

SUPPORT SYSTEM



AGRONOMIC CONSULTANTS CAN BE A RESOURCE FOR SUPERINTENDENTS UNDER THE RIGHT CONDITIONS

When superintendents hear the words “agronomic consultant,” they react differently. Some think they’re too expensive, some fear their purpose and others question their worth. But some know a properly used consultant can offer tremendous benefits.

Terry Buchen, president of Williamsburg, Va.-based Golf Agronomy International, estimates half the golf courses in the United States hire consultants for advice, and they’re mostly medium- to upper-level golf facilities because those are the ones that have the resources to do so. Management companies usually consult in-house, he says.

According to Larry Gilhuly, director of the Northwest Region for the U.S. Golf Association’s Green Section, the Green Section staff visits only 10 percent of all golf courses in the United States.

Buchen says a good reason to hire a consultant is to maintain the continuity of a maintenance program, which can be hurt by constantly changing green chairmen who, in turn, change a course’s direction.

Scott Kroll, golf course superintendent at Sunnybrook Golf Club in Philadelphia, says consultants are a great resource to verify what needs to be done budgetwise.

“It’s reinforcement because consultants see a number of clubs in the area,” he says. “They see so many courses and tell you what’s working and what’s not working and help you stay up to date on emerging technology. They can suggest how to utilize your budget more. They reinforce what we do and educate us

about what’s going on in the area.”

Kroll says, like many courses on a program with the USGA, he uses its consultants to discuss agronomic programs and new materials and practices. A USGA agronomist visits Sunnybrook annually.

WHAT THEY OFFER

Buchen says he’s brought in as another set of eyes to consult on playing conditioning standards and agronomy.

“I ask, ‘Do you want the course to look good, play good or both,’” he says. “Most Americans want everything green. If you go over to the United Kingdom or Ireland, they don’t care as much about looks. They just want it to play good. Courses that have conditions that are firm, fast, dry and off-color are few and far between in the United States. Bandon Dunes is an example. It features fescue grass that’s maintained like in the U.K. You can putt off the edges of the green and play bump-and-run style of golf. You’re not playing the ball in the air all the time.”

Buchen checks maintenance operations by reviewing the history of how the course was built and how it has been maintained.

“It’s like going to the doctor’s office for the first time,” he says. “I walk the entire course and learn the entire agronomic history from the superintendent, take pictures and carry a soil probe.”

Buchen says clubs call him in for peace of mind or to deal with specific situations, such as agronomic problems, and want to know how to fix them. Most of the time he visits

BY JOHN WALSH

“It’s reinforcement because consultants see a number of clubs in the area. They see so many courses and tell you what’s working and what’s not working and help you stay up to date on emerging technology.” – SCOTT KROLL

The U.S. Golf Association’s Green Section visits about 10 percent of all golf courses in the United States annually.

Consulting agronomist Terry Buchen visits between 40 and 50 golf courses annually.

Of the superintendents Terry Buchen has worked with, he estimates only 10 percent have grow-in experience.

courses annually to make sure there’s continuity with agronomic programs.

“A lot of times, the superintendent makes a recommendation to the club, and I reinforce what the superintendent wants to do and is doing,” he says. “I also help recommend equipment. Most of my recommendations are maintenance-budget related. A lot of what I recommend is to spend more money, but to spend it properly and efficiently.”

Buchen says golfers are constantly comparing courses, which is irresponsible because each course’s budget is different. However, if one was to compare courses, he says there are five guidelines that can help narrow down the comparison process: (1) the number of workers per hole, (2) the cost per staff per hole, (3) the cost to maintain per hole, (4) the cost to maintain per acre and (5) the cost per round of golf per hole. He says he helps bring a maintenance budget more up to par with other courses that are better conditioned.

“If members are unhappy, it’s usually because they played another course that’s better conditioned,” he says. “All this ties back to budget comparisons for superintendents.”

Gilhuly says he has budgets in mind 100 percent of the time.

“We won’t recommend things that are beyond one’s budget,” he says. “But sometimes we do. For example, if the irrigation system should be replaced, we’ll recommend an irrigation consultant to start going down that path.”

Fairway topdressing is another example.

