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When I was elected President of the MGCSA, my first reaction was what do I do? I have a few ideas of what I think I should do, but how could I be sure? To answer this, I set out to talk to some of the “established” members of our association. Our conversations were enlightening and beneficial to me. It helped me shape some ideas I have to lead the association through the year. I will be taking these ideas to the board of directors for consideration and implementation. I thank the strong supporters of our association for their input.

Make plans to attend the Mini-Seminar on Monday, March 13 at the Mall of America. Fred Taylor and the Conference and Education Committee have put together a diverse and thought-provoking agenda. Come with a professional attitude and interest as the topics will stir up emotion. Registration has been sent out and additional information about the Mini-Seminar is found elsewhere in this issue of Hole Notes.

One of the issues we are closely following is an OSHA safety requirement. If you attended the session at our annual conference, it dealt with the mandatory use of an OSHA-approved roll over protection system (ROPS) on all off-road golf course equipment that has a 20 HP rating or more. This would be for all equipment since 1968. We are currently following up on this requirement and will include notifying the USGA, GCSAA and legal counsel as it affects our members. Our Ex-Officio Joe Moris is handling this project and has been exploring all options on this issue. We have invited Don Strot, Sr. OSHA inspector, to talk once again to our association at the March Mini-Seminar. On another related issue from OSHA, the hard hat question will be discussed in detail.

A few changes are in order for our monthly membership outings. On a recommendation from the Industrial Relations Meeting in December, we will no longer have equipment displays. The interest has dwindled to an all-time low. All the equipment from the associate members can be seen at the MT&GF Summer Expo in August at the Resurrection Cemetery in Mendota Heights. I encourage all of our members to participate in this function to support the MT&GF. Also at our monthly outings, there will be guided tours of the host superintendent’s maintenance facility. Watch for the times on the registration flyer to be included in the tour. We will continue to offer speakers to discuss relevant topics if the facility has the technical support available. At our April, May, June and October meetings where we have no structured golf event, we do now. We will have a sign-up for a membership mixer for those interested. The board welcomes these changes for our diverse association.

So far as President of the MGCSA, I have averaged over 100 phone conversations per month on association matters. If there are any comments or questions that Scott Turtinen can’t answer at our office, feel free to call me. See you all at the Mall of America in March!

— Kevin Clunis
President
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March Mini-Seminar Offers Variety

One of the annual rites of spring for Minnesota superintendents is quickly approaching—attending the MGCSA Mini-Seminar on March 13, 1995.

This year’s event features a potpourri of timely topics and interesting speakers. A special panel discussion dealing with the new OSHA regulations and enforcement will highlight the morning session. Don Strot from the Minnesota OSHA office will offer the specifics of required worker protection that will affect every golf course in the state. This is a must-see discussion for every superintendent, and you will have an opportunity to ask questions!

As every superintendent knows, the hottest topic concerning the golf course today is environmental considerations. Dr. Don Gordon, Professor of Biology, Mankato State University, will bring a different point of view for attendees to ponder. He has written numerous articles concerning the potential environmental risks such as groundwater contamination and pesticide exposure related to golf courses. Some of his comments may not be popular with superintendents, but through controversy and debate comes enlightenment, and all who listen to Dr. Gordon will no doubt be enlightened.

Following Dr. Gordon will be Bob Mugaas from the U of M Extension Office speaking on surface water contamination. He will offer advice on ways to reduce the potential for run-off of pesticides and fertilizer.

Dr. Ward Stienstra’s topic is “The Art of Spraying.” He will share his experiences and research pertaining to efficacy of various application methods and procedures as well as common sense solutions to typical spraying dilemmas.

Steve Hamelau, Superintendent at the Alexandria Golf Club, will recall some of his most memorable moments concerning winter injury and the subsequent (and successful) regrassing of a number of Alexandria’s putting greens. This presentation will be most humbling and informative for those of us who live with the unpredictable Minnesota winters. Look for many take-home tips on seed establishment from Steve.

Mona Bond, executive director of Iowa Alliance for Environmental Concerns, will inform the audience on “Political Potential.” With all of the debate on environmental concerns, it is certain that some piece of legislation will be introduced that will have an impact on how superintendents do their jobs. She will discuss the ways and means to fight such legislation, and how to position ourselves to be more credible in our discussions with those who make the laws.

