

stamp out Gray Leaf Spot in perennial ryegrass

Prevent the dreaded *Pyricularia grisea* (for which there is no cure) by planting new, Gray Leaf Spot resistant ryegrasses developed by doctors for Turf Merchants.

Even the best home lawns, parks and golf courses have Gray Leaf Spot in late summer when days are hot and humid.

Gray Leaf Spot isn't pretty. It strikes quickly, affecting young ryegrass seedlings first with gray-to-brown lesions, often contorting tender blades into fishhook shapes. With prolonged hot, humid weather, large, mature turf areas can be lost to this dreaded disease.

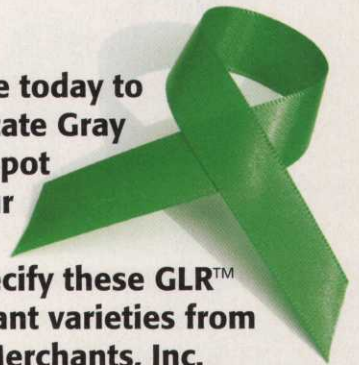
In existing, older ryegrass turfs, Gray Leaf Spot can be addressed by applying a preventive fungicide, but once the pathogen has developed, little or nothing can cure it.

It's prudent to take precautions.



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The Endurance Factor

How much shelf life do those old, half-used turf products have left in them? It depends

BY JIM BLACK, CONTRIBUTING EDITOR

Walk in to any golf course maintenance facility, head directly to the storage area for seed, fertilizer and chemicals, and you'll find them tucked away in a far corner or up on the top of a rack.

Abandoned and forgotten, the stash of leftover turf products sits in the dark maintenance shop with dust quietly marking time on the half-empty bottles, jugs and bags.

From my own experiences, these collections of musty, old clumping and rotting relics inherited from a handful of previous superintendents always gave me a slight cause for concern.

"Is this stuff any good anymore?" I would wonder. "What happens to some of these

chemicals over time? Will it be worth the effort to spray this stuff out or apply this fertilizer? If the mice are still eating the seed, does that mean it'll still germinate?"

My biggest fears were always that the insecticide was a thousand times more toxic, or the selective herbicide would no longer select. And surely the fertilizer was now hotter than MSMA on a 95-degree day.

And disposal fees? Forget about it. No public course I ever worked at wanted to engage in that discussion. "Just spray it out," they would say.

"Yeah, right," I would think to myself. "And suffer the consequences."

So what to do with all this waste? Mostly, I would just work around it, giving a cursory glance and a fleeting thought of how to dispose of it, while at the same time cursing

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it for being in my way. In the end I have to admit I did what all the superintendents before me did — left it for my successor.

Since that time my curiosity has been getting the best of me. Could all those old products have been put to good use without worry?

Rather than continuing to wonder, I decided to find out once and for all what can be done with them.

According to Doug Brede, research director of Simplot Partners and author of the “Turfgrass Maintenance Reduction Handbook”, the shelf life of turf products depends primarily on how they are stored. Take seed, for example.

“If kept in a basement with low humidity,” Brede says, “you can have fairly good germination on many turfgrasses at four years and even up to 10 years. We routinely keep bluegrass seed here in Idaho in an unheated warehouse for upwards of 10 years for research purposes, with little decay in germination rate.

“The exceptions to that rule are: fine fescue and hulled bermudagrass. Both of these have a short shelf life of two years maximum. Hulling, or stripping away the floral bracts, really shortens the life of seed.”

As far as fertilizer and chemicals go, Brede says: “Fertilizers keep indefinitely but will cake in humid environments. It’s usually best to use them within six months, but 10-year-old fertilizer is still good if you break up the clumps.”

Brede says dry pesticides will keep indefinitely. “Liquids decay with time, depending on the formulation,” he adds. “Emulsifiable concentrate (EC) products settle into plastic goo. Solubles keep for several years.”

Once, I discovered some chemicals of which I had never heard. When I researched the manufacturer on the peeling label, I found the company had gone out of business. I knew what the chemical was, but how was I to know how old it was?

Barbara Klahn, of the Product Support Center from Bayer Environmental Science, says the only way to determine how old products are is to get the lot numbers off

the packages. Lot numbers are usually ink-jetted onto the packaging, not the labeling, she adds.

“We conduct shelf-life studies for two years on our products,” Klahn says. “Typically your baits are the shortest-lived products because of the food material in the baits, followed by liquids. Dry formulations tend to last the longest.”

