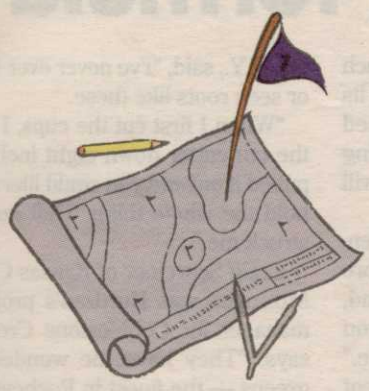
Briefs



NEW ARCHITECT JOINS HALE'S DESIGN TEAM

Hale Irwin Golf Services recently added another architect, Stan Gentry, to its team.

Gentry enhances the company's relationship with Dick Phelps in creating "one of the most experienced teams of golf course architects in the country," Irwin said. "We're pleased to have Stan aboard."

Gentry will coordinate each Irwin design project with Richard M. Phelps, Ltd., the golf course architectural firm associated with the company.

Gentry holds a master's degree in landscape architecture from Kansas State University and a bachelor's degree in horticulture from the University of Missouri. He has had experience in landscape design and golf course architecture.

PALMER HIGH ON TREESDALE LAYOUT

PITTSBURGH — In North Pittsburgh, construction has begun on Treesdale, a master-planned community featuring a 7,111-yard golf course designed by Palmer Course Design Co.

"From the beginning, Treesdale provided great potential for a championship course. It will be spectacular and beautiful in many ways," Arnold Palmer said.

Palmer noted the maximum use of the area's natural beauty in the course's design plan. "I have used every acre of terrain — wooded valleys, open meadows, and rolling hills — to create a wide variety of challenges in a picturesque setting. The result is a spectacular mix of landscape with panoramic views."

BAYOU SIGNS ON SOUND FOR CLUBHOUSE

LARGO, Fla. - Bayou Club has awarded a contract for construction of the luxury country club's new clubhouse to Sound Construction Group, Inc. of Clearwater.

"Construction of the clubhouse will make a significant contribution to the Pinellas County economy," said President Randall E. Gentry.

After completion of construction, finishing of interiors and furnishings and remodeling of existing facilities, total cost of the 42,000-square-foot clubhouse at Bayou Club is estimated at almost $4.5 million.

Encompassing close to 400 acres, Bayou Club's master plan calls for 350 estate homes, an 18-hole championship golf course designed by Tom Fazio which is already in play, the clubhouse, and many country club amenities.

AUTOS, GOLF PARTNERS IN PARK

BLACKS CREEK, Idaho—A $30-million theme park featuring a World Class Classics antique auto museum and an 18-hole golf course is being contemplated for a site 15 miles southeast of Boise.

The project, which may include the financial backing of Eva and Zsa Zsa Gabor, will be built on a150 acre tract that could eventually include a motel and convention center, trout-stocked fishing lake, and a retirement village.

Proving a revolutionary old idea

By Mark Leslie

An old idea has found new life with Hurdzan Design Group in Columbus, Ohio.

