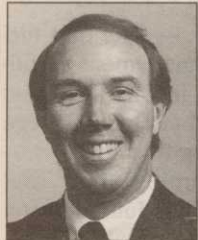


BRIEFS



PGA HONORS WILLIAMS

Golf Course Superintendents Association of America (GCSAA) President Bruce R. Williams has been recognized for his accomplishments by The Professional Golfer's Association (PGA)



Bruce Williams

of America. Williams, superintendent at Bob O'Link Golf Club in Chicago, was elected PGA honorary director at the PGA's annual meeting in San Diego this winter. "Bruce has been instrumental in forging a strong relationship between the PGA and GCSAA," said PGA Honorary President Tom Addis. "He is a strong leader who has demonstrated a commitment to excellence in his profession and in service to the game of golf."

CHALIFOUR SUPER OF THE YEAR

GROTON, Conn. — The Connecticut Association of Golf Course Superintendents (CAGCS) has named Robert Chalifour the 1996 Superintendent of the Year. The superintendent at Shennecossett Golf Course here for 27 years, Chalifour was CAGCS president in 1988-89 and has served on many of its committees. A certified golf course superintendent since 1982, he was cited for his unmatched dedication to the advancement of the profession.

RUTGERS OFFERS INTRO

NEW BRUNSWICK, N.J. — Rutgers University is offering two short courses at Cook College here March 3-4 — Management Skills for Golf Course Professionals and Introduction to Golf Course Turfgrass Management. The \$245 course for professionals is described as an innovative and value-adding workshop designed to provide superintendents and assistant superintendents with hands-on exercises to sharpen their skills in management. People may call Rutgers at 908-932-9271.



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AUDUBON CERTIFIED AQUARINA CC

MELBOURNE, Fla. — Audubon International's Cooperative Sanctuary Program for Golf Courses has certified Aquarina Country Club here in environmental planning. Greg Plotner, staff agronomist for International Golf Management, which maintains the course, vowed that it would work get the club fully certified. Scott Campbell is the resident superintendent overseeing the programs at Aquarina.

# Golf catches the new technology wave

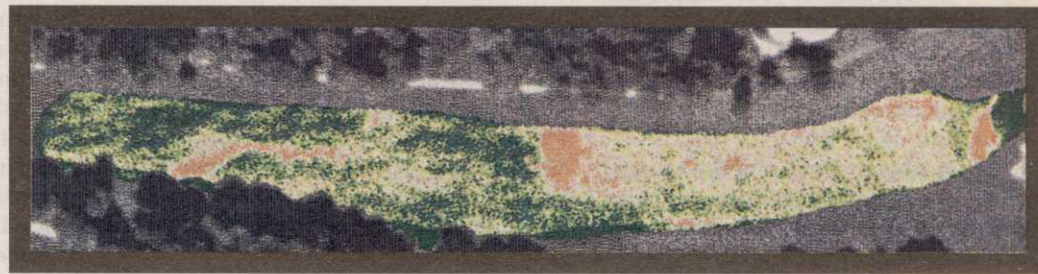
## Restoring greens for play in 24 hrs.

By MARK LESLIE

PEBBLE BEACH, Calif. — Coming soon to a golf course near you: Sand Channel Greens. The company, which promises to add drainage channels to old pushup greens and have them playable in a day, is expanding this winter into Southern California, Arizona, Las Vegas and the Northwest, according to Marketing Director David Lansdale. "And we're looking to establish a machine on the East Coast. We have two machines going full-time now, and we want to be up to five next year."

The former "Cambridge greens" process, which used a vibratory plow so disruptive it took months for turf to heal, also has a whole new life: cutter wheels. With these cutter wheels, the machine can

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The WHoleView image from a flyover shows turf health, from the less healthy browns and yellows to the more healthy greens and dark greens.

## Flyovers fore see future of turf health

By MARK LESLIE

Thank you, Dr. John Schott. Schott, of the Center of Imaging Science at Rochester (N.Y.) Institute of Technology, was an early pioneer of digital enhancement of infrared images. Today, combining that technology with Global Positioning Systems, CADD and digital mapping from LinksManager software, golf course superintendents can "see" situations developing on their turfgrass weeks before they are visible to the human eye.

"It's an exciting prospect to integrate all these technologies for the maintenance, construction and redesign of a golf course," said Bob Katula, president of Links Diagnostics, Inc. (LDI) here.

