Eco-terrorists strike Pure Seed test farm

By JAY FINEGAN

HUBBARD, Ore. – An underground eco-terrorist group styling itself the Anarchist Golfing Association attacked Pure Seed Testing Farm here last month, smashing into greenhouses, overturning and stomping on experimental grass plots, scattering identification labels, and spray painting such slogans as “Nature Bites Back.”

Crystal Fricker, director of research and new president, estimated damage at about $500,000, but said the value of projects destroyed in the raid could easily have run over $1 million. “It’s hard to put a value on it,” she said. “We’ve lost years of research.”

The Federal Bureau of Investigation swung into action quickly, assigning 10 agents to the case. At press time, no arrests had been made.

The vandals stole onto the 110-acre research farm during the night. “They hit two different greenhouses and went across 70 acres of the farm, hitting different nurseries, pulling up plants, cutting the heads off plants, and dumping 200 pots of ornamental grasses collected from around the world,” Fricker said. “They left little clues that they had been everywhere – golf balls embossed with their insignia: a circle-A anarchist symbol.

Damage to Pure Seed’s experimental grass plots.

Dot-coms primed to revolutionize market

By ANDREW OVERBECK

While the buzz surrounding the launch of several Internet-based business-to-business ventures earlier this year has faded, work behind the scenes continues as these high-tech companies clamor to define strategies, attract vendors and buyers and get up and running. In the meantime, savvy superintendents are beginning to embrace the concept of purchasing goods on-line.

New players have also burst onto the scene in recent weeks, bringing the total of superintendent specific dot-coms primed to revolutionize market and shopping online.

Destructive beetle spreading fast through Northeast

By JAY FINEGAN

BRETTON WOODS, N.H. – An unusually pernicious turf-destroying beetle, the European chafer, is marching briskly through Northeastern states and appears poised to extend its range. Speaking to superintendents from Maine and New Hampshire at the Mount Washington Hotel here, entomologist Stanley R. Swier said the chafers can do “a phenomenal amount of damage.”

Swier also expressed concern that the insect may be on the verge of a breakout phase. “The chafers lay their eggs in pot- ted nursery plants, and these plants will be shipped around the country,” he said. “They can also be carried by cars and trains. They emerge by the millions in late June, and they’ll fly right into vehicles. When you look at

The Andersons finish Scotts acquisition

Golf Course News • July 2000
When we seeded The Merit Club in 1990, the new Penn "A" and "G" bentgrasses were still in development, so we used PennLinks, the grass I'd had great success with in the past. PennLinks provides the consistent putting surfaces demanded for Championship standards, and will survive the short cut during the heat of summer, then remain healthy for member play after TV cameras and the 55th U.S. Women's Open are history.

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Our tees are Penncross. What can I say about Penncross and its ability to recover from wear and divots that hasn't already been said?

Do I count on the Penn Pals to make The Merit Club look and play perfectly for the 2000 U.S. Women's Open? You bet I do. But then, where would I be without my crew behind me?

Oscar Miles, CGCS

PennLinks Greens: Developed for grainless greens, PennLinks became an instant success when introduced in 1987. PennLinks has upright, dense growth and takes the close cut necessary for true putting on Championship greens. PennLinks is fine textured and heat tolerant.

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Penncross Tees: The standard for creeping bentgrasses since 1955 and still the most widely used creeping bentgrass in the world for golf courses. Reliable Penncross recovers quickly from injury and divots and has good heat and wear tolerance.
NGF survey finds golf more popular than ever

By JAY FINEGAN

JUPITER, Fla. - There's plenty of encouraging news for the golf industry in a recent report issued by the National Golf Foundation (NGF), headquartered here. The 2000 edition of its "Golf Participation in the United States" based on a large-scale survey - is packed with demographic data and analysis about the state of golf in the country.

Among the key findings are these:

• Rounds of golf played in the United States last year climbed to a record high of 564 million, a seven percent increase over 1998 levels. So-called "core golfers" - people age 18 or older who played at least eight times last year, accounted for 87.6 percent of all rounds played.

• Among all U.S. golfers, including core, avid, occasional and junior players, the average golfer played 21.3 rounds last year.

• The number of junior golfers, those aged 12 to 17 who played at least once last year, jumped by nearly 20 percent from 1994 levels.

Market Facts, Inc., of Chicago, conducted the research for the NGF. It collected responses from more than 52,000 households, or 109,000 individuals, and also used 1999 updates from the U.S. Census Bureau.

The survey pegged the total number of American golfers at 26.4 million, including 21.3 million men and 5.1 million women. In 1994, the number stood at 24.3 million players. The junior golfers in this mix numbered 2.03 million last year, with 89 percent of them male.

For overall profiles, the average male golfer last year was 39.1 years old, enjoyed a household income of $68,041, and played 22.4 rounds. On the female side, the average age was 42.2, with a household income of $68,908, and 17 rounds played.

The research found a strong correlation between education levels and the likelihood that a person plays golf. For example, 15.1 percent of all college graduates played golf last year, versus 5.2 percent for high school graduates and 2.7 percent of non-high school grads.

Similarly, household incomes were key indicators of golf participation. More than 20 percent of people from families earning $100,000 and up played some golf last year. But only 3.4 percent of those with incomes under $20,000 did so. Closer to the national household income average, in the $40,000 to $49,999 range, 11.5 percent of respondents reported playing.

By occupation, 42.9 percent of all golfers are in a group that performs professional, managerial or administrative work. Among sales people and clerical staffs, 13.1 percent play golf. The rates drop to 10.2 percent for blue-collar workers and 8.8 percent for the retired or unemployed.

On a regional breakdown, the survey found the highest golf participation rate - 15.7 percent - in the West North Central states, including the Dakotas, Nebraska, Kansas, Missouri and Minnesota. East North Central states, including Ohio, Indiana, Michigan, Illinois and Wisconsin ran a strong second at 15.6 percent.

New England rang up the third highest rate, 11.9 percent, followed by the Mountain states at 11.5 percent and the Mid Atlantic at 11 percent. Bringing up the rear, at a 7.8 percent participation level, were the East South Central states of Mississippi, Alabama, Tennessee and Kentucky.

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GOLF COURSE NEWS July 2000
As eco-terrorists attack golf industry, proactive steps necessary

In my first month on the job, here, I've been impressed by the golf industry's extraordinary commitment to environmental integrity. Superintendents have reduced water usage and are applying pesticides and herbicides more judiciously. Course architects are designing new layouts to minimize the need for chemicals. And hardly a day goes by without word that yet another course has been certified by Audubon International as a wildlife sanctuary.

It came as all the more of a shock, then, when a group calling itself the Anarchist Golfing Association launched an attack on Pure Seed Testing (see story on page one). Operating under a cover of darkness, vandals fanned out across Pure Seed's 110-acre farm in western Oregon. They systematically wrecked property and test beds, destroying plants representing up to 10 years worth of research and inflicting damage estimated at about $500,000. Crystal Stricker, Pure Seed's director of research and new president, said it was impossible to put a value on the lost research.

Pure Seed Testing serves as the research arm of TurfSeed Inc., a major supplier of grass seed for golf courses and other turf projects. Its work is environmentally benign. All new grass varieties there are the result of natural selection. Tom Stanley, marketing manager for Turf-Seed, said the breeding program aims to develop grasses that are a darker green and need less fertilizer, grasses that can survive on salt water or effluent water, and which don't need as much herbicide. "If we can accomplish that," he said, "we're making the earth a better place."

The so-called Anarchist Golfing Association, however, hit the family-owned operation under the belief that it was breeding and producing genetically modified organiments. In point of fact, Pure Seed has only a permit from the U.S. Department of Agriculture to have genetically altered bentgrass on its premises, for testing purposes.

"They shot the wrong guy," Stanley said. "We're doing a pollen flow study to determine whether those genetically modified characteristics can be transferred by pollen from the host plant to other plants in the environment. We are finding, that in certain cases, yes they can. That's a dangerous situation that we want to prevent. The irony of this attack is that it's a fact they had the information we were developing, it would have been something they could have really run with for their cause."

As the attack makes clear, golf has its enemies. The Anarchist Golfing Association is believed to be a splinter group of Earth First!, an extremist environmental outfit. It's not known if the same people are behind the numerous attacks on golf courses across the country, where greens have been blown up and courses sabotaged. What is known is that in the Earth First! National, in 1995, this article encouraged the destruction of golf courses, starting with irrigation systems.

"When you are cutting off a course's water supply," the story advised, "think one thing: green. Your golfer can deal with faded fairways, or maybe a tan tee. If the greens aren't green, the golfers will quit coming, period."

In exacting terms, the article told how to wreck an irrigation system, urging a relentless campaign. "Hit the greens first and then blow them up," it said. "Every time the sprinklers are replaced, hit them again. Forget the fairways. Take no notice of the tees. Just nail those greens."

To those of us who love golf, such language sounds unbelievable and absurd. But the threat is real. With courses under ever-greater scrutiny for their chemical and water usage, and now under physical attack, it's all the more important that superintendents and club managers act as goodwill ambassadors in their communities.

If you're taking some environmental positively steps as your club, make sure the locals know it. If Audubon International certifies your course, make it public. Write a press release for your local newspaper. Speak to service organizations, such as a Rotary Club or a Chamber of Commerce. Be proactive in defending your business. If you don't go on the offensive, somebody else is going to get a story out, and it might be damaging. Just ask the folks at Pure Seed.

