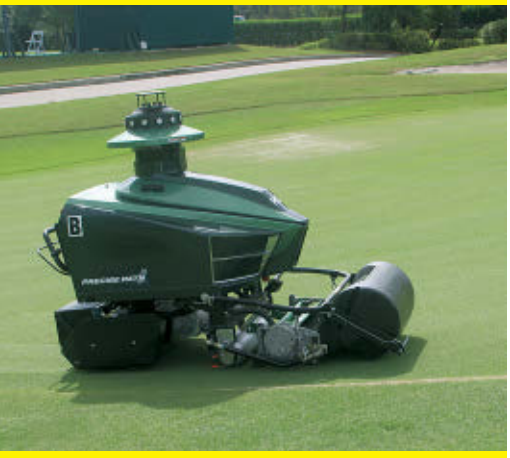


The RG3 robotic greensmower was just the latest in high -tech maintenance unveiled to the golf industry this year.

Golf course architect Rees Jones addresses the crew at Atlanta Athletic Club before the start of the PGA Championship while director of grounds Ken Mangum, CGCS, listens.

degree commercially prejudiced."

Uihlein said it's up to the R&A and the USGA to not only set the rules, but to assume greater responsibility in the game's future. "If not, who does?" he said.

Mark King, the CEO of Taylor Made, was even more blunt.

"I think it's time," said King of bifurcating the rules for pros and amateurs in light of the precedent-setting groove rule change. King notes that in the past he has "not been a proponent" of such a change because "we use Tour professionals as the main reason aspirational golfers will buy our products."

King says the game needs to "do something pretty quick" to make golf "a little easier, a little more fun."

Golf course design

In the nearly extinct world of course design and development, Tiger Woods saw his Dubai project halted after six holes were completed. Those six will now be allowed to return to the desert landscape, while his project at The Cliffs is also stalled indefinitely.

Even China, where most architects and workers have gone to keep busy, has stalled. But according to some the slowdown is happening under the weight of government crackdowns over the illegal building of courses.

"China, for example, is shut down right now golf-wise," Jack Nicklaus said in October. "We were over there about a month ago with a course two weeks from being finished that was shut down. They put a satellite up to monitor it to see that nobody was working."

As for things at home?

"I haven't been to a country in the last year where the outlook is as bad economically as it is here for us," Nicklaus said, confirming he has not been to Darfur.

Nicklaus was speaking just months after the scrapping of a controversial plan proposed by Florida State Representative Patrick Rooney to build a "Jack Nicklaus Trail" of sorts, opening up several parks in the state to be converted to new Nicklaus courses. And who was one of the main opponents of the bill, besides other lawmakers and an enraged public?

Arnold Palmer.

"While Arnold Palmer Design Company is a fan of golf as a tool for tourism… we do feel that there are alternative options than using our state parks for 'new' golf course development," the company stated.

That big ego battle will pale compared to one of the most intriguing course design stories of all time: the decision to hire an architect for the 2016 Rio Olympic course.

Expected to be announced in early 2012 after the Rio 2016 Organizing Committee launched an international design contest, participants have been asked to design a project that "meets International Golf Federation (IGF) specifications."

The course must be "capable of becoming an international centre of excellence for the sport of golf for professional and community use as a legacy to Rio's population." It also must "respect the environmental law in force and the local ecosystem," help promote Rio around the world and constitute "an important tool for youth transformation through sport."

Oh, and also host the first Olympic golf competition in over 100 years.

Because of the project's high profile nature, most major firms are bidding on a project that will pay a mere $300,000 to the winner.

That's a small fee in the world of course design. But in this economy, even the biggest names in the business will take the money. ■

Geoff Shackelford is a contributing editor for Golfdom.

LEASE — OR — BUY

??????????????????????????

A financial expert with John Deere takes a step-by-step look at acquiring equipment.

BY RHONDA FLANERY, JOHN DEERE FINANCIAL

In today's economy, superintendents and club managers are faced with a number of issues to tackle, from player demands to sustainability concerns to finances. For successful results, overcoming each obstacle requires preparation, planning and flawless execution.

