



RESEARCH ALIVE FOR

Spring Dead Spot

By Anthony Pioppi,
CONTRIBUTING EDITOR

Recent findings made public by research at Oklahoma State University may shed light on a disease that has frustrated superintendents and turfgrass researchers since well before it was first identified in the early 1960s.

Spring dead spot is the rue of virtually every superintendent in the transition zone who manages bermudagrass where winter temperatures sustain below-freezing levels. Other than a ridiculously expensive preventive spray program — anywhere from \$30,000 to \$50,000 for two applications — there is little that can be done to thwart or even manage the pathogen.

That may change, however. Nathan Walker, an assistant professor at Oklahoma State University and one of the leading researchers on spring dead

active in the spring, and dealing with it then may have positive results.

Research on the seasonal activity of the pathogen began in 2000, so the findings are preliminary. Walker admits the findings have not been challenged by the scientific community at large yet he is confident enough in the research to have presented the results to a group of turf pathologists last October.

Although nearly half of the United States has summer temperatures warm enough to grow bermudagrass, only areas with temperatures cold enough to send the turf into complete dormancy are affected.

In the spring, circular areas of infected turf, varying in size from a soup can lid to the hood of a car, turn brown and die. The areas only recover when healthy turf moves back in as the disease recedes in the summer months. Since the disease

Oklahoma State researchers
make breakthrough on how
to treat troubling turf disease

spot, said he and others in the department have uncovered an interesting trait of the disease, namely that it is much more active in the spring than imagined. Preventive spraying has traditionally been done in the fall prior to the first freezing temperatures and that time of year has always been the focus of research, Walker said. Now he and others at OSU believe the soil-borne disease is more

is soil-borne, the problem returns to exactly the same areas every spring. If the affected area is small enough, the turf and soil can be removed using a cup cutter or similar tool.

Even though spring dead spot was first identified in the early 1960s, superintendents and turf researchers differ about some traits of the disease. Many superintendents say pH of the

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soil affects the disease, but pathologists and others disagree. The two sides also disagree on the susceptibility of turf varieties. Superintendents such as Brian Peterson will tell you older common varieties withstand the onslaught better than newer ones.

Peterson has been the superintendent at The Greens Golf and Racquet Club in Oklahoma City since 2004. The course was built in the 1970s and has common bermudagrass. He said spring dead spot there is manageable. But when Peterson was at Gaillardia Golf Country Club, also in Oklahoma City, he was virtually helpless as the disease decimated large areas of fairways and roughs on a course less than 15 years old. The Arthur Hills design hosted the 2001 and 2002 Senior PGA Tour Championship.

"At Gaillardia, it just kicked my butt," Peterson said, describing the annual scene looking as if somebody sprayed large swatches of the course with Roundup.

Peterson said there was little he could do and spraying out was out of the question, even at such a high-end facility.

Walker and others say the theory that common varieties hold up better is not based on fact. He surmises that turf on older courses has built up resistance over time and is not inherently better at holding off spring dead spot than newer cultivars.

He did point out that OSU breeders have developed varieties such as Riviera and Patriot with resistant qualities.

Many of the newer varieties developed by other sources do not have the resistance and are marketed to areas of the country not affected by the disease, he said.

"Some of the new grasses have been developed while not taking spring dead spot into mind," Walker said.

Researchers and superintendents do agree that spring aeration helps combat the disease.

"Any disruption of the soil tends to disturb the disease," Walker said.

Superintendent Roby Robertson of Shangri-La Resort in Afton, in the north-east corner of Oklahoma, deals with two



Since spring dead spot is a soil-borne disease, it returns to the same area every spring.

varieties of the disease at his course and has found raising the height of cut in the fall on all areas of turf helps minimize the affected areas come spring.

The length of the winter freeze may be the biggest factor in determining the severity of the disease.

In Chattanooga, Tenn., and the surrounding area, spring dead spot appears with much less severity than in Oklahoma City, almost on the same latitude.

Black Creek Country Club superintendent Scott Wicker says the disease hits throughout his course but is gone by July 4. Even when he was superintendent at nearby Lookout Mountain Golf Course, at an elevation of more than 2,100 feet, the disease was not a top priority.

"We don't get the Arctic winds out of Canada in the winter," he said.

According to Wicker, the largest affected areas are not more than 2 feet in diameter.

Because of the cost of spraying and its limited effectiveness, he elects not to go that route but would in different circumstances.

"If there was something out there that worked, it would be used here," he said.

Peterson has a theory on why an affordable chemical has not made its way into the market. He says that measures to stem the disease would have been developed years ago if spring dead spot had affected another variety of turf in another region of the country.

"If all of this happened in New Jersey, there would be a 400-member task force from 12 universities working 24/7 to fix it," he said. ■