Finally, our friend from the Minnesota Golf Association, Ross Galarneau, will suggest methods for improving the playability of the golf course—especially as it relates to the rules of golf.

As you can see, this conference is bound to challenge and educate all who attend. Remember, your staff and club officials are encouraged to participate. See you there!

—Fred Taylor, Mankato Golf Club

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FEBRUARY–MARCH 1995
HOLE NOTES • 5
I attended for the MGCSA. Those in attendance included representatives from the Department of Agriculture, Plant-Food Chemical Association, U of M and other groups that this will affect.

Several different ideas on how to improve the system were discussed. The home correspondence course for recertification was a subject of much debate. It was felt that this method was not a good measure of competence. The EPA requires some kind of measurement for applicator training, and they are concerned about an unmonitored open book home exam not being a true test of competency. The workshop training format, on the other hand, can be monitored and the training documented.

It was the consensus of the subcommittee to reduce or eliminate the use of the correspondence course. Discussion on changes in the training recertification included several alternatives: offering monitored tests at more locations, raising the cost of the correspondence course to the same as a workshop, plus offering more workshops made available by the U of M and Dept. of Ag. They will also keep the recertification intervals the same. Any group who wants an interval change should present their case to the Dept. of Ag. and/or the U of M for consideration.

Some other ideas that were discussed were: Length of the workshops, aerial applications, state reciprocity and video disc presentations.

There definitely will be changes in the current applicator training system. The nature and scope of these changes will depend on a series of these subcommittee meetings and their presentation to a full committee.

Ski Outing At Lutsen

A scenic drive along the North Shore, and downhill and cross country skiing were on the agenda for the January meeting.

The modest number who participated enjoyed the camaraderie with fellow members and a great lunch buffet put on by the staff at Lutsen.

Thanks go out to Mike Davies and his staff for hosting the meeting. This beautiful area would make an ideal location for hosting a summer meeting.
The turfgrass plant, much like a human being, requires a proper balance of air, water, food and a healthy environment to sustain life and survive in its flora world. The basic teachings of turf physiology have sharpened the expertise of many a superintendent to help combat against the elements that seek to upset this balance and to weaken, stress or kill our grasses. When an adverse condition is noticed—whether a pathogen, insect or climatic influence—the turf manager becomes a physician of sorts who analyzes, defines and resolves the problem using diagnostic methods of on site visual or off site laboratory tests. Most of the time this occurs after the damage has been done to some degree. We know that a weakened turfgrass plant is more susceptible to disease, stress and parasitic invasion. Identification of what causes a weakened plant in the first place could be the key to prevention and could increase the survivability of the turfgrass. A soil core analysis should be part of your check list.

True, many factors from close mowing to foot traffic or phytotoxicity can put a turfgrass plant in a weakened state, but the subsurface environment of the root zone area can set the stage for “do or die” of the turfgrass plant. Infiltration, porosity, organic content and particle distribution are the dynamics of a soil structure engineered for turf. Harmony and balance must exist among these root zone characteristics below the surface in order to support your cultural program atop the surface. When a soil imbalance exists, the turf cannot respond fully to the applications you apply to enhance its quality and vigor. Thus the turf plant becomes weak due to the soil environment in which it is anchored. Unfortunately, by the time the weakening effects are felt the mercury hits 90 plus, humidity is oppressive, there is a shotgun member guest at 12 o’clock, and you cancel lunch while you grab that bottle of antacid. Sound like the summer of ‘94? It’s “no holds barred” thing such as high organics or particles too abundant in coarse or fines.

Spring and Fall are more opportune times to conduct a soil test analysis as a diagnostic tool prior to aeration and topdressing, and to make proper decisions on what material you should or shouldn’t be amending the root zone with. Conventional soil testing methods are good for choosing a new root zone or topdressing material for greens and tees. However, for an existing soil profile in either a new high sand or an old push up green, a more surgical approach is required to locate, pinpoint and isolate a soil malfunction within a specific area from 0 to 12” so that you can implement the proper corrective action (a “smart bomb” analogy, if you will). Such a method has been developed by International Sports Turf Research Center of Olathe, Kansas, to test intact, undisturbed soil cores inch by inch and evaluate the physical well-being of the soil medium as it relates to the root system and health of the turf plant. This is especially effective on golf greens where intense culture and abuse struggle to find an equilibrium. Now soil testing technology has devised a way to bring your golf green to the laboratory. Okay, sure, core samples have been done for years by using a cup cutter or pounding in random lengths of PVC, but never with this high degree of accuracy.