It’s a popular practice and allows one to play a golf course year round in the Northwest, Gilhuly says. But because it’s a high-ticket item, not everyone can afford to do it.

“We can talk about fairway topdressing and demonstrate topdressing aprons or par 3s with a greens topdresser,” he says. “After one year, members will see the difference, and then they can make the decision to buy the equipment needed to topdress the wetter fairways or all fairways.”

Buchen says superintendents are always trying to gain more knowledge, and that’s where he can help because he has gained a lot of knowledge from the 40 to 50 courses he visits each year and from his previous 26 years as a superintendent.

Buchen says courses don’t implement all his recommendations at once but do so throughout time. They schedule and prioritize the recommendations, and he helps with that sometimes.

Buchen and the USGA are examples of third-party, independent consultants. Buchen says there are free consultants, too, who represent products, services and equipment and give free advice but are trying to sway a superintendent to purchase their particular products only.

“I’m not tied to any one supplier, so I recommend as many different products and equipment as possible that do the job,” he says.

Golf Maintenance Solutions is a consulting firm that offers many services. It

can set up a budget, hire a management staff, develop fertilizer and chemical programs, evaluate equipment, establish a purchasing equipment plan, work with vendors, set up accounts and manage projects on the construction side, as well as set up quality control, cart maintenance and preventive maintenance. Bill Nauroth and Dean Wochaski own the four-year-old company. They used to work for management companies and were superintendents before that.

“We’re being used by different management companies and head up the maintenance side of an operation,” Nauroth says. “The majority of what we see is a lack of communication. We bridge the gap between owners, superintendents and general managers.

We marry their ideas. Sometimes it’s what superintendents want, other times it’s not. We’re opening their eyes to see things a different way, and for the most part, they embrace what we recommend because it moves the golf course forward. We try to get everybody on the same page with the direction of the club.”

Nauroth says superintendents want to know what’s really causing an agronomic problem so they don’t have to throw everything but the kitchen sink at it.

“We tend to come in for one scenario and end up coming back because they see the value in it,” he says. “Consultants have to prove their value. We need to work facilities through a situation and then move on.”



Gilhuly

GROW-INS

Assistance with grow-ins of new construction, renovation and restoration projects is another area in which Buchen offers expertise. He helps write agronomic specs with the superintendent and architect about what needs to be done.

“A grow-in is the opposite of routine maintenance, in which you want to keep the conditions dry and the fertility low, keeping the grass hungry,” he says. “With a grow-in

you’re using tons of water and fertilizer for a short period of time, usually two to three months.”

Buchen, who went through 13 grow-ins when he was a superintendent, says many superintendents don’t have grow-in experience. Of the superintendents he’s worked with, he estimates only 10 percent have had grow-in experience.

“With half the new construction projects, the owners try to bring in a superintendent

with grow-in experience, but you also need to look long term,” he says. “I usually go back to the course after it’s grown in.”

Kroll has worked with Buchen during a reconstruction project at the DuPont Country Club in Wilmington, Del., where he worked before Sunnybrook.

“We did a whole project in 367 days,” he says. “Using Terry was a huge asset because he helped narrow down materials and amendment mixes. When doing a project that large, you can use someone who has seen numerous projects and can process all that information to let us know what works best.”

Common problems

Throughout the year, consulting agronomists visit many golf courses, talk with many golf course superintendents and discuss many of the difficulties or problems they deal with regularly.

Larry Gilhuly, director of the Northwest Region for the U.S. Golf Association’s Green Section, visits different types of courses – 40 percent are private clubs, 30 percent are resorts, 20 percent are municipalities and 10 percent are privately owned public golf courses. Through it all, he sees four main common problems:

1. The impact of trees
2. Bunkers
3. Green speed
4. Aeration.

Gilhuly says the most common problem with golf courses is getting members to understand the negative impacts of trees, which are shade and roots.

“People understand it, but they don’t want to deal with it,” he says

Gilhuly says superintendents just smile when he asks about bunkers, the second biggest issue, because golfers think bunkers should be perfect and aren’t consistent.

