Is It Or Isn't It?

Using a quick method to identify pink snow mold.

by KEITH HAPP

In some cases disease samples don't need to be shipped to a diagnostic laboratory for identification. The University of Massachusetts Diagnostic Laboratory has observed that under the proper conditions many pink snow mold samples can be easily diagnosed by golf course superintendents themselves.

IT HAS LONG been taught that managing turfgrass disease revolves around accurate and timely diagnosis so that preventative or curative measures can be implemented. Although many turf managers utilize preventative disease control strategies, a great many employ an integrated approach to disease management. In either case, field diagnosis remains essential so that control measures are effective and efficient.

Imagine walking onto the course after a long winter and seeing unfamiliar discoloration on the greens. All precautionary measures were implemented prior to winter weather, so it is even more puzzling as to what could be attacking the turf. The discoloration is exhibited in all sizes and shapes and appears to be moving toward low-lying areas of the greens. The color of the infected turf ranges from chlorotic yellow to greasy brown/orange. To further compound the issue, there are no visible signs that would help identify the pest problem. To address the problem, a diagnosis must be made rapidly so that further damage can be minimized.

Managing golf course turf involves managing problems proactively before visual signs of damage or decline become evident. Arguably, a major component of course preparation is pest control, particularly disease control. Organisms that can wreak havoc must be controlled in order to provide healthy turf that offers the best playing conditions.

Each spring an easily misdiagnosed disease attacks putting green turf throughout much of the northern United States. Pink snow mold (*Microdochium nivale*, also known as fusarium patch) has become a problem primarily due to the fact that it is commonly misdiagnosed as cool-season phythium. The symptoms and signs of a disease help distinguish it from others, but unfortunately signs are not always visible and symptoms can be confusing. This is particularly true for pink snow mold in its early stages of development. Not all superintendents own or have access to a microscope to examine the signs an organism expresses, so when problems do arise, samples often are sent to a university or independent diagnostic lab for identification. Although a definitive diagnosis can be achieved, there is an element of time involved before results can be returned.

Dr. Gail L. Schumann directs the activities of the disease diagnostic laboratory at the University of Massachusetts. She receives samples in all shapes and sizes. During the spring, samples from Massachusetts and adjoining states roll in and one of the most common samples submitted is pink snow mold. During cloudy, cool, wet spring weather, this disease can proliferate rapidly and can be streaked onto unaffected areas by mowing or other traffic, similar to the destructive way hot weather pythium blight can be experienced. This is due primarily to the fact that the residual effects of the

fungicide applied the previous fall have been exhausted. In many northern areas of the United States, weather conditions can allow pink snow mold to remain active well into the month of June. In fact, pink snow mold activity has been diagnosed by university laboratories during 11 months of a calendar year.

Dr. Schumann observed that by the time pink snow mold samples arrived at the laboratory they would often exhibit clear signs of the disease. During the time it took to package and ship the sample to the lab, mycelium would grow. The signs of the disease are expressed when a cool and damp environment is provided. This observation led to Dr. Schumann's turf tip for rapid diagnosis of the problem. She suggests the following:

• First, sample the infected sites so as to obtain a continuum of disease symptoms.

• Second, wrap the sample in a moist paper towel or lightly sprinkle a little water on the turf surface. This will simulate an extended period of leaf wetness similar to prolonged periods of dew.

• Finally, insert the sample into a plastic bag and place it in a cool, shaded area of the maintenance facility. An interior corner of the maintenance building will work well. The plastic bag should be closed securely, but a 1" to 2" air space should be maintained.

In as little as 24 hours, signs of the disease will be expressed. Initially, mycelium growth will be white. This is due to the lack of sunlight exposure. However, with sunlight exposure mycelium growth will develop a pinkish color, thus offering more classic features for diagnosis. Most importantly, the mycelia will distinguish the problem from cool-season phythium, a root rot disease that does not produce such surface growth. A certain diagnosis requires observation of the spores of the fungus with a microscope.

Naturally, not all turf diseases can be diagnosed this way. However, this method provides a means to further support an initial diagnosis of pink snow mold, leading to effective control of the problem. If you're confused about this disease and would like to confirm a suspicion, give this strategy a try.

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