In its agronomic service, LDI flies over a property taking infrared images revealing the photosynthetic rate of the plants

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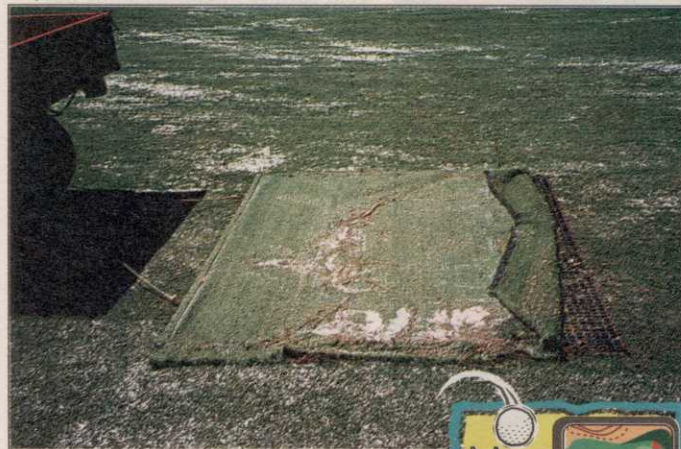
## Taking irrigation into the future

By MARK LESLIE

ST. BRUNEAU, Quebec, Canada — A golf course irrigation control system that may change the industry has been installed at one of the oldest golf courses on the continent, Mont Bruneau Country Club outside Montreal, and at Widow's Walk Golf Course in Scituate, Mass., which will open in July.

"They just might revolutionize the irrigation industry," said Dr. Michael Hurdzan, a golf course architect from

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The mat: a 1-inch-square metal drag covered with a piece of artificial turf-type material.

## The drag mat beats snafus from moisture

By TERRY BUCHEN

Superintendents are very happy and fortunate to have the many new pieces of equipment now on the market. Of particular note is the fairway topdressing machine. Most of these new implements can carry 4,000 pounds of top-dressing material, usually more, making top dressing fairways almost as easy as greens.

However, fairways are many times top dressed during the early-morning hours, making for wet, dew-type conditions which can cause a delay in "dragging-in" the top dressing. The top dressing can be wet from natural causes, as well.

One great idea to help drag in wet top dressing, especially a sandy material, is to use a 1-inch-square metal drag mat and lay a piece of artificial turf-type material over the top (attach it with a zip strip plastic-tie material every few inches on all four sides).

This idea really works in helping keep the top dressing from "balling up" and "clogging up" the drag mat, which obviously makes quite a mess and delays dragging until the top dressing is dry. This idea is also especially helpful in getting the dragging done ahead of play, which golfers obviously appreciate.

When the top dressing is wet, for whatever reason, this drag-mat concept can also work quite well when top dressing greens with straight sand, or with a 90/10, 85/15, 80/20 sand/peat moss mixture.



ON THE GREEN

## Niemczyk on non-traditional turf treatments



Dr. Harry Niemczyk

Dr. Harry Niemczyk is professor emeritus and coordinator of turfgrass entomology research at The Ohio Agricultural Research and Development Center of the Ohio State University in Wooster. He received his bachelor's, master's and doctoral degrees from Michigan State University. His research on turfgrass insects and behavior and mobility of turfgrass pesticides has been widely published. Recently he has been doing extensive research on biological controls of turfgrass insects.



**Golf Course News:** Could you describe the progress of your work regarding biological controls for insects?

**Harry Niemczyk:** I've been studying the effects of entomopathogenic nematodes, parasites that destroy cutworms, grubs and other insects. Several have shown good results. They are introduced live into the soil, seek out the insects, enter their bodies and cause the insects to die.

**GCN:** What products are showing promise?

**HN:** We've had some good results on grubs with a product called Cruiser by the Ecogen company. The key is getting the nematodes through the thatch and into the soil. It's hard to introduce them since they can be destroyed by desiccation and ultraviolet light.

LESCO has a product called Vector that's been pretty successful with cutworms on golf greens. It is supposed to be irrigated into the green. But that can be complicated. Vector is often mixed in a spray tank and applied along with other products, like a contact fungicide. But contact fungicides should not be watered in. So you end up applying two products together that have different requirements for post-treatment irrigation. That's a problem. Vector can be effective if it's used according to the label directions.

**GCN:** Are there any other biological or biological-like

Continued on page 37

*'The concept itself is almost foolproof.'*

— Geoff Blind, Hillendale Country Club



## Sand Channeling, a bad-drainage 'fix'

Continued from page 19  
cleanly cut the turf in 2-inch strips. Then it digs 9-inch-deep trenches and fills them with drainage pipe and sand.

