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# HOLE NOTES

Official Publication  
of the  
Minnesota Golf Course  
Superintendents' Association

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## FROM YOUR PRESIDENT'S DESK

### It's Time To Enjoy The Toils of Our Work



The hockey player arrives at his new team just in time to get ready for the next game. Thoughts of how he will be accepted go through his mind. An older veteran player introduces himself first and puts the player at ease. The game starts and everything falls into place. It's business as usual on the ice. After the game, the rest of the team welcomes him and congratulates him on an outstanding game. The team packs up and heads toward its next game.

All of us at one time or another have had the experience of changing jobs or even careers. The days leading up to and the first few days on the new job can be difficult on one's nervous system. So many questions and not enough answers keep the days traveling at warp speed. Pretty soon the job begins to run smoothly and life tends to return to normal (whatever that is). The job change I am experiencing is rather dramatic. After 11 years of managing fine turf, I find myself directing traffic between bulldozers, scrapers, dump trucks, back hoes and trenchers. But as each day passes, the final shape of the golf course becomes clearer. As time goes by, I will be managing fine turf again. It will be business as usual then.

\* \* \* \*

**I was unable to attend the June meeting at Bemidji.** By all accounts, it was great. Thanks to Tom Johanns and staff for hosting our meeting. We finally got to play golf. The monthly mixer was very successful and a large number of members stuck around after the event to socialize and enjoy complimentary hors' d'oeuvres. We have events scheduled for the next three months but will return to the mixer format in October.

\* \* \* \*

**As the summer staffs return, the workload tends to even itself out.** We now have a chance to get out and play some golf and enjoy our toils of work. Or perhaps we even have a chance to play another course. This is a point we need to discuss. It came to my attention from a PGA member that a few of our MGCSA members were showing up at another course demanding that they be given complimentary green fees. This is *not* appropriate procedure. A timely article was published in *Hole Notes* last month on how to make arrangements. Please, take time to read this again. Our professional image demands the respect of other golf courses. Not all courses recognize or accept this. As the article states, make arrangements with the course superintendent. This is not only being professional but it helps to keep our opportunities open. A few bad apples can spoil it for everybody, so please pay attention to this issue.

\* \* \* \*

**The superintendents and their staffs team up next month** for the Garske Scramble to be held at Indian Hills and Stillwater Country Club. This is a fine opportunity to interact with staffs at another golf course and perhaps take something away from the experience that could be useful at your own course.

Until next month. . .

— Kevin Clunis, CGCSA  
President

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# University of Minnesota UPDATE

## Homeowner Fertilizer Practices And Turf Quality Management

By John W. Schultz, Dr. Terry H. Cooper  
and Paul G. Johnson  
*University of Minnesota*

Homeowners, like golf course superintendents, use many management techniques to improve turf quality including fertilizing, mowing, core aeration, vertical mowing, irrigation, pesticides and top dressing applications. Turf quality is important to homeowners. Creason and Runge, in their survey "Use of Lawn Chemicals in the Twin Cities," stated that 93% of Twin Cities homeowners believe that having a nice lawn is either very important or somewhat important.<sup>1</sup> The survey also found that 90% of their neighbors believe that having a nice looking lawn is either important or somewhat important. Many studies have attempted to gain an understanding of turf management by surveying homeowners by telephone or mail. Many of these surveys will often make claims and accusations that homeowners are over applying lawn chemicals and are therefore contributing to surface and ground water pollution. However, these surveys have not taken into account the complex nature of applying nutrients to control turf quality. In order for turf maintenance to be properly assessed, specific factors, like soil nutrient levels, that cannot be assessed by phone or questionnaire must be considered.