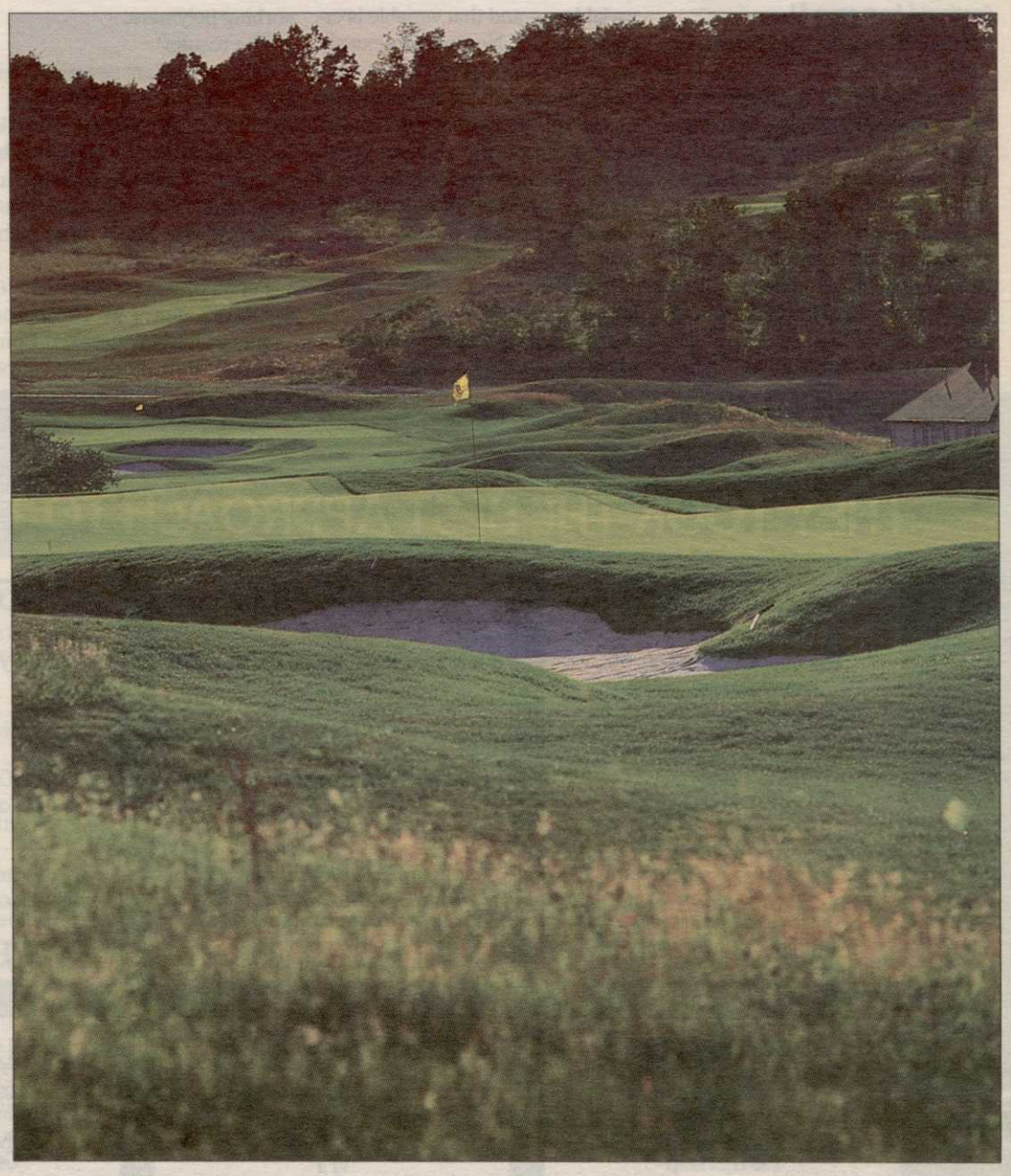
Saying he has become a believer — a believer that theories are theories and reality is reality, architect Mike Hurdzan is now offering clients an old-fashioned alternative to high-tech green construction methods. He has been developing all-sand greens that are easier to grow grass on and cheaper to build.

That is a turn away from U.S. Golf Association specifications, which recommend a laboratory-tested 12-to 14-inch top mix of sand and organic matter, which is placed over an intermediate sand layer, which is underlain with a pea stone blanket and tile.

It is also a return to ancient times in terms of golf course construction, when earthmoving was minimal, irrigation was rare and naturally adapted grasses were planted and maintained, and when the superintendents' main cultural practice was frequent topdressing with pure sand.

Hurdzan's alternative method is simply 12 to 14 inches of pure selected sand, placed over tile. There is no blending of organic matter, no intermediate sand layer, and no gravel blanket. The key is finding the proper sand, which

Continued on page 32



An example of pure-sand greens are the 13th green (foreground) and 14th green (background) at Cobblestone Creek in Rochester, N.Y. This photo was taken when the greens were 10 months old.

Photo courtesy of course co-designer Craig Schreiner

Golf communities successes in right situations

Some going under, some hot, some being salvaged

By Kit Bradshaw

Are golf course residential communities going the way of the dinosaur, lumbering into the tar pits of extinction?

If you bought an equity membership in a club that is now on the ropes financially, or

See related story, page 51.

if you can spot your one neighbor three blocks away in a residential community that never got off the ground, your answer would probably be yes.

If you are casting about for financing of a golf course residential community, your resigned answer is yes.

But if you are the sales director of a community that is still viable, despite slower-than-expected home safes, your answer is most likely no. And you hope it stays no.

When you talk to people in selected areas of the country, there is a checkerboard of responses to the question.

