

In the northern United States, winter's arrival brings its own set of disease problems. Depending on a location's latitude and elevation, an assortment of snow mold diseases can occur. One of the more prevalent snow molds is microdochium patch, caused by the pathogen *microdochium nivale*. This snow mold is rather unique in that a snow cover is not required to cause disease.

In the United Kingdom, where snowfall is rare, microdochium patch, or as it is often referred to as fusarium patch, is the most chronic and severe disease that golf course superintendents and their crews face on their golf courses. In the United States, the disease can form under snow cover prevalent in the upper Midwest and Northeast and is often referred to as pink snow mold.

The more prevalent host for this disease is *Poa annua*, especially when grown in shaded, wet or north-facing areas. Other hosts include creeping bentgrass, Kentucky bluegrass and perennial ryegrass. Young, juvenile or lush turf going into winter is more susceptible than mature stands. Often, conditions under green covers are ideal for microdochium patch. Covers are often used to protect newly seeded turf or promote a more succulent turf. It's important to monitor and make a fungicide application if necessary under these covers.

Microdochium patch symptoms initially appear as a yellowing of the infected turf area that progresses rapidly to a reddish-brown color. The disease

progresses, producing circular patches that are tan or whitish in color with often a pinkish border. These patches range in size from several inches to 2 feet in diameter. If conditions are favorable and the disease pressure severe, these patches will eventually coalesce into large blighted areas.

The pathogen is active under cool, wet conditions when temperatures range from freezing to 60 degrees Fahrenheit. Given this



Winter Brings Fusarium Patch

BY KARL DANNEBERGER



IF CONDITIONS ARE FAVORABLE, MICRODOCHIUM PATCH CAN OCCUR THROUGH ARKANSAS AND TEXAS

range, the disease can occur from late fall through mid-spring. In late winter or early spring when abundant moisture is present, the pathogen spores can be spread along drainage patterns, and easily moved by mowers producing a streaking pattern. It's during this period the disease can be confused with other diseases like cool-temperature pythium or anthracnose.

Although springtime streaking on *Poa annua* greens can be confusing, the appearance of microdochium patch on bermudagrass or ultra-dwarf bermudagrass can be surprising. If conditions are favorable, although normally unlikely, microdochium patch can occur through Arkansas and Texas. Fortunately, the *microdochium nivale* spore type is easily recognized through microscopic examination.

Culturally, superintendents should continue mowing until top growth ceases in the fall. This is especially important with Kentucky bluegrass and perennial ryegrass.

Long-matted turf tends to be more severely affected with this disease. In the spring, disturbing infected sites through raking or mowing will limit disease activity. Although snow cover is not a prerequisite for disease development, installation of snow fences to limit snow drifting on greens and tees will help reduce the disease severity.

Several fungicides and a combination of fungicides are effective for microdochium patch control. Timing the preventive application is the most difficult aspect of control, considering the snow could soon be flying.

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