One of the largest impacts a homeowner or superintendent can make to turf quality is through fertilizer applications. Homeowners and turf managers must consider not only the amount of fertilizer to purchase, but also the fertilizer carrier and the application rate and time. Homeowners often overlook fertilizer recommendations made by turfgrass specialists and soil testing which is usually inherent in the training of most golf course managers. Soil testing has also become an important tool for turf growers, especially with regards to phosphorous, since recent research has indicated that applying phosphorous to turf and soils high in phosphorous results in run-off, contributing to the eutrophication of area surface waters and decreasing water quality.<sup>2</sup>

In addition to making conclusions about environmental impact, interesting comparisons could be made between the home turf and golf course turf manager. Homeowners do not have specialized equipment, nutrients and chemicals at their disposal or the pressure to produce high quality turf that is under great stress and wear. The types,

intensity and frequency of homeowner turf maintenance practices have not been directly observed, like those of golf courses. To evaluate the impacts on maintaining a quality lawn in an efficient and environmentally safe manner, objective analysis of turf needs, soil fertility and homeowner practices needs to be completed. This evaluation could lead to more valid comparisons between golf course and homeowner turf management.

**Table 1. Fertilizer Application Times**

# of Homeowners	Time	# of Applications
7	April-June	1
	July-August	1
	Sept.-October	1
1	April-June	1
	July-August	2
8	April-June	1
	July-August	1
2	April-June	2
2	April-June	1
	Sept.-October	1
1	April-June	1

In the summer of 1993, the University of Minnesota Soil Science Department, partially sponsored by a grant from the Minnesota Center for Urban and Regional Affairs, studied 21 Minneapolis-St. Paul suburban lawns containing Kentucky Bluegrass, Creeping Red Fescue and Perennial Ryegrass. Lawn soils had a loamy sand texture, containing 78% sand, 13% silt and 9% clay. Soil physical properties, and soil nitrate, phosphorous and potassium levels were obtained. The fertilizer bags were collected after homeowner application; fertilizer spreaders were calibrated and application dates were recorded. Grass samples were collected 10 days after the fertilizer spreaders were calibrated, and application dates were recorded. Grass samples were collected 10 days after the fertilizer application to determine the plant's response to fertilization. Turf quality was measured on a scale from zero to five. A lawn with a quality of zero was considered bare soil. A lawn with a rating of five was a dark green, weed-free turf with uniform texture and high density. Ratings were obtained on July 7, August 18 and October 1, 1993. Statistical correlation was used to determine the level and appropriateness of homeowner fertilization which allowed insight into the parameters that control turf quality.

### Homeowner Fertilizer Practices

The nitrogen carrier used by homeowners was predominantly urea. Other carriers included nitrates, ammonia and slow release sulfur coated urea. Homeowners applied an annual average of 2.04 pounds of nitrogen per 1000 ft<sup>2</sup> (Figure 1). Homeowners followed the recommended number of bags and fertilizer spreader settings; however,

*(Continued on Page 21)*



# EAST vs. WEST

## In Golf Course Management

By Paul Mayes

I have lived in Japan now for over one year. During this time I have found both similarities and differences in the Far East on golf course maintenance compared to the United States.

I am presently consulting for three golf courses owned by the Towa Company. One course is an 18-hole Robert Trent Jones, Jr. design built in 1992. The second course is an older 27-hole layout built by a Japanese designer that opened in 1962. These two golf courses are located in north central Japan about 180 kilometers north of Tokyo. The third golf course is 90 kilometers west of Hiroshima. It is a 36-hole facility designed by Robert Trent Jones, Jr. One 18-hole project was built in 1992, and the other 18-holes in 1993.

I am based at Towa's premier golf course, Nasu Highland Golf Club. I am at Nasu Highland on a daily basis. The second course, Towa Nasu Country Club, I visit two to four times per month. The 36-hole complex near Hiroshima, I visit two to three times a year.

Each course has similar grass types. They all use zoysia for roughs. Two courses have mainly zoysia tees and fairways. Nasu Highland has bluegrass tees and fairways. All these complexes have bentgrass greens. The older course has the traditional "two-green" complex for every hole. One green is bentgrass used during spring, fall and winter. The other green is zoysia used in the summer.

