

WATER SOURCE from page 9

I had to fill out Water Use Permits for our existing well plus one to draw water from Lake Waconia. Write up a contingency plan if our water allocation was reduced or suspended. Draw a map showing proposed pumping site, existing well, distribution point, legal descriptions, aerial photos and lake shore owned. After compiling all the information I waited for their reply which I was told would be no problem and wouldn't take long.

After the paperwork for the D.N.R. was done, I went to the county. I applied for and got a tiling permit which was needed to auger a culvert under the road bed to bring the water onto the golf course. I also had to talk to the County Water Safety Patrol about dock placement and a protective cage for our pump.

I kept in touch with the D.N.R. calling every week, always getting the same answer, don't see any problems with your getting the permit. With this response we started dredging and excavation work. By mid-February we had finished our dredging and excavation work and building a pumphouse but we still had not received our

permit. When I called the D.N.R. the next time, the lady I had been working with was no longer with the D.N.R. and nobody knew anything about our application. Now was a time of panic, 3 1/2 months of the D.N.R. telling me "NO PROBLEM", \$15,000.00 spent and we had nothing!

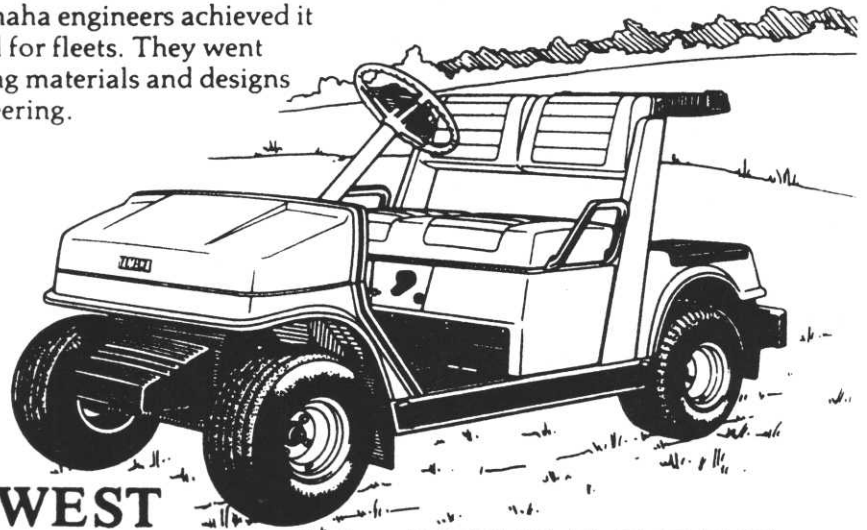
I had to start all over again, filling out applications and gathering all the information. This time I'd call the D.N.R. twice a week to check the status of our permit. Even with all the set backs we were going ahead with automating our system and use our well to fill the pond. After all the phone calls and waiting, our permit was approved on the 24th of April, only to find that a mistake was made on the application.

I had asked for 40 million gallons of water I thought, but the D.N.R. said I asked for 40 acre feet which amounted to 13.3 million gallons. Knowing that this would not be enough water, I went to see our lawyer. After giving our lawyer all the information I had, he went about writing letters and making phone calls. On June 15 an amended permit for 40 million gallons of water was issued.

