



BRIEFS

MOUNT SNOW GOLF CLUB NAMES PETREY

MOUNT SNOW, Vt. — The Mount Snow Golf Club, owned by American Skiing Co., has named Donald Petrey golf course superintendent. Petrey comes to Mount Snow from Keystone Resort in Keystone, Colo., where he spent the last two years as the assistant superintendent. At Keystone Resort, Petrey managed a crew of 22 and oversaw the Audubon Cooperative Sanctuary program.



Donald Petrey

CARLS ELECTED CALIFORNIA CGCSA PRESIDENT

SUNNYVALE, Calif. — Gary Carls, CGCS, golf operations supervisor for the City of Sunnyvale, has been named president of the California Golf Course Superintendents Association (CGCSA) at their annual meeting in Palm Springs. The CGCSA comprises six regional chapters throughout California and boasts more than 2,000 members. In 2000, Carls served as president of the Golf Course Superintendents Association of Northern California, the state's largest chapter.

AMERICAN SOCIETY OF IRRIGATION CONSULTANTS CHOOSES BARRETT

TUSCON, Ariz. — James Barrett, president of James Barrett Associates in Roseland, N.J., was elected president of the American Society of Irrigation Consultants at the group's annual conference here. Barrett has been involved in the irrigation industry since joining Robert Trent Jones Inc. as an irrigation designer in 1972. He started his own company in 1985. During his term, Barrett will continue to help further the understanding of how well-designed irrigation systems that use the latest technology can save water, energy and money. He also will continue to encourage local, state and federal lawmakers to work with irrigation consultants to develop meaningful irrigation regulations.



Editorial Focus: Fertigation

Superintendents overcoming fertigation learning curve

By ANDREW OVERBECK

While fertigation and injection systems have been available for many years, more superintendents are tuning into the benefits of applying liquid fertilizers and other nutrients through their irrigation systems.

Once overcoming the initial learning curve, superintendents are finding that fertigation units not only save time, labor and fertilizer costs, but also can improve playing conditions by constantly providing low levels of nutrients to turfgrass.

At Ravenwood Golf Course in Victor, N.Y., the facility's owner turned superintendent Peter George on to the value of fertigation.

"Our owner was actually the one who pushed the fertigation system on me," said George. "Once I saw the results of how fast the greens came in using the fertigation system, I started using it more during the grow-in. Now that we are fully operational, we use it for 60 percent of our fertilization."

George doesn't see that level going any higher, however, because his first application in the spring must be made before he can turn on his irrigation system.

"I go out in the spring and put a half-pound of nitrogen on the fairways with a low-quality granular and then I spoon-feed with the fertigation system all summer long," he said. "As a result I don't have peaks and valleys like other courses in the area. With the constant feed, I get good color and quality."

Down the road at Irondequoit Country Club in Rochester, N.Y., superintendent Rick Holfoth also is learning how to best use his new fertigation system that was installed as part of a \$1.5 million golf course and irrigation system renovation.

"I had been moving more toward using liquid fertilizers and plant growth regulators," said Holfoth. "When it came time for a new irrigation system, this was my



Peter George uses his fertigation system for 60 percent of his fertilization needs at Ravenwood Golf Course.

chance to add fertigation. So far in our first season, we are using it for 70 percent of our fertilization."

As George and Holfoth sort out their fertigation programs, other superintendents, like Ryan Porter at Old Ranch Country Club in Seal Beach, Calif., depend on their systems to keep their courses up and running.

Porter uses a fertigation system to distribute eight tons of gypsum monthly onto the 18-hole layout to help fight the waterphobic, high-sodium soils. Using liquid fertilizer for foliar feeding also helps him

Continued on page 8

Washington courses providing habitat for burrowing owls

By ANDREW OVERBECK

PASCO, Wash. — As a three-year long study to determine if golf courses can provide suitable nesting habitat for burrowing owls draws to a close, there are promising signs that the species of concern is finding a home on the links.

"We are excited that the burrows are being used, both as satellite burrows and as nests," said project coordinator Matthew D. Smith, a graduate student at the University of Arizona. "We are optimistic that over time the number of owls will increase and expand to use more of the artificial burrows."