The third biggest issue, green speed, is a constant. Gilhuly says everyone thinks they have to lower mowing height to get speed. He says rolling is a good way to increase green speed without lowering mowing height, but superintendents shouldn’t roll more than

three times a week. He says target rolling, in which one rolls 20 to 30 feet around the hole, works and is becoming more popular. Superintendents can roll quadrants of a green, coordinating green speed and hole location.

“You want grass to grow better, so it needs to be higher,” Gilhuly says. “The faster the speed, the fewer the hole locations. If we want healthier greens, we need to mow higher. It’s a problem all over the country. It’s a topic that’s talked about at every course. We’re trying to educate golfers.”

At municipal courses, green speed should be looked at differently because the fees are lower and so are the expectations.

“There’s so much more play at munis, and traffic control is a huge issue,” Gilhuly says. “Faster green speeds at munis are counterproductive. You can’t have green speeds too fast because you need to make money and get more people through the turnstiles.”

The fourth biggest issue, aeration, is unpopular with golfers. To lessen the disruption aeration causes golfers, manufacturers are planning to come out with equipment that causes less disruption of play when used, Gilhuly says.

“Golfers get aeration now better than they used to because expectations are so high,” he says. GCI

EXAMPLES

Jason Funderburg, co-golf course superintendent at the private, 18-hole Rich Harvest Links in DeKalb, Ill., says the idea of hiring a consultant was originally brought up by the owner and he and co-golf course superintendent Jeff Vercautren followed through.

“Originally, we set out for backing of what we were doing,” Funderburg says. “The previous superintendent didn’t keep up with agronomics. When we took over, we needed to spruce things up and needed justification for the increase of spending on chemicals and such.

“The owner has ties with the USGA, so at his request, we brought in consultants to discuss what we were doing,” he adds. “Paul Vermeulen from the USGA was very insightful. He gave us a lot of opinions and information from the hundreds of courses in the region. One of the things Paul liked was our overall philosophy, but he said we were too dependent on chemicals. We’re high end, so we don’t tolerate disease. We preventively spray for everything. He also wanted us to keep topdressing records more frequently and to implement a fairway topdressing program.”

Funderburg also says Vermeulen helped reiterate the fact that they needed to implement a tree removal program because several greens were negatively affected by too much shade.

“We talked to the members about cutting down trees until we were blue in the face, so the owners wanted us to bring in an expert,”

he says. "Then we began a slow tree removal program that started out on the two worst greens."

When Kroll was at DuPont, a USGA agronomist knew much about plant growth regulators and helped the staff with a program for the tournament course.

"It took tweaking to get better results because there were so many new products on the market," he says. "It's important when choosing a consultant to talk to him and make sure he's a good fit for you and the membership."

Buchen says most of his calls are one-day visits, but sometimes the first visit is a day and

a half because he delves into the details of the course's history and the maintenance practices. Unlike the USGA, he doesn't conduct half-day visits. The cost for one of his visits is similar to the USGA, he says.

Nauroth says costs for a visit from his firm can be a la carte and range from \$1,000 to \$1,200 for an overall evaluation that takes a day to \$3,000 to \$6,000 for a two- to three-day visit.

Gilhuly, who sees between 100 and 150 courses a year, says most of those are half-day visits, although it offers full-day visits, too. The cost is about \$2,500.

PERCEPTIONS

Despite the benefits of agronomic consultants, some superintendents are wary about them. Others are more confident about such a visit. Funderburg says he and Vercautren have stopped using consultants other than those from the USGA.

"We've gone away from other consultants because they sometimes gossip about what others are doing," he says. "And the USGA is unbiased – they don't push any products. They see more golf courses than the smaller consultants, have more knowledge and backing and work well with universities."

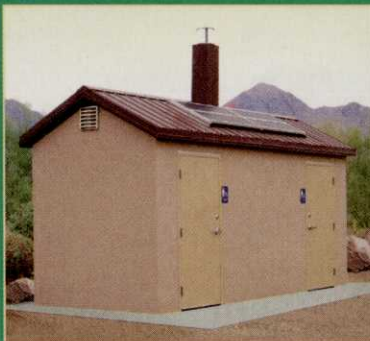
Buchen says most people who hire him are superintendents' bosses. He hears "I want peace of mind" a lot from club officials. He says superintendents can be suspicious and are protective of their turf.