In general, golf course residential communities, like anything connected with real estate today,

Continued on page 52

The Carolina Club in Margate, Fla., is a prime success story. Developer Franklin Golf Properties, Inc. built an upscale public golf facility with country club amenities. The course, designed by Karl Litten, is target-oriented with many water holes. Fees are up to $55 including cart in the peak season.

Simplicity wins over complexity in formula

Continued from page 31

has not been a problem so far, he says.

Holding a Ph.D. in environmental turfgrass physiology, a master's degree in turf studies, and a bachelor's degree in turfgrass management, Hurdzan has put his scientific knowledge to work. And, instead of complexity, he has found simplicity to be the answer and a return to the benefits of pure sand culture.

"We've just taken out one of the variables — and that variable is organic matter. No one can exactly predict how and when that organic matter is going to break down in the mix and to what end product, and so we're not taking a chance. We're making this nice and simple,'" says Hurdzan, a former president of the American Society of Golf Course Architects.

"Simple" means no soil, no peat, no rice hulls, no bark. Hurdzan's mix contains just sand, with micronutrients, fertilizers and water-absorbing polymers.

The results?

"Our greens are awesome," says Joe Perry, superintendent at Hurdzan-designed Eagles Landing in Berlin, Md., which opened last summer. "They are beautiful and held up all summer. The (grass) roots average six to eight inches deep."

Perry, who was superintendent for 4-1/2 years at Crestbrook Country Club in Watertown, Conn., said that while other area courses had trouble after a recent five-inch rainstorm, Eagles Landing, with its high percolation rates, "flushed right out. The greens have amazing drainage and playability. They will never be closed."

Galen Scharenberg, superintendent at Hurdzan's new Sycamore Creek Golf Course in Richmond, Va., said, "I can't see why you wouldn't build this way all the time."

Rusty Madden, superintendent at Cobblestone Creek, a course Hurdzan last year designed in Victor, N.Y., said, "I've never ever had or seen roots like these.

"When I first cut the cups, I set the cut cutter down eight inches, pulled it out and you could literally hold the whole thing. That really struck me."

Craig Schreiner of Kansas City, Mo., who was Hurdzan's project manager for Cobblestone Creek, says: "They have the wonderful greens — the finest in Rochester, and there are some great courses in Rochester."

Schreiner said, in fact, that building 12-inch sand greens was "such a great idea, we put in six-inch sand tees. And they are awesome."

Initially hesitant about all-sand greens "because I'm used to working on soil greens and was concerned about keeping enough moisture in there," Madden said it was an excellent choice he would recommend to others.

The superintendent for four years at Oak Hill's East Course, Madden said he was persuaded it could work at Cobblestone Creek when, during a planning meeting, Wadsworth Construction Co. President Paul Eldredge was asked if he would build all-sand greens.

"If it were my own course and I had the perfect sand, yes, I'd do it," Eldredge recalls saying. He adds that he was discussing a Northern course and he would think differently in a desert site where the sand could percolate too fast.

HOCUS-POCUS?

Removed as a member of the USGA Greens Committee, Hurdzan says: "I think the industry is making too much hokus pokus out of building greens... Yes, they grow well when built to USGA specs. But there might be another way, and that way could lead to a better, healthier plant. That is what I am searching for."

It also costs around $1 to $2 less per square foot — or $120,000 to $250,000 on a normal 18-hole course, Hurdzan estimates. "If you can save that, plus 10 percent for the life of the loan, that's a lot of money," he says. "Or it might mean the difference between affording a very fine drainage and irrigation system as opposed to a lesser system. Personally, I would rather use the money for more sod. However, if the client wants USGA greens, we build them to perfection. It's the client's choice."

In 1957 at the age of 13, Hurdzan worked with his mentor, course architect Jack Kidwell, when Kidwell built a 100-percent sand green and "it was the prettiest green we ever had," Hurdzan recalls.

In the early 1970s, Hurdzan visited the Palm Desert, Calif., site where Arnold Palmer-designed Ironwood Country Club was being built with all-sand greens by contractor Keith Dewar.

That memory stayed with him. Then, several years ago, when

for a problem-free green

Hurdzan was building The Centennial in Canada, heavy rains prevented getting peat on the greens in the fall and again the next spring.

"The course had to get open, so we took a chance, smoothed the greens up, seeded them to 100 percent sand, applied soil amendments and the greens were absolutely gorgeous," he said.