Burrowing owls inhabit short-grass open country and use the abandoned burrows of badgers, ground squirrels and coyotes for their nests. As those animals are driven away by development researchers suspect the owls may be left with fewer burrows. Since golf courses are open spaces with short grass, they represent potential habitat. The owls provide some benefit to courses because their diet includes pests such as voles, mice, pocket gophers and beetles.

Dr. Courtney J. Conway, a University of Arizona wildlife ecologist received a three-year, \$75,000 grant from the United States Golf Association in 2000 (GCN May 2000) to install and monitor artificial burrows at five area golf courses.

The researchers built artificial burrows at a variety of locations on golf courses to determine how the owls would tolerate golfers and maintenance activity. The artificial burrows are constructed of 10 feet of irrigation pipe, which leads to an upside-down five-gallon bucket that is buried three feet underground.

So far Horn Rapids Golf Course in Richland and Sun Willows Golf Course in Pasco have had the most success.

"At Horn Rapids there are five burrows



Field coordinator Audrey Sanfaçon and Sun Willows superintendent Ron Kuhns discuss the location of owl nests. A burrowing owl on the 15th hole at Sun Willows (inset).



Photos by Andrew Overbeck

with signs of use and one nest burrow," said field coordinator Audrey Sanfaçon. "At Sun Willows we have a pair raising young in one artificial burrow, unpaired resident males at

Continued on page 9

Seeded bermudas are narrowing the quality gap

By ANDREW OVERBECK

After nearly a decade and a half of work, turfgrass breeders have introduced seeded bermudagrasses that are getting closer to the quality of the best vegetative varieties. Beyond the obvious cost savings associated with using seed versus sod, some seeded varieties also require less water and have better cold tolerance.

"In the past seeded bermudagrass was pretty far away from vegetative varieties but the gap is closing," said Kevin Morris, executive director of the National Turfgrass Evaluation Program based in Beltsville, Md. "Seed is cheaper to use, and it has better cold hardiness. If you want to establish something quickly they are a good choice."

Seeds West's Princess seeded bermudagrass has topped the NTEP quality rating in recent trials for seeded varieties.

According to Seeds West director

Continued on page 9

Audubon Int'l certifies 500th sanctuary

SELKIRK, N.Y. — Audubon International has certified its 500th Audubon Cooperative Sanctuary.

"In an era where we see increasingly complex environmental problems, Audubon International has dedicated itself to helping people from all walks of life be part of the solution," said Audubon International president Ronald Dodson. "Certified Audubon Cooperative Sanctuaries exemplify what can be done when people make a

commitment to good environmental stewardship and sustainable resource management. We applaud the many golf courses that are participating in this crucial effort."

Certified properties account for more than 173,000 acres of land that is managed to protect wildlife and environmental quality and includes backyards, schools, golf courses, cemeteries and a variety of corporate sites.

Editorial Focus: Fertigation

Fertigation market expanding

By ANDREW OVERBECK

Fertigation and nutrient injection system use has expanded over the last 10 years, primarily due to the growth in new construction as many golf course designers and irrigation architects specified the systems to help with grow-in. Now that an estimated 10 to 20 percent of courses in the U.S. have fertigation systems, suppliers are working to improve their offerings, tackle the renovation market and target lower-budget courses.

Efforts are being placed on education, better technology and on-site mixing.

"The technology and the concept is growing by leaps and bounds," said PlantStar's Ed Nash. "Courses are starting to recognize the value of injection systems beyond grow-in. They are a great tool for the long-term maintenance and management of turf."

With new construction down, suppliers are finding that existing courses are looking to fertigation to get an edge on competition and save money.

"The percentage of people ordering fertigation systems with their pump stations is certainly up," said Allen Olson, who runs Flowtronex's Nutrifeed division. "They are looking at how they can save money and fertigation is a good tool to do that."

According to Turf Feeding Systems' Michael Chaplinsky courses can save an average of \$14,000 to \$40,000 a year by installing a fertigation system that costs between \$7,000 and \$20,000.

"The fertilizer is less expensive, you don't have to use the labor or machines to spread or spray fertilizer, and the feeding is light so you don't have flushes of growth that require more frequent mow-

ing," he said. "You also use less water, save electricity and cut down on pump station use."

Because of the education challenges involved in fertigation systems, regional supplier Moyer & Son in Souderton, Pa., offers what it calls "circle support." The company not only installs fertigation systems and provides the liquid fertilizer, but it also helps superintendents use the units properly.