Japan is a mountainous country. It reminds me a lot of Hawaii except Japan doesn't have as moderate temperatures. The north half of Japan has all four seasons because of the elevations. Nasu Highlands' elevation is

620 meters at its lowest point and 800 meters at its highest. The truth of the matter, Japan has six seasons. We all are familiar with spring, summer, fall and winter. There are two more seasons here in Nippon. The rainy season comes in mid-June and will last until late July. During that period the average rainfall is 500mm, or 19 to 20 inches. The sixth season is typhoon season which occurs about mid-September to mid-October. Strong winds and heavy downpours of rain can occur in a every short period of time. Then there are always frequent lightning storms and earthquakes throughout the season to deal with. This makes turfgrass management a challenging experience.

My first impression of golf course management in Japan was as if I stepped back in time to the early 1950s in the United States. Many of the maintenance practices are being completed by manual labor. Also the vast majority of "keepers" and workers only experience is farming. There is no true turfgrass education for the Japanese to attend. All new innovative practices being used here come from western culture. Japan is going through the same growing pain that the United States did 40 years ago in turfgrass management. The advantage they have is the availability of products, education and technology from the western part of the world.

There is an eagerness to learn more innovative methods of turfgrass management, but many Japanese philosophers hinder their progress. Japanese are very loyal to their people and country, something the United States could learn from. The Japanese do not wish to harm their

people's economic situation in order to produce a more cost-effective product. Instead, they want to enhance the usefulness of their people to produce a perfect product. We can do this by perfecting each person's job task so they are able to complete each task in a more efficient matter and cover more area in a certain time frame.

Daily grooming here in Japan is actually a much easier task than in the west. The Japanese plan their day at the golf course to spend as much time at the club as possible. Therefore, play will begin around 8:00 a.m. and continue teeing off until around 12:00 noon. After that time, very few members start play because they would be unable to complete their round. They play their first nine holes in about 2½-3 hours. Then most players will stop for one hour for lunch and complete their 18 holes afterwards. This allows our staff to mow greens, tees, rake bunkers and change cups in the morning. Then in the afternoon we work behind play — mowing fairways, roughs and do project work. This way there is no disruption to the members during play.

Staff size varies from course to course as in the United States. One resource not available in Japan is college and high school students. Japanese students start university studies two weeks after high school graduation. Also summer vacation for students is only six weeks long (from mid-July to the end of August). Therefore, in seasonal play areas, part-time staff personnel are required during growing season. These people usually consist of older women who are not able to operate sophisticated mach-

*(Continued on Next Page)*

# East vs. West —

(Continued from Previous Page)

inery. This makes it necessary to use full-time staff for mechanical operations for morning and afternoon job tasks, leaving manual labor projects to part-time staff.

The Japanese want to maintain similar quality conditions as in the United States. To do so, they try to create the same conditions as in the United States. Japan soils are very heavy clay soils and volcanic rock. This makes it difficult to grow quality turfgrass. To achieve better soil profiles, they remove soil and rock in areas where tees, fairways and greens are to be located. They then replace this area with straight sand and soil amendments. They usually do a very good job with elaborate surface drainage. Problems arise when very little or no subsurface drainage is attained on these high sand profiles built on top of heavy clay and rock. This combined with the large amounts of rain received each season will challenge even the best American superintendents to produce quality turfgrass. But through persistence and good water management (with a little help from drain tiling), quality turfgrass can successfully be attained.

Fertilizers are another inadequate resource for the Japanese greenskeepers. Most fertilizers produced here are of agriculture grade and ratios (such as 1:1:1). The nitrogen source is of high salt content and potassium is from chloride as mioviated materials. Fortunately, some American products are available at a slightly higher price. The problem is convincing the Japanese greenskeepers to stop thinking they are growing agriculture products and start thinking of fertilizing turfgrass. Their experience is very inadequate to produce quality turfgrass health.

Japan, as a country, has available to them some very good pest-control materials. Many chemicals used are the

same as in the United States. There is a serious problem in their dilution rates. The Japanese greenskeepers are requested to spray materials at ten times the rate of water applied to the surface of the turfgrass than in the United States. This reduces the effectiveness of the pesticides used in most cases. I am having to retain their thought process on spray application rates to achieve the best results for the pesticides.

