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On behalf of the M.G.C.S.A. I would like to take this opportunity to thank John Nylund for the super job he has done for all of us this past year. Not many people are aware of the extra time away from his family that it takes to attend meetings as the M.G.C.S.A. representative. He carried our banner high wherever he went and we appreciate it very much.

Your board was invited to attend the Evans Caddie Scholarship Selection Committee meeting at Minikahda Club recently. We had seven members in attendance and it was a real experience to interview these fine young men and women. Nineteen scholarships to the University of Minnesota were awarded. If the future of our game winds up in the hands of this type of person, we have absolutely nothing to worry about.

What can you say about our turf conference except that it was the biggest and the best yet. It was extremely interesting with a knockout lineup of national speakers. It ran as smoothly as a newly tuned up Mercedes Benz and the guys to thank are Jim Wodash and Dale Caldwell. If you didn't learn something at this conference, it was because you weren't listening.

At the annual meeting I was presented with a fine board to work with during the coming year. They accepted their committee appointments with enthusiasm. Those appointed are listed elsewhere in this publication. Look for the list and if you are interested in helping on a committee, just give the chairman a ring and I'm sure he will put you to work.

I hope to see many of you at Izaty's Lodge on Mille Lacs Lake January 16.
THE EFFECTS OF SODIUM ON TURF

by DAVID L. DODDS
Superintendent
Apple Creek Country Club
Bismarck, North Dakota

The soil at Apple Creek Country Club is classified as sodic soil. Sodic soil as described by James S. Beard in his book TURFGRASS: SCIENCE AND CULTURE is "soil having an exchangeable sodium percentage greater than 15 and/or a ph of 8.5 or higher. Sodic soils contain sufficient sodium to interfere with turfgrass growth or quality. The effects of sodium become dominant in sodic soils due to the absence of calcium and magnesium. This occurs when sodium composes more than half of the soluble cations in the soil solution and becomes the predominant absorbed cation on the soil colloids. The dominance of sodium impairs flocculation and causes deterioration of soil structure. Sodic soils are characterized by a relatively coarse textured, thin surface soil zone. Beneath is a dense layer of clay accumulated from the horizon above, which has an extremely low water permeability".

Apple Creek C.C. has all of these conditions. To make matters worse, half of the course has a high water table and the water that is used for irrigation is drawn from a creek that has a high sodium content.

The first order of business was to engage a soil engineering firm that does extensive work with this type of soil condition. They drew up a master drainage plan which included surface and internal drainage. A seven year plan was adopted to effectively fund and complete this project with minimal interruption of play.

The next priority was the aerification of the greens, tees and fairways. Greens and tees are aerified twice a year with a Greens Air II using a homemade 1" tyne. We use a large tyne to remove as much soil as possible and replace it with sand. It takes 6-7 1/2 tons of sand per green for each aerification.

Fairways are also aerified twice a year. The Greens Air II is used on the worst fairways. This process is slow, but it works well. The remaining fairways are aerified in two directions with a fairways aerifier. Plugs are removed and sand is applied to the worst fairways at 25-30 tons per acre for each application. Gypsum and sulfur are added to all aerified areas both in the spring and the fall.

In summary, Apple Creek C.C. has four major problems. They are a high ph factor, a high exchangeable sodium percentage in the soil, a high cation exchange capacity (CEC), and a high exchangeable sodium level in the irrigation water.

To correct these problems the following procedures are being implemented:
1) Drainage projects to leech down the soluble salts.
2) Sulfur application lowers the ph level.
3) Gypsum takes the place of sodium in the soil which in turn will lower the ph and lower the CEC.
4) Sand topdressing applied to the greens, tees and fairways improves the soil structure.

We are continuing to use water from the creek for irrigation; however, future plans include a well, which will eliminate this additional source of sodium.

APOLOGIES

Due to a malfunction of our camera (the operator wasn't too good, either) many of the pictures taken at the Turf Conference did not survive. Our apologies to the main speakers, the prayer meeting participants and others whom we were not able to show in this issue.
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THE MANY HATS OF THE PURPLE HAWK

by FRED R. ANDERSON
Superintendent
Purple Hawk Country Club
Cambridge, Minnesota

Before I get down to the basis of my article, a short history of the Purple Hawk is needed to explain why this course is unique.

As in some situations where a small town has a nine hole course mixed with a growing population, a decision was made to sell the present 9-Hole course and build an 18-Hole course with pro shop and restaurant. With the availability of low interest government money to borrow, the land was purchased and construction began in early 1969 and completed mid-1970. The course opened mid-summer and was playable despite its newness. The clubhouse was the answer to all dreams - men's and women's locker rooms, showers, supper club and a pro shop. A few years passed and the dream was in serious jeopardy. The financial stability of the Purple Hawk was in question, with large monthly payments, low membership numbers and a supper club that was taking a huge drain on the golf course revenues. The end result was that of selling the supper club to a private party in 1976. Now the Purple Hawk Golf Course was on its own and the next hurdle to overcome was an ailing credit rating. This has taken several years but it has been corrected.