This New ISTRC SYSTEM cores with a plugger device and extracts a 2” diameter by 3” deep intact core into a copper sleeve that is then capped and sent off the the lab. Two types of cores are extracted which represent specific levels of the root zone for analysis. First, the most crucial upper tier — 0” to 3” — that is subject to general aeration practices, topdressing, soil amending, surface contamination and direct compaction. Second, the lower 3” to 6” tier that can harbor hard pan, fines build up, and is affected during vertidrain, deep tining and hydrojet practices. Additional lower tier cores may be extracted from 6” to 9” and 9” to 12”, especially when considering deep tining or rebuilding. Identification of the make up of the soil profile with inch by inch accuracy is the intended purpose when subject to the following series of tests: USGA physical evaluation guidelines including infiltration rates; Walkley/Black organic; Particle distribution and textural analysis; Bouyoucous test; Porosity in capillary and non-capillary; Particle sphericity/angularity; and Root mass and feeder roots analysis.

Where and what are the most common soil problems found through core testing? Definitely in the upper tier 0” to 3”. Buildup of organic and fine layers that seal off the root zone and impede proper infiltration, choking of the soil porosity creating an imbalance of air and water, the restriction of feeder roots from penetrating the depths of the root zone, and confining the root mass to the upper portion of the root zone. What could cause all the mayhem? The cause could be as simple as using improper topdressing material. Not that your topdressing material may be bad, but it just might be too much of a good thing such as high organics or particles too abundant in coarse or fines. Can you imagine what would happen to our cholesterol levels if we ate steak and eggs every day? Just as a blood test is a good diagnostic tool for human health, soil core analysis is a good diagnostic tool for the health of your turf.

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PROUD SUPPORTER OF RESEARCH AND EDUCATION THROUGH THE MGCSA
Jim Latham was cleaning out his desk as his December retirement date drew near. As one might expect, notes, letters, and articles that have been buried for years were discovered in the process. One gem found near the bottom of a drawer was an old article that was the source of the quote used for the title of this short review of the 1994 growing season. The article consisted of excerpts from a January 1994 issue of The Greenkeepers’ Reporter written by O. J. Noer. The excerpts were sent to all members of the Royal York Golf Club in Toronto after a particularly difficult season during 1993.

The article emphasized careful use of irrigation, fertilizers and the importance of utilizing improved cultivars of turf for greens. It’s surprising how little things have changed over a span of 50 to 60 years. During an “easy” season there is plenty of time to experiment with growth regulators, new fertilizers, rollers, biostimulants and other practices to fine tune the maintenance program. In contrast, when the Milorganite hits the fan during an extended period of hot, humid weather, it’s time to keep it simple and follow the basic principles of sound turf management. One of the more important, but most often overlooked, maintenance practices to consider is amount and frequency of irrigation.

It was a “sneaky bad” season for a number of superintendents in the Midwest this past year, particularly in the Chicagoland and Detroit areas. If one would review the weather records for the summer, there would be little to suggest a period of severe turf stress, yet significant losses of turf on greens occurred during late July and August. The pattern for turf loss was surprisingly similar at many courses. Injury generally occurred on greens in problem sites, those usually affected by shade, poor air movement, tree root competition and inadequate surface drainage across the putting surface. It was not unusual to find 16 or 17 greens in excellent condition and one or two greens (those found in heavily-wood sites) to be very thin and weak.