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Feature	Rain-Bird 91-95 DR Series	Toro 674-06 Series	Toro 694-06 Series	Benefit
Inlet Size	1 1/2" FPT	1 1/2" FPT	1 1/2" FPT	Less pressure loss—cuts pumping cost
Rotation Speed (60 PSI)	1:30 minutes	3:07 minutes	3:07 minutes	Faster rotation speeds—less time to syringe
Pop-Stroke	3"	1 3/8"	7/8"	Higher pop-up height—less matting around head
Arc—Adjustable	Yes 30-360 degrees	No	No 90-180-360 degrees	Adjustable arc is more versatile Model #95DR is full or part circle
Valve Type	Diaphragm	Piston	Piston	Diaphragm valve—less flow loss, cuts pumping cost, less sticking, cuts maintenance cost. Longer life 10X piston.
Internal Porting	Yes Bleeds water into sprinkler inlet	No Bleeds water into case	No Bleeds water into case	Internal bleed—does away with wet spots around head Case does not fill up with water
Drive Mechanism	Brass impact	Plastic gears	Plastic gears	Impact drive—has 2 moving parts—less expensive to service & repair. Less pressure loss.
Pressure Regulation	Field adjustment	Factory set	Factory set	Field adjustment—allows individual head regulation for more even distribution
Maximum Working Pressure	150 PSI	150 PSI	150 PSI	
Energy Efficiency	85%-95%	70%-80%	70%-80%	Impact drive more efficient—less pressure loss thru head, cuts pumping costs
Pressure Loss Thru Head	< 15.0	> 23.0	> 20.0	Saves pumping/power costs
Positive Retract Spring	Yes	Yes	Yes	
High Strength Plastic Case	Yes	Yes	Yes	
Cover	Aluminum	Plastic	Plastic	Aluminum less susceptible to striking damage from equipment, golf clubs etc.
Manual Override	Yes	Yes	Yes	Can still operate if power is not available
Nozzles	2	3	2	
Nozzle Interchangeable	Yes	Yes Must change stator	Yes Must change stator	Impact drive—allows nozzle to be changed without replacing a costly part
Screen Accessibility From the Top	Yes	No	No	Impact drive—allows screen to be removed thru top so head does not have to be removed from riser
Self Flushing Valve Seat	Yes	No	No	Diaphragm valve—has less hang-ups and sticking, cuts maintenance cost
Solenoid Grit Filter	Yes	No	No	Grit filter—filters water to valve ports, less hang-up problems, cuts maintenance costs
Solenoid	24V-2W	24V	24V	24V-2W Solenoid requires less power—allows longer runs on smaller wire
Radius	68' - 98'	76' - 102'	78' - 108'	
GPM Range	28 - 75	31 - 65	45 - 82	
Maximum Spacing No Wind	Square Triangular 55% 60%	55% 60%	55% 60%	
List Price	\$127.00	\$133.00	\$213.95	

FOR MORE INFORMATION CONTACT:

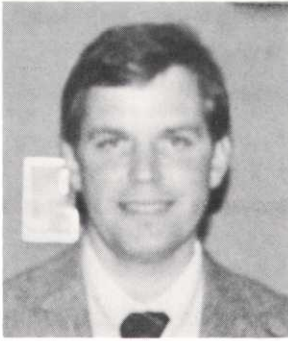
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CROQUET - A WICKETT IDEA

BY

SCOTT HOFFMANN
MADDEN INN & G.C.

Most remember the backyard game of croquet. Nine wire hoops in a double diamond configuration with an inexpensive set of balls and mallets with which you knocked your opponent into the next county with. Well, if you haven't heard by now, croquet is making a resurgence but not as the game we remember. This croquet is sanctioned by the United States Croquet Association (USCA) and is played with only six wicketts and one stake on a putting green quality surface of 84' x 105'. It requires much strategy and considerable skill.

Heavy iron wicketts just large enough to accommodate the passing of a finely machined ball, struck by exotic hardwood mallets with leather gripped handles constitute a USCA croquet set. A good set can be purchased for around \$1,000. It has been said Croquet demands a golfer's stamina, a chess player's concentration and a billiards champion skill.

After reading articles on croquet in the February, 1983 issue of Golf Course Management, our interest in Croquet at Maddens' was aroused. We immediately began assembling information and plans to build our own championship quality croquet lawn.

A site bordering the Madden Lodge Marina on one side and the tennis complex on the other was selected with construction starting in May of 1983. This provided a beautiful setting but because of its closeness to the marina it did pose several problems. The area nearest the marina required considerable fill. Because croquet demands such a level surface, care had to be taken to assure complete settling of the sand fill. To accomplish this two things were done. First the area was watered heavily to

promote settling, and secondly we used a vibrating roller of the type used in highway construction to compact it further. I was afraid this might be too severe at first, but because of the nature of the sand, this was not a problem. A second potential problem to overcome was that of muskrats burrowing into the bank causing uneven settling. To counteract this the edge of the marina was dug out with a backhoe and backfilled with rip-rap size rock.

