

BY ADAM MOELLER

Dollar Spot – An appropriate name for a costly nuisance disease

Dollar spot is expensive to control on fairways, but a little tolerance for this nuisance disease can result in significant cost savings at your golf facility.

Dollar spot (caused by the fungus *Sclerotinia homoeocarpa* F. T. Bennett) is a very common disease on golf courses, especially those with creeping bentgrass or *Poa annua* (annual bluegrass). It was originally named more than 70 years ago because infected turf resembled silver dollars. At present, dollar spot is a perfect name because it is expensive to control on fairways. Budget constraints are an increasing concern for many golf facilities, and fewer fungicide inputs to control dollar spot present a great cost

fairways depends on many factors; however, the amount of disease occurrence that is acceptable at your golf facility is the driving force in most cases. Dollar spot control with cultural and chemical inputs is never perfect, and some amount of disease breakthrough on fairways is likely each year despite regular use of preventative inputs. How much dollar spot is acceptable at your golf facility? This is a question that should be asked.

Before this question can be answered, the impacts on playability must be understood. The dollar spot pathogen blights

be slightly sunken, but it is unlikely to be sitting on bare soil. The infected turf will be discolored, matted down, and sparse, but very playable. Remember, there are no guarantees for perfect lies, even in fairways. Is it ideal to play shots from turf with symptoms of dollar spot? Probably not, but an increased tolerance of dollar spot creates a significant cost saving opportunity for golf facilities looking to reduce maintenance costs.

Many golf facilities with low budgets simply cannot afford to treat fairways for dollar spot control, yet golfers still enjoy the course. Play the ball as it lies and play the course as you find it are fundamental principles of golf, and this includes turf affected by dollar spot. If golfers become more tolerant of dollar spot incidence, fungicide use can be reduced. This allows turf managers to make fewer fungicide applications each year and save money in the process. The cost of making a single preventative fungicide application can vary greatly, but a conservative estimate is \$2,000 to \$5,000 for an 18-hole golf course with 25 to 30 acres of fairways. Forgoing just one or two fungicide applications each year could help pay for many important golf course maintenance items, such as labor, materials like top-dressing sand, or even allow for a small budget reduction. Regardless, fewer pesticide applications for dollar spot control results in a more economically and environmentally sustainable golf facility. Spending large amounts of money on cos-

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saving opportunity for golf courses without significantly impacting playability.

Dollar spot can develop on golf courses in the Midwestern and Northeastern U.S. for most of the growing season, while many other diseases are found under more specific environmental conditions as illustrated by Figure 1. The long duration of seasonal activity requires superintendents to budget dollar spot prevention programs accordingly, with many making 5 to 10 (or even more) applications per year on fairways. The number of applications made to prevent this disease on

turf leaves, creating 1- to 2-inch-diameter spots of tan, matted grass. Because the disease does not infect turfgrass roots or crowns, it is primarily a cosmetic problem and not usually lethal to the turf.

A dollar spot outbreak can severely compromise ball roll on a putting green because it creates small depressions, often referred to as pitting, in the turf canopy. On fairways, playability can be affected by the disease also, but it is almost always more of an aesthetics nuisance than a major problem with ball lie. For instance, a ball lying on infected turf may

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metic problems is not money well spent, and fewer fungicide inputs targeting a disease that is rarely lethal to the turf will serve to make the game of golf more affordable for everyone.