In a single pass the Sand Channel equipment excavates the channels and injects sand and pipe. The channels are installed first on 16-inch centers,

then in a perpendicular direction on 48-inch centers. Capillary action can then draw water through the sand layer laterally to the sand channels and down into the 1-inch pipes that empty into 2-, 3- or 4-inch collector pipes that get either "daylighted" or tied into a local storm drain.

"The concept itself is almost

foolproof," said superintendent Geoff Blind, who did all 18 greens at Hillendale Country Club in Phoenix, Md., in the fall of 1992. Even with the old vibratory plow and its disruption, Blind endorsed the procedure.

His 40-year-old, bowl-shaped greens were virtual water collectors, and in 1992 hot, humid and very wet weather combined to devastate the high-population *poa annua* greens. Sand Channel Greens installed its drainage matrixes that fall.

"In the spring of 1993 the greens drained unbelievably," Blind said. "We had 62 inches of rain in 1996 and I had a little trouble in September because of a lot of play, shorter days and our aeration program. But the greens recovered quickly. It makes them so much more resilient."

Blind is trying to get superintendents in his area to commit to Sand Channel projects to get a machine there. "I have some low wet spots on my course that I want to drain," he added.

"It's an idyllic application to get water off a green and get it to perform better," said superintendent Bob Zoller of Monterey Peninsula Country Club here.

After maxtrixing two greens and two tees last spring, Zoller reported in January: "The tees were extraordinary. They were everything I would have hoped they would be. We chose very level areas that didn't drain at all, and they are now our best tees instead of quagmires."

"The greens drained quite well. They typically were unplayable for two or three days after a heavy rain. This allows them to move the water through well."

"Quite frankly," Zoller added, "it makes me think I'd like to try doing bad fairway areas. The application there would really be something."

"Landing areas on fairways and tees are very attractive applications," agreed Lansdale. "We did Toronto Country Club's fairways just prior to the Gold Rush Open. On a new course things start bubbling up where no one knew it would be an issue."

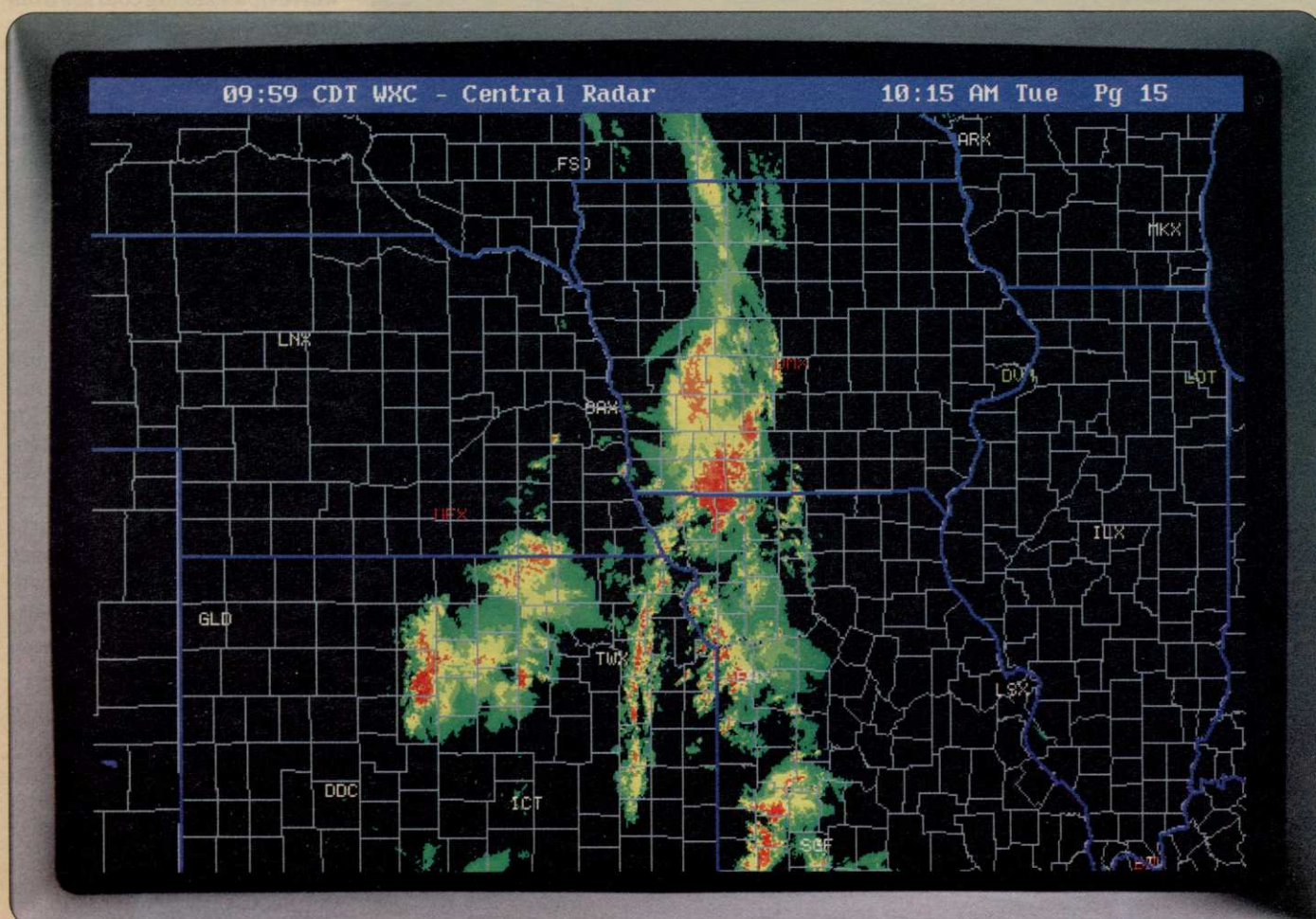
Zoller pointed out that installing this matrix drainage system will not perform to the level of a rebuilt green. The surface can still have soft soil between the splits. Yet the cost differential is major.

