Minnesota Golf Course Superintendents' Association

HOLE NOTES

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IZATY'S GOLF AND YACHT CLUB HOSTS 1999 MGCSA SCHOLARSHIP SCRAMBLE

Elm Creek Team Captures Scholarship Scramble

Mike Klatte, CGCS, Tom Dargay, Jason Klatte and Tyler Banaszak teamed to win the 1999 MGCSA Scholarship Scramble at Izaty's Golf & Yacht Club with a 13-under-par 59. Their scorecard consisted of 11 birdies, one eagle and six pars.

There was a three way tie for second place, with scores of 60, that was broken by a scorecard playoff starting with the number one handicap fifth hole. Members of last year's championship team of Tom Kasner and Michael Saatzer of Albany Golf Club teamed with Mike Kasner and Scot Milstroh of Wapicada Golf Club to win the playoff.

Third place went to Benson Golf Club whose team of Terry Negen, Lindy Maanum, Don Mittness and Ken Feda lasted until the second playoff hole. Purple Hawk Golf Club, a strong contender in recent years, finished fourth. Tom Noyce, Don Nystrom, Devin Hillman and Gary Tollifson formed the team from Purple Hawk.

WINNERS FROM ELM CREEK GOLF LINKS OF PLYMOUTH, from left are Tom Dargay, Mike Klatte, CGCS, Jason Klatte and Tyler Banaszak.

There were four closest-to-the-pin competions. Winners were: Mike Kasner, Wapicada; Keith Matowitz, Midland Hills; Dan Brown of Par Aide, and Karsten Williams of Southbrook Golf and Country Club.

Steve Makowske, Interlachen Country Club, won the long drive contest on hole 11. The Benson Golf Club team sank the longest putt on the 18th hole to win that competition.

Thanks to Steve Schumacher, CGCS, host superintendent at Izaty's new Black Brook Golf Course, for

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PERIODICAL
Please Deliver Promptly

Modern Putting Greens—

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(ca. 4.4 in. hr.$^{-1}$) or low (ca. 1.9 in. hr.$^{-1}$) rainfall rate. Rainfall was applied for 3 hours to ensure a constant drainage rate. At the end of the rainfall period, the rain device was turned off.

Drainage outflow was measured every 5 minutes for both the 3-hour rainfall period and for a 48-hour drainage period. Soil water contents were measured every 20 minutes for the first 24 hours of the drainage period. Soil moisture levels were measured hourly for the ramining 24 hours. This resulted in about 44,000 total drainage outflow measurements and 113,000 total soil moisture measurements for the full 18 runs of the study. Data collection began on 6 August 1997 and ended on 30 October 1997.

Results

Due to space limitations, only a portion of the data collected in the study will be presented in this article. Specifically, we will present only the high rainfall rate data since, after the first two hours of the drainage period, rainfall rate had little effect on the experimental results.

During rainfall, drainage rates from the research greens exhibited a significant interaction between profile design (either with or without a gravel blanket) and root zone permeability. The USGA profile greens, containing the gravel blanket, had higher drainage rates than the California profile greens. Additionally, drainage rates from the USGA greens were essentially the same regardless of root zone permeability. This result differed from that of the California greens, where the drainage rate during rainfall was substantially reduced for the low-permeability root zone compared to the high-permeability root zone. Finally, drainage rates in the USGA greens consistently increased with increasing green slope, while this was not the case for the California greens.

Although drainage rates were much lower after 27 hours without rainfall, outflow was still observed from all research greens. The California-style greens had higher overall drainage rates than the USGA greens, due principally to differences between the high-permeability root zone treatments. Also reversed from that observed during rainfall was the effect of green slope, where drainage rates of the California greens exhibited a larger increase with increasing slope than the USGA greens.

Just as drainage rates showed an interaction between profile design and root zone permeability, the pattern of soil moistures through a cross-section of the root zone yielded a similar interaction. This pattern is illustrated by Figures 1 and 2, where isobands of soil moisture are shown as a function of distance upslope and root zone depth for each of the profile design:root zone permeability combinations. Also, the individual figures correspond to green slopes of 0%, 2% and 4%.

After 48 hours drainage at 0% slope, both California profiles showed an effect due to drain spacing. Lower soil moistures were observed over the drain lines at 2 ft. and 17 ft., and higher moistures were observed between the drains. This contrasts with the USGA profiles where soil water contents were more uniform laterally across the soil profile. As expected, root zone permeability yielded the low-permeability root zone for both profiles. It was interesting, however, that the levels of near-surface soil moistures were similar in the California high-permeability and the USGA low-permeability greens.

All research greens exhibited increased water contents with root zone depth. In both permeability rates in the California profiles, water contents increased by about 15% to 2% from the 2 in. to the 10 in. depths. The USGA low-permeability greens yielded about a 10% increase and, while not readily apparent from the figures, the USGA high-permeability greens had a 4% increase in water content with depth.

The patterns of soil moisture for greens sloped at 2% were somewhat similar to those observed at 0% slope. This small slope applied to the greens, however, generated some downslope accumulation of soil moisture for all systems. Consequently, the soil moisture pattern due to drain spacing in the California profile greens was skewed in the downslope direction, and downslope water accumulation, particularly at depth, was observed in the USGA greens. This downslope soil water accumulation was accentuated in all greens after 48 hours at 4% slope. Drain spacing effects disappeared for the California greens and evidence of water

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Scholarship Scramble—

(Continued from Front Cover)

bringing the MGCSA participants to the course. Izaty's golf pro Rich Oberfeld did a great job on the scoreboard and the Izaty's staff treated us to a wonderful day and a successful scholarship scramble.

Next month's meeting, the MGCSA Golf Championship, will be at Heritage Links Golf Club in Lakeville on August 16. Host superintendent will be Paul Eckholm, CGCS. Defending champion Chris Manor, MTI Distributing Co., is expected to be on hand to defend his title.

Top 20 Scramble Results

Elm Creek Golf Links of Plymouth	59
Albany Golf Club	60
Benson Golf Club	60
Purple Hawk Country Club	60
Midland Hills Country Club	61
Pine Meadows Golf Course	61
New Richmond & MTI Distributing Co.	61
E-Z-GO Golf Cars	61
Country Club Turf	61
Mesaba Country Club	62
The Minikahda Club	62
National Mower & Plaisted Companies	62
Minnesota Golf Cars	62
Valley View Golf Course	62
Rich Spring Golf Course	62
P & H Warehouse	62
The Wilds	63
Fox Hollow Golf Club	63
Precision Turf & Chemical	64
Twin City Hydro Seeding	64
Paskvan & MTI Distributing Co.	64
North Star Turf Supply & Par Aide Products & National Mower	64