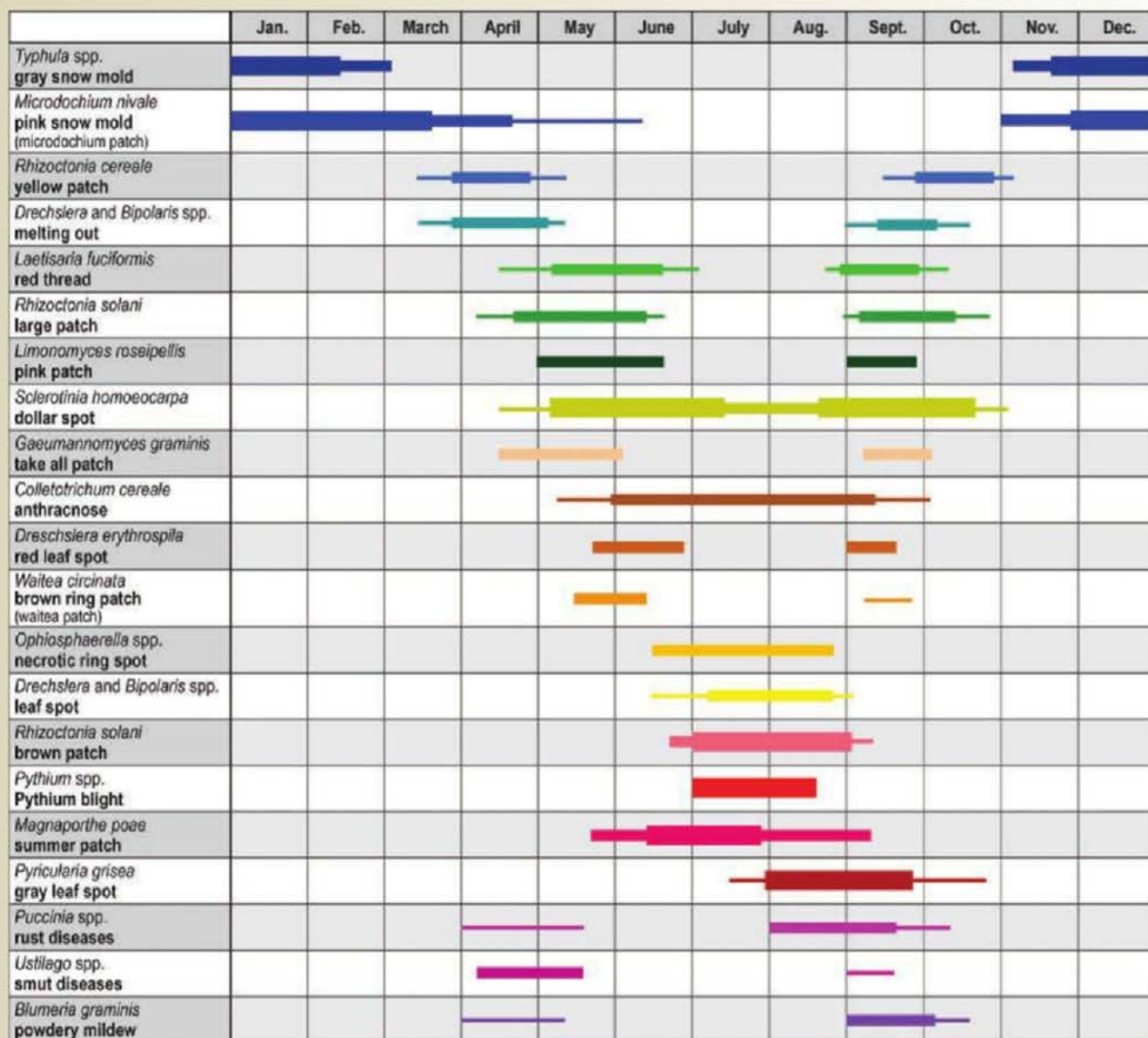
Reduced fungicide use for dollar spot does come with some challenges beyond golfer acceptance. Mainly, what happens if dollar spot outbreaks get really bad? The amount of disease breakthrough is not a linear relationship with fungicide use. Sometimes a curative program will result in very little disease, while at other

times moderate disease could occur. New fungicides with good curative efficacy against dollar spot and long residual activity will allow for this type of program to be utilized more successfully than ever before, even if severe outbreaks occur. With appropriate rotation of systemic active ingredients and tank-mix combinations with contact active ingredients, fungicide resistance concerns can be minimized as well.

Curative fungicide treatments require full application rates, while preventative

applications usually are half the curative rate. Thus, one could argue that two preventative applications will cost the same as one curative application and probably result in less disease. But if the disease does not occur or if the outbreak is small to moderate because of a favorable change in the weather, the money spent to prevent dollar spot could be wasted. Budgeting for preventative versus curative control strategies against dollar spot is difficult, but the costs of curative fungicide programs will not exceed the

Figure 1: Seasonal activity of turfgrass pathogens in the Midwestern and Northeastern U.S. Figure courtesy of Dr. Richard Latin, Purdue University. Originally published in Seasonal Activity of Turfgrass Pathogens (BP-125-W). bit.ly/1E1F8q



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costs of preventative programs if golfers are more tolerant of the disease

Researchers from Oklahoma State University, Pennsylvania State University, Mississippi State University, the University of Wisconsin, and the University of Tennessee have developed an accurate model for predicting dollar spot activity and outbreaks. This model, which uses site-specific weather data as the driving force, is a great tool that will allow superintendents to make more informed decisions on when to apply fungicides for dollar spot, and it will aid in reducing costs associated with controlling this disease. Accurate predictions of dollar spot activity will allow fungicide appli-

cation intervals to be stretched and may even eliminate preventative applications altogether. If all goes well, turf managers will have access to this model by 2014.

The USGA Turfgrass and Environmental Research Program has funded plant breeders for many years to develop turfgrasses that are more resistant to dollar spot. To date, dozens of varieties of creeping bentgrass have been released with superior resistance to dollar spot. Unfortunately, many of these varieties have been underutilized because new golf courses are not being built frequently and fairway regrassing has remained limited because of the associated disruption. The combination of a superior grass

and the soon-to-be-available dollar spot prediction model should make adopting a curative-only fungicide program easier for golf facilities trying to reduce expenses.

Every golf facility is encouraged to examine its dollar spot program and identify the potential to save budget dollars. Consider the financial reward of tolerating more dollar spot, and remember that this approach, while aesthetically noticeable, will have minimal impact on playability. With increased golfer tolerance of dollar spot and a committed golf facility, reduced fungicide applications and costs savings are possible. This is a great way to make golf more affordable. I hope you agree. GCI

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