrogen treatments that resulted in significantly less disease than the no-nitrogen treatment.

In general, the disease severity was inversely proportional to nitrogen level. The average number of dollarspots for all nitrogen sources at the 11.25-pound rate was significantly lower than the average for the same sources applied at lower rates (45 and 33%, respectively, for the 3.75- and 6.75-pound rates).

Summary and Conclusions

A review of literature and field observations suggest that all nitrogen carriers do not have the same effect on turfgrass disease, incidence. In this study, three insoluble sources – activated sewage sludge, process tankage, and ureaform – and three soluble carriers – urea, ammonium nitrate, and ammonium sulfate – were applied at various rates to bentgrass turf to determine whether they affected disease incidence. Plots treated with activated sewage sludge showed significant reductions in dollarspot incidence. These reductions were greater than is normal for this desease as a result of nitrogen stimulation, and the effect was in evidence at every level of nitrogen fertility.

Tee to Green

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