When the time comes to purchase a new piece of equipment, you have a number of options. Instead of letting the questions mount and the stress get the best of you, at John Deere Golf we recommend setting a strategic plan to handle the process. As a finance company representative, I'm often cautioned to offer an even-handed, objective point of view about various financial options. So I feel strongly that there is only one way to think about acquiring new equipment, and that is to make the process as easy as possible.

The big picture

Every superintendent comes to the point where he or she can no longer put off the inevitable: It's time to replace a piece of equipment. More than likely, the first thought is, "How am I going to get the funding?" We know superintendents have to figure out how to save everywhere they can, and unfortunately, there are no simple solutions when it comes to new equipment needs. However, understanding all of the options at hand, and how to communicate them through your organization, will make a considerable difference.

The first inclination might be to simply work out a plan for the immediate replacements. However, I recommend you consider the bigger picture and formulate a plan to replace all your equipment, even if some of those purchases may be a few years in the future. Having a long-term plan enables rational consideration and replaces immediate concerns and worries with the confidence you need to make smart and efficient long-term business decisions. Plus, taking a big picture view of how you need to structure all your purchases enables you to better prioritize and, more importantly, justify your plan of action to your club manager and ultimately to the board of directors.

1 CREATE A CYCLE

The first step is to identify a replacement cycle for each piece of equipment.

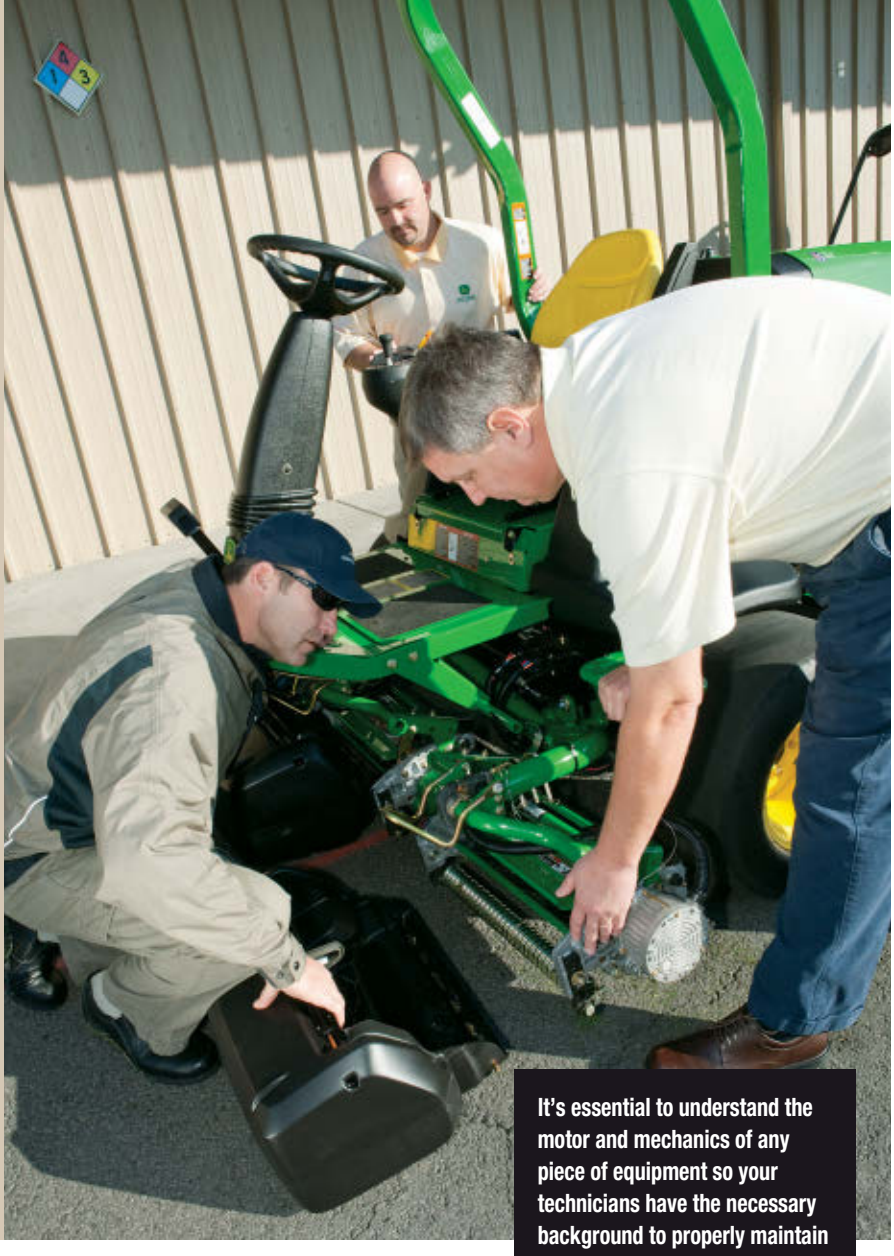
Generally speaking, there are some types of machines you know you can wait more than five years to replace, such as tractors, grinders and in some regions, aeration equipment. Other, more heavily used equipment, like greens and fairway mowers, you ideally would want to update every three to five years.