"Superintendents that know what they're doing and are confident don't have a problem with me coming in," he says. "Those who have a problem tend to be more nervous and don't want you there. Superintendents sometimes tend to be very insecure people. They're like a chef who's only as good as his last meal. Some people think I'm there to take their job, but that's the last thing I want to do. I'm there to help them keep their job when there's a



Consultants can help superintendents with playing condition standards and the continuity of agronomic programs. Many times they reinforce what superintendents are already doing.

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serious problem. If they're nervous, I tell them I'm there to help them and reinforce what they're doing. If something needs to change or be done, I recommend that."

He says the superintendent business is interesting because their bosses don't know much about growing grass and other agronomic conditions, which is one of the reasons consultants are hired.

"It's a strange relationship," he says "The superintendent is telling the boss what he thinks they should do. So the boss usually listens to the superintendent's recommendations because there are many agronomic decisions the boss isn't qualified to make."

Gilhuly says the superintendent brings USGA agronomists in more than any other



person at a club, and in most cases, it's not because of a problem.

"We're a constant source of updated information they can use," he says. "It's a partnership. The Green Section's job is to provide

information, not protect superintendents' jobs.

"For superintendents that have never used us, when we have been brought in where there are problems, we're there to give answers," he adds. "We're not there to fire a superintendent. We're coming in to get facts. I've said this many times, 'There's no way one person can come in for four hours and determine if a superintendent is competent.'"

Nauroth says most of the time a superintendent is wary of his visit, but he lets him know he's there to support and help him.

"We're looking for the best options," he says. "Whatever direction is decided, the superintendent is a big part of it. We don't pull punches. We tell superintendents exactly what we're going to tell the owners."

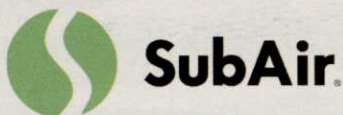
Funderburg says it's his and Vercautren's responsibility to make the course at Rich Harvest Links the best, and if that means having a consultant come in with recommendations, then that's what they need to do.

"We don't know everything," he says.

However, Funderburg suggests superintendents look to their peers before using an outside firm.

"Talk to the guy down the road, the guys who are actually doing what you're doing on a daily basis," he says. "That's when you'll get the best input. But if you need the backing of a consulting firm, why not use the USGA?" **GC**

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a necessary evil

Although some don't like them, cart paths help generate revenue

Jeff Osterfeld, owner of the Golf Club at Stonelick Hills, prefers long, broad curves in cart paths. Photo: Golf Club at Stonelick Hills

BY T.R. MASSEY

If a strip of concrete on the golf course has changed the game forever, blame Henry Ford.

The invention of the car and America's love affair with vehicles is the genesis of modern cart paths on golf courses. In the mid-1940s, three decades after Ford made a car affordable for most Americans, an enterprising entrepreneur built a small golf cart so golfers with disabilities could move throughout a golf course.

At the time, cart paths didn't exist. A purist would say it's a travesty to pave a small road through a pastoral field designed for a game of walking, and carts aren't needed because carrying a bag is a caddie's job. But golfers saw the golf cart and loved its convenience, and owners and golf professionals saw a way to make more money in addition to green fees.

Generally, the prevailing notion is that younger people ride and older people walk because of the way they were introduced to the game. At one time, golf carts were a luxury only for the rich. Now, carts are as common as drivers, tees and balls, and so are the paved pathways on which they're driven.

The golf industry has evolved into one in which motorized transportation is the rule, says Mike Benkusky, a Chicago-area golf course architect.

"Today, whether good or bad, people expect

a cart to be part of a round," he says. "That's starting to become the rule – \$50 includes a cart."

CONCRETE OR ASPHALT?

Cart paths are installed as a course is being constructed, or if an older course is being remodeled, they're installed as part of the project. Once the decision is made to have cart paths, a material must be chosen. Asphalt generally is cheaper than concrete, although rising oil costs have caused asphalt costs to increase during the past two years. Concrete generally lasts longer and requires less maintenance than asphalt.

Matt Rownd and his father operate The Cart Path Co. in Atlanta. He works with concrete and says it's better than asphalt.

"Many times you can replace a panel or two [of concrete] in-house," he says. "You could do it with one or two guys. Asphalt requires a special expertise. Also, concrete can be buried [when it's being disposed of], but not asphalt."