"So I am convinced we don't need the organic matter. But yes, we need some soil amendments."

Cobblestone Creek, Eagles Landing and Sycamore Creek are results of that conviction.

Hurdzan's method includes laying the four-inch drain tiles in six-inch-wide trenches and covering the trench, only, in pea gravel. On top of that goes 12 inches of sand. In the top two to three inches of the sand, he mixes four pounds of super-absorbent polymer, 20 pounds of STEP (a Scotts Co. micronutrient mix), 30 pounds of Sand-Aid (a seaweed extract), 20 pounds of 18-5-9 fertilizer, 20 pounds of Milorganite (which is Milwaukee sewage sludge), and 10 pounds of sulfur-coated urea, per 1,000 square feet.

KEEPING IT SIMPLE

"When you start with sand you have an inert but predictable mass," Hurdzan says. "If you add organic matter you don't know what you have. Sawdust, rice hulls, leaf mulch, composted sewage sludge — it's all so variable. There's no definition of organic matter. Aspirin is aspirin, but peat varies.

"I'd rather blend in things that will react predictably."

Under the normal method, Hurdzan says, "The danger is that we start with a sterile sand mixed with an organic substrate. Then, at grow-in (the first one to two years), we get weird diseases because organisms can just move into that sterile mix."

Scharenberg, who has worked at The Links and Eagle Sticks courses in Ohio, and had to rebuild two greens at Eagle Creek in Naples, Fla., agrees with the positives of a pure sand root zone.

"I know my greens profile is not going to change," he says. "I also like the loose profile because, when you're pushing the roots for grow-in, they go right down for you. And once you get roots that deep you greatly reduce the risk of stress."

Essential to Hurdzan's all-sand plan is getting the right sand.

"I caution that you can't do this with every sand," Hurdzan says. "We search for sand that falls within guidelines. I'd like to see an infiltration rate at 25 inches per hour or less; a percolation rate that when compacted is at 20 inches or less; a water holding capacity in the 15- to 25-percent range; and 1 or 2 percent silt and clay.

"But most important is uniformity in the sand particles. I like it in the one-half- to one-millimeter size. That's almost the same sand as everyone uses."

Madden agrees. "I feel the key to the whole thing was in the selection of the sand... A lot of sand has too many different particle sizes and the particles tighten up. I know guys with sand-peat greens who, after two or three years, have to deep-tine aerify. That doesn't make sense to me, agronomically. Something is wrong," he says.

"First in importance is the right sand. Get the subgrade right and the subgrade drainage right. The next goal is, keep it simple. Bentgrass wants to grow. Roots want to go down in the sand... I feel whatever you can do to simplify the process, do it."

"We've all been like sheep," following guidelines that recommend adding organics to sand in the root-zone mix for greens, Hurdzan says. "I was a sheep, too. Now I'm a lion."

YEAS AND NAYS

This all-sand program is not new.

Continued on page 34

'We've just taken out one of the variables — organic matter. No one can exactly predict how and when that organic matter is going to break down in the mix and to what end product, and so we're not taking a chance. We're making this nice and simple.'
— Dr. Michael Hurdzan

Hurdzan's greens recipe challenges the standard

Continued from page 33

"The problem is that too few golf course architects or contractors have the technical or scientific background to challenge the standard," Hurdzan says. "It was simply easier to build them to conventional guidelines than to question if there is a better way.

"I guess it is my obligation, given my training and position, to be the dissenter. I simply ask, 'Why?' and 'How do you know that?' "

Hurdzan adds: "With all the turf research in the past 30 years, surely someone could offer definitive performance comparisons between green construction methods. But to my knowledge, no one has proven any method to be one bit better in terms of turf growth, water conservation, pesticide reduction, or fertilizer savings. Just a lot of theory, no proof."

Advocates of organic matter say their reasons for adding organics are:

- "To increase the cation exchange capacity (the holding capacity of vital nutrients). Yes, but that doesn't mean the amendment releases nutrients to the plant. That only happens when the organic matter decomposes or the cation is displaced by a free cation with a greater affinity.
- "It holds water. Yes, but will it give up moisture to the plant? Grudgingly... Water retention? Just turn the sprinklers on more until it is grown in more. We're only talking a couple hundred gallons of water.
- "It gives resilience to sand. It makes sand soft so it holds the ball. But you're trying to grow a good pad — mat layer. Let the mat (one-quarter to one-half inch deep) be the pad.
- "Micronutrients. That's why we add them, too. And we're not complicating it by having it tied into organic matter."

