

Turf Disease Update – a couple new ones are out there!

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I'm sure you already have a strategy in place for the diseases you normally anticipate. What about that unexpected or misdiagnosed problem that seems to pop up and cause trouble? This update is aimed at familiarizing you with a few of the diseases you may not have encountered yet but could be lurking on Iowa golf courses this year. As always, I'm just a phone call away if you need help with your field diagnosis. My mobile is 515-231-1741 and my email is dminner@iastate.edu. I hope you will give me a call, even if you have already identified your problem; it really helps to know what diseases are brewing and to get the word out to other Golf Course Superintendents. Field diagnosis of disease problems is sometimes very clear and straight forward, and at other times a complete mystery as you try to make what you see and what you know fit into an accurate diagnosis of the problem. Here are some tools to start with so that when you get to the sprayer you are not wasting money.

Digital Camera – This standard equipment is needed to document many of the problems and solutions you deal with on the golf course, including diseases; keep it in your work cart or you won't use it much. Pictures are needed for professional presentations as you advance your career. Laboratory diagnosis from a 4-inch plug is much better when the diagnostician can see what you are observing on the green. Use the close-up setting to take a picture from 3 to 6 inches if possible. Then take a second from 2 to 4 feet showing the problem area sampled, and a third showing the whole green. Digital pictures are an inexpensive and fast way to assist those helping with diagnosis. A dated picture log of past problems on your course is very helpful when assessing current abnormalities on your greens. This is an excellent project for a student intern to develop for your golf course.

Disease Samples – For things I can't diagnose, and sometimes just to help me confirm a diagnosis, I use Dr. Barb Corwin, Turfgrass Diagnostics L.L.C., 573-219-1156, corwinb@socket.net. Most of the diseases mentioned below are described and pictured by Dr. Corwin at <http://extension.missouri.edu/publications/DisplayPub.aspx?P=IPM1029>. Commercial distributors of turf products may also assist with collecting and identifying turf diseases through a reputable turf diagnostic consultant. It costs about \$100 to have a problem sampled and diagnosed.

Here are some considerations when deciding to seek additional help with your diagnosis.

- Take pictures as soon as you notice the abnormality and repeat the process in the same area as the problem progresses.
- Send the pictures and call me or your diagnostic person to discuss the situation. Sampling or an on site visit can be arranged if needed.

- Whenever possible collect samples before treating with fungicides so that the disease organism can continue to produce mycelium and spores needed for diagnosis. Samples taken after fungicide treatment should still be sent for diagnosis; sometimes the diagnostician can determine if the fungicide has suppressed the organism.
- Samples should be shipped overnight by FedEx or UPS. Take a few minutes to phone or email ahead of time to provide the opportunity to communicate preliminary information about the problem that is causing concern.
- A good sample consists of one or more cup cutter plugs or 4" by 6" plugs cut with a knife to the depth of the root system. Send enough plugs to accurately represent the symptoms of concern as they occur on-site. Plugs should be taken at the transition between healthy and affected turf, so comparisons between healthy and damaged turf can be made in the clinic. Where ring patterns are evident, center a portion of the ring in the center of the plug.

How to pack and ship the sample

- Once the plug has been removed, wrap the root zone to prevent soil from impacting the surface of the plug, leaving the surface of the turf exposed. This can be accomplished by inserting the plug in a heavy plastic bag and duct taping the soil profile. Wrapping the root zone in foil or inserting the root zone in a container cut to size from a plastic liter soda bottle also works well. Clearly label each plug with the sample location and name of the facility. Place the cores in a sturdy box with seams taped to prevent leakage during shipment, and then pack with newsprint or other dry paper to prevent plugs from moving during shipment. Loose samples that contaminate the grass surface with rootzone sand or soil are difficult to diagnose.

Magnifyer – Maybe I'm just getting old but those hand loop magnifiers just don't allow me to see much. I like the visor type magnifiers that give you a better view with both eyes open. Mine are 5x magnification and I can use 2x reading glasses under the visor for even more magnification. Under \$50 they help you see a whole new world down there. It is easy to determine if abiotic problems such as scalping or topdressing damage are causing the problem instead of a fungal disease. They can also help you easily identify *Poa annua* from bentgrass, even when it is mowed at 100/1000 of an inch. Knowing which grass is being damaged can certainly help when identifying host specific diseases, such as Summer patch and Brown ring patch, that occur mostly on *Poa annua* and seldom on bentgrass.

Some of the less familiar diseases that have been popping up in the mid-west are brown ring patch (*Rhizoctonia circinata*) and Leaf and sheath spot (*Rhizoctonia zeae*).

Brown ring patch (*Rhizoctonia circinata*), formerly called Waitea patch, was first identified from greens in Washington and California, but has also been reported in Ohio, Chicago, and St.

Louis. There have been no confirmed reports of brown ring patch in Iowa, but I have seen yellow ring symptoms in May on greens in Cedar Rapids and throughout Iowa. We have always thought that they were Yellow patch (*Rhizoctonia cerealis*) that persisted longer than it should have. I know you may not want to be known as the first to have a new disease in Iowa, but if we have it we would like to be able to report it in Iowa. Brown ring patch occurs primarily on *Poa annua* with symptoms very similar to yellow patch (*Rhizoctonia cerealis*); both form irregular yellow rings from a few inches to 3 feet in diameter. Yellow patch occurs first in April/May at 50 to 65°F and brown ring patch is most noticeable later in May/June above 77 to 86°F. In some years both diseases may be expressing symptoms at the same time. Because they are ring type patch diseases they could also be confused with Brown patch (*Rhizoctonia solani*), summer patch (*Magnaporthe poae*) or fairy ring. Don't be fooled by the name. Brown ring patch usually starts out with a characteristic yellow ring that can progress to a brown ring on the outer edge of the patch. Fungicides labeled for control of *Rhizoctonia* – including Heritage, Medallion, ProStar, Insignia, Endorse, and Banner MAXX – have shown activity against brown ring patch when applied preventatively, although efficacy may be variable. *Rhizoctonia circinata* can also colonize the soil and thatch below the ring causing hydrophobic conditions that mimic Superficial fairy ring. Surfactants and thatch control can be used to manage these conditions. Here are some links with pictures and information about brown ring patch.

http://www.agry.purdue.edu/turf/tips/2007/06_01brownpatch.htm

http://buckeyeturf.osu.edu/component/option,com_turfnotes/Itemid,84/noteid,2095

<http://turfpathology.ucr.edu/>

Leaf and Sheath Spot (*Rhizoctonia zeae*) has been confirmed by Dr. Corwin in a Kentucky bluegrass golf course rough and in home lawns in the Des Moines area. *Rhizoctonia zeae* is most active at 77 to 93°F. The symptoms on Kentucky bluegrass and perennial ryegrass appear as sporadic yellow ringed patches up to one foot in diameter that eventually fade to brown patches. Pink to orange BB sized bulbils can be found on the surface of decaying grass tissue and embedded in leaf tissue. Symptoms can be confused with brown patch, summer patch, fairy ring, yellow patch, and necrotic ring spot. Leaf and sheath spot has not been confirmed on *Poa annua* or creeping bengrass greens in Iowa.

<http://extension.missouri.edu/publications/DisplayPub.aspx?P=IPM1029-14>

Keep your eyes open this year for those yellow/brown ring patches on your putting greens and give us a call if you see anything you think may be **brown ring patch** or that you would like us to diagnose. Also, be on the look out for **leaf and sheath spot** in Kentucky bluegrass or perennial ryegrass surrounds and roughs.