Next, weigh the choice between buying and leasing for each piece.

2 CONSIDER LEASING VERSUS BUYING

Buying offers the clear benefit of being able to call the piece of equipment yours at the end of the loan period, and freedom from a continuing obligation to make payments. However, it also comes with higher monthly payments, a down payment and continued maintenance costs. Leasing, on the other hand, requires you turn over the equipment at the end of the lease, lowers your monthly payments, often eliminates the need for a down payment, and leaves you in a better position to consistently use the newest and most advanced machines every three to five years.

"The equipment lease program was a great way for us to get our fleet updated



It's essential to understand the motor and mechanics of any piece of equipment so your technicians have the necessary background to properly maintain your new purchase. Here, John Deere Golf representatives give the customer a good look at a greens mower.

PHOTO COURTESY: JOHN DEERE

fast,"said Dan Meersman, director of grounds, The Philadelphia Cricket Club. "The benefits of leasing are the standardization for employee training, the ability to sync warranties and ensure all parts needs are streamlined."

If you follow the replacement cycle you developed, it's easy to walk down the path of whether purchasing or leasing is the best choice. Generally, purchasing is the way to go for those pieces you identified as having long replacement cycles (over five years). Leasing may be better for equipment like greens or fairway mowers that are typically updated more frequently.

There are other differences between buying and leasing, and how these purchases are accounted for on your organization's balance sheet, which may influence your manager and board of directors. Basically, leasing comes out of your operational budget, and purchasing out of your capital budget. So leasing equipment may leave lines of credit open that can be used for renovations or other areas needing improvement in your club. This is worth keeping in mind as you develop your plan.

It's no surprise that golf courses that follow their plans opt to have a mixture that may include multiple terms and both operating and lease purchases, as well as outright purchases.

3 THE FINANCIAL PARTNER

Of course, another way to reduce the stress of the whole process is to pick a financial company you can trust. So look for some specifics when considering your finance company options.

The first thing is the stability of the relationship. Changing finance companies can be time-consuming and a hassle. In difficult economic times, comfort can be found in having a long-term financing relationship based on trust.

Next, consider the company's reputation for integrity and support. We've all heard rumors of dealings that may not be within our comfort zone. True or embellished, it's important to think ahead and ask any and all financing questions you may have. It's better to ask in advance than to regret the question you didn't ask after documentation is signed.

Look for demonstrated flexibility. Your club may have specific nuances that require flexible arrangements. Within reason and with a stronger credit profile, you should have access to a seasonal payment schedule (for example, 6 on/6 off; 8 on/4 off).

Lastly, it's important to work with a company that is familiar with leasing or financing equipment for golf courses. Industry knowledge is important.

4 THINK THROUGH THE WHOLE PLAN FIRST, THEN RELAX

You have plenty of other worries to address when maintaining your course. Figuring out how to afford the equipment you need ideally should not be one of them. So if you plan ahead, discuss your options with local distributors and benchmark with your peers, you can take a lot of the aggravation out of the whole process. ■

Rhonda Flanery is a product marketing manager with John Deere Financial. She has worked for John Deere for 22 years.

