1999 Management Co. List
The much-anticipated listing of management firms and their courses

New Chemistry Abounds
An in-depth look at several of the new chemical products from this year's big show

GARL ADDS MCFARLANE TO DESIGN FIRM
Architect Ron Garl (right) has added Scotsman Steven McFarlane to his design team. McFarlane is expected to work on both international and domestic projects. See story on page 44.

Pre-opening sparks fly at Roaring Fork
BY MARK LESLIE
ASPEN, Colo. — The Roaring Fork Club is opening July 1, but the spotlight may already have been stolen by a criminal court case in which the project manager for the development will stand trial on three counts of felony theft and one of failure to appear. Michael Bolton is charged with allegedly stealing $230,000 in cash from the Roaring Fork Club during three separate six-month periods. Each is a Class 3 felony punishable by up to 24 years in jail, according to Pitkin County Assistant District Attorney for the development.

Eco-Soil inks innovative deal with Chubb
BY M. LEVANS
SAN DIEGO — On the heels of its EPA approval for the use and distribution of its biopesticide, Spot-Less, though the Bioject biological distribution system (GCN, March '99), Eco-Soil has inked a deal with Chubb Insurance that offers comprehensive coverage at a reduced rate for users of the company's system. Under the guidelines of the deal, Eco-Soil customers using Chubb insurance will be provided expanded liability, environmental liability and expanded property coverage. In short, Chubb has identified courses using biologicals as a lower financial risk and will, in turn, protect the club, its owners, officers and directors from environmental claims.

CMAA faces 'image' issue
BY PETER BLAISS
SAN FRANCISCO — Enhancing the club manager's image and the election of a new slate of officers, including the organization's first female officer, were the foci of the Club Manager's Association of America's (CMAA) recent annual meeting here.

Norman to open first course in South Carolina
MYRTLE BEACH, S.C. — Above is a view of The Reserve Golf Club's No. 5, a mid-length par-4. Waste bunkers at the Greg Norman-designed Reserve are filled with native red sand and provide a strong contrast to the Feldspar sand traps. It marks Norman's first course in the Carolinas and is expected to open officially in late April.

Flat pipe revisited
OUT WITH THE THIN, IN WITH THE NEW
BY MARK LESLIE
COLUMBUS, Ohio — Out with the thin-slitted flat pipe; in with the regular-slitted style. That is the determination of the manufacturer as well as superintendents at golf courses that have used the flat AdvanEDGE Pipe made here by Advanced Drainage Systems, Inc. (ADS).

Eco-Soil has identified courses using biologicals as a lower financial risk and will, in turn, protect the club, its owners, officers and directors from environmental claims. "As we bring this technology to superintendents we want to demonstrate to them that biologicals are the way to go," said John Doyle, vice president, CMAA's marketing manager for golf courses. "We are recommending the regular-slotted pipe, whose perforations are much bigger, with the sock on it."

By "sock," Rapp was describing a geotextile fabric that fits over the pipe like the outer skin of a snake and prevents sand or soil from plugging the slits. A Maine golf course that had used the flat pipe in its practice green reported problems with it, which Rapp attributed to a sludge-type subsoil. A couple of other courses...
Flat pipe revisited: larger is better

Continued from page 1

 reported problems when they did not use the sock.

But, according to Rapp, "The flat pipe was not the problem.

The greens at Westwood Plateau, left, are California method, so pure sand is dumped at the edge of the green and pushed over the tile. Notice the tile is flat, and all of the grade stakes used to control depth of sand.

It was the perforation and/or soil mix.

Rapp also suggested covering the pipe with crushed stone, which has proven effective on several courses.

Meanwhile, the superintendent at the course believed to have first used flat pipe in its greens construction is a solid believer in the product, which was actually developed to be installed vertically as highway edge drains.

"I must say, I was skeptical to start with," said Bruce Thrasher at Westwood Plateau in suburban Vancouver, B.C. "But I can say now, after watching these greens for six years, we have had no problem with it."