As eco-terrorists attack golf industry, proactive steps necessary

Robert Trent Jones Sr.: We'll miss you sir

He was the dean of American course architects. During his seven decades of practice, he designed some 350 layouts in 45 states and 29 foreign countries — on every continent except Antarctica and Australia. His far-flung creations made it possible for him to boast never sets on a Jones golf course. Jones died home in Fort Flr. He was 92.

Born in Inc., 1906, he was United States ambassador to England, in brought to the age six by his Welsh immigrant parents, who settled in Rochester, N.Y. He learned the game as a caddie at the Country Club of Rochester, where he developed such an aptitude for the game that he became a scratch golfer in his teens. During the building of Oak Hill in 1926, Jones met Donald Ross, the leading golf architect of the time. Through conversations with Ross and observation of his work, he decided on his course design style from then on.

Besides his original courses, he was responsible for the redesign of approximately 150 other courses. His collective body of work includes courses that, since 1951, have been the venues of 79 national championships, including 20 U.S. Opens and 12 PGA Championships.

And as his career spanned the transition of golf from the days of the wooden to the steel-shafted clubs, and now the use of space-age materials, Jones kept pace by fashioning courses that, despite the improved equipment and shot-making prowess of the elite players, hewed to his credo: "Every hole should be a hard par and an easy bogey."

His son Robert Trent Jones Jr., of Palo Alto, Calif., and Rees Lee Jones, of Montclair, N.J., continue in his tradition. In recent years, Jones and his son Bob Jr. collaborated on golf course designs, and son Rees has renovated and remodeled work by his father.
Pure Seed attacked  
Continued from page 1

with a butterfly."

Pure Seed Testing is owned by Bill Rose, who also owns Turf-Seed Inc. He said his company will have to absorb the loss because insurance covered only seed and seed stock, not experimental plants.

E-MAIL COMMUNIQUE

In an e-mail communique to the company and media outlets, the Anarchist Golfing Association wrote that "the biotech industry usually hides behind the pany and media outlets, the Anarchist

loss because insurance covered only seed

Continued from page 1

have no social value."

Rose, who also owns Turf-Seed Inc. He

and seed stock, not experimental plants.

courses provide suitable habitat for

the golf trade journals claim that golf

industrial culture, is invasive and per-

racist aura of feeding the Third World.

But as you can see, these crops are grown

for profit and the pleasure of the rich and

have no social value."

The message continued: "Grass, like industrial culture, is invasive and permeates every aspect of our lives. While the golf trade journals claim that golf courses provide suitable habitat for wildlife, we see them as a destroyer of all things wild."

The anarchist group apparently believed that Pure Seed was conducting genetic engineering work on grasses, Fricker said. "The irony of it is that those were all naturally bred grasses they destroyed, having nothing at all to do with genetic work," she said.

"We were doing one risk-assessment project to determine if it's wise or safe to introduce genetically altered grasses into the environment," she added. "And in fact, our data were showing that we should not have open-pollenated transgenic bentgrass, and that we need to go towards something like male sterility, so that the gene won't be carried in the pollen. That's what they attacked - the research that would have proven their point, and maybe stopped some of this."

"We were the only company doing that sort of research," Fricker said. "There are some companies producing genetically altered products without doing the research. In our opinion, she said, "they hit the wrong place and shut down something I think they might have supported."

Fricker seemed particularly dishheartened by the loss of her research work on experimental varieties of grasses. The vandals destroyed a strain of tall fescue that survives a low pH factor, she said. They hit another tall fescue that is resistant to brown-patch disease - a major disease in the Southeast and even in California. They also ruined a salt-tolerant perennial ryegrass and a creeping fescue that was naturally tolerant to Roundup.

"We'd been working on some of these things for six years," Fricker said.

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So relax. There's no need for stress; a schedule of
quick, cost-effective applications of VigaROOT can
return turf to peak performance perfection!

Researchers follow anti-golf groups

Barry Clausen, a specialist in eco-terrorism, said there are several groups in the country that see golf courses as "an evil." Clausen, of Redding, Calif., has written a book, soon to be released, called "Burning Rage - The Growing Anger Within My Country." He said the movement is led by people who think all mining is bad, all logging is bad, all golfing is bad. They recruit high school and college kids, who get brainwashed, and the result is the kind of destruction you see at Pure Seed.

A golfer enthusiast himself, Clausen said the attackers "probably didn't care that no genetic research was going on. It's about sabotaging golf courses. They hate golf courses, because in order to build them you have to tear up natural areas."

According to Clausen, golf courses have been on the eco-terrorism hit list since 1995, when the Earth First! Journal advocated sabotaging golf courses and described how to do it.

"There are numerous courses across the country where they have blown up the greens," he said. "At one resort in Washington state, they tore up nine greens and then put a stink bomb in the ventilation system during a convention. There was also a bombing on the PGA Tour, in Akron, Ohio, where a bomb went off in a trash can and two people were injured. PGA officials said a kid had thrown an M-80 in there, but it was a bomb. I got the reports from Bureau of Alcohol, Tobacco and Firearms."

In the 1995 Earth First! Journal article, entitled "Golf Course Maintenance," readers were told that golf is "the sport of the aristocrat and the poser aristocrat." Among the "tips" offered by the anonymous author were:

• Forget all that you've heard about pouring gasoline or Roundup on the greens. Don't even bother carving up the tees or stealing golf carts. Just cut off that IV from the aquifer. It detailed exactly how to destroy irrigation systems.

• Hit the greens first, and repeatedly."

— Jay Finegan

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• "Hit the greens first, and repeatedly."

— Barry Clausen
IGM ADDS TWO COURSES TO PORTFOLIO

LAKELAND, Fla. — International Golf Maintenance, Inc. (IGM) has added two more courses to its portfolio of golf facilities, bringing the total to more than 40. The company has signed agreements with Hunting Hills Country Club, in Roanoke, Va., and The Majors Golf Club, in Palm Bay, Fla.

Under the agreements, IGM will handle all aspects of turf and grounds maintenance, including personnel and equipment issues.

The Majors is a new Arnold Palmer signature course. The 18-hole layout measures 7,346 yards, and brings water into play on almost every hole. Superintendent Mark Patterson hopes to have the course in tournament condition following last year’s stormy weather. “We’re now overseeing a second growing-in period for the course, made necessary by hurricanes Floyd and Irene,” he said. “They washed out much of the grass and top soil.”

Hunting Hills, a 6,037-yard, tree-lined course designed by Ray Loving and built in 1970, is known for its pure bentgrass greens.

IGM is part of Meadowbrook Golf Group, which owns and operates golf facilities across the country.

AUDUBON CERTIFIES GLEN ANNIE

SANTA BARBARA, Calif. — Environmental Golf, a division of Environmental Industries, Inc., announced that Glen Annie Golf Club, in Galena, Calif., near here, has achieved designation as a Certified Audubon Cooperative Sanctuary. It is the ninth course in California and the 235th in the world to receive the official designation. Vince Gilmartin, Glen Annie’s superintendent, has also begun restoration work on a wildlife corridor to connect habitat throughout the course. Environmental Golf manages the course.

Snyder beats drought, opens Blackstone National

By ANDREW OVERBECK

SUTTON, Mass. — After nearly three years of trying work, disastrous delays and just plain bad luck, Superintendent Jay Snyder has completed his first golf course grow-in and construction here at the Rees Jones-designed Blackstone National Golf Club, which opened May 26.

According to Snyder, who came to Blackstone National in August 1997 from an assistant’s position at Indian Ridge Country Club in Andover, this may be his first and last time as a construction superintendent.

“I was at war with the place,” said Snyder of the golf course that opened nine holes in spring 1999 only to be hit by extreme drought, have the wells run dry and lose all of the turf on its fairways.

“I worked on a course in Florida preparing for a PGA Tour event, but building a golf course and getting it open for play is much more difficult than getting ready for a tournament,” he said.

After Colorado-based Niebur Golf finished shaping the course and putting in the irrigation in 1997, Snyder oversaw the grading of 10 of the holes and dormant seeded another five holes before the winter hit.

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After Colorado-based Niebur Golf finished shaping the course and putting in the irrigation in 1997, Snyder oversaw the grading of 10 of the holes and dormant seeded another five holes before the winter hit.

In the spring of 1998, the owners and Snyder decided to finish the course themselves but faced record June rains that slowed down the job.

"On the 9th hole the topsoil was pushed out, raked and seeded three times," said Snyder. "We also had to cut and fill the 15th hole and irrigate it. We laid 1,500 feet of pipe and put in 28 to 30 heads."

In addition, the crew of 25 had to push out and seed the rest of the course, finish tee tops, complete five greens and build a 180-foot timber bridge.

The course opened nine holes in spring 1999, right before the Northeast got hit with a drought.

"It just stopped raining," said Snyder. "Wells dropped from 165 to 92 gallons-per-minute. The pond was leaking. As a result, I lost everything but my tees and greens. It looked like the Serengeti Plain."

While Snyder concentrated on saving bunker faces, greens and tees, his fairways got torched and the clover took over.

"It was devastating," Snyder recalled. "We got two black eyes from last summer."