Audubon International MARKS A MILESTONE

The organization dedicated to preserving wildlife and nature on golf courses celebrates 20 years.

BY KEN MOUM

Ron Dodson pulls old siding off the Audubon International headquarters around 1988. Below, Dodson and John Santacrose, then vice president of AI, in front of the building.

Today, it's hard to imagine golf without an organization whose mission is to help courses navigate their way to environmental consciousness. Several organizations and initiatives aim to do that now, but 25 years ago that wasn't the case.

Then, Ron Dodson had something happen that too many people in the business of golf will find familiar — he got laid off.

Dodson, founder and president of Audubon International, had been a regional vice president of the National Audubon Society. In the mid-1980s that organization suffered some budget deficits and closed a number of its offices, including his.

He needed to find something to do, and had plenty of history in the environmental movement of the era. "I am a wildlife biologist by training. I was a school teacher and did a number of other things, but I was always concerned about the environment," Dodson said. He added that he was talking to Kentucky residents about the environment back as early as the 1970s

PHOTOS (AT LEFT) COURTESY: RON DODSON; MIKE KLEMME (RIGHT); ISTOCK INTERNATIONAL INC.

when he lived there. "People there probably still think I was an environmental wacko," he laughed.

During his unemployment, Dodson contemplated his tenure at the National Audubon Society. "I had time to think about what we'd accomplished — the successes we'd had," said Dodson. "I realized I was tired of talking to the same people all the time — people who already agreed with us. I didn't want to be just opposed to things; I wanted to talk about what we were in favor of doing, and how we could help people achieve those goals."

Then, he said, some of the local people in New York suggested he restart the defunct Audubon Society of New York, which had been part of the Audubon Alliance, an organization of state Audubon Societies that predated the National Audubon Society.

He did that, and his organization will be 25 years old in 2012. The Audubon Society of New York eventually became Audubon International, and 20 years ago the Audubon Cooperative Sanctuary Program (ACSP) was launched.

In the years since then, 2,400 golf courses have enrolled in the ACSP.

But it wasn't a perfectly smooth trip to where we are today. Dodson started with the Community Conservation Network, which would have involved communities, but it didn't catch on.

So he began working on a cooperative sanctuary system of individually owned and managed properties that he could enroll into a habitat management program. Early on, his father suggested that he should work with golf courses because they could provide food, water and shelter for wildlife. Golfers would be a good audience for environmental education, he added.

Solving a skunk problem

Then, Dodson says, he got a call from the superintendent at McGregor Links Golf Club in Glens Falls, N.Y. and went there for a visit. "He showed me where they had skunks rolling up turf to get grubs," he said. "He didn't want to use a chemical to eliminate the grubs but wanted to stop the turf damage.

"So I gave him my spiel about wildlife — how it needs food, water, shelter. We located the skunk den sites in stone walls, and by eliminating the shelter, we altered the conditions enough to stop the turf damage. That prompted him to introduce me to other superintendents with similar problems."

Then one of his board members noticed someone faxing golf course plans at his sporting goods store, and suggested that Dodson help with the environmental elements of the plans. The course was the Lake Placid Club, and Dodson took the time to put together some suggestions.

He said, "I ended up tromping around the site and found some greens in a bog and one fairway too close to a river that was in the state's wild, scenic and recreational system. I knew because they were going to have to deal with the Adirondack Park Agency, getting the plans approved as drawn would be difficult. So I wrote a report and sent it to them."

In the end, Dodson was right, and the developers were forced to abandon the project. All was not lost, however. While working on the report, Dodson had the good fortune to meet Jim Snow, then a regional agronomist with the USGA Green Section. They talked about starting a golf course program, but it never went past the discussion stage.