Rownd says a proper concrete mix matching a course's freeze/thaw climate and the concrete's use must be considered. More concrete per square inch is necessary if heavier equipment will use the path. Another part of the equation is whether to use fiber mesh in the concrete or steel rebar, which is more

expensive. The end use can dictate sturdier reinforcements.

With all concrete cracks – every eight or 10 feet of a cart path – a control joint must be cut in. This means the concrete cracks where you want it to.

"You'll never see it because it's recessed in the concrete about an inch or inch-and-a-half [down from the surface]," Rownd says.

Expansion joints are another must. These allow the concrete to expand and contract depending on the temperature without breaking or cracking. The standard interval is 80 feet.

Another important aspect to remember when installing concrete paths is that concrete attains its designed strength in 28 days after it's poured, so driving on it before then isn't recommended.

"Don't run anything on them until 28 days have passed," Rownd says. "That's when you can count on it and when warranty issues can be backed up."

Concrete can be different colors and have different finishes, from the pitted, coastal look to a broom finish or an exposed aggregate. Asphalt always is black.

Many courses have asphalt cart paths, and if the base is laid well, they work quite well. Clay Dubose, the general manager and golf course superintendent at Tradition Golf Club in Myrtle Beach, S.C., says his asphalt pathways

are preserved because he runs a vibratory root plow alongside them each year, preventing roots from growing under the paths that can damage them.

"It's a fairly small amount of our budget to maintain them, except when you have to replace them," he says. "A couple of years ago, we cut out some old paths, removed the roots and put a new base in. It was about \$30,000."

A typical 7,000-yard course will need about 25,000 lineal feet for wall-to-wall paths,

Benkusky says. The cost per yard of concrete or asphalt varies throughout the country, but the range is anywhere from \$200,000 to more than \$1 million. More width (eight to 10 feet is required for two carts to pass without having to drive off the pavement) and curbing add to the cost.

"It's a significant part of a golf course construction fee," Benkusky says. "Irrigation, greens construction and cart paths are the most expensive."

PUT IT HERE

General guidelines exist for cart path location. Cart paths generally are placed down the right side of a fairway, if possible, because most golfers slice, and it's better to have a path on a high side of a hole so golfers can see the location of their balls. Paths are placed on the outside of a dogleg so players don't have to look at the path in their line of sight. Additionally, it's unwise to place a path between a landing area and a hazard, especially water, because bad bounces are unfair and can ruin a round.

"You look and try to run paths to provide access on and off fairways," Benkusky says. "Put paths closer to landing areas. You don't want to put a path across a fairway unless completely necessary."

Benkusky says topography dictates the design and strategy of a hole in many cases, which trickles down to the placement of cart paths, i.e., one can't put a bunker where a path needs to go or vice versa.



Larry Canini, owner of Clover Valley Golf Club (pictured at top) has liability insurance to help protect him from lawsuits involving cart paths. Photo: Clover Valley Golf Club

At TPC Craig Ranch (pictured above), golf course superintendent Mark Johnson requested \$50,000 in his budget for cart path repairs. Photo: TPC Craig Ranch

Cart paths usually consist of asphalt (left) or concrete, which is more expensive. Photo: Jeff Brauer



TPC Craig Ranch in McKinney, Texas, has 7.5 miles of cart path. Photo: TPC Craig Ranch

“You try to find the main access points from the cart path,” he says. “You don’t want a cart path behind the bunker to the green.”

Golf course architect P.B. Dye remembers listening to his famous father address a group of golf course superintendents during the mid-1960s.

“His advice was to bring cart paths to the high side of every green and build a lip on them so golfers have to park and get out,” he says. “Then, they won’t remember they three-putted because all they’ll be thinking about is walking up a hill to get back to the cart.”

Dye says he operates under the general philosophy of building paths close to the level

of the tee and on the outside of the hole.

“You know where the best place for a cart path is?” he says. “The middle of the fairway. No one ever hits it there.”

Aside from location, cart paths need enough slope so they don’t retain water. Rownd says safety curbs can be used to direct water to keep it from eroding natural features, but that’s more expensive.