In August, they drilled two additional wells and worked to correct the situation before the winter hit.

"It was my responsibility," Miles explained, "to draw up the specifications for construction, the graveling plan and the in-house landscaping plan. I was also responsible for formulating all those budgets."

By bringing the superintendent on board prior to construction, Oldfield and owner Bert Getz gave Miles an enormous level of input and control.

The rewards were immediate. The Merit's original land plan, for instance, was designed to accommodate a 25-year flood frequency.

"After looking at the Merit plans, I can see we needed better flood management. We hired Lindley & Sons out of Hinsdale [III.], They took the original plan, did a cad-cam on it, and studied the flow and drainage. Lindley came back with a new plan that gave us a 100-year flood capability."

Prior to its development, the Merit Club parcel was 300 acres of natural prairie. Seeing and studying the land in this state helped Miles formulate grassing and tree-management plans that best preserved the landscape's character.

"I knew we were going to be involved with Audubon, so I took classes on how to
SPOTSYLVANIA, Va.—With the departure of superintendent Bob Wren, the baton at Fawn Lake Country Club has been passed to Brad Files, serving now as acting superintendent. "I'm still a Class C," he said, "until they decide what they want to do."

Files has been at the course, adjacent to the site of the Civil War's Battle of the Wilderness, for five years. He started his turf career when he dropped out of a computer science program at Penn State and went to Germany with his father, a defense department official. "I didn't know if I'd ever get another chance to see Europe," he said. He ended up staying for six years on the grounds crew at Rheinblick Golf Club in Wiesbaden.

Back stateside, he obtained a certificate in golf course management from the University of Maryland's Institute of Applied Agriculture in 1995. He went first to Glendale Country Club, in Glendale, Md., then to an internship at Wilmington Country Club, in Delaware. Then came Fawn Lake, designed by Arnold Palmer. "When I interviewed here, construction was about to begin, so I got to see the course from the ground up," he said. "I thought I'd learn more from that than from going to one of these big clubs."

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**Reel Grinder:** 1 Express Dual, Bernhardt and Co.

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**Irrigation Pump Station:** Flowtronex UFO 1,500 gpm

**Irrigation System:** Toro OSMAC

**Total square footage of maintenance building:** 9,000

**Annual rounds of golf played:** 15,000, now pushing 20,000

**Normal green speed:** 10-10.5

**Can't Live Without:** handheld soil probe to check greens' moisture

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**Mike Suess, GC Superintendent**

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Beetle
Continued from page 1

and has been seen as far west as Rochester, N.Y. The chafer also has struck in Pennsylvania, Connecticut, Massachusetts and elsewhere in the region.

"Most of the entomologists in the Northeast are looking at the chafer now," said Swier, a Ph.D. entomologist with the University of New Hampshire's extension service. "We don't know of anything effective enough to totally wipe them out. They will keep on moving as long as there are areas that have good, fibrous roots."

Many golf course superintendents are unaware of the threat, Swier said, because the invasion has been spotty. "It's not in every course," he noted. Also, because the insect prefers to fly at night, it's not often seen. Consequently, the beetle can inflict its damage long before it comes to a superintendent's attention.

Superintendent Tom Rowell, at Cochecho Country Club, in coastal Dover, N.H., is a case in point. He had no idea what was killing his rough two years ago. "At first, the bad spots were few and minor, and I didn't think too much of it," he said. "But then the damage got worse."

A few days later, Rowell began noticing large, unfamiliar beetles on his greens early in the morning. He sent a few specimens to Swier, who identified them as European chafers.

CHAFER'S LIFE CYCLE

Swier has been conducting field trials on the insect for the New England Regional Turf Foundation (NERTF). "We're looking at the correlation of life cycle with degree days, so we can predict the stages of the chafer in the ground for better timing of insecticides," he said.

The adult chafer emerges from the ground in June and flies up to the trees to mate. The female then drops to the ground in search of suitable soil to lay the eggs. "They tend to prefer soil slightly on the dry side," Swier said. "That's why, on golf courses, you will more likely see them in your drier areas, where there might be some," he said, or perhaps in unirrigated roughs. But that doesn't mean you won't also see them on irrigated fairways.

As the eggs transform into grubs, the larval chafer burrows into root zones and goes to work. "They are larger than Japanese beetle grubs, so they eat more," Swier said. "Also, they are more cold-tolerant. The Japanese beetle grub might stop feeding by late September and start burrowing down to spend the winter, but the chafer grub will feed into early November.

"Also, in the spring," he said, "they are the first ones to come back up from the depths of the soil and start feeding on grass roots. They'll come up as early as February or March in the Northeast. The roots haven't even had a chance to start growing, and the chafers are already at work. They will feed right through May, and then start turning into the pupal stage. But when they emerge as adults, in mid to late June, they feed little if at all.

"After they mate and lay their eggs, they die," Swier added. "Superintendents will tend to see the dead bodies on low-cut, maintained grasses."

NOTHING BUT DIRT

The beetle can cause extensive turf damage. Last year, for example, a major infestation plagued Dover, N.H. The chafers hit early and they hit hard. By the time the snow cleared that spring, many lawns were completely devastated.

"It was the talk of the town," said Rowell, the Cochecho superintendent, who was inundated with questions from club members. "We had entire lawns without a single blade of grass. They were nothing but dirt. You could turn down any street in Dover, and lawn after lawn was totally destroyed. They also wiped out entire cemeteries."

At Cochecho, Rowell had treated isolated areas of the rough in 1998, but the chafer made another run at the course last year. Bird activity alerted him to the threat.

"Once the snow was gone, the..."
Destruction
Continued from previous page

crows started really tearing up the roughs trying to get at these huge grubs," he said. "They are big and hard to control if you don't get to them when they're young. The thing is, you're not looking for any damage that early in the season, but there it was. We'd never had grub problems in the rough—not enough to treat, anyway—and then all of a sudden these guys came along."

TREATMENT OPTIONS
In field trials conducted for the NERTF, Swier has tested various insecticides against the chafer. His research shows that Merit, by Bayer Corp., is very effective. A new pesticide called Meridian, made by Novartis, is due on the market later this summer. Swier said Meridian looks promising. "The materials we have will control them at 90%," he said, "but they're not effective enough to wipe these insects out completely."

He's also studying the efficacy of halofenozide, the active agent in Scott's Grubex and in Mach 2, produced by RohMid LLC, a joint venture between Rohm and Haas and American Cyanamid.

The insecticides being used on the pests have very low risk to other species because they target a growth hormone specific to the European chafer, Swier said.

"Generally speaking, one application—either granular or liquid—will do the trick, when done in June or earlier. Some superintendents have used Merit in May, also, with acceptable results," he said. "A preferred time is closer to the egg-laying period, just before or after they come out of the ground. That way, you have a maximum amount of chemical available at the time when the grubs are first hatching.

Swier said the recommended applications range from two pounds per acre for Grubex and Mach 2, down to 0.4 pounds per acre for Merit. The forthcoming Meridian, he said, will allow the lowest level yet—0.26 pounds per acre.

"We're looking at a variety of formulations, many of which are granular and which can be incorporated into fertilizers," Swier explained. "The fertilizer is mixed with the insecticide as a pre-made formulation. That way a superintendent can fertilize and kill grubs at the same time."

At Cochecho, Rowell has been spraying fairways with Merit and Mach 2. "I've been alternating between the two, because these pesticides are new and nobody knows if the chafer will build up resistance," he said.

That combination was effective last summer. Cochecho, right in the midst of Dover's severe chafer outbreak, lost only 4,000 square feet of turf to the beetle, mostly on mounds that tended to be drier than the rest of the fairway. "Other than that," Rowell said, "we kept it at bay."

On his rough, Rowell is staying with Merit, because Mach 2 is not recommended for unirrigated areas. He calculates the cost of defending against the European chafer at about $100 per acre. "The cost of golf just went up," he said.

Blackstone
Continued from page 6

repair the leaks in the irrigation pond's liner. Fall rains and hurricane season helped to mitigate the drought conditions and allowed Snyder to overseed the entire course.

"The seed went in well in the fall ... and we had good weather this spring, which has helped," he said.

The course held its grand opening at the end of May and has received rave reviews and high levels of play.

"The grass still has to fill in a bit. We are back in shape," said Snyder. "Now I can finally put the construction equipment away and concentrate on doing some of the agronomic work that is necessary. Rees Jones is coming up soon and he wants to make it perfect and bring this course to the top. We've got the design and the resources now to do that."

Snyder and his staff are now finishing the putting green and doing landscape work before getting to the final task—building a maintenance facility.
cate his members on renovation project requirements and capital improvement requests to make sure the facts are clearly understood.

"We, like most golf courses, are constantly trying to counteract the rumor mill," he said. "Our television station is incredibly effective in promoting good will and getting all the facts correctly stated to our members. One of the greatest examples is during hurricane season. Our television station is the greatest communication tool I have ever experienced in the golf business to say anything that I want to say by communicating in a friendly, efficient manner."

**AT FRENCHMAN'S CREEK**
Further north on the Atlantic Coast, in Palm Beach Gardens, is the Frenchman's Creek Country Club, where F.W. "Chip" Fowkes III is the superintendent. Frenchman's Creek is also a gated community—the homeowners are the only members. It also has the luxury of two club television stations that broadcast 24 hours a day.