The USGA joins the effort

Then, Dodson got a membership solicitation from the USGA. That prompted him to write a letter to the USGA about what he was doing with golf courses. And that resulted in an invitation to make a presentation at the GCSAA Conference

Continued on page 26

PHOTO COURTESY: RON DODSON

An area of Hollyhock Hollow Sanctuary, near Albany, N.Y., was donated to Audubon International by Dr. Robert Rienow, pictured. The group's headquarters is located on the sanctuary.

Continued from page 25

and Show in Orlando. It was an opportunity he couldn't turn down, but he probably didn't expect 1,200 people to show up, either.

It was clear that golf course superintendents were ready to hear his message that golf courses were going to continue to be targeted until the industry took a proactive approach to environmental issues. It was there that he publicly unveiled his organization's interest in working cooperatively with golf courses to change behavior and perception.

By then, Jim Snow was the director of the Green Section, and the idea of cooperating on a program for golf courses came to the forefront. Snow agreed to solicit funding from the USGA Executive Committee. But the reaction wasn't all positive. According to Dodson some members wondered why the USGA would want to give money to an environmental organization.

Then, Dodson said, "Someone in the meeting who had been involved with the Lake Placid Club said, 'Is this the organization that Ron Dodson runs? Because if I had listened to his suggestions and advice four years ago, we'd have saved $4 million. If he's going to run it, I'll vote yes.'"

The USGA did offer Audubon International a grant, and within a year 150 courses had signed up. By 1994, more than 1,100 golf courses had joined the ACSP for Golf Courses. That year, the Green Section Record reported that 15 courses had received certification from the program, and a year later the number of certified courses had expanded to 36.

In recent years, the economy has had a dramatic effect on the golf industry, and some courses have found even the small annual cost of being in the ACSP difficult to justify.

According to Gregg Breningmeyer of John Deere Golf, his company wants to do something about that problem. It has offered to pay half the cost for new or lapsed members.

"We like to make the best use of our resources and if we talk about our sensitivity to the environment, we need to follow up on that with action," Breningmeyer said. "There are people in golf who are doing things that are not only sensitive to the environment but also enhance it. We need to support those people."

Where things stand today

According to Kevin Fletcher, executive director of Audubon International, there are 2,400 courses enrolled in the program, including ACSP, Classic and Signature categories. About 750 of them are already certified and another third of the courses are actively working to get certified.

Fletcher has been with the organization for 10 years and executive director since 2007.

"We have tried to focus on real, measurable results on the ground and on tying those results to the business value of environmental stewardship," he said. "As an organization involved with golf for 20 years, I am happy with what we've done, but it's still only a blip in the graph. We have enrolled about 15 percent of the courses in the U.S.

"That's why it's important to tie the program to return on investment. We want to see measurable growth in the 85 percent of courses we haven't reached and we want to look at the entire facility, not just the golf course. We are exploring how we might do that. It's clearly a need." ■

Contributing editor Ken Moum lives in Topeka, Kan.

Clark Talks Turf

TIMELY TURF ADVICE

Painting Dormant Bermudagrass Greens

Grady Miller is a professor of turfgrass science at North Carolina State University. Grady's research program addresses a number of topics, including all aspects of painting dormant bermudagrass on golf courses. Miller can be reached at grady_miller@ncsu.edu.

Q How common is painting dormant bermudagrass greens? It is fairly common today, with more superintendents choosing to paint greens each year. Once one golf course in an area paints their greens it seems the others tend to follow the next year. The reason is that superintendents and golfers are more likely to consent to painting their greens once they can see for themselves what it looks like at a local golf course.

Q What are the common threads among golf courses that paint their greens? Painting dormant bermudagrass greens started at low budget facilities, but today painting is being done on all types of facilities. The amount of traffic on greens during the dormant period is a key question to answer before deciding to paint. If the greens experience wear problems when left dormant without painting, or if wear patterns are present in overseeded turf, painting is not a good idea. Painted surfaces will only tolerate a modest amount of traffic before the bermudagrass wears out.

The idea of painting dormant bermudagrass turf started with sports turf managers and has moved into the golf industry. Talk to a local sports turf manager for a few tips on painting dormant bermudagrass. I have seen a few golf courses paint their fairways and have talked to a couple of superintendents who are going to try a light rate of seed on their overseeded greens along with painting to provide a good playing surface.