It costs \$30,000 to \$40,000 to rebuild a green. Blind said it cost him a dollar a square foot to do his average 4,800-square-foot greens.

"When we do it turnkey it is roughly \$7,000 per green... smaller greens with bunkers are harder to do," Lansdale said. Plus the

Continued on next page

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## A bad-drainage fix

Continued from previous page  
superintendent's crew works with us, removing spoils and returning sod strips to the channels."

"The cost isn't bad," said Zoller, "not when you consider that golf courses have done serious drainage work on fairways, removing sod, taking out 6 to 8 inches of soil and capping them with sand. That can run into \$200,000 a fairway. With this method, they are charging \$12,000 to \$15,000 an acre. You might have a couple acres on a medium-sized, par-4 fairway. It at least bears some trial before deciding against it."

"It's vast savings," said Lansdale, "plus the down time is a big, big issue with some people. We go in with our system and then recommend a diligent aerification program to address the space (that native soil) between the channels. You aerify it to get the water percolating into the channels. You can come close to a sand-based green by disturbing and working with the soil."

While the tee and fairway application is easy because the 2-inch strips of sod are not replaced (the turf is left to heal on its own), Zoller said superintendents should realize that on putting green projects, their crews are responsible for putting sod strips back in after the Sand Channels are made.

"We ended up with eight to 10 people on the green for four days straight as they were doing the work," he said. "Those people are almost all working at putting the 2-inch-wide sod strips back in the ground. The application is only as good as your sodders are. I figured there were over 3 miles of 2-inch sod strip on one green. So basically the finished product isn't going to have as much to do with them [Sand Channel Greens] as it is with your crew and their ability to do a good sodding job."

"I was real proud of my guys. It's back-breaking work and very repetitive for four days."

Each green takes four days to complete and, the fifth day, it is back in play.

...

Lansdale also pointed out that old golf courses wanting to maintain the character of their green designs are possible clients. "You have a classic design and don't want to disrupt it. You put in our system and end up with drainage," he said.

"In the last year we've done four Alister Mackenzie courses," Lansdale said, among them Green Hills, which did two greens, Montecino Country Club in Santa Barbara, and Pasatiempo Golf Course in Santa Cruz.

For superintendent Dean Gump at Pasatiempo the work was *deja vu*. He had 11 greens done in 1988 with the old vibratory system, then

four greens in 1995 with the Sand Channel method.

"The Sand Channel method seems to be performing much better than the old system," Gump said. "We had double the rainfall this year, and those four greens were better than the others on the course."

"The beauty of our system is return customers," like Pasatiempo, Lansdale said. "We are at a 70-percent return rate."