The golfers’ unreasonable expectations for ultra-fast green speed, regardless of the weather conditions, were also partially responsible for the injury to greens. The Midwest experienced a period of hot, humid weather just before the Fourth of July that caused a flush of turf growth. It became almost impossible to provide a fast, firm playing surface at many courses due to the vigorous growth of turf. The frequent rain and high humidity made the greens soft and, for lack of a more descriptive term, “puffy,” more so on greens that possessed a significant amount of organic matter or thatch near the surface. Golfers at a few courses found that they were playing a temporary green by late summer because of the additional stress caused by a shaded site and/or their unwillingness to allow the superintendent to aerify, raise the height of cut, hand water, or initiate other practices to relieve stress on drying greens. A considerable amount of 
Foa annua
and bentgrass turf was lost due to excessive rolling, double cutting and ultra-low mowing heights during the peak stress period of midsummer—not to mention the adverse effects of using plant growth regulators at that time. Unfortunately, these practices were sometimes mandated by the golfers.

It quickly became obvious that more turf was lost by too much automatic irrigation than by too little irrigation. More black layer related problems were seen this summer than in any of my previous seasons with the Green Section. Superintendents who turned off the sprinklers early and switched to hand watering fared better than those who had neither the manpower nor experience to do so. To be fair, an unfavorable growing site was sometimes more to blame than any other factor, and the loss of turf was beyond the superintendent’s control.

Fans increase air movement and fungicides can reduce the potential for disease, but they cannot compensate for a lack of sunlight. To borrow a favorite saying of Jim Moore, the Director of the Mid-Continent Region: “The three most effective fungicides for use on a number of stressed greens this summer would have been Stihl, McCullough and

(Continued on Page 9)
SURVEY RESULTS

1. To what allied association do you belong?
   A. MGCSA  81 responses
   B. MAC   0 responses
   C. MNLA  3 responses
   D. MASMS 1 response
   E. MTA   2 responses
   F. MPSA  2 responses
   G. MMFTSAC 0 responses
   H. MSTMA 6 responses
   I. Other  7 responses

2. Do you feel the pricing structure for the conference and show was fair and reasonable?
   A. Yes 97%
   B. No  3%

3. Were you satisfied with your 1994 conference experience?
   A. Yes 98%
   B. No  2%

4. Would you like to see the conference/show expand or stay the same size for 1995?
   A. Stay the same 48%
   B. Expand 52%

5. Knowing that the cost of refreshments, i.e. coffee, soda, pastries, etc., is $12,000 for a three day show, are you willing to continue to pay for that amenity in your registration fees?
   A. Yes 71%
   B. No  29%

6. Did you prefer the two day arrangement for the trade show?
   A. Yes 91%
   B. No  9%

7. Did you attend hospitality night?
   A. Yes 51%
   B. No  49%

8. How should the costs of hospitality night be financed?
   Vendors 57%  Attendees 14%
   Association Annual Fees 9%  Cash Bar 6%
   Combination of Vendors/Registration Fees 6%
   Separate Part of Registration 5%
   Not Vendors 1%  Previous Incoming Monies 1%

9. Minnesota pesticide recertification should be required every:
   A. one year 40%
   B. two years 25%
   C. three years 24%
   D. four years  2%
   E. five years  8%
   F. don’t know  1%

10. What did you most enjoy about the 1994 conference/show?
    Speakers 39%  Trade Show 18%  Topics 13%
    Minneapolis CC 8%  Visiting/Meeting Others 9%
    Everything 4%  Concurrent Sessions 5%
    MTGF Theme 2%  Fellowship Meeting 1%
    Session Time Management 1%

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TOO MUCH WATER —
(Continued from Page 8)

Homelite.” Unfortunately, many golfers still believe the trees on the course are more important than the quality of playing surfaces.

Careful management of irrigation is always important but even more so on shaded putting surfaces. Five-minute cycles might still provide excess irrigation to low lying portions of shaded greens during humid weather. I was surprised to find plenty of soil moisture in poorly drained areas of shaded greens even after 5 or 6 days without irrigation or rainfall.

Hand watering is often necessary in spite of a modern, sophisticated irrigation system. More important is hand irrigation only to the portions of the green and collars that need irrigation. Too much hand watering is just as detrimental as too much automatic irrigation. A comment I have heard (and agree with) from more than one superintendent who has been successful in keeping the greens dry is that “few superintendents have a feel for how much moisture stress greens can tolerate without causing permanent injury to the turf.” Perhaps this is a point to ponder before firing up the irrigation on greens during the first dry day next spring? O. J. Noer was right over fifty years ago, and he is still right today.
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