Indeed, Thrasher, who used 12-inch flat pipe on a nine-hole executive course and three-hole learning facility, said they "unequivocally" drain better than his 18-hole course with standard 6-inch round tile.

Thrasher said he initially had trouble because he had removed the sock, fearing it would seal up. "But we put the sock back on and it has worked fine," he said.

Westwood Plateau averages 8-3/4 to 10 feet of rain per year. "We can get a 4-or 5-inch rainfall overnight and these greens will stand up easily to it," Thrasher said.

Meanwhile, golf course architect Michael Hurdzan, who first adopted the flat pipe to a golf course at Westwood Plateau, acknowledged some problems with the thin-slitted type.

"We had 10 greens with fine-slitted pipe on one of our Columbus courses, and we noticed they were staying too moist," he said.

"We dug out that tile and put in wide-slitted tile with the sweat sock material. Now it's fine."

"We did five courses with flat pipe last year. Four had no problem whatsoever; one had a problem."

Andy Mottel, superintendent at Fieldstone Golf Club in Greenville, Del., where the greens were built last July, said he has experienced no problems with the flat tile.

"We put the sand analysis is the key, he said. "Adding that very fine material could clog the fine-slitted pipe."

In his case, "getting to a larger percentage of medium sand and putting gravel on top of the pipe prevented clogging," he said.

Thrasher said he has built greens with a sand-peat mix on top of flat tile, "and they've performed just as well" as with pure sand.

Plus both superintendents noted a savings with the flat pipe. "Normally, you use 4 to 6 inches of subgrade and 4 inches of stone over the whole green," Mottel said. "We laid tiles flat and covered them 3/4 inch. So instead of 4 to 6 inches of material we used about 1 inch."

At Westwood Plateau, Thrasher reported "a dramatic savings, depending on what your sub-base is made up of."

"Ours was pretty much rock," he said, and trenching was not an option. It had to be built using an excavator.

Thrasher warned, however, that the sub-base configuration of the green must exactly follow
SAN JOSE, Costa Rica—Fron-tier Construction Co. has broken ground on an 18-hole championship golf course here at Los Suenos Resort, an ambitious development that will include golf, resort housing, marina and a 300-room Marriott hotel facility. The golf course has been laid out by architect Ted Robinson. Marriott Golf will manage the golf operation. The hotel and course are scheduled to open in November.

"We expect to be finished with course construction in July," explained Nick Scigliano, president Frontier Construction Co., based in Jones Mills, Pa. "We will oversee the project through grow-in, though Marriott will manage the turf development program and ultimately manage the course."

Ground-breaking at Los Suenos follows hard on the November opening of another exotic Frontier project, Coamo Springs Golf & Tennis Club in Coamo. Designed by Ferdinand Garbin, Coamo Springs G&TC is the centerpiece of an upscale resort development focused around Banos de Coamo, a natural 105-degree spring which draws tourists and health-conscious bathers from all over the world. Frontier turned its first spade of dirt in Coamo in February 1998. Ten months, two hurricanes and three rows of irrigation later, this 18-hole desert-style layout was accommodating resort play. "Seed selection was one of the reasons this course grew in so quickly," Scigliano said. "Most folks would use 419 sprigs in a climate like Coamo's, but the folks at Jacklin Seed Co. convinced us to use their new seeded Bermudagrass, Jackpot, which came in incredibly fast. It germinated in five to six days. The club was mowing in two weeks."

Frontier installed a triple-row Rain Bird system at Coamo Springs while addressing several complicated irrigation issues in this semi-arid environment. For example, after locating an abundant water source — 15 feet below a dry river basin some 7,000 feet from the course — Scigliano and his team dropped submersible pumps in each of two wells. Frontier then pumped the water more than a mile uphill to the uppermost irrigation pond, which sits 150 feet above the river bed. Frontier's three-tiered pond scheme features a fully automated supplementation system, meaning inadequate water levels in the lowestmost lake trigger flow from the river basin to the uppermost lake.

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