Hurdzan contends: "The essential ingredient for good greens is not sand. It is not tile drainage, type of grass, irrigation system, fertilizer program, pesticides, mowing equipment, aerification, top-dressing, or consultant's advice.

"Each of these influences the quality of a golf green. But none of them is the essential element. The essential element is the golf course superintendent. No combination of factors will work without the careful manipulation of them by the golf course superintendent who, through his experience and knowledge, can anticipate the deleterious effects and apply well-balanced preventive measures."

Hurdzan even questions whether all 18 greens need to be exactly the same, for each will receive its own maintenance regime based upon its location.

"Given a set of greens of exactly the same root zone mix, but located differently — on top of a windy hill, in a protected valley, in full sun, in shade, in Georgia, in Michigan — would you treat them all the same? Of course not, for each has its own micro-environment and susceptibility to desiccation, disease, and dormancy. My goal is to provide the superintendent with each green predictable within itself, not to its neighbors. The fewer the number of variables the superintendent must contend with, the easier it is for them to manage."

Hurdzan believes natural processes of that micro-environment will amend the sand with organic matter produced by the plants growing there.

> *'I guess it is my obligation, given my training and position, to be the dissenter. I simply ask, "Why?" and "How do you know that?" '*
> *— Dr. Michael Hurdzan*

"Just grow the turfgrass vigorously and let the sloughed-off roots and natural organic debris provide the organic constituent to the sand," he says. "This happens within a year or two.

"I am constantly searching for ways to improve green mixes. One new one that shows lots of promise is Isolite, which is said to hold water and nutrients in the soil until the plants need them. The problem is that it adds more than $100,000 to green construction and there are not yet enough tests to prove its advantages. To me it is simply a matter of cost-to-benefit ratio."

THE NEGATIVES

Perry and Madden both report they are using more fertilizers than

Continued on page 35

Transamerican blending micro-nutrients for jump-start

Operating on the principle that soil and chemical laboratories are the doctors, and that soil blenders are the pharmacists, Transamerican Soil Blenders is experiencing success with a new prescription in golf course green construction.

Troy McNeil of Transamerican, which mixes sand and other media for golf course greens around the country, said: "We inject micro-organisms into the mix of sterile media to speed up the maturity of greens. Bacteria breaks down thatch."

"We're trying to take the guesswork out of it. This way, it's easier to deal with the growing profile," McNeil said.

Since fertilizers have no bacteria, companies like O.M. Scott are starting to help with appropriate changes to their product lines, he said.

"It's important that we have a C/N (calcium/nitrogen) ratio in balance. If not, it's difficult for the superintendent to maintain the turf. Keeping the growing media in balance gives the superintendent the ability to manage with ease, and we can do that from the start," McNeil added.

He said maturity "increases the capacity of turf to heal from spike wounds, et cetera.

"And, like body chemistry, if it's in perfect balance it can heal quickly. The green, especially in the early stages of development, is the same. If the pH is out of balance, for instance if it's below 6.5, you've got disease problems."

Number of rounds played, he added, is "the bottom line on a course."

Hurdzan

Continued from page34

normal, and they face localized dry spots.

"My biggest problem is isolated dry spots daily," Perry says. "With pronounced slopes on some greens, and a lot of wind on the course, I will have problems with dry spots."

Madden says sand tends to form isolated dry spots and can become hydrophobic — fighting water. Yet, he adds, using sand uncomplicates the matter. You're not introducing a foreign element that has to be a perfect mix. For the long haul, it's going to work out for you."

Hurdzan says: "All greens are susceptible to localized dry spots, regardless of how they are built. I've seen localized dry spots on university turf plots using every type of rootzone mix imaginable, and most often hand-mixed in small batches. I see about 100 courses a year and, during certain times of the year, most of them have localized dry spots."

As for higher fertilizer costs, Perry says: "We use organic fertilizer continually because, with all-sand greens, you use a lot of fertilizers... We will require 15 to 20 pounds per 1,000 square feet of nitrogen per year compared to the typical six pounds.

"My green fertility program has 15 different types of products. The program costs at least double the normal green. It costs $10,000 a year compared to $4,000 to $5,000, plus extra labor and spot watering."

"Joe makes a good point," says Hurdzan, "but an extra $300 per green compared to the initial saving, plus the dependability of these greens, seems like a small cost.