> "Colorants can range from $400 to over $1,000 per acre with no guarantees that a higher priced product provides better quality."

Q What has been the response of golfers to painted dormant bermudagrass greens? Golfers are embracing the idea. Initially there is some trepidation, but after trying it once, most golfers embrace the idea. They experience good putting quality during the winter, a smooth transition in spring and save money by not overseeding. On a year-round basis, putting quality is much better on a golf course that paints versus one that overseeds.

Q What turf management practices should be taken in fall prior to painting? Slightly increase the mowing height to provide more leaf surface for the paint to stick to and apply the paint when the grass is still partially green. Partially green turf will require less paint and will look better when painted.

Q What are your guidelines for selecting a paint? I prefer the term colorants rather than paint. The products used in the turf industry are more similar to a dye than a latex paint. There are about 25 turf colorants on the market and it is difficult to compare products because there is no standardization in place. Colorants can range from $400 to over $1,000 per acre with no guarantees that a higher priced product provides better quality.

Q How long will a single application of a colorant last? In most cases, a colorant will last 50 to 60 days. They are primarily degraded by UV light. Rain and cold weather are not major factors in colorant degradation. At most golf courses, colorant is reapplied 50 to 60 days after the first application. A third colorant application is made at a few golf courses.

Q Anything else? In most instances it is cheaper to apply a colorant than to overseed. While the initial price of the colorant is expensive, when you compare the cost of seed, water, fertilizer, mowing and labor associated with overseeding, applying a colorant is less expensive. Plus you have more weed control options on a green that has colorant applied rather than overseeded.

Clark Throssell, Ph.D., loves to talk turf. He can be reached at clarkthrossell@bresnan.net.

TURFGRASS TRENDS

THE PROMISE OF COMPOSTING

PART 2 IN A SERIES

Alternative Approaches to Manage Dollar Spot

By J.B. Workman and C. Waltz

Over the last 40 years, fungicides have been the most widely used tool for managing dollar spot, *S. homoeocarpa*. As a result of numerous applications of fungicides during a growing season, resistance of *S. homoeocarpa* has led to an ongoing challenge of fewer fungicides being available to control the disease.

S. homoeocarpa has developed resistance to several classes of fungicides including heavy metal-based compounds, contact fungicides, and systemic fungicides such as dicarboximides, benzimidazoles, and demethylation inhibitors (DMI) (Ki Jo, 2008). Resistance of *S. homoeocarpa* to certain benzimidazole fungicides like Cleary 3336 and Chipco 26019, two commonly used older fungicides for dollar spot control, have been reported (Vargas et al., 1992, Ki Jo et al., 2008). Resistant strains to these particular fungicides were found to have persisted for more than 20 years on some golf courses. The development of resistance to the DMI fungicides like Bayleton and Rubigan occurred much slower compared to the benzimidazole fungicides. In some cases the benzimidazole fungicides developed resistance in one to two years after the products were used, whereas most of the DMI fungicides had been used for more than ten years before resistance was confirmed. In most cases, *S. homoeocarpa* exhibits cross resistance (i.e., resistance to more than one fungicide within the same chemical group) or multiple resistance (i.e., resistance to different fungicide classes).

Although fungicides have been successful for dollar spot management in the past, increasing levels of fungicide resistance, coupled with tightened environmental scrutiny of existing fungicides, has left fewer chemical options for controlling this pathogen. Therefore, turfgrass managers are looking for effective alternative disease suppressive practices that may help delay the occurrence of fungicide resistance or extend their effectiveness.