Now to the purpose of my writing this article and that is to explain the management and care of an 18-Hole semi-private golf course without clubhouse responsibility. So you ask what does he do and what are his responsibilities? I wear three different hats. First is that of Superintendent; secondly that of pro shop manager; and third, I am the general over all club manager. With each hat comes different responsibilities.

1) As Superintendent my duties are not any different than any other superintendent. My crew consists of myself, three college students, one high school student and one man who is with me from April until November. We are able to maintain the 200 plus acres of the course plus have some extra time for various course improvements. This was the "hat" that I was familiar with and felt confident in my ability to do a good job. The following "hats" I had to learn on the job.

2) As Pro Shop Manager my duties include that of purchasing and pricing of all golf merchandise, hiring and training of pro shop personnel who are capable of dealing with the public and handling of large amounts of cash on a daily basis. An important factor in having a smooth and profitably run pro shop is the keeping of a daily log of income and activities. These figures are then transferred to a monthly journal so I am always informed on our cash flow. I am very fortunate that my wife, Sharon, does all the daily and monthly book work as well as work in the pro shop. This enables me to spend more time on the course (and some other courses, too!).

3) Finally my last "hat" of Club Manager entails the responsibility to inform, educate and work with a nine member Board of Directors. Since I have no greens chairman or any other committee that I must answer to on a daily basis, I am pretty much on my own for the daily decisions that arise concerning course operations. The board's feeling is that I was hired to take care of all course business and if I fail in that responsibility, someone else will take my place. I have been extremely fortunate since my taking over this position in 1979 in that my board has approved all my maintenance equipment requests; thus giving me new and time saving equipment and also the security of back up equipment. It is also my responsibility to write all checks for purchases involving course maintenance and pro shop merchandise. I must also prepare payroll checks on a bimonthly basis for all employees. The job also entails preparing an annual budget for golf course income and expense as well as one for pro shop income and expenses. With this is a five year long range financial budget. I also work closely with our accountant throughout the year.
and in preparing our financial statement for our annual Stock Holders Meeting. In the spring I meet with area school coaches in preparing the Junior Golf program and scheduling golf meets. It is also my job to set up the format and run our annual shortstop tournament and to work with the board in setting up tournaments expressly for our members.

In summary the Purple Hawk is unique because of the many facets in which I am able to work. I find this type of employment to be very challenging, educational and rewarding. I am greatly benefitting from my experience here at the Purple Hawk because I am becoming a better golf course superintendent. I feel that in a situation of this type where the superintendent can work in all phases of management, he is acquiring a broader spectrum of the golf business as a whole.

**EDITOR’S CORNER**

by DOUG MAHAL
Chairman
Editorial Committee

President Don Lindblad approached me shortly after our annual elections and asked if I might chair the Editorial Committee and thereby help organize the HOLED NOTES. My first reaction was that it sounded like quite a responsibility for a "rookie" but after a chat with former chairman Boots Fuller, I've decided to "give it a shot". I'd like to continued on Page 7

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congratulate Boots for the exceptional job he's done with the HOLE NOTES this past year. His hard work in organizing a good format has made my job considerably easier! I don't anticipate many changes in the format Boots has initiated which means I'll be attempting to contact two superintendents and an associate member each month to write articles on an aspect of their operation which may be unique or some different timely subject. Volunteer articles from any of our members would be greatly appreciated. I know we have many members with something noteworthy to say. So, to you ladies and gents, please don't hesitate to put your thoughts on paper and send it to Warren Rebholz or myself. Let's all benefit from each other's experiences. Your HOLE NOTES will again feature monthly reports from Don Lindblad, your president, and from Lyle Olson, membership chairman. One might also anticipate frequent Research Committee reports which are aimed to keep the membership abreast of progress and new information which becomes available through the work of our research fund.

I think I speak for all the newly elected or appointed officers and directors when I say thanks to the membership for their vote of confidence at our annual elections. Be assured, the entire board will be working hard to keep this association a very viable and productive one. Here is a list of officers and committee chairmen: PRESIDENT, Don Lindblad; VICE-PRESIDENT, Dale Caldwell; SECRETARY, Kerry Glader; TREASURER, Mark Smith; BYLAWS, Scott Hoffman; MEMBERSHIP, Lyle Olson; EDITORIAL, Doug Mahal; ARRANGEMENTS, Russ Adams; EDUCATION, Keith Scott and Jim Wodash; EX-OFFICIO, John Nylund.