## Wisconsin GCSA elects Kienert to rule in 1997

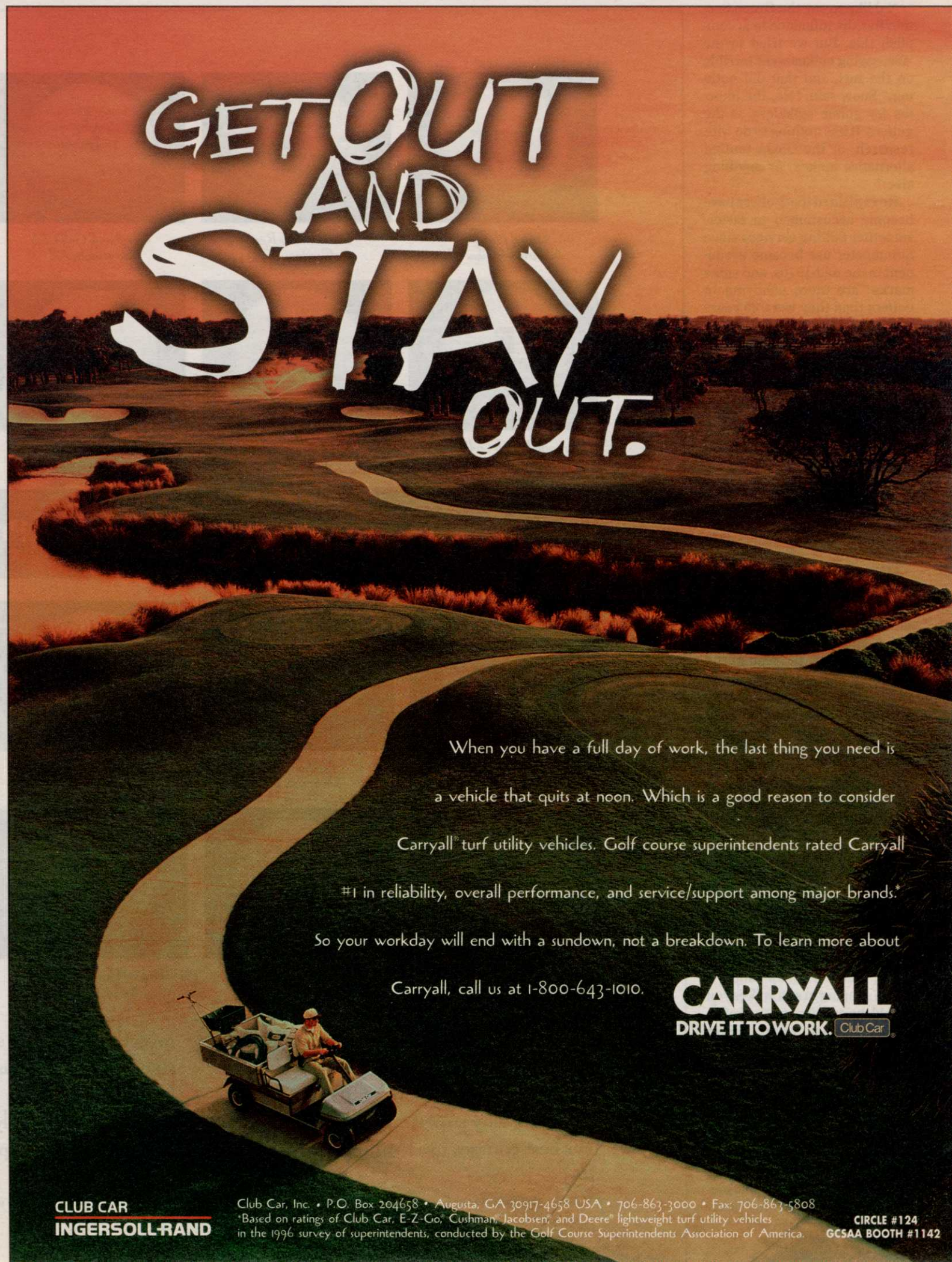
The 250-member Wisconsin Golf Course Superintendents Association (WGCSA) has re-elected its slate of officers, headed by President Mark A. Kienert of Bull's Eye Country Club in Wisconsin Rapids.

Vice president is Scott H. Schaller of North Shore CC in Menasha, while Kristopher J. Pinkerton of Oshkosh CC is treasurer and David A. Brandenburg of Rolling Meadows

GC in Fond du Lac is secretary.

Elected to two-year terms as directors were David E. Smith of Abbey Springs GC in Fontana and Gary Tanko of Sentryworld in Stevens Point.

Other current board members are Past President Mike Semler of Bishops Bay CC in Middleton, Andrew Kronwall of Lake Geneva CC and Charles Shaw of Nagawaukee GC in Pewaukee.



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