Incorporating natural organic amendments such as compost into turfgrass disease management may be an alternative for dollar spot control. Composting is the controlled rotting of organic matter. The composting process is mediated by microbial activity and can be affected by physical and chemical characteristics such as temperature, aeration, moisture, carbon to nitrogen ratio (C:N), and pH. The result is a stable end product with increased organic components and nutrient availability. The process is considered to be the most efficient treatment in producing an envi-

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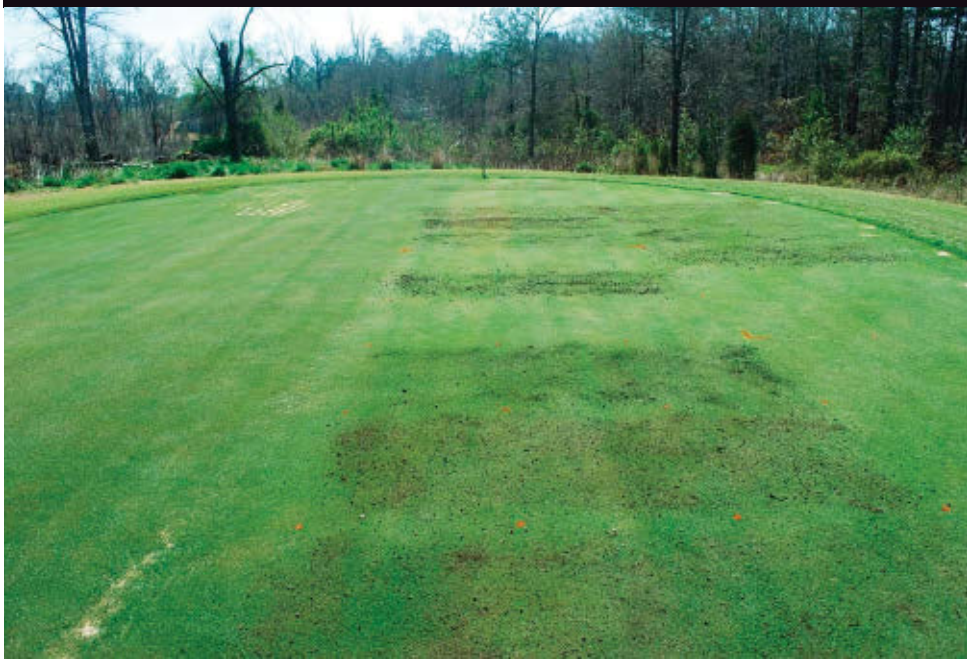
FIGURE 1



Naturally suppressive composts can be incorporated into normal turfgrass maintenance.

PHOTO COURTESY: CLINT WALTZ, PH.D.

Continued from page 29

ronmentally safe and agronomically advantageous soil organic amendment at acceptable costs. The purpose of composting is to convert organic material that is unsuitable and incapable of being incorporated into the soil into a material that can be safely introduced into the ecosystem. Successful composting is achieved from the continual supply of oxygen and water to the microbial community, along with temperature and adequate mixing.

There is interest in the use of natural organic amendments for use on turfgrasses because of their potential effect on increasing soil microbial activity. Researchers have reported significant reductions in dollar spot severity following applications of certain organic fertilizers including Milorganite, Ringer Green Restore and Sustane, as well as certain composts prepared from turkey litter, sewage sludge and plant material. A high level of microbial activity in compost is believed to be a reason composts are able to successfully suppress turfgrass diseases. Increased microbial activity in soil presumably diminishes the activity of plant pathogens by antagonizing, parasitizing or competing with pathogens. Researchers from Cornell University postulated that suppression is a result of elevated microbial activity resulting in increased competition with pathogens for root exudates. Studies have shown that infectious disease agents are prevented from germinating by high microbial activity in composts through competition for nutrients. Through continual removal of nutrients, especially carbon and iron, pathogens are prevented from germinating and therefore remain inactive. Disease suppression may also be due to enhanced microbial breakdown, resulting in an increased availability of nutrients, which may stimulate plant recovery from disease infection. Known bacterial*(b)* and fungal*(f)* species in compost include *Fusarium heterosporum(f)*, *Acremonium* spp.*(b)*, *Rhizoctonia* spp.*(f)*, *Enterobacteria cloacae(b)*, *Pseudomonas fluorescens(b)* and *Pseudomonas lindbergii(b)*, all of which have been shown to suppress dollar spot.