I hope to see many of you in Las Vegas for the GCSAA Annual Conference and Show. From all indications, Vegas will host the largest annual conference in GCSAA history. It should be exciting. For those M.G.C.S.A. members who have had thoughts of joining the national, keep in mind that you are exempt from conference registration fees if your GCSAA membership is approved prior to the conference. And speaking of conferences, Jim Wodash organized an incredibly good annual conference. Well done, Jim! Attendance was up substantially from last year. Ticket sales numbered 241 on Wednesday, 280 Thursday and 253 on Friday. Speaker selection was outstanding and hotel accommodations and service were second to none. The Thursday evening banquet attendance has fallen somewhat over the past three years, however, (159) to a point where 1984 conference chairmen Jim Wodash and Keith Scott will be looking for ways to spark new enthusiasm in this enjoyable affair. The banquet is a fun time, especially for the ladies who put up with those horrid schedules of July and August. One might think we owe them "a night on the town".

Work is already being done on our Mini-Conference in March. Any member with particular topic interest may contact one of our board members and relay that information. We're looking for input.

I hope all had a blessed and joyous holiday season and that the new year will be a prosperous and productive one for all. See you at Izaty's!
ANNUAL MEETING HIGHLIGHTS

Newly elected directors are, left to right, Doug Mahal, Scott Hoffman and veteran former president Keith Scott. All are eager workers.

Twenty-five Year Award went to Bill Johnson of Edina, right, presented by new president Don Lindblad with proper congratulations.

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ASSOCIATES' CORNER

by TOM L. HAUGEN
BRAYTON CHEMICALS, INC.

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First let me say a few words about myself and my background. While attending Simpson College I worked at my hometown golf course at Forest City, Iowa. After graduation in Business and Economics I was a Superintendent General Manager for three and one-half years. During that period I attended various turf classes around the state. After that period I accepted a position in Des Moines at Willow Creek G.C., a 27-hole facility. For Willow Creek I also managed a garden center, landscaping and lawn service. Six and one-half years later I joined the Brayton Chemicals organization when the decision to expand to Minnesota in turf was formulated. Before actually moving to Minnesota I had the privilege (through Brayton) of touring a week with Dr. Harry Niemczyk and Dr. Joe Vargas in other Brayton territories.

This hands on, on the spot learning is a yearly event for Brayton. Last summer Dr. Paul Riecke from Michigan State and I took a two day tour of a number of turf facilities in Minnesota and I think everyone involved learned something about sand topdressing, hydrophobic soils, fusarium and many other turf related topics. In 1984 we hope to make that visit in coordination with a state MGCSA meeting.

Brayton is a service oriented company. Starting as strictly an Ag chemical company and distributor years ago, it has made a logical and important expansion into the turf specialties market. A distributor for all turf and ornamental fungicides, herbicides, insecticides and with sales personnel and warehouses throughout the entire Midwest and Mideast, the commitment to the turf industry is very great. Brayton is also committed to the dissemination of ideas and facts. After all, a distributor must be a distributor of knowledge as well as the tools (chemicals) to solve problems.

Enough about Brayton chemicals. The year and so that I have been in Minnesota has been most enjoyable. The superintendents are great which makes the M.G.C.S.A. also a good organization. The turf conference this last month was one of the best state conferences I have attended. For it and the past year I would like to thank the superintendents and the University and I hope the years to come will be as enjoyable and productive.

MEMBERSHIP REPORT

The following Membership Report is from the Annual Conference and the December 13, 1983 Board Meeting:

NEW MEMBERS: Jeff Earley, Hazen G.C., North Dakota, Class BII; Bill Sexton, Pine River G.C., Minnesota, Class BII; Steve Ross, Bracketts Crossing, Minnesota, Class BII; Todd Dietz, Anoka AVTI, Class C; Bryan Stover, Anoka AVTI, Class C; Pete Mogren, Anoka AVTI, Class C; Steve Sinclair, Anoka AVTI, Class C; Joseph Baker, Anoka AVTI, Class C; Kerry Anderson, Lebanon Chemicals Co., Class F; and Jerry Odash, Kaye Corp., Class F.

REINSTATEMENTS: Bruce Luchsinger, Hudson G.C., Wisconsin, Class A; and Calvin Schmidt, Riverdale G.C., Colorado, Class A.

CLASSIFICATION CHANGES: Jeff Churchill, Wadena C.C., Class A; John Mackenzie, Lost Spur C.C., Class BII; John Granholt, Eau Claire C.C., Class A; Pat Walton, Golden Valley C.C., Class BII; and Tim George, Eshquaguma C.C., Class A.

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