“You have to direct water to go somewhere,” he says. “Especially in Texas, Florida and other places in the South where there aren’t many terrain changes. You have to have at least a 2-percent slope to break the surface tension of the water on concrete. You have to direct it, and if you don’t have 2 percent, water won’t move.”

Though it might look appealing, putting
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Reducing damage from golf carts

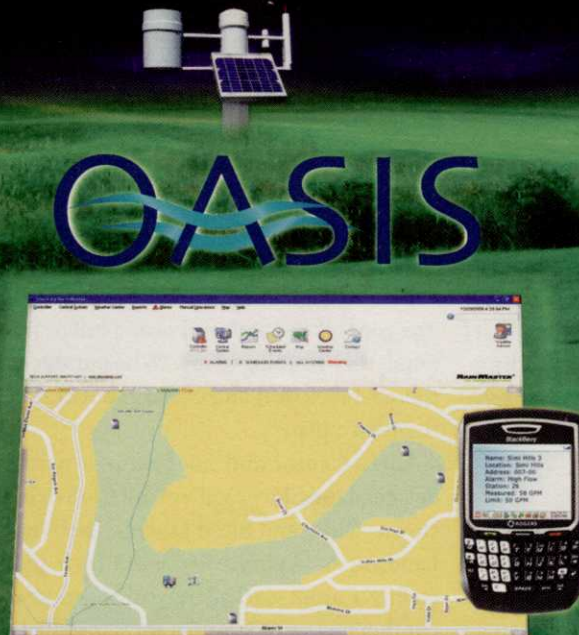
No matter how much golf purists dislike golf cart paths, they're here to stay. Cart paths are the route for owners to collect fees and save a course's flora from damage, especially during wet or cold weather. Mark Johnson, golf course superintendent of TPC Craig Ranch in McKinney, Texas, says he uses rocks around the curves of the course to help prevent the grass from wear.

"The wear around the edges is the biggest headache," Johnson says.

According to the U.S. Golf Association, golf carts damage grass and compact the soil. To reduce the damage, managers should establish cart policies. The USGA recommends:

- Encouraging golfers to spread cart traffic over a wider area and avoid turning and driving over the same areas repeatedly.
- Varying the entry and exit points along the cart paths each day to spread traffic and wear more evenly.
- Keeping all vehicles at least 30 feet from the edges of tees and greens to avoid damaging sensitive turf areas.
- Never allowing carts to be taken across excessively wet areas.
- Encouraging golfers to always share a cart.
- Encouraging golfers to use the 90-degree rule by exiting the path and driving to the first ball, then to the next ball, and then returning to the path.
- Restricting carts to the path on all par-3 holes.
- Proposing a "walkers-only day" one time per week when no golf carts are allowed on the course.
- Considering closing one additional hole to cart traffic on each nine on a weekly rotation. This allows the turf to recover from damage and gives the maintenance staff time for extra aeration and other procedures to stimulate turf recovery. GCI

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Cart paths generally are placed on the right side of a fairway - as shown on the Palmer Course at Oglebay in West Virginia - because most golfers slice. Photo: T.R. Massey



(continued from page 68)

curves in cart paths is a poor idea, says Jeff Osterfeld, owner, operator and designer of the Golf Club at Stonelick Hills in Batavia, Ohio.

"They cut off every inside corner, no matter how soft or subtle the curve," says Osterfeld, who's the founder of the Penn Station East Coast Subs chain. "Then you're sodding and seeding all the time. I would do longer, broader curves if I did it again."

LIABILITY

Cart paths aren't without a bit of controversy, though. It seems no one wants to take responsibility for their placement.

"The problem is everyone gets sued over the damn things," Dye says. "In my contract, I say everything I do is approved by the owner."

Some architects will consult about cart path placement but won't include it on the final layout.

"I'll look at how the circulation is going to affect the golf course and look at it to provide easy access so the pace of play keeps up," Benkusky says. "From there, you work with the contractor and owner. We don't like to say, 'This is where you put the path.' An engineer can do that work. It's such a liability. Someone goes off the path and over a hill or into a pond, they're going to say, 'Who put this path there?' I look at it and consult, but don't put them on a plan."