"The beauty of television is that it takes you right into the members' homes. This gives the viewer an opportunity to watch the presentation in a relaxed setting. The documentary format that we use allows us to present our maintenance and project topics completely, without interruption, and in a factual yet familiar manner," Fowkes said. He also participates in a monthly show called "The Answer Man," where members submit questions about any aspect of the club to David Schain, who acts as a moderator and poses each question to the respective department manager for explanation. "This is a great way to cut down on the rumor mill by addressing member concerns right away," Fowkes said.

Fowkes also uses the television stations to explain to the members various policies and procedures, such as terrification and its benefits. He can edit in a picture of new root growth after coring a green, or show full infiltrometer tests before and after coring while giving an explanation as to the importance of the results.

He also does visual presentations of how to properly repair a ball mark and divot; introduces key maintenance staff members to the membership; immediately addresses problems such as flooding or storm damage during hurricane season; demonstrates new equipment that has been recently acquired; and shows before and after sequences of landscape changes or improvements to the course. Orender and Fowkes are two of the best examples nationwide of great communicators in our profession, because the membership clearly knows who they are and understands their role in operating and maintaining the golf course. The members receive factual and accurate information right from the source, and they can understand the important role that they play in the successful operation of the course.

"It would be really great if all superintendents had a television station at their respective courses so they could communicate to their golfers in a professional factual and accurate manner," Fowkes said, and Orender echoed that sentiment. "We are very grateful to our communication-minded members for their help and support."  

**Miles**
Continued from page 6

"Don't look at all 300 acres [when developing a grassing plan]; look at one hole at a time," he said. "And to the extent that it's possible, as early as possible, work up your own plans; work up your own budgets, and do your best to sell them to the powers that be."
New seeded varieties of zoysiagrass ready for market

By ANDREW OVERBECK

Following in the footsteps of Bermudagrass, which 10 years ago was available primarily in vegetative varieties, more new seeded varieties of zoysiagrass are emerging out of the testing plots and into the marketplace.

The typical problems with seeded zoysia have been germination times and rates, inadequate seed yields to justify production, inconsistent quality and unsatisfactory turf density and texture.

The new seeded types are being grown in the United States, as researchers have determined how to get the seed yield necessary to build proper inventory levels. As the turf quality of seeded types improve, more are being used on golf courses because it is more affordable than straight sod.

"Courses that are using seed are those that don't have enough money to completely sod or don't have the time for sprigs," said Dr. Leah Brillman, director of research for Seed Research of Oregon (SRO).

Zenith and Companion are both varieties developed by Lakeland, Ga.-based Patten Seed.

“We bought Zenith from Dr. Jack Murray in 1991,” said Dr. Tim Bowyer. "It has taken us this long to get inventory and acreage planted to get seed yields to make it a marketable product.”

Both varieties are grown at Patten’s farms in South Carolina and Georgia because the climate provides the right day length and humidity to get consistent seed

Beatrice CC testing zoysia for fairways

By GARY BURCHFIELD

Zoysiagrass is widely used on golf courses from about the Kansas City area on south, because of zoysia’s hardiness and tolerance of heat and drought. Nebraska, though, is on the northern edge of the transition zone, subject to severe winters that can winter kill warm season grasses.

Despite the risk, superintendent Casey Crittenden is running a zoysiagrass test at the Beatrice, Neb., Country Club in the southeast corner of the state. So far, he’s more than pleased with the results.

The private course has about 225 members and sees a moderate play level of approximately 20,000 rounds per year. The course is open year-round, but winter weather dictates how much play is possible. Crittenden says the last couple of winters have been mild enough that play was possible nearly the entire 12 months.

The course was renovated and reconfigured in the early 1990s, including the addition of some donated land on the south edge that brought the 18-hole course to 200 acres. Crittenden came aboard as course superintendent during the renovation.

During the renovation, the old bentgrass turf was replaced with a bluegrass and ryegrass combination on the fairways, a bentgrass mix on the greens and a bluegrass-rye-bentgrass mix on tees. Still, the combination of heat, humidity and drought the
seeded zoysia
Continued from previous page
head production.
Zenith is similar to Meyer-type zoysias with medium texture, medium green color and can be maintained at one half to two-inch heights said Bowyer.

“Zoysia, but is greener, finer and a bit more dense. “We developed Zenith first because it was more promising, but we eventually figured out how to get both varieties to produce commercial quantities,” said Bowyer.

Zenith is on the market now. Companion will be released soon and will be marketed by SRO.

Companion is similar to Zenith, but it is greener, finer and a bit more dense. “We developed Companion first, because it was more promising, but we eventually figured out how to get both Companion and Zenith to produce commercial quantities,” said Bowyer.

Companion will be released soon and will be marketed by SRO.

In addition to its Cathay and Sunrise seeded varieties, Jacklin Seed has received a patent for a new variety of seashore zoysiagrass that is extremely salt tolerant.

“[Zoysia sinica] is as dense as Japonica, a bit higher in color, highly salt tolerant, has good seed size and winter survival,” said Samudio. “We think the bigger seed will enhance its germination ability.” Zoysia sinica was discovered by Jacklin’s Dr. Joe Brede during one of his trips to China in the early 1990’s. The samples Brede brought back were growing in sea water, leading him to believe that they may have a salt-tolerant strain.

“It will have a better adaptation on courses that get sea spray and use second-hand water,” said Samudio. “And there is potential down the line that the seed would not need to be treated to improve germination.”

Jacklin is working to increase seed stocks now and it will be 2001 before certified seed is available.

RESEARCH
Researchers are also working to combat the early dormancy and late green-up associated with zoysia.

Brillman believes that year-round green could be achieved with zoysia by seeding tall fescue and zoysia together. “If you overseeded zoysia with tall fescue you could have cover and manage them as a blend in certain areas of the country,” she said.

Jacklin’s Samudio has also been looking at interseeding zoysia with fescue. “We haven’t seen any long-term survival studies, but we know that is the way to do it,” she said.

BEATRICE CC
Continued from previous page
past two summers has caused problems with burnout and higher than usual fungus attacks.

“The costs for fungus control on fairways is cost-prohibitive,” Crittenden said, not to mention the heavy irrigation needs. He discussed the situation a couple of years ago with Roch Gaussoin, Extension Turfgrass Specialist at the University of Nebraska. “He told me that the university has maintained a plot of Meyer zoysiagrass at its Mead research center, north of Lincoln, for the past 12 years and it has done just fine.”

Crittenden discussed the idea with his greens committee chair, then contacted Winrock Grass Farm in Little Rock, Ark., and arranged for a one acre shipment of Meyer zoysiagrass sod.

The sod arrived in May 1999 and was laid on a cleared area on the driving range. “We watched it all last summer to see how it rooted and knit in to fill the gaps. We have been very impressed with the results so far.”

WEIGHING COST VS. BENEFITS
Crittenden figures it would cost $275,000 with $300,000 to sod all the fairways to zoysiagrass at Beatrice Country Club. On the other hand, he estimates fungicide costs for the present course grasses could run from $80,000 to $100,000 per year if current conditions continue.

“Zoysia is not immune to fungus,” Crittenden says. “But, where we might have to treat the bluegrass-ryegrass turf once or twice a month, we can probably get by with one or two treatments per season on zoysiagrass.”

Zoysia can save on other maintenance costs. He estimates the zoysia will take from one to one and a half pounds of nitrogen per year, compared to four pounds per year for bluegrass-rye fairways. The zoysia will require less water as well.

Crittenden admits that zoysia isn’t a panacea or cure-all for his golf course turf problems. “But, to compete in today’s golf market, we have to keep our fairways in good shape and this is one way that seems workable.”

Gary Burkheldt is a freelance writer based in Lincoln, Neb.
Toro's new 3250-D features a no-tool, quick-adjust steering arm

The Toro Co. introduces the new and innovative Greensmaster 3250-D. The unit features a cutting unit suspension system (retains steering feature) and a no-tool quick adjust steering arm position, that adjusts for a wide range of operator sizes. The Greensmaster 3250D has a steering cylinder with through shaft design for accurate straight line steering.

New medium penetration front Whiele rollers result in reduced marking on the turf as well as an improved grass collection system (retains steering feature) and a no-tool quick adjust steering arm position, that adjusts for a wide range of operator sizes. The Greensmaster 3250D has a steering cylinder with through shaft design for accurate straight line steering.

Travel solo in the Sport

For golfers with physical disabilities, the path to the fairway is often rough. With that in mind, Mobility Solutions, Inc. has created a unique vehicle to assist the disabled in their game of golf. The "Sport" is powered by twin 400 watt permanent electric motors, uses twin direct drive 20:1 to 1 reduction sealed gearboxes and a twist-grip stepless control throttle for smooth operation. The "Sport" can climb hills with a 1-to-3 gradient, has an attached electromagnetic parking brake for safety and uses a 10-amp, 24-volt automatic battery charger. It is 36 inches high, 38 inches wide, 54 inches long, weighs 153 pounds and will travel up to 25 miles on a single charge. For more information, contact 330-888-5557.