Actual construction was quite simple. To provide the required flat surface with a very minimum slope for surface drainage, we decided to build it as you would a tennis court. Grade stakes were placed every ten feet with twine stretched across the section being worked on at the moment and leveling as you go. Six inches of a 3:1 sand and peat mix was applied and automatic irrigation was installed. The lawn was seeded with 2#'s/m of a Penneagle and Pencross blend. Eight days after seeding we were blessed with a 4 1/2" rainfall, completely washing the outer 15' of the lawn into the marina. With less than 30 days before our scheduled grand opening and accompanying publicity we were virtually starting over. Thanks to an extreme effort by the golf course crew and subsequent good fortune from Mother Nature, we made it.

The degree of publicity we received with our Grand Opening overwhelmed everyone. Apparently the novelty of championship croquet in Minnesota was a very hot news item. Coverage ranged from local media interviews to extensive coverage from KSTP, WTCN and KCMT television and both the Minneapolis and St. Paul Sunday papers. To top it all off we received an award and recognition from the USCA for best new facility in 1983.

Croquet has proven very popular with both our guests and the local public. This has prompted us to begin plans for a second lawn to be constructed this spring, hopefully in time to host the USCA's Regional Championship this July.

For those of you looking for something unique to add to your facility, croquet can be a very natural extension of your golf course and provide an added dimension to your club.

SOUTH DAKOTA ORGANIZES

On November 12, 1984 eighteen superintendents held a meeting at the Minnehaha Country Club to form the South Dakota Golf Course Superintendents Association. Our long time goal became a reality!

An interim board of seven directors was elected and given the charge of organizing a non-profit corporation to advance the art and science of golf course management. That task is well underway and will be fully accomplished by March 18, 1985, the date set for our charter and first annual meeting.

If you are located in South Dakota we want you to be a part of this first meeting. Won't you join us? You can do so simply by filling out the enclosed application for membership and returning it along with the attached meeting registration card. Please note that we have kept the dues, as well as the meeting fee, well within the reach of all.

If you would like further information on the SDGCSA, write or call David Edison at association headquarters, 466 North Lake Drive, Watertown, South Dakota 57201. Telephone 605/886-4182.

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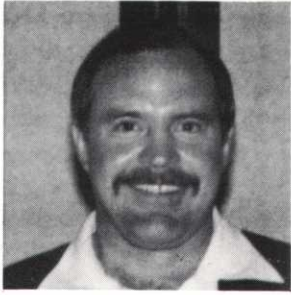
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EDITOR'S CORNER

FRED ANDERSON, JR.

Congratulations to Chris Hague of Hazeltine National Golf Club who was appointed a director to fill the expired term of Mark Smith who departs for Palm Springs. Keith Scott moves up to treasurer. Best wishes to Mark with those new and different climate conditions.

We are happy to announce the site of the June 30 picnic will be Lake Cornelia Park (near Southdale) in Edina, Minnesota. It is a great place that features swimming, nature trails, softball and children's playgrounds. Mark your calendar now because the Turf Products Distributors who are our new hosts are planning an

unforgettable afternoon. A flyer with complete details will follow.

The way the weather has been looking these past few days, we've gone from winter right into summer. What ever happened to spring? I wonder if El Nino will be a factor for the weather this year?

The weather sure wasn't a factor at New Prague on Monday. Thanks to Scott Proshok and Bob Adams for the great weather, a fine golf course to play and an excellent meal. Again thanks go out to the both of you and your staff. As long as I'm in a thanking mood I'll continue with last month's HOLE NOTES writers: Glen Lentner from Rich Acres, Orland Maenke from Olympic Hills, Mike Kasner from Wapicada, Jerry Commers at Cushman Motors and James Kaufman at M.T.I. Distributing. Again gentlemen, thank you for taking time out to write these articles. I know that there are many of you superintendents out there that have something to contribute by the way of an article and I still need quite a few more. So please think about writing and send it to me. Remember that the HOLE NOTES are only as good as the people willing to contribute.

Our superintendent brothers in South Dakota have formed their own state association. The best of luck goes out to you and your group.

Our Question and Answer section is off and running. If this section is to be successful we need YOUR input so whatever question you might have, please send it to me at Purple Hawk, Box 528, Cambridge, Minnesota 55008, Attn: HOLE NOTES. No names need be given. I have asked Dan Hanson to assist us in finding answers to your questions. Remember, don't wait for someone else to ask a question. Do it yourself. We hope this section will be of benefit to us all.