David Ross, technical manager for Syngenta Professional Products, notes that the Environmental Protection Agency has specific guidelines for chemical producers to establish at least two years of product longevity.

“When registering with the EPA, they will accept the results of an accelerated storage study where chemicals are subjected to heat of 60 degrees Celsius for two weeks to mimic conditions over two years,” he says. “We shoot for a five-year shelf life, but only guarantee for two years. In general, all products have at least a two-year shelf life at room temperature.”

Ross notes that actual shelf life can depend on several factors: formulation, percentage of active ingredient, pH, sunlight and heat. All of these factors can break down chemicals and reduce efficacy.

“Elemental metals, of course, will never break down,” Ross adds. “When you see an actual physical change in the product, you can expect degradation. But for dry products like wettable powders and water-dispersible granules, they will last a long time if you just keep them dry.”

One of my big curiosities about these old chemicals was whether or not they actually get more toxic as time goes by.

“There’s nothing I know about that grows more toxic over time,” Brede says. “However, this should not be confused with pesticides found from the 1960s in someone’s garage. There were some arsenic and heavy-metal pesticides sold back then that I wouldn’t want to get near. Most of today’s chemistries are between the toxicity of table salt and gasoline.”

All right then. We know storage conditions are a big factor with our two biggest summertime enemies, heat and humidity, taking their toll on our valuable turf products. But what about the cold?

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“There’s nothing I know about that grows more toxic over time.”

DOUG BREDE,
SIMPLOT PARTNERS

The best thing to do is to plan ahead and don't store a lot of chemicals.

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Todd Burkdoll, a market development specialist for BASF Professional Turf & Ornamentals, says when some EC materials are under freezing conditions, the cold temperatures change the molecular structure of some of the constituents, especially the inert ingredients.

"Most pesticides are less than 50 percent active, with liquid products less than 20 percent active and dry products maybe 60 percent to 70 percent active," Burkdoll says. "Typically, you have at least 50 percent inert ingredients. What a superintendent needs to do is look at the MSDS for the product and that will tell him exactly what the freezing point is for the material."

Burkdoll notes that it's best just to use your products up and keep a lower inventory.

"It's good risk management all around," he adds. "If the label changes on a product or if the product goes off registration, you can't

use the product in certain states anymore."

Burkdoll also suggests keeping good records and making inventory lists. You may end up in a situation where you buy a pesticide for a specific reason and leave the course to take another job. Then when the new superintendent comes to the course, he might not know the background on that product and the reason you purchased it.

"The best thing to do is to use what you're going to use this year and plan ahead and don't store a lot of chemicals," he says. "In certain cases when you have fire sales or early orders, a (vendor) has a blue-light special opportunity to buy more at a reduced price. There is nothing wrong with that, but you've got to use the product accordingly."

So let's say the stuff you have lying around is just too scary looking to trust being sprayed or spread out even into the furthest reaches of your rough. *Do not*, I repeat, do not just chuck

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2009 Dog Days of Golf Calendar



Is Your Canine Camera-Friendly? If so, please submit a photo of your dog to be considered for LebanonTurf's 2009 Dog Days of Golf calendar. Photos of your dog in a golf-related setting, in action or with you are encouraged. The 2009 calendar will feature dogs from your favorite course and be circulated to golf course professionals throughout the country. Any questions? Please call Cynthia Andrews, 1-800-532-0090 ext 253.

Submit your nomination today for LebanonTurf's 2009 Dog Days of Golf calendar. Complete the following information and send in a **high-resolution photo** of your dog to *Golfdom* magazine, Attn: Kristen Morabito, 600 Superior Ave. East, Suite 1100, Cleveland, Ohio 44114 or e-mail it to kmorabito@questex.com.

Deadline for entries: August 1, 2008

Free gift to all who submit!

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Searching For A Cost-Effective Solution To Control Dollar Spot?



Problem: Dollar Spot

Dollar Spot *n.* - The fungus *Sclerotinia homoeocarpa* ("Dollar Spot") commonly attacks low-cut creeping bentgrass. It thrives in damp clippings or moist, cool soil.

Symptoms:

Fast-spreading Dollar Spot begins as small discolorations. Grass blades as small discolored patches on bleach, forming dead patches on turfgrass surfaces. Spreading infection causes ugly, tan-colored spots 2-3" wide (silver dollar size).

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3. Cobwebby white mold
4. Damaged putting greens



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The Science of Nature

The most sensible thing to do is to order only what you need to keep inventory to a minimum.

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it into your dumpster. The environmental and financial risks are just too great.