Control aquatic weeds with Avast

Griffin, LLC, a joint venture company of Griffin Corp. and DuPont, introduces Avast, a fluridone aquatic herbicide. As an aquatic vegetation management tool, Avast offers aquatic managers species selectivity, long-term residual activity, easy application and no restrictions on access to bodies of water following application. It presents minimal risk to fish, waterfowl and desired plant species. Avast is a slow-acting herbicide selectively effective on target species, allowing desirable vegetation to be re-established without oxygen deprivation or fish kill. Avast continues to control problem weeds for up to 12 months. It is available as a flowable liquid formulated with four pounds active fluridone per gallon. For more information, contact 912-242-8635.

Smithco debuts new Tournament Roller

Smithco introduces the new and improved Tournament Roller greens roller. It features a more powerful engine and an exclusive roller design that assures equalized weight and ground pressure. The roller is powered by an 8-hp Honda gasoline engine that is rubber mounted to prevent vibrations and has a leak-proof drip tray that protects turf from fluid damage. It also has three 36-inch turf rollers that are tapered and faced with vulcanized rubber to give them a soft touch on the turf, prevent any damage from slippage and closely follow the greens' surface undulations. The Tournament Roller is self-transporting, with retractable wheels that are easily lowered for fast travel between greens, eliminating the need for a trailer and the job of unloading and loading. It weighs in at 700 pounds and its psi is 5.0 with an operator aboard. For more information, contact 612-888-8801.

Irrigate more efficiently with Rain Maker

Rain Bird has added flow meters to its golf product. Designed to measure the flow of water at a specific point in an irrigation system, flow meters can help identify breaks, failures or other flow related problems. They also help system managers meet local regulations, prevent water waste and monitor the use of reclaimed water. Two types of flow sensors are available from Rain Bird: Tee-type sensors come pre-installed in plastic or metal tees up to four inches in diameter. Insertion-type sensors are ideal for installation in pre-existing systems and are effective in pipe sizes above two and a half inches. Insertion-type sensors are available in brass and stainless steel models. Pulse transmitters interpret the spinning of the paddle wheel and translate it into a pulse that represents flow in either metric or U.S. measures. The 150 series transmitter features local programming and display. The 322 model allows programming through a PC and has plotted circuitry that makes it resistant to harsh environmental conditions. For more information, contact 800-648-7836.

De-thatch organically

The aggressive growth rates and extreme density of "super grasses" (such as the Penn A4 and G-2) are prone to excessive thatch layer buildup. Growth Product's Control De-Thatcher is an organic inoculant concentrate specifically developed to assist in the breakdown of thatch and other composting media. It contains a unique blend of carbon-based raw materials, slow-release nitrogen from a carbon/nitrogen source, and a concentrated source of beneficial, naturally occurring soil microorganisms. When applied to the soil, the beneficial microbes contained in Control De-Thatcher produce significant quantities of enzymes, which digest protein contained in thatch and other organic compounds in the soil. And other enzymes (such as cellulase, amylase, and protease) produced by the beneficial microbes (Bacillus) break down organic matter into valuable nutrients for other beneficial soil microbes. The extended and even release of this nitrogen source also discourages the formation of additional thatch and excessive top growth that result from fast-growing turf and related problems. They also help system managers meet local regulations, prevent water waste and monitor the use of reclaimed water. Two types of flow sensors are available from Rain Bird: Tee-type sensors come pre-installed in plastic or metal tees up to four inches in diameter. Insertion-type sensors are ideal for installation in pre-existing systems and are effective in pipe sizes above two and a half inches. Insertion-type sensors are available in brass and stainless steel models. Pulse transmitters interpret the spinning of the paddle wheel and translate it into a pulse that represents flow in either metric or U.S. measures. The 150 series transmitter features local programming and display. The 322 model allows programming through a PC and has plotted circuitry that makes it resistant to harsh environmental conditions. For more information, contact 800-648-7836.
HARDWARE

Edge-R-Rite bed shaper cuts close

Turfc's Edge-R-Rite bed shaper has angled blades to cut through turf with an oscillating blade action, similar to a sod cutter blade. The Edge-R-Rite features a standard right angle blade for edging and landscape installation work, a 30° angle blade for creation of tree and shrub rings, standard rotary blade for vertical cuts, a V-trencher blade for cutting drainage ways along hard surface areas and a 3-inch sod cutter blade.

The Edge-R-Rite is built with a solid steel frame, self-propelled drive, and is powered by a 3.5-hp Briggs & Stratton I/C engine. For more information, contact 800-679-820.

Solo sprayer rolls

Using proprietary technology to fit a plated half-inch steel axle as an integral part of the sprayer tank, Solo Inc., was able to add two 6-inch wheels without compromising tank integrity of its new Rollabout Sprayer model 457. The Rollabout Sprayer comes fully assembled with wheels mounted, and the pump handle serves as a grip for towing wherever the sprayer is needed. No screws, holes or fasteners are needed. The Rollabout Sprayer weighs 7.5 pounds, is 22 inches high and measures 11 inches hub to hub. The unit comes with standard inflation valve, wand, shut-off valve and nozzle and a six-foot hose. For more information, contact 757-245-4228.

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Measure climatic conditions with the Lite Station

Adcon Telemetry introduces the Lite Station. While other technologies require separate modules to record various conditions, the Lite Station uses patented probes to simultaneously read all relevant climatic data. Sensors are designed for temperature, humidity, wind speed, wind direction, precipitation and leaf wetness. There is also a choice of setting up an ET station. The solar-powered sensors transmit data up to one km (2/3 mile) to a personal computer from as many as three wireless stations. Data can be sent as a text file or in HTML. After analyzing the data, the system's intuitive software then gives recommendations on optimum conditions for irrigation. Additional features include precise monitoring of weather and soil conditions, solar-powered sensors with battery back-up, flexible measuring and transmission intervals, alarm and macro functions. For more information, contact 561-989-5309.
**HARDWARE**

**Davies Instruments**' new Fan-Aspirated Radiation Shields improve the accuracy of outside temperature readings.

**Terracare's pull-behind 5-gang**

Terracare Products Co. Inc. introduces a new self-contained 5-gang pull-behind mower for fairways. The unit is powered by a Briggs & Stratton 31-hp liquid cooled engine and has five 30-inch mower decks for an overall cutting width of 142 inches. The decks are 20 by 31 inches and will produce a uniform cut on turf. For more information, contact 608-429-3402.

**Parts and Accessories**

**Fill it in with the terrabroom**

Terracare Products Co., Inc. introduces the economy terrabroom. The unit features a revolving brush that sweeps topdressing into aerating holes. With the soft brush, it can be used in hot and humid weather with no damage to the grass. It is also designed to follow contours. For more information, contact 608-429-3402.

**SISIS frame eases hookups**

The SISIS frame on a Cushman Turf Truckster.

The new SISIS frame enables the quick attachment of SISIS implements to trucksters and other vehicles without 3-point linkage, utilizing the auxiliary hydraulics to raise and lower implements. For more information, contact 864-261-6218.

**Jacklin Genetics**

Now it's easy to know whether you have the best turfgrass mixtures and blends available. Just look for the Jacklin Genetics label.

The Jacklin Genetics label on the bag says you're planting seed varieties with:
- the industry's leading private research and breeding program behind them
- a wealth of innovation that has led the world in turfgrass development for nearly seven decades
- proven performance that combines unsurpassed color, turf quality and disease resistance with higher seed yields

You never have to wonder if the best is in the bag when the Jacklin name is on it. So ask for Jacklin Seed. And if you don't see the Jacklin Genetics label on the blends and mixes you're considering, ask "why not?"
**CHEMICALS**

**Reward herbicide improved**

Zeneca Professional Products has improved the formulation of Reward landscape and aquatic herbicide. The new formulation makes the product cleaner to work with, load and apply. It has been reformulated to remove the black specks that occasionally occurred when using the product. Reward is a fast-acting, non-selective, contact herbicide that helps manage broadleaf and grassy weeds. Reward is also registered for use in aquatic areas such as along edges and nonflood areas of ponds, lakes, drainage ditches and canals. For more information, contact www.zenecaprofprod.com

**Lontrel herbicide controls safely**

Lontrel turf and ornamental herbicide, manufactured by Dow AgroSciences LLC, provides the highest level of turf safety while offering superior post-emergence control of broadleaf weeds that show up most often on golf courses—clover, dandelion, thistle and plantain. Weeds absorb Lontrel as its active ingredient, clopyralid, moves through the plant and attacks all parts, including the root system. The process, called translocation, prevents weeds from sprouting. Eventually the weed stops growing, withers and dies. Lontrel contains 3 pounds of the active ingredient per gallon and is packaged in a tip-and-pour quart-sized container. Application rates vary from .25 to 1.33 pints per acre or up to 1/2 ounce per 1,000 square feet. This low odor compound can be applied to growing weeds on established turf throughout the United States. While Lontrel is excellent for use on golf course fairways, precautions exist for use on putting greens and tees. For more information, contact 800-263-1196.

**ROOTS® Case History**

Product comparison undertaken at Smiley’s Golf Course, Lenexa, KS

Kenny Hoehn, Superintendent

ROOTS® Turf Food and an ordinary organic fertilizer were applied, watered in for ten minutes following application and then watered for 20-30 minutes that evening. The following morning, the turf, still moist from the previous evening’s watering and morning dew, was mowed.

