



# ROUND AND CAPABLE OF DAMAGING GOLF GROUND

**SPRING DEAD SPOT POSES SIGNIFICANT PROBLEMS ON ULTRADWARF BERMUDAGRASS. THE REASSURING THING? A RECENT SURGE IN UNDERSTANDING AND CONTROL OPTIONS MAKES IT EASIER TO HANDLE.**

By Guy Cipriano

Let's get this out of the way about spring dead spot. The nomenclature doesn't match the appearance.

"It really ought to be called spring dead patch, because it's not like dollar spot," says Clemson University turfgrass pathology professor emeritus Dr. Bruce Martin. "It's not a tiny little spot."

The disease, though, was named before Martin devoted a significant chunk of his career to studying it. And Martin has been studying it longer than nearly anybody in the turf business.

He received his first in-depth exposures to the root disease while conducting research under Leon Lucas at NC State in the late 1970s. The patches sparked curiosity. Martin crossed the state line to lead a research team at Clemson and developed into one of the leading experts on all the nasty things that can hinder Bermudagrass, including

spring dead spot.

Much progress has been made in the last 40 years even if the nomenclature never changed to match the severity of the disease. Circular in shape, patches range from 6 inches to 2 feet.

Bermudagrass in the Transition Zone is susceptible to spring dead spot. Temperatures must cool enough for turf to go into dormancy to produce a spring dead spot emergence. The disease can occur on all playing surfaces and isn't just a domestic issue. It has been identified and studied in other nations with Transition Zone climates such as Australia and Argentina.

The lower the temperatures go, the higher the likelihood of spring dead spot. "The main stress that causes it are low temperatures in the wintertime," Martin says. "Just in South Carolina, going from the western part of the state where it gets colder in the winter to the beach, the

symptoms will be more severe in the colder part of the state. Along the coast, you may not see it in fairways, but you'll see it on mounds, hills and slopes, those areas that are naturally more stressed."

Patches become visible as Bermudagrass exits dormancy during the spring. "If it's been a fairly severe winter, the grass is likely completely dead in those patches," Martin says. "If it's a mild winter, then some grass will still be surviving."

In many cases, the patches reoccur. If a specific part of a fairway, tee or green suffered from spring dead spot one year, there's a possibility of a repeat emergence the following year. Virginia Tech researchers are studying how mapping, drone and GPS technology can help superintendents target treatments.

Martin's research intensified when sales of a popular fungicide stopped in 2012. The move coincided with the introduction of multiple

▲ Spring dead spot produces patches ranging from 6 inches to 2 feet on Bermudagrass playing surfaces.

► Spring dead spot is a significant disease concern in the Transition Zone and parts of the Southeast.

ultradwarf Bermudagrass cultivars on golf courses throughout the Transition Zone. The introduction of those cultivars, Martin says, led to spring dead spot outbreaks as far south as the Florida Panhandle.

“Some people had to worry about spring dead spot when they went to the ultradwarfs and they didn’t have to worry about that with the older cultivars and it really goes back to those grasses were not developed for low-temperature tolerance,” he adds. “They were developed for the hot, humid South, but in the Transition Zone it gets cold too. Most of our big diseases in Bermudagrass occur in the winter and spring.”

And what about zoysiagrass? It’s a similar spring dead spot situation. Newer cultivars, according to Martin, are more susceptible than Meyer, the most common variety in northern parts of the Transition Zone. Martin adds that spring dead spot damage is less severe on zoysiagrass than Bermudagrass.

Fall represents a key time for spring dead spot control. Martin advises superintendents to wait until soil temperatures dip to 70 degrees to make their initial applications.

“A couple things are happening,” he says. “Bermudagrass is putting out new roots and the same fungus will start to affect those new roots at that soil temp. All of us recommend that those applications be watered in and you want to water them in for other reasons like take-all root rot. Depending on what (fungicide) you chose, you might be able to control both diseases.”

Unlike a decade ago, control options are numerous. The introduction of multiple fungicides, including Maxtima and Navicon Intrinsic brand fungicide, represent significant breakthroughs in managing the disease. Released in 2019, both fungicides belong to the DMI class and are also labeled for take-all root rot control.

“The choice of fungicide is import-



ant,” Martin says. “Some of the new fungicides that have come out are excellent for spring dead spot control. The nice thing about Maxtima is that it’s a DMI and can be used on ultradwarf greens with no fear of growth regulation.”

Trials at Clemson indicate that a pair of fall applications 30 days apart provide quality control. But properly defining the type of applications is a murky matter. In fact, even the most calculated applications might fall under the curative category based on Martin’s studies and observations.

“I think in actuality all of the applications are either early curative or late curative, meaning the infections have already taken place and you just don’t see it. If you get the fungicide down and can slow it down or halt those infections, you can limit the severity of the disease and you don’t see it in the spring. If you wait until the spring and when you see the patches — that’s when most people think of curative control — and you see the symptoms and put the fungicide out, you are going to be really disappointed because the damage is already done.”

Routine practices such as regularly reducing thatch and maintaining proper pH levels can help lessen the severity of spring dead spot. Research has been conducted on the impact of fertility on spring dead spot, but Martin says, “the bottom line is that I haven’t seen superintendents wholesale change their fertility practices just to manage spring dead spot.”

“On ultradwarf greens, thatch is a problem,” Martin adds. “You just need to let them not get too thatchy and that includes core aeration and topdressing. But even with that, I have even seen spring dead spot severely in brand new ultradwarf greens not even a year old. That goes to show how susceptible those grasses are to the disease and there’s not much you can do about that except chemical control with fungicides.”

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