

Understanding and Treating Localized Dry Spot and Fairy Ring

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as transcribed by Steve Davis

The following article represents proceedings from the recent AgrEvo First Program Conference Call Series, March 16, 1998, sponsored by Steve D. Davis, Midwest representative for AgrEvo USA. For more information on the subject contact Steve Davis at 800-441-6138, ext. 1102, or Dr. Houston Couch.

Turfgrass managers, especially golf course superintendents, face the increasing intensity of localized dry spot and associated fairy ring causing quality problems on both greens, tees and fairway turf. Many of these problems in the past were presented as different pathogens and varying management concerns. As with D. Mildew and Yellow Tuft, they were thought to be different pathogens, but, in fact, turned out later to be similar pathogens. Fairy Ring and Localized Dry Spot are in much the same situation: thought once to be different but may be the same and caused by the same or similar fungi.

Fairy Ring can be put into two specific categories, Edaphic Fairy Ring, which can occur to a depth of 3 feet in the soil profile and is most often solved by masking or fumigation of the problem area, and Lectophylic Fairy Ring, which is a term used to describe thatch-loving fungi often associated with the term "False Fairy Ring." False Fairy Ring is like saying this is a false telephone. The term is misleading; and, therefore, the term "Lectophylic" was given to provide a proper explanation of where the fungi are located.

Edaphic Fairy Ring has three types: type 1 where turfgrass is killed or damaged, type 2 where the turfgrass is stimulated, and type 3 where mushrooms are often present. All of these types occur in the soil to varying depths, can occur on any area of the course and may come and go at will.

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Lectophylic Fairy Ring, as discussed before, is a thatch or mat area condition and is described as three specific types: type A describes associated fungi with mushrooms and little or no affect on turf, type B where turfgrass shows symptoms of stress and type C where turfgrass shows severe injury or loss of turf. Both types, Edaphic and Lectophylic, cause exudates that cause waterproofing of the soil and associated turf stress or loss.

In comparing both Edaphic and Lectophylic and Localized Dry Spot, we can see the association of each with one another.

Once thought to be different problems, in most cases, they are, in fact, one in the same!

Localized Dry Spot is easy to see with well-irrigated turf with areas of drought-stress turfgrass and accompanying dry soil. Many times the soil when pulled in a soil sampler will just fall apart. One superintendent just prior to a meeting easily saw this problem on the subject when he watered the green for two hours, and many of the LDS areas were still dry and appeared to have had no water, thus the waterproofing. We have more to learn on the subject, but it appears that the problem that can be solved with both chemical and cultivation treatments.

Basidiomycetous fungi are the focus; and, therefore, treatments need to get to the fungi regardless of depth in which they occur. It will be the method that makes the difference in control. Both Edaphic and Lectophylic can be controlled with Prostar 50WP at labeled rates of 6.0 oz. when associated with proper pre-treatment and soil conditioning.

The following program is a step-by-step treatment that will eliminate the problem with one or two applications:

1. Aerify or spike the area to be treated.
2. Apply a wetting agent at the manufacturer's labeled rate. Dr. Couch does not recommend any particular soil wetting agent.
3. Irrigate the area to be treated with sufficient water to bring the rooting mixture to field capacity at a depth of 6 in.

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4. After 24 hours, apply Prostar 50 WP at the labeled rate for preventive (3.0 oz./1,000 sq. ft.) or curative (6.0 oz./1,000 sq. ft.) in a least 2 gal. of water per 1,000 sq. ft. of turf.
5. Before the leaves dry from the Prostar application (or when dew is present or foliage is previously wet from irrigation), irrigate the treated area with the equivalent of 1/4 to 1/2 in. of water.
6. Keep the thatch moist for two weeks.
7. It is recommended that two applications be applied six weeks apart.

It must be stated that the key is the method both with Edaphic and Lectophylic Fairy Ring and associated Localized Dry Spot.

Question: Many are saying that wetting agents alone are solving the problem; can this be true?

Couch: Using a wetting agent will, in many cases, eliminate the symptoms for short periods but will not control the associated fungi; and using only a wetting agent is much like taking aspirin for a major back problem. Why not go all the way: use the wetting agent and follow with Prostar.

Question: What are the major types of Fairy Ring around the world?

Couch: Edaphic occurs in the arid regions of the country, but Lectophylic can and does occur in all areas of the world. Most of the information we have is from Drew Smith of Canada.

Question: Does Lectophylic produce mushrooms?

Couch: No, not all the time. There are many forms of this fungi. It will grow on any organic matter.

Question: What amount of wetting agent would you recommend?

Couch: The labeled rate. Do not go over the labeled rate as many can cause phyto problems.

Question: Can Localized Dry Spot be sampled and fungi examined?

Couch: Many times the fungi may not be easily seen, but there are occasions where you can place a plug in a sealed plastic bag, place it in a cool place (not in direct sun), and fungi can be produced and seen.

Question: What does the fungi look like?

Couch: Most of the time the Basidiomycetous fungi will be white in color, but associated fungi not related might show up as green.

Question: What will it take to do a microscopic examination?

Couch: Slide mounts will see fungi and clamp connections at 500x magnification.

Question: Does the fungi grow fast or slow?

Couch: In most cases, very rapidly.