Maryland is one state that occasionally offers a free pesticide disposal program, but it is usually reserved for farmers and agricultural producers. But Rob Hofstetter of the Pesticide Regulation Section of the Maryland Department of Agriculture says superintendents can sometimes take advantage of disposal programs. If a superintendent finds a program in his or her area, he or she will sometimes be allowed to participate and be charged only what the hauler is charging the state, which can be as little as 97 cents per pound. "But remember, that's based on the hauler getting 20,000 pounds of material or more," Hofstetter points out.

Unfortunately for superintendents, Hofstetter says these programs are becoming more and more scarce. Contacting an independent certified waste hauler is usually the best option to take if you're unsure.

Another option is to call your local county landfill services office and see what's acceptable. I was very surprised to find out that if you have a nasty bag of old fertilizer that's gone to mush or has solidified into an N-P-K brick, you can actually just throw it away in some areas. But be sure it's straight fertilizer and not a combination product.

I think that it's obvious that the most sensible thing to do is to order only what you need to keep the inventory of partial bags and bottles to a minimum. But chances are you'll be inheriting an aging arsenal of chemical and fertilizer relics. When it comes to their use and/or disposal, I advise you to use your head to avoid losing your job.

Jim Black, a former Maryland golf course superintendent, is now an operations manager for Scotts Lawn Service in southern Maryland. In switching to the lawn business, Black has gone from taking care of 200 acres of turf to taking care of about 356,000 acres of turf. ■

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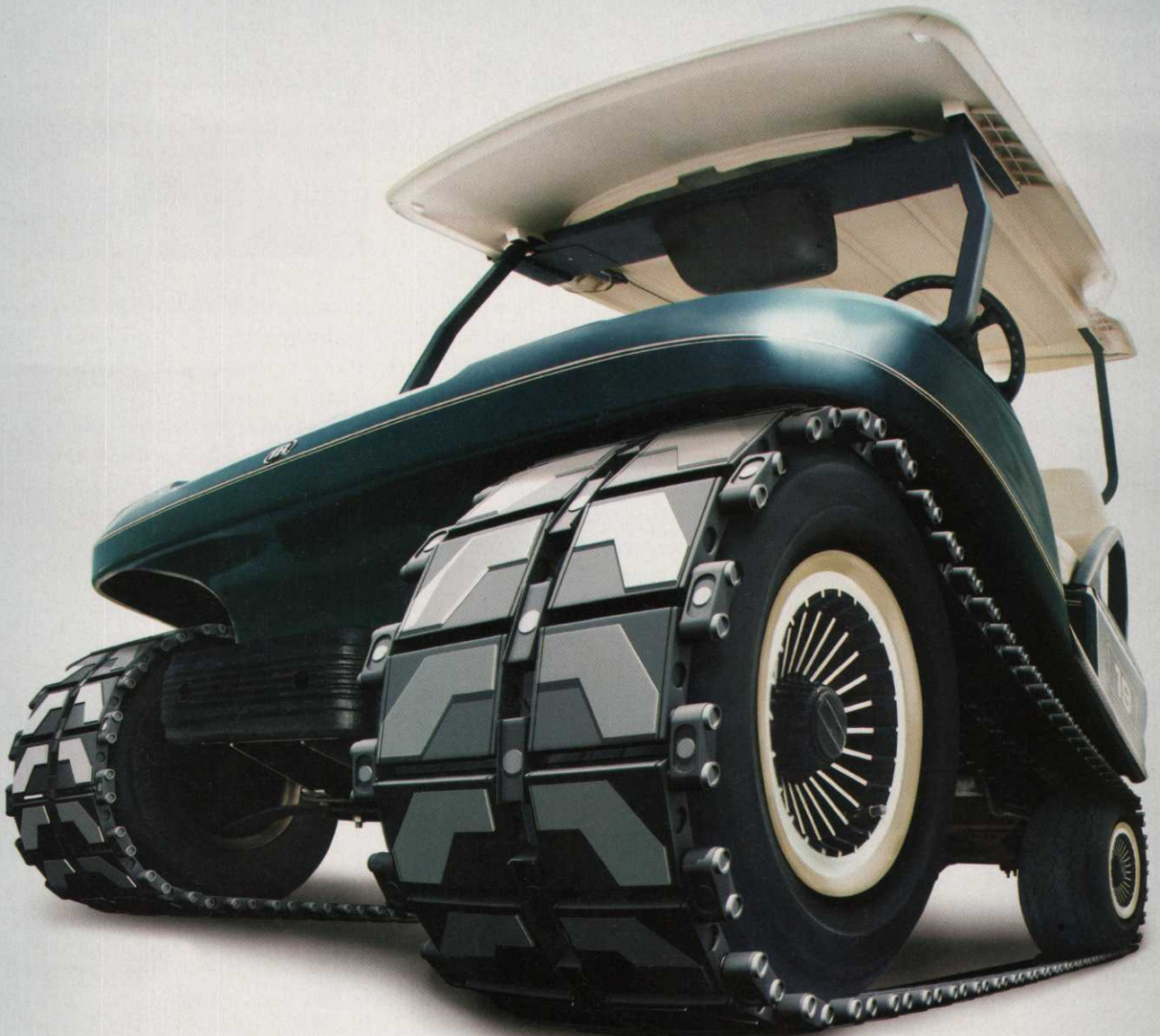
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TOP Assistants