Coming meetings:

May 13: River Falls Golf Club
Scott Ainsworth, host

June 19: Turf Expo - Rum River Campus
Anoka Vocational Technical Inst.

June 30: Annual Picnic
Lake Cornelia Park, Edina, MN

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- July 8: Northland Country Club
Mike Netzel, host
- Aug. 12: Island View Country Club
Mark Poppitz, host
- Sept. 9: Guest Day Scramble at
Hazeltine National G.C.
Chris Hague, host
- Oct. 7: Golden Valley Country Club
Mike Olson, host

SUPPORT THE H. B. MUSSER FOUNDATION

During issues to come Scott Hoffman and myself will be informing you about what we are funding and the progress that has developed in these research areas.

In this short note I would like to ask all of our membership to support the Musser International Turfgrass Foundation. In honor of H. B. Musser, the developer of Penncross Creeping Bentgrass and Pioneer-Researcher-Educator, the Musser Turfgrass Foundation was formed. The goal of this organization is to raise funds to support: A) grants to turf-oriented graduate students and B) grants for needed research by any segment of the turfgrass industry.

Through these research grants the Musser Foundation has funded the following:

OHIO STATE UNIVERSITY: Life History and the control of the black turfgrass *Ataenius*.

CORNELL UNIVERSITY: Idiology of *Fusarium* on bluegrasses.

PENNSYLVANIA STATE UNIVERSITY: Microclimate in turfgrasses.

TEXAS A&M: Physiology of stress on turfgrasses.

MARYLAND UNIVERSITY: Effect of wetting agents on rooting of turfgrasses.

How can you help? On every certified bentgrass seed container or bag there is a BLUE TAG known as the CERTIFICATION TAG. If you will remove this tag and mail it to me, I will mail all that I receive in a single mailing to the Musser Foundation on behalf of the MGCSA. It is a very worthwhile project that costs us nothing

and supports a most beneficial turf oriented program. We also have a goal to develop a research tournament benefitting out association and the Musser Foundation.

Anyone with questions regarding this program may feel free to call me at work or home. As Musser President Fred V. Grau ends all his letters, "Sincerely yours for better turf".

Kerry Glader
St Cloud Country Club
P.O. Box 1064
St. Cloud, Minnesota 56301
Work 612/253-1331 or 253-5250
Home 612/253-0466

ADVANCED NOTICE
MARK YOUR CALANDAR

MINNESOTA GREEN INDUSTRY EXPO

JUNE 19, 1985
8:00 a.m.

MINNESOTA GREEN INDUSTRY EXPO '85 is a combined effort of twelve professional organizations who are employed in the green industry. The summer show allows the members of each organization to see a wide selection of equipment and supply company displays.

Site: Anoka Area Vocational Technical Institute
Rum River Campus, 3929 North 7th Avenue, Anoka, MN 55303

Person to contact: Bob Lund
5500 International Parkway
New Hope, Minn. 55428
612/533-4823

Co-Sponsored by:
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Minnesota Ice Arena Managers Assoc.
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Minnesota Assoc. of School Maint. Supvrs
Minnesota Hospital Groundskeepers
Grounds Supervisors of Area Colleges
Minnesota Cemeterykeepers Association
Minnesota Recreation and Park Assoc.
Lawn Services

THE M.G.C.S.A. ANSWER MAN

QUESTION: I have a disease. It looks similar to Brown Patch, no smell, yet chemicals won't control it. What do I have?

ANSWER: You probably have localized dry spot, so check under affected area for lack of soil moisture.

QUESTION: Why do my greens have a reddish brown tinge to them?

ANSWER: You have dull cutting units and should replace bedknives and sharpen reeds.

QUESTION: How often should I mow my greens to have good puttability?

ANSWER: At least five days per week, depending upon the weather conditons.

QUESTION: How often should I be checking height of cut of my greens mower?

ANSWER: To maintain a good, consistant putting surface we recommend checking weekly.

BAFFLED? ASK THE ANSWER MAN!!

WELCOME NEW MEMBERS

We are happy to welcome the following new members into the M.G.C.S.A.:

John C. Peckham, Class F, ChemLawn
Bob Bonnett, Class F, London Fog, Inc.
Ed Meehan, Class F, Mound Spraying and Supply, Inc.