**RESULTS:**

**Photo 1:**
Ordinary organic fertilizer did not work into the turf, causing gumming on the rollers.

**Photo 2:**
ROOTS® Turf Food worked itself into the turf quickly, without gumming up the rollers.

**Get rid of geese naturally**

Newly developed GooseChase is a food-grade taste aversion agent, made from a bitter, smelly component of concord grapes (active ingredient methyl anthranilate). GooseChase renders treated food sources unpalatable and inedible. Geese cannot habituate to the taste. Field tests have shown efficacy: reduced goose activity in treated areas. GooseChase is an alternative to lethal methods and is environmentally safe. The material is biodegradable and is an FDA “Generally Recognized As Safe” compound. For more information, contact 800-662-5021.

**COURSE ACCESSORIES**

**Fossil signs resin fused**

Fossil resin-fused graphics are impervious to moisture, ultraviolet rays, extreme weather and resist graffiti, scratches and cigarette burns. Fossil can custom create signs with computer-generated artwork, high-resolution images using a customer’s own photographs, illustrations, logos, text or any combination of these elements. The visual is then printed and fused under extreme heat and pressure. Panels can be as large as 4 by 8 feet and 1/16 to 1-inch thick. They can be cut, shaped, drilled and routed to form an unlimited array of creative shapes.

For more information, contact 800-244-9809.
Sanford ready to play in Big Dig’s dirt

By ANDREW OVERBECK

BOSTON — After almost three years of work and more than 500,000 truckloads of dirt, developer Charles Gellich and architect John Sanford are finally ready to start construction on Quarry Hills Golf Course in Quincy. Gellich insists that all of the money they are being paid to take the fill is being eaten up by construction and engineering costs.

"By our estimates, we are saving the Big Dig $150 million," he said. "We are working three shifts around the clock and the staff is enormous. Our engineering costs alone are upwards of $7 million. Every dime we’ve been paid has all gone into the project."

Regulatory pressures have also added costs to the project, according to Gellich.

"There isn’t a regulatory body that we haven’t dealt with," he said. "Between federal, state and local authorities, we have an inspection by somebody every week."

As a result, Sanford estimated that he has done more than 30 different routing plans for the project.

New Tom Fazio complex in Virginia spotlights junior golf

By JAY FINEGAN

RICHMOND, Va.—When the Independence Golf Club opens here next summer, junior golfers will have an upscale course and facility to call their own. The $1.4 billion cost over-run of the Big Dig project, the developers maintain that the highway authority has saved money by trucking the fill a mere eight miles to Quincy. Gellich insists that all of the money they are being paid to take the fill is being eaten up by construction and engineering costs.

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Continued on page 20

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Keystone’s second 18-hole layout opens in Rockies

KEYSTONE, Colo.—The Rocky Mountains’ newest 18-hole course opened last month at Keystone Resort. Situated at 9,300 feet above sea level and surrounded by soaring peaks, the River Course at Keystone was designed by Michael Hurdzan and Dana Fry to compliment the natural beauty of the area and to minimize any impact on wildlife and native vegetation.

"With the opening of the River Course, Keystone will take its place as one of the premier mountain golf destinations in North America," said John Nighter, chief operating officer. "Each has its own challenges, with the highly rated Ranch Course, Keystone now offers 36 holes of championship golf in a spectacular setting. The par-71 River Course stretches to 6,886 yards, with a rating of 70.3 and a 131 slope. The front nine meanders along the Snake River, while the back nine provides superb views of the Continental Divide, Lake Dillon, and the Gore Range. The course also offers a 194-foot vertical drop on the par-4 16th hole and a challenging navigation through 12 bunkers on the 18th."

"There’s a breathtaking view from every hole on the course," said Steve Cornelli, director of golf at Keystone. "It’s more than just a natural design. We used environmental principles for this design. It looks as if the course was air-lifted in."

According to Cornelli, Hurdzan and Fry were selected because of their designs at the American Society of Golf Course Architects (ASGCA) and 15 years in the planning, Independence will also feature an 18-hole, Fazio-designed championship course, complete with four man-made lakes. An elegant, Jeffersonian-style clubhouse, 20,000 square feet, will anchor the complex and house everything from the pro shop and grill to a museum of Virginia golf history and a library. An education center will provide a place for seminars and conferences for superintendent, golf professionals, and club managers.

The so-called Kids’ Course, however, along with other youth-oriented amenities, makes the new facility the first of its kind on the East Coast. "The emphasis on kids has been the focus from day one," said David Norman, executive director of the VSGA. "We think it’s going to be a really neat atmosphere for them."

Measuring 1,326 yards, the Kids’ Course is a par-3 layout, with multiple tee boxes on each hole. "It’s going to be fun for everyone from toddlers up to the early teens," Norman said, "but it will look like a championship course. You will definitely have the feel of a regular course, with hazards and all. It has bunkers, but not pot bunkers, and it actually crosses a creek twice, but from the shortest tees you don’t have to shoot across water. The holes range up to 192 yards, but we’ll have some tees down to 60 yards for the..."
Dig
Continued from page 19

"There were many constraints throughout the permitting process," said Sanford. "We'd get a routing plan and they would change it because more quarries were discovered. Then we had a plan and the archaeologists found eight more prehistoric Indian workshop areas.

Each time, we'd do five to 10 different plans to make it work." Sanford also had to design around wetland areas and figure out how to terrace the course off the landfill mounds.

"The landfills are basically ellipsoidal domes and we had to use the fill to terrace off the side of the domes. I have worked in Japan where we were working with steep mountainous slopes, so I had a leg up on that," he said. Also, by using pre-loaded fill, Sanford hopes to avoid the pitfalls of settling that is common in courses that are built on landfills.

Now that all of the dirt has arrived Sanford is eager to get started.

"This project wins the prize for constraints," he said. "But on the flip side, it is a great location with tremendous elevation change and panoramic views. It is all worth it."

The course has 150 feet of elevation change and features views of downtown Boston, the harbor, Logan Airport, the Kennedy Library and Blue Hills State Forest.

Each nine-hole section of the course will have its own distinct design characteristics. This summer and fall, Sanford expects to shape, irrigate and grass the Milton 9 that will be fairly open and have a Scottish or Irish links look.

Between the Milton and Quincy landfills, the course will play through a natural valley and a tree-lined parkland-style section of the property. The final nine holes will play down along the water-filled quarries.

Working west to east, Sanford estimates that the rest of the construction will be wrapped up by the end of 2001 and all 27-holes will be open for play by summer 2002.

In the meantime, developers are working on a 44,000-square-foot clubhouse, a pavilion and four soccer and Little League ball fields. If construction keeps pace with the planned timetable, the project will open exactly 10 years after work began and bring a once derelict piece of property back to life.

"Eight years ago when I first started, it was one of those jobs that I looked at and said, 'Chances are this will never really happen, but if it does it will be a great course,'" said Sanford. "From day one it was a long shot, and now it is actually happening."
Nicklaus
Continued from page 1

"They want to leave the intensity of the Bay Area and retire to the relaxed lifestyle the Monterey Peninsula affords," says managing general partner Lee Newell. "The schools here, both public and private, are outstanding, and the city's growth limitations restrict density and traffic. Plus, most of these young millionaires realize that real estate in Monterey adjacent to a Jack Nicklaus-designed course is a sound investment for the future."

Frequent Nicklaus collaborator Chuck Reeves was charged with the construction and operation of the project. Reeves was saddled with the task of creating a playable, enjoyable course for club members on top of a drastically uneven landscape.

The par-71 layout maintains a natural feel with transition areas planted with native grasses. The fairways and tees are straight rye, and the roughs have a combination of rye and native fescue. The greens are standard bent.

WILDERNESS PRESERVATION

The terrain provided an interesting challenge for Reeves. In addition to difficulties presented by the unevenness of the property, wilderness preservation restrictions limited the amount of land that was legally workable. These significant obstacles and Reeves' design experience generated the character of the course.

Narrow landing areas for tee shots and confidence-testing carries over wilderness areas are Pasadera's signature.

There is a total elevation change of 375 feet across the course, with many holes having significant slopes. Nearly half of the holes are upward sloping and present players with difficult choices on how much of the slope they want to eliminate with their tee shots. Long drives are challenged by ever narrowing fairways and strategically placed traps.

"What made Jack great as a player was strategy. The same thing makes him great as an architect," Reeves says. "He always wants you to think off the tee, but not take the driver out of your hand."

The course has some interesting design features. The fairways of the par-3 sixth and the short par-4 fifth cross-over. "I think we did it safely," Nicklaus said with a wry grin.

The signature hole at Pasadera is the 211-yard par-3 14th, which requires golfers to carry a hundred-foot-deep canyon in order to reach safety. The views from this hole, and many on the course, especially on the back side, are spectacular. Glimpses of the white-capped Monterey Bay and nearby Mt. Toro abound on the 565-acre property.

Still, the Golden Bear is tentative about calling his creation a difficult course. He quickly reverts efforts to label it "tournament difficult."

"This is a golf course for people to enjoy, not for tournament players to enjoy," said Nicklaus. "I don't do golf courses for Jack Nicklaus—I do golf courses for the people who are going to play them."