"If my client saved $150,000 or more in initial construction, he doesn't mind buying an extra $5,000 in fertilizer for the first couple of years. After that, these greens perform the same as greens constructed by other methods, for they have produced their own organic matter."

Madden says he is using more fertilizers and micro-nutrients — projecting a rate of seven to nine pounds per thousand square feet.

But Scharenberg likes the idea of being able to fertilize greens "as much as you want during grow-in because the sand percs so quickly. I use quick-release fertilizer. It keeps the price down and the fertilization up. You can make 2-1/2 times the applications for the price of one slow-release application."

Wadsworth's Eldredge says it's basically an economic decision.

"It's the developer's decision. Is it worth eliminating the mixing operation and cost of peat? Or is it cheaper to spend more on water and nutrients?" Eldredge says.

FEAR AND OPEN-MIND FACTORS

Hurdzan and Eldredge say architects and builders have been afraid to use greens construction techniques other than USGA recommendations.

"Architects have to recommend to do what the USGA tells them, or

Continued on page 37

Hurdzan

Continued from page 35

risk facing a suit from the owner," Eldredge says. "What if the green fails for some reason? The owner will come back and ask, 'Why did you go against the USGA?' You'll never win that one in a court of law."

Hurdzan adds: "There has been a liability problem for those who specify the USGA method because it has a measurable performance standard. If you claim a car goes 150 miles per hour and it goes only 145, then someone can sue. If you just say this car is dependable and it goes fast, there is no basis for a suit.

"Isn't it a pity that the fear of being sued should overshadow principles of good turfgrass management and add immensely to the cost of golf course construction without a measurable advantage?"

Yet, he says: "If the purpose of the green is to provide the golfer the truest, most consistent putting surface possible, I offer Oakmont as a benchmark. Its greens are made of clay, as are many U.S. Open courses and thousands and thousands of other famous courses around the world...

"It must be recognized by all golfers that tournament-speed putting surfaces can stress the grass plant beyond its ability to survive. Keeping super-fast greens on a routine basis is flirting with failure, no matter how the green is built.

"The key to great putting surfaces is a good superintendent and not some root-zone voodoo."

Golf Resources busy in Japan and California

Representatives for Golf Resources, Inc. have just returned from Tokyo, Japan, where they broke ground on Iwaki Golf Course.

Byron Nelson, design consultant on the project, and his wife Peggy led the contingent to Japan to take part in the four-day groundbreaking ceremonies. This is Nelson's first project outside the United States, while it is the second of four projects Golf Resources is involved with in Japan.

The 27-hole championship course will be completed in 1994 and will be the centerpiece of a full destination resort.

The firm also just recently completed a nine-hole bunker renovation of Cottonwood Valley Country Club at Las Colinas, Calif. GRI was charged with renovating the original nine holes to compliment the nine-hole addition previously completed by Jay Morrish.

GRI Management, Inc., a subsidiary of Golf Resources, Inc., has recently taken over the management duties of Oakmont Country Club in Corinth, Texas. The 18-hole championship course has residential and commercial land available within the development.

Palmer Golf Management adds agronomist, marketer

ORLANDO, Fla. — Mark F. Miller has been named associate agronomist with Arnold Palmer Golf Management Co. and will be based out of the Orlando office.

Meanwhile, Tracy Kennedy was appointed national marketing coordinator.

Miller has been working on some of APGMC's overseas golf course projects since 1986.

APGMC's Chief Operating Officer, Robert Holzman, said: "Miller's addition allows us to better serve our clients who now extend to Singapore, Germany and the United Kingdom."

Mark Miller

"Miller's experience will allow us to work on multiple courses, as well as continue to provide the high level of service to our current clients' projects," Holzman added.

Miller, previously director of agronomics for Desaru, an IMG/Arnold Palmer-managed project in Malaysia, was responsible for construction of its five 18-hole courses and sod farm.

Prior to Desaru, Miller was responsible for the 36-hole golf course, lawn bowling greens and grass tennis courts for Sanctuary Cove Resorts in Australia—also an APGMC-managed project.

Miller graduated with a degree in business administration from Florida State University in 1981.

Tracy Kennedy

Kennedy has been working with the Palmer firm for one year as a marketing and communications consultant.

She has more than 10 years of experience in management of corporate communications, marketing, public relations and advertising.