Question: What is the best way to tell what type of Fairy Ring fungi are present?

Couch: It must be grown out as there are more than 50 types of fungi that can be involved.

Question: Are we able to correct the problem with Edaphic types?

Couch: Yes, Prostar will do the job provided that you can get to the fungi. In many cases, superintendents and turfgrass managers are treating it with fungicide like Prostar and still have Localized Dry Spot or Fairy Ring problems. It is the procedure which counts (not that the fungicide will not do the job). Get the method correct, and it will work!

Question: Do organic materials or natural organic problems contribute to the problem?

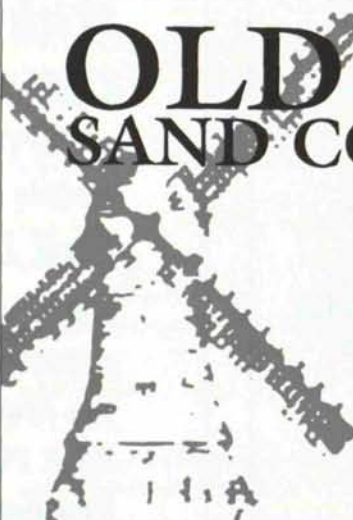
Couch: If the materials used are from a mushroom compost or wood type product, they can contribute to the increase in fungi.

Question: Does it matter the time of year for treatments?

Couch: No, as long as you can get and keep the soil wet; therefore, you may want to avoid high disease incidence times.

Question: Do the thatch control or biostimulant materials help?

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Congratulations to Mrs. Ray (Jo) Gerber who turned 94 on June 12. Mrs. Gerber along with Mrs. Paul Burdett (Jim's mother) were one of the ones responsible for the women's program at our annual GCSAA conference.

Two of our members received some press time in the past couple of months. Jim McNair, Orchard Valley G.C., was quoted by Len Ziehm, *Chicago Sun Times*, on the use of softspikes on his course and how they are becoming pretty much accepted at so many other courses. Luke Cella, Pottawatomie G.C., wrote "Going Native on the Course" in *The USGA Green Section Record*, March/April 1998.

At the April meeting, 127 golfers turned out for the annual opening scramble. The winning teams from the April golf event were: Low Net—Dave Blomquist, John Gurke, Mike Mumper and Dan Sterr. The Low Gross team

consisted of Dave Louttit, Eric Swanson, Gene Thompson and Paul Yerkes. Fred Behnke was the closest-to-the-pin winner, and Tim Scott took the long drive contest. Congratulations and a BIG thank you to the entire staff at the Schaumburg G.C. Everyone enjoyed the sunny, but cool, afternoon. Additionally, thanks to everyone who contributed to the Leukemia Society by purchasing a mulligan. We'll see you June 15 at Fox Valley G.C.

The members of the Midwest Association of Golf Course Superintendents would like to extend their sincere condolences to the family and friends of William (Bill) Miller who died in his home in Wheeling on Friday, April 24, 1998, at the age of 86. Bill was the superintendent at Palatine Hills G.C. from 1969 to 1973, when he retired at the age of 62. Prior to that, he was superintendent at Pebble Creek G.C. in Palatine, an area now developed with homes and an office park. Bill was a dear friend

to many superintendents and will be greatly missed.

Dave Schlagetter and Chad Ball were in an auto accident April 30 while on their way to play golf with fellow superintendents at Bull Valley G.C. Both were hospitalized after the accident but were sent home that day.

Chad Ball of Conway Farms will be moving into a new maintenance building sometime this year. The new building will be 60 ft. x 180 ft., or 10,800 sq. ft., with all of it heated. A chemical storage building will be alongside that measures 20 ft. x 30 ft. Both buildings will be block with some vinyl siding.

Ray Kearney at Marengo Ridge C.C. is installing an Osmac system with touch net controls on nine of the holes. This system is replacing the 35-year-old one. It will have a new Flowtronex PSI pump station with the capacity of 1,300 GPM.

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Couch: No, they do not work. It has been shown that mechanical cultivation of aerification and verticutting is best to keep thatch levels below one-half inch. Consult your local state turfgrass specialists as they will provide more detailed information on thatch management. As with all biocontrols, you cannot maintain high enough levels for a long enough period of time.

Question: Why has there not been more work on these problems?

Couch: Drew Smith did a great deal of work, but we are dealing with a variety of causes for what is termed Localized Dry

Spot. We continue to look for solutions.

Question: Prostar provides excellent control; are there other products that may provide control of Localized Dry Spot and Fairy Ring?

Couch: Prior to Prostar, I have would recommend the use of sterol-inhibitors, but they needed to be used at high rates, and some associated phyto could occur. Heritage may also provide control, but I am not sure where the data was produced and who produced it.

Question: Why not use the wetting agent and Prostar together to make it easier?

Couch: The key is not being

easy. The key is solving the problem of Localized Dry Spot and Fairy Ring. The wetting agent set the soil profile to accept the fungicide. It is a process.

Question: Can you treat for *Rhizoctonia* at the same time since Prostar controls *Rhizoctonia* as well?

Couch: Since Prostar will be drenched in, I would follow up with another foliar treatment four days later, especially in the summer when *Rhizoctonia* occurs.