Larry Canini and his business partners designed the Clover Valley Golf Club in Johnstown, Ohio, and hired Lincoln, Neb.-based Landscapes Unlimited to build their public facility. Canini marked the paths, Landscapes cut them in, and Canini's crews installed the gravel base then subcontracted the asphalt installation. But early on he realized that he'd bear final responsibility for the cart path placements.

"Obviously, you have liability insurance,"

he says.

Michael Geiser, a partner with the Columbus-based law firm The Plymale Partnership, says cart path liability fears make him crazy.

"I've never had anyone call and want to sue because of it," he says. "It's conceivable there would be some liability if a golf course or path was designed in such a manner that it was foreseeable a customer would be injured. But when you think about the circumstances that would be necessary, it's laughable. The only thing I could think of is a cart path on a hill that's so steep it's probable the cart would tip."

Geiser says people take responsibility for themselves when they play golf, whether they know it or not.

"We assume the risk of injury when we play golf," he says. "It's standard law if you're participating in a sport and are injured, you've assumed the risk of injury. You're engaging in an activity that's known to be hazardous."

Geiser says wording of the contract golfers

COURSE MANAGEMENT

sign when they take out a cart relieves the course from liability. Only when there's true negligence in design is there a problem.

Golf course builders also require the owner to have the final say when it comes to cart paths. Scott Veazey, president of Tifton, Ga.-based Southeastern Golf, says many jobs he works on are a collaboration between the architect, builder, owner and subcontractors.

"Some architects flag out the path area, and we cut them in," he says. "They'll kind of do it, but they indemnify themselves from the final decision. Every course has a few critical areas. Some decisions have to be made, such as where the cart paths need to go, and that's where the owner is involved."

THE BOTTOM LINE

Considering the good and bad of cart paths, they still mean a lot to the bottom line of a course operation.

"What really affects the bottom line is when a public course has an outing that's been set up in advance, and it rains the day before," Benkusky says. "They can't say, 'No carts today,' because they'd lose the outing. That affects the bottom line."

Cart rentals represent a big item on a course's income ledger each year, with each cart generating several thousand dollars of fees during in-season months. Osterfeld says he put much thought into his cart paths when designing his layout because there's no question carts are a welcome and significant addition to the bottom line.

Mark Johnson, golf course superintendent of the TPC Craig Ranch in McKinney, Texas, says his operational line item for cart path repairs and his requests for capital dollars for cart path repairs is roughly \$50,000 a year for 7.5 miles of path. Johnson says it's worth it.

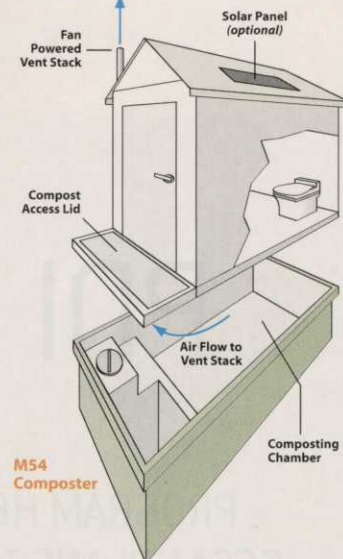
"If you get a rain day and it's walkers, you lose a lot of money," he says. "We are against them, but we manage them because they're always going to be here in this country." GCI

T.R. Massey is a freelance writer based in Columbus, Ohio. He can be reached at trm@columbus.rr.com.

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HYDROPHOBIC SOILS Any area of the Golf Course not up to par gets a DRENCH of 5gals. Surf-Side in 160 gals. water put out with a hand gun watered-in. This brings the areas under control.

LOCALIZED DRY SPOTS I've put up to 12-oz Surf-Side 37 in 2-gals. water and poured it on the LDS. It's best to first core the area with a soil probe. Follow with lots of water, and VOILA!!! No more problem. It's a "no brainer" for Superintendents fighting LDS.

DISEASE PROGRAM This is a good time to cut labor costs and maintain your Surf-Side 37 Soil Water Management Program. We average 5 to 7 fairway sprays a year and put 2-gals Surf-Side in the 160 gal. sprayer. On green and tees we average 8 to 10 sprays a year and put 1-gal. Surf-Side 37 in the 100 gal. sprayer.



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