Dealing with suppliers is very interesting in Japan. The traditional method of picking our suppliers is by whom you like to deal with. Most suppliers carry all products necessary for golf course maintenance. The same supplier will carry Toro, Jacobsen, Cushman and other brand equipment. They also may carry various golf course supplies from different companies. The problem with this method is there is no competitive bidding with other suppliers. Also, service needs are not considered as part of a good supplier. I am encouraged to see this way of thinking is changing because of economic restraints. The "money is no object" philosophy is definitely diminished in Japan.

Golf course in Japan are coming of age. With the increased popularity of American management practices, Japanese courses can move quickly to a higher level of excellence. I hope I can help just a little in the movement in that direction. I look forward to a new year of growth with the Japanese greenskeepers. For now, West is on top. But with Japanese determination, East could soon equal or overcome the West's dominance.

## MEMBERSHIP REPORT

### NEW MEMBERS—JUNE 12, 1995

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<b>Kevin J. Black</b> . . . . .	Prairie View Golf Course . . . . . A
1300 Apel, Worthington, MN 56187	W: 507-372-8651
<b>Matt McKinnon</b> . . . . .	Bemidji Town & Country Club . . . BII
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<b>James E. Leftwich</b> . . . . .	Hayward Golf & Tennis Club . . . . . BII
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## Indian Hills G.C. and Stillwater C.C. To Host 1995 Garske Scramble on July 10

The 1995 Garske Scramble will be played at Indian Hills Golf Club and Stillwater Country Club on Monday, July 10. The afternoon shotgun at Stillwater is full.

There is still room at Indian Hills for the morning shotgun. Call the MGCSA office (612/473-0557) if you have any questions.



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# Beautiful Day at Bemidji T&CC For MGCSA's First Mixer

By Scott Turtinen  
Executive Director

June's MGCSA membership meeting at Bemidji Town & Country Club finally brought some much-anticipated summer weather. A calm, 80°, clear-blue-sky day and Host Superintendent Tom Johanns greeted more than 80 members of the association on Monday, June 12.

Johanns had his greens smooth, true and with an Executive Director stimpmeter reading of 8.5. The course was firm due to a lack of rain in the area which made it play tournament tough.

The mixer team of Scott Hoffman, Madden's on Gull; Pat Sullivan, Bemidji T&CC; Steve Shumansky, Perham Lakeside, and Tom Little, Minnesota Golf Cars, won the first MGCSA mixer of the year. They were 17-under par in a Best 2-Ball Net event.

Runner-up honors went to Tom McCann, Turf Supply; Butch Greeninger, MTI; Brad Klein, Detroit CC, and Benson Golf Club's Dave Sime, who shot 16-under.

The Pines' Tom Kientzle chipped in on the 12th hole to help settle a scorecard playoff for third place. Other members of Tom's foursome were Dave Krupp of Precision Turf, Spooner Golf Club's Mark Paffel and MGCSA Executive Director Scott Turtinen.

The fourth place team consisted of Daryl Scheerhoorn, PBI/Gordon; Par Aide's Steve Garske; Mark Hartle of Achitectoral Consultants and Kevin Rue of The Pines at Grand View Lodge.

The mixer format has a few wrinkles to iron out but overall was a smashing success. People were able to play with new faces and a great time was had by all.

We will have a few guidelines to follow at our next mixer at Chisago Lakes on October 9.

It would be nice to be able to have the pairings done ahead of time but things happen. Not everyone who signs up for the monthly meeting can always make it. To alleviate this matter we must make the pairings as people check in at the registration table.

Each mixer team consist of an "A" player (0-9 handicap); a "B" player (10-15); a "C" player (16-25) and a "D" player whose handicap is 26 or higher.

Slotting the players will happen shortly after arrival and at least 20 minutes before the shotgun. Players who arrive after the pairings have been made may still play but will not be entered in the mixer.

Teams should know the handicaps of each member of their foursome and turn scorecards in with a team score. The event will be a Best 2-Ball Net meaning that you take your best two scores (with handicap) for each hole.

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