Kelvin Stebbins, Class D, Midland Hills
Dan McGuire, Class BII, Montgomery GC
Rick Huber, Class D, Mankato G.C.
Jim Skiba, Class B, Brightwood Hills

The following classifications changes were made:

Kathleen Dahl from Class C to CLASS E
Pete Mogren from Class C to CLASS BII
Shawn Novak from Class D to CLASS BII
Bob Distel from Class C to CLASS BII
Bob Harne from Class C to CLASS B
Steve VanNatta from Class A to CLASS BII

ASSOCIATES CORNER

By Jerry Anderson, President
Dakota Turf

Dakota Turf Supply, Inc. was established in 1950 by my dad, Cliff Anderson, and a partner. Before the year was over, dad bought out the partner and mom Bea virtually ran the business. In 1954 dad came in the business full-time as did Lonnie (my borther) recently home from the service. I came into Dakota Turf in 1960 after military service. We incorporated as a family business at that time with Bea as secretary-treasurer. Dad's passing in 1963 was a great loss to us as a family and as a company. He was a golf course superintendent for many years and had a great deal of knowledge to help superintendents on many small courses in our territory. In 1982, when Lonnie passed away, Bea stayed active in the business to help fill the company and family loss again. After 35 years she has decided to retire.

I am sure you, as we, wish her well.

GOLF CAR INTRODUCED

Yamaha Motor Corporation USA, the nation's leading manufacturer of gas golf cars, is introducing in limited numbers the next step toward the ultimate gas golf car - the 4-stroke G2-A5 Gas Golf Car.

The G2-A5 utilizes an all new 4-stroke, overheadvalve engine, specially designed for golf cars, which enables it to produce high torque at low rpms. This engine, in combination with a new lightweight, virtually indestructible, rustproof, polypropylene body and strong, steel frame helps the car achieve greater fuel efficiency than a conventional gas car. In addition, the overhead valve engine is more efficient and requires less maintenance because it cools faster and doesn't accumulate carbon, unlike a side-valve, flathead, multi-purpose, 4-stroke engine.

Golf courses that previously shied away from gas golf cars because of their noise, smoke and odor will find the G2-A5 runs cleaner and quieter than conventional cars. A baffling system that incorporates an extra-large, double-walled muffler minimizes engine noise.



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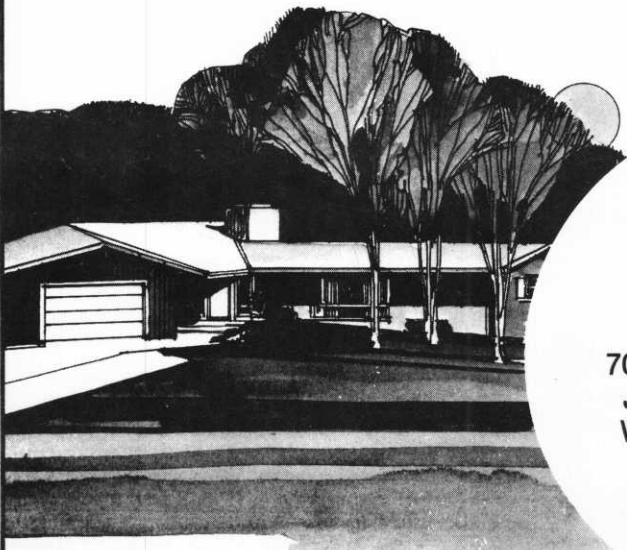
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Diseases	Interval of Applications	Rate of Application per 1000 sq. ft. in 2-10 gals. water	
		Flowable	W-75
Helminthosporium: leaf spot and melting-out	7-10 days	3-6 fl. ozs.	2.4 ozs.
Brown patch			
Gray leaf spot			
Curvularia leaf spot			
Red thread	7-10 days	3-9 fl. ozs.	2-6 ozs.
Copper spot	7-10 days	6-9 fl. ozs.	4-6 ozs.
Dollar spot	7-14 days	3-6 fl. ozs.	2-4 ozs.
Stem rust of bluegrass	7-14 days	6.9 fl. ozs.	4-6 ozs.
DICHONDRA Alternaria leaf spot (CA only)			



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