"Following up is important," said John Ripp, golf course sales manager. "We are teaching people how to run the equipment and write programs and be efficient in the use of the systems."

DISSOLVING THE BARRIERS TO MARKET

One of the largest barriers to growth in the market is the belief that you need a high-tech irrigation system to use fertigation properly.

"It doesn't need to be a high-tech system," said Chaplinsky. "With wind moving the impact zone and light feeding every time, the evenness is surprising. We can make it work with any reasonably designed system and save the course money."

The other large stumbling block is the fact that many parts of the country do not have access to liquid fertilizer. Suppliers have solved that problem by offering mixing systems that use soluble fertilizer packs to create individual batches of liquid fertilizer.

Nash's PlantStar has been offering a mix-



Turf Feeding Systems' new Auto-Mixer

ing system since 1986 and other companies are working on similar units. Turf Feeding Systems is rolling out its Auto-Mixer this summer that allows courses to make four to five days' worth of supply at a time. Flowtronex is working on an agreement with soluble fertilizer maker SQM North America to provide courses with a ready supply that can be mixed in a blending pump.

With these moves, suppliers are working to expand fertigation use. However, the strongest motivator is word of mouth. "Nobody wants to be the guinea pig," said Olson. "But when you have one superintendent in an area who jumps out there and has success with it, nobody wants to be last in line."

Overcoming fertigation learning curve

Continued from page 6

get better nutrient uptake in the turfgrass.

"If I don't put out gypsum, we will have hard spots develop on our fairways within three to four weeks," said Porter. "It is one of our right hands."

"We have gypsum in the water at all times, and we fertilize through the system every night of the week except for the weekends," he continued. "Forty per-

cent of our fertilization is done through fertigation."

With such complicated soil structure, Porter has found that fertigation makes the management of the course much easier. "Without it I would be spending a lot on labor," he said. "The ease of application is also a plus. I just tell a guy to load the machine every night."

INFRASTRUCTURE REQUIREMENTS

All three superintendents caution that a fertigation system requires significant investments in infrastructure.

At Irondequoit, Holfth expanded his pump house from eight by 12 feet to 28 by 26 feet. "We more than doubled the size," he said. "We had to fit in two 1,000-gallon tanks, one 500-gallon tank and one 300-gallon tank. Plus we had to do the containment to make sure if a tank leaked it would not go into the ground or the wet well."

A good quality irrigation system also helps, said George.

"A reliable system is necessary," he said. "And one with a central controller makes it easier. We have a new Rain Bird system that can calculate the number of gallons I am putting out, so it makes it easy to calibrate for fertigation."

The final piece of the puzzle is getting liquid fertilizer to the pump station.

Holfth has a gravel service road that comes right up to the pump house, but George wound up running a 2,000-foot two-inch feeder line from a parking lot to the pump house so the pressurized delivery truck could recharge the storage tanks.

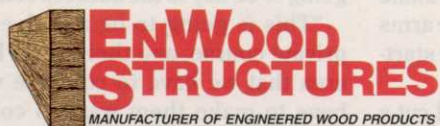
As more companies produce water-soluble products, however, more superintendents will likely follow Porter's lead. "We buy all soluble now," Porter said. "It is one-fourth the price of regular fertilizer." ■



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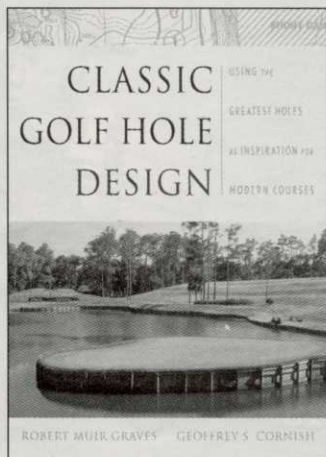
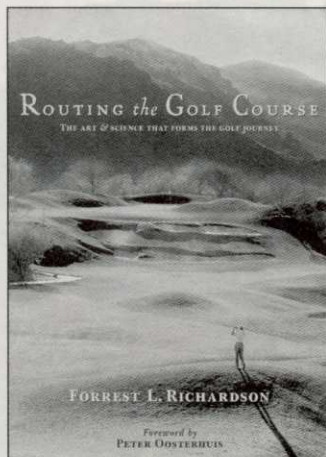
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