The road from conception to completion has not been a quick one. The property was first looked into as a possible course location nine years ago. Though Monterey's city ordinances did not prevent the team's plans to build 255 new homes on the Pasadera grounds, the California Coastal Commission did intervene and have much to say about what could be built, and where they could build it. Although the restrictions presented a design challenge, the course more than retained the terrain's natural beauty.

Isaac Hillson is a GCN contributor based in San Francisco.
Independence
Continued from page 19

In planning the Independence complex, the VSGA looked at other centers owned by state golf associations. The Kids' Course, for instance, was inspired by the 9-hole, par-3 Little Course at Aspen Grove, in Franklin, Tenn., built by the Tennessee Golf Association. The championship layout drew on the example of Poppy Hills Golf Course, at Pebble Beach, owned and operated by the Northern California Golf Association.

With five sets of tees on each hole, the main course at Independence will range from 5,086 yards, from the shortest markers, to 7,134 yards from the back tees. To make it even shorter for very young players, additional tee boxes will be set along some fairways. "We understand that the length of a regulation course can be a deterrent to kids," Norman said, "and we want to keep it fun for them.

A CLUBHOUSE FOR KIDS

The Kids' Course is just one of the highlights for junior golfers at Independence. Concerned that the younger set might feel uncomfortable dining in the handsome grille room, for example, the planners decided to build a separate clubhouse for kids.

"We felt a need to give the kids their own place," said Norman. "The dorms are going to be at the far end of our double-ended driving range, down where the teaching center is, and it made sense to do food service and other activities near the dorms rather than making them walk up to the main clubhouse, 350 yards away."

"The South Carolina Golf Association actually has a little clubhouse in Columbia," Norman added. "We borrowed that idea. So we'll have a restaurant in there, or at least a kitchen, where the counselors can prepare pizza or burgers - kids' food. It'll be a nice place for them to hang out and release some energy. We think it's going to work out real well." For players age nine to 14, Independence plans to run the so-called Challenge Golf League, with uniforms, a regular season, and a tournament. "The kids will come for tryouts, and the coaches will draft their teams," Norman said. "They'll play a skills challenge one day a week, which means they put, chip, and drive for points. They'll also play head to head against the other teams, and on another day of the week they'll play a four-hole scramble. It's a lot like Little League baseball."

CADDIE TRAINING PROGRAM

The Independence course will feature the usual fleet of motorized golf carts, but it will also encourage the use of caddies as a means of forging connections between adult golfers and the upcoming generation of players. Some of the older high-dollar country club protect the caddie programs they have, Norman noted, but seldom these days does a new course come out of the gates with a caddie system.

He's aware of the pitfalls of caddie programs, and hopes to avoid them. "One of the problems with caddies now is that sometimes they don't show up, or sometimes they sit around and nobody takes a loop, and they go home without having done any work," he said. "It's a problem to match them up, unless you make it mandatory. We didn't want to require players to take caddies, but we did want to offer it. So the idea we're pursuing right now is to set aside certain hours during the day as assigned caddie starting times.

"For instance," he said, "you might want to tee off between 8 and 9 a.m., and that would be a caddie-only starting time. And then if the kids wanted to carry a double loop, we'd have it again from 1:30 to 2:30 p.m. With a system like that, if a kid signs up to caddy, he knows he's going to get a bag, and he knows he's going to get paid. He also knows the benefit of being with a player he can learn from and make connections. That's the neat thing about caddie programs - how the older golfer helps the younger golfer. We're kind of losing that."

The caddie training program will focus on kids age 14 to 21. "We're not out here trying to train 40-year-old guys to be professional caddies," Norman said. "And we might not want to set the rates very high, but more than they'd make flipping burgers at McDonald's. Part of our goal is to help train caddies for neighboring golf clubs. We're an amateur golf association, and these clubs are our members. So we'd help our member clubs get back into caddie programs themselves."
Marsh, Orion target golf courses with new food service venture

BY ANDREW OVERBECK

MT. STERLING, Ky. — Orion Food Systems, in collaboration with U.S. Senior Tour player, golf course architect and owner Graham Marsh, has developed a turnkey franchise food service operation geared specifically toward golf courses. The first Graham’s Grill outlet opened here June 5 at Old Silo Golf Club, Marsh’s first U.S. design. Two other locations will open this summer and Orion officials expect to have 15 to 20 in place by the end of the year.

The Graham’s Grill concept was formed when Marsh, who plays each year in an Orion golf charity event, convinced the company that an opportunity existed to provide simple, yet high-quality food service to golf courses.

“Food and beverage in golf is difficult to do,” said Marsh. “Most courses are stuck between a snack bar and a banquet facility and cannot get the right balance.”

Orion has designed a food service system that is easily customized and requires minimal training and staff.

“The financial benefits are going to come in a couple key areas,” said Tad Anderson, brand manager for Graham’s Grill. “The flash bake technology is a huge benefit for any golf course. It’s a very versatile machine with a lot of options, such as beer on tap, Austin (Texas)-made pizza, and a lot of hot food options that are very appealing to golfers.”

COURTESY OF ORION FOOD SYSTEMS

Open since 1994, the Ocean Course, referred to as the ‘Pebble Beach of Baja,’ features seven holes on the water with views of ocean, mountain and desert terrain. Construction of the Tom Weiskopf course, the second of three golf courses planned for the Ocean Course at Cabo del Sol, an 18-hole, Jack Nicklaus-designed layout in Los Cabos, Mexico.

The first Graham’s Grill at the Old Silo Golf Club in Mt. Sterling, Ky.

Troon Golf joins Cabo del Sol team

SCOTTSDALE, Ariz. — Troon Golf has been hired to manage the Ocean Course at Cabo del Sol, an 18-hole, Jack Nicklaus-designed layout in Los Cabos, Mexico.

In the next 18 months, the project owners plan to invest approximately $25 million in the construction of a second golf course, golf clubhouse, residential lots and associated infrastructure.

Open since 1994, the Ocean Course, referred to as the ‘Pebble Beach of Baja,’ features seven holes on the water with views of ocean, mountain and desert terrain. Construction of the Tom Weiskopf course, the second of three golf courses planned for Cabo del Sol, is scheduled to break ground this summer and open in late 2001.

Survivalink partners with Softspikes

MINNEAPOLIS — Survivalink Corp. has announced a strategic partnership with Softspikes, Inc., to sell its FirstSave Automated External Defibrillator (AED) to golf clubs and resorts. AEDs are portable devices that deliver an electric shock to the heart to halt sudden cardiac arrest.

“We selected Survivalink’s FirstSave because of its ease of use and the impressive clinical data from its STAR biphasic waveform,” said Jon Hyman, chief executive officer of Softspikes. In lab testing, Survivalink’s AED revived victims 100 percent of the time.

Sudden cardiac arrest claims more than 350,000 lives in the United States outside the hospital annually, and golf courses have been identified as one of the top five places outside the home where people suffer sudden cardiac arrest.
The Andersons wrap up Scotts Co. acquisition

By ANDREW OVERBECK

MAUMEE, Ohio — Just five months after signing a letter of intent to acquire the Scotts Co.'s U.S. professional turf business, Andersons, Inc. announced June 1 that the transaction has been completed. The company has now entered into a transition strategy to get its new sales team up to speed.

"For the size of the deal and number of people involved, it was a smooth process," said General Manager Tom Handel. "We are now working on getting our sales people lined up and aimed in the right direction.

The Andersons are also working to quell rumors and communicate what this acquisition means to the golf course industry. "There was a lot of speculation from a variety of sources that there was going to be some huge difference in Scotts products after June 1," said John Henson, marketing manager for the Anderson's Processing Group.

Andersons acquired the ProTurf, Contec and PolyS brand names from Scotts but will only be able to use the Scotts logo, the green oval, during the transition period. Andersons also signed a long-term supply agreement with Scotts. In order to ease through the transition process, said Henson, Andersons will spend the next several months visiting superintendents and distributors to evaluate their needs, concerns and expectations. The company will also be working on bringing new products to market.

"We have a lot of innovative energy and we have some things in the hopper that we think will be exciting to the future of our business and the industry," said Handel.

EPA reduces Dursban rates

By ANDREW OVERBECK

WASHINGTON — The Environmental Protection Agency (EPA) released its revised risk assessment for chlorpyrifos (Dursban) June 8 and has signed an agreement with Dow AgroSciences and other registrants to eliminate and phase out certain uses of the popular insecticide.

While Dursban use has been canceled in home and garden applications, agricultural and golf course uses are remain relatively intact. On golf courses, the EPA has reduced the application rate from four pounds per acre to one pound per acre.

Of the 35 insects on the Dursban Pro label, only six will be affected by the reduced rate ruling said Dow's Mike Melicher, customer agronomist for turf, ornamental and technical products.

"Control of annual bluegrass weevil, black turfgrass atenius, mole Continued on page 28

Zeneca targets owners, managers

WILMINGTON, Del. — Zeneca Professional Products has taken a new approach to marketing its products by directly targeting golf course management companies and owners.

"There is consolidation on every level," said National Accounts Manager, David Ross. "Management companies are purchasing other courses and smaller management firms and local courses are forming buying groups."

At the same time courses are under increasing pressure to keep costs down and one way to do that is by reducing inputs, said Ross. "Instead of having our prices driven down we are going to the source to learn more about what they do and how they make decisions," he said.