Chris Cantrell knows the definition of hard work

Editor's note: Top Assistants will feature a question-and-answer session with an assistant superintendent every month. If you'd like to nominate someone for the feature, please send an e-mail to Larry Aylward at laylward@questex.com.

Counting summer internships, Chris Cantrell celebrates his 20th anniversary in the golf course maintenance business this year. Cantrell has been the assistant superintendent at Chattanooga (Tenn.) Golf and Country Club since 1995.

"In my more than 20 years as a superintendent at Chattanooga Golf and Country Club, I have not worked with anyone who works harder than Chris," says Jeff Hollister, the club's superintendent.

Cantrell also has been a tremendous influence on other employees, Hollister says. We caught up with Cantrell recently and asked him a few questions:

Golfdom: What's your favorite part of the job?

Cantrell: I have always enjoyed the construction side of the business. I work for a very progressive club that is always trying to improve its facilities for its membership. Over the years we've tackled many projects, and through those I have enjoyed the learning experiences and the friendships that are made while trying to reach a common goal.

Golfdom: Who has been the biggest influence on your career and why?

Cantrell: I've never accomplished anything in my life alone, and I owe many people my gratitude and sincere thanks. It begins with my Christian faith, and I owe it all to Christ. I also have a mom who taught me to work hard and never lose sight of what is important. My

wonderful wife, Nicole, is my greatest supporter and friend. My boss and mentor, Jeff Hollister, continues to teach me not only the science of the industry but the importance of relationships and communication. Tim and Wes Gilbert, two brothers who own Windstone Golf Club, taught me all the fundamentals I still rely on today. Plus, they gave a smart-alec kid a chance in the beginning. Mark Stovall, superintendent at Lookout Mountain Golf Club, first taught me how to manage a crew and is the best net worker, bar none.

Golfdom: What's your favorite product or piece of equipment and why?

Cantrell: I really like the Toro Groundsmaster 4500D. It delivers a great cut on our bermudagrass roughs; it's easy to operate, and it will climb virtually any slope. Although we only use it twice a year, the Cushman Core Harvester might be the best piece of equipment ever.

Golfdom: If you could change something about the industry right now, what would you change?

Cantrell: I believe that unrealistic expectations are slowly strangling the game of golf. Golf courses across the country are spending more time and labor to make sure hazards, especially bunkers, are pristine. Greens are only acceptable if they are rolling above an 11 on the Stimpmeter. Roughs have to be flawless. Golf course budgets continue to rise in order to meet those expectations. It is very important to provide a good, consistent golf course, and



if we accomplish this task, then the golfer is ultimately responsible for the lie of his/her ball. Golf was intended to be played in the elements, and it is the golfer's challenge to adapt to the golf course — not the golf course adapting to the golfer.

Golfdom: Describe yourself in one word?

Cantrell: Dependable.

Golfdom: What is your favorite hobby and why?

Cantrell: Outside of golf, I enjoy running. I took it up about 10 years ago in order to lose a few pounds. Since then, I have run several marathons and hope one day to qualify for the Boston Marathon.

Golfdom: What's your favorite vacation spot?

Cantrell: Ka'anapali in Maui, Hawaii.

Golfdom: What is your favorite golf course besides your own?

Cantrell: Manatee County Golf Course in Bradenton, Fla.

Golfdom: If a movie were made about your life, what actor would play you?

Cantrell: I tell my wife that most people mistake me for a younger George Clooney, but without question I look more like Matthew McConaughey.

Golfdom: It's your last day on Earth. What would you do?

Cantrell: I would take my family (Nicole and three English Springer Spaniels) on a hike. It was a disaster the last time we tried it, so it might be a good time to try it again. Afterwards, we would go home, fire up the grill, and it's steak and shrimp for everyone. ■