So far, Ross has found that the superintendent often has the final call in purchasing decisions, but the owner has some influence as well. "We are trying to give the owners more information so that when he has a conversation with the superintendent he is on a more even footing," said Ross.

— Andrew Overbeck

Golf Course News STOCK REPORT (6/16)

Company Symbol Stock Price %Change %Change P/E 52-week Proj. 5-yr

Astrazeneca AZN 42.375 1.50 -3.14 65.04 31-47.88 9.3%

Deere & Co. DE 41.125 -2.95 -7.58 35.4 30.31-49.32 9.5%

Dow Chemical Co. DOW 108.675 -18.06 -7.36 17.25 92-141.5 8.1%

Family Golf Centers FGCIQ 0.3125 -77.78 0.00 N/A N/A 0.25-9.5

Golf Trust of Amer. GTA 15.8125 -5.64 -3.10 12.96 14.5-25.75 8.5%

Ingersoll-Rand IR 43.8125 -20.43 -7.15 12.55 34.25-69.875 12.2%

Lasco Inc. LSCO 14.25 -16.18 -8.06 10.14 12.25-19.5 17.5%


Toro Co. TTR 34.3125 -8.04 11.13 11.89 29-39.5 12.0%

Textron Inc. TXT 56.5 -26.32 -14.15 12.55 51-91.75 14.2%

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□ B. 18 holes
□ C. 27 holes
□ D. 36 holes
□ E. More than 36 holes
□ F. Other: ____________________________

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□ 2. $50,000-99,999
□ 3. $100,000-249,999
□ 4. $250,000-499,999
□ 5. $500,000-749,999
□ 6. $750,000-1,000,000
□ 7. Over $1,000,000

5 Annual capital expenditure:

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□ B. $100,000-249,999
□ C. $250,000-500,000
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time to build a base of marketable items so it becomes a drawing place for buyers," she said.

San Diego-based Golfsat.com also debuted at this year's show, but has not gone live with its site.

"We are focused on building a true e-commerce business," said Chief Executive Officer Mike Scott. "That means embracing the existing distribution structure that is out there and creating software and capabilities to enable a distributor to log onto Golfsat through a control center and put up and take down product information and pricing."

A new version of Golfsat.com's site will be launched at the end of this month featuring technical information and access to university research. The company's 1.0 software is due to be up and running in September.

At that point we will have our five beta sites begin purchasing from a select group of beta distributors," said Scott.

While Scott thinks larger ticket equipment items will eventually be bought on-line, the site will initially target commodity items, such as fertilizer, chemicals, small power tools and replacement parts.

"Larger ticket items won't happen right away," he said. "But a distributor can now [with golfsat.com] take his salespeople out of the low margin commodity transactions and allow them to focus on higher margin, value added sales."

PROFESSIONAL GOLF COMMERCE
Denver-based Professional Golf Commerce (pgcgolf.com) recently added golf course maintenance specific equipment and supplies to its product listings.

The site also provides pro shop goods and will soon expand its coverage to the food and beverage sector.

According to President and Chief Executive Officer Kirk Sanders, the company is taking a different approach to setting up its superintendent-driven module.

"It is a different market. We are going to let them [vendors] dictate how they want this process to occur," he said. "The beauty of our model is that we don't focus on price; we are not forcing vendors to compete because these suppliers have worked hard to maintain pricing and provide value added services."

On pgcgolf.com, vendors will be able to access customers directly, decreasing mailing and customer service costs and ultimately increasing savings and profits, said Sanders.

The site already has more than 350 members and 57 superintendents signed on, but will not start to collect a membership fee until the first transaction. "Until we aggregate the critical mass of suppliers, we will waive the fee," said Sanders, who anticipates having the superintendent part of the site up in the next 60 to 90 days.

GOLFBUSINESS.COM
The National Golf Course Owners Association (NGCOA) announced June 9 that it has teamed with Apollo Real Estate Advisors to form golfbusiness.com, a vertically integrated marketplace for the golf course industry. The site, which brings 4,000 buyers and 40 sellers from the organization's Smart Buy Network into the fold, will go live Sept. 1, according to Michael McLaughlin, vice president of operations. The site will cover food and beverage, pro shop and maintenance goods.

"This will not just be an interchange," said McLaughlin. "We will be doing our own distribution. We will process orders and place them via vendors or go through logistics relationships."

This way, a course will deal with one vendor and get one set of purchasing orders and one monthly statement to streamline accounting he said.

SyncroFlo adds MESA
NORCROSS, Ga. — SyncroFlo, Inc. has added Pleasanton, Calif.-based MESA Energy Systems to its list of pump station service agents.

MESA, an EMCOR Group company, will service SyncroFlo golf, irrigation, commercial and municipal installations in California.
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"I am not going to go to everyone's individual web site," he said. "That is going in the wrong direction, we need a one-stop-shop."

Randy Nichols, superintendent at Cherokee Town and Country Club in Dunwoody, Ga., and a Greentrac.com user has been impressed with the cost and time savings available on-line. "Every time I have placed an eRFP I have saved the club money, anywhere from 10 to 35 percent," he said.

Exactly how the Internet will alter existing vendor relationships is still unclear, although some companies are envisioning a new sales model.

Linde Sorensen, managing director of Internet services for Toro Co., believes that the Internet will not replace face-to-face customer support, but will enhance it.

"It may get salespeople out providing training and product support and help them spend less time pushing paper," she said.

Casey Pearson, director of e-business for Textron Golfiturf, looks to take it one step further.

"I see customers using [on-line] configurators to put together specific combinations of accessories that they are looking for in a piece of equipment," he said.

However, companies are approaching the young e-commerce industry with guarded optimism.

"We are taking the conservative approach," said Sorensen. "We are looking at all the sites. There is not one solution."

Andrew Overbeck

Dursban rates

Continued from page 24

Melichar. "Insects such as ants, army worms, cut worms, chinch bugs, chiggers, tics and crickets will all be controllable at the one pound rate. The rate will still control 85 percent of the insects listed."

Dow will have to change the Dursban Pro label to reflect the new rates by Dec. 1, Melichar said that all product with the current label, including stock purchased between now and December can be legally applied until Dec. 1, 2001.

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Book4golf, NGCOA

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courses will go back to the course. Book4golf.com will get the opportunity to participate in regional and state chapter field days and multi-course management meetings, as well as be included in member prospect packages.

Book4golf.com also will be listed on the NGCOA web site, and NGCOA member courses will receive special broadcast faxes regarding Book4golf.com and Smart Buy Network promotional opportunities.

"The Internet is becoming increasingly important to golfers and golf course operators," said Mike Hughes, NGCOA executive director. "This agreement enables our 4,000 members to take full advantage of the benefits offered by the Internet and Book4golf.com’s Web-based products and services. The agreement will enable Book4golf.com to bring more courses online for golfing consumers nationwide, adding to the nearly 1,000 courses it currently has under contract.

"NGCOA constituents now have the leadership and guidance they have sought in the online, tee-time reservation arena," said Dan Drolet, executive vice president of Book4golf.com.
IRS, NGCOA

Continued from page 1

issued in 1955, states that "expenditures incurred by a taxpayer in the original construction of greens on a golf course constitute capital expenditures to be added to the original cost of the land and are not subject to an allowance for depreciation."

The IRS has consistently been guided by this ruling when auditing golf course owners.

"Nobody there [at the IRS] really had a clear perspective on the evolution and complexity of today's golf courses," said Bill Ellis, a partner with KPMG and the firm's national director of tax services for the golf industry.

The NGCOA enlisted KPMG's assistance in the negotiations to help fashion a professional and comprehensive response to any issues arising from the discussion. In spearheading the NGCOA's effort, Ellis set out to convince IRS officials that golf course construction, described as property description and background of this industry. Ellis pointed out the changes that have taken place in golf course construction and maintenance since the 1950s. Most notably, he said, course irrigation systems did not exist prior to 1959. He argued that the golf course has become an entire drainage system composed of different levels from the soil to sand and drainage pipes, down to the irrigation system itself.

Jim Moore, director of the Green Section for the United States Golf Association, in Waco, Texas, focused his presentation on the wear, tear and obsolescence of golf courses. He explained that if the irrigation system needs to be replaced, the greens also need to be dug up and replaced.

Moore described how changes in the game of golf influence course architecture, requiring reconstruction of the greens. The layer of gravel underneath the green is often composed of lime, which can break down due to mechanical pressure or natural chemical forces, he said, causing a decline in the amount of water being transported to the drainage lines.

Moore's presentation went on to describe root-zone damage. For example, he discussed the damaging effect of mowing on root systems. The clipping left behind accumulate in the upper layer of the root zone, causing deterioration of growing conditions.

Turfgrass, Moore contended, is often overlooked for its decline in value. Contamination, segregation and mutation are all reasons for the depreciation of turfgrass. Moore provided in-depth analyses of the ways in which greens, tees, bunkers and fairways depreciate.

Michael Haddad, executive director of the NGCOA, described the meeting as extremely productive. "I think they [the IRS] approached it with an open mind," he said. "We provided them with some really useful information."

The IRS, Ellis said, will not issue the ATG based on the outdated information from 1955. He is hopeful that the course owners may even be able to obtain revaluation of Revenue Ruling 55-290.
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