

# Uncovering Winter Turf Diseases

By Joe Bell

All living things are subject to disorders and turfgrasses are no exception. Through careful selection and breeding, turfgrasses have been developed with remarkable degrees of disease resistance. However, no grass is close to a level of complete disease immunity.

As always, good turfgrass management is the strongest weapon against disease. In most cases, this is simply sound judgement that helps turf perform at its best — not just for a few weeks, but season after season and year after year. A thorough understanding of turf care is necessary for this to happen.

All turf areas are composed of many tiny worlds, microenvironments, which determine the overall quality of the turf. For example, on the golf course and athletic field, it is not uncommon to find hills and humps that are in constant need of moisture to avoid stress. Simultaneously, adjoining valleys and depressions may be in danger of stress from too much moisture.

Preliminary steps can be taken to avoid such problems. Drainage can be altered, trees can be trimmed and fertilizer can be applied. However, imbalances in maintenance and physical conditions can be an open invitation to disease.

The ability to anticipate, identify, and react to turfgrass diseases is an essential part of good turf management. So, as winter quickly approaches, it is important to watch for diseases specific to the season.

## Gray Snow Mold

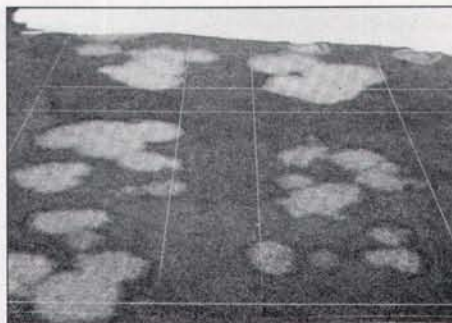
Mostly a cool-season grass, cold-weather disease, gray snow mold is active at near freezing temperatures and when moisture is abundant. Snow

or leaf cover encourages this disease. Extensive injury is likely to occur after snow has been in place for several months.

This disease becomes infectious as snow begins to melt and air temperatures reach 30 to 40 degrees F. The first sign is yellow-green spots a few inches in diameter. If the same weather conditions continue, these spots grow in size and become grayish-white. Leaves within the infection become matted and turn light tan, with a gray-white border of mycelium often growing around the outer perimeter.

The circular areas may spread to two feet in diameter, but the majority will be less than one foot. However, when the attack is severe, diseased spots become more numerous, run together, and cause unsightly, extensive turf damage. It can eventually lead to crown and root destruction. However, injury from light attacks is quickly reversed by high temperatures and normal spring growing conditions.

*Typhula ishikariensis* is prevalent in the northern and western parts of the United States, with *Typhula incarnata* the strain commonly found in the north-



Gray snow mold.



ern and eastern states. Both can occur simultaneously, and there are very little visible differences in damage. However, the fruiting bodies of the two fungi are quite different.

Turf infected by *Typhula ishikariensis* has numerous, tiny black spots (sclerotia) resembling specs of black pepper on bleached grass blades. *Typhula incarnata* sclerotia appears larger, the size of a pin head or bentgrass seed. It is pinkish-brown to reddish-brown, and may not be as plentiful.

## Pink Snow Mold

Commonly associated with periods when snow is melting, pink snow mold can become infectious in nearly all seasons. Also known as Fusarium patch or Gerlachia patch, it is a disease of nearly all cool-season grasses and can occur in all temperate areas. It is generally most obvious on closely mowed bentgrass and *Poa annua*.

Pink snow mold can have infectious growth when moisture is abundant and temperatures reach 32 to 45 degrees F. Circular spots appear with or without snow cover. These spots are quickly covered with white mycelium and vary in size from a few inches to more than a foot in diameter.

In wet turf, the diseased grass blades gradually mat together and feel slippery to the touch, with the white mycelium turning light pink. Dead leaves within the infected area become light, bleach tan. As long as disease activity continues, the outer edges remain a darker rusty-pink. Heavily diseased turf areas will run together and may suffer extreme injury.

Pink snow mold under snow cover can reach epidemic proportions before

grass becomes visible during the spring. In its most active form, it is often found intermingled with heavy infections of gray snow mold and can readily develop into crown and root rot.

### Cool Weather Brown Patch

Cool weather brown patch has been reported in varying degrees across most temperature regions. It seems to affect most cool season grasses, but has become particularly noticeable on bentgrass putting greens and fairways.

Cool weather brown patch, often found with various forms of snow mold, can occur during cool, wet weather over a wide range of temperatures. However, most infestations have been observed in fall through early spring. The disease appears in circular patterns that range in size from a few inches to nearly two feet in diameter.

Blades are bleached and the outer edge can be covered with a grayish-brown mycelium, while light tan sclerotia may be found near the crowns of the plants. Grass within the rings does retain its color. Often, on small turf areas, many rings are present, forming a mottled pattern.



Spring dead spot.

This disease can cause some thinning of turf, but rarely reaches stages of extensive injury. In most cases, an increase in air temperature is accompanied by a gradual disappearance of the disease. After turf has been mowed several times, all traces of the infection are usually gone.

### Spring Dead Spot

In southern regions, spring dead spot can be quite severe on bermudagrass turf, especially during extended periods of dormancy. It is a disease of well-maintained turf, usually with a strong thatch layer. Because thatch is a contributing factor, spring dead spot is seldom found on newly established turf.

In addition, the disease is most closely associated with hybrid bermudas. Unfortunately, infected bermudagrass has little inclination to repair itself. The results are unsightly, rough-textured, weedy turf requiring an extended healing period.

The cause of spring dead spot is believed to be the fungus *Leptosphaeria Korrae*. Factors that decrease this disease range from proper fertility to sound maintenance practices.

Unlike the preceding diseases, spring dead spot seldom becomes truly evident until the bermudagrass comes out of winter dormancy. Circular areas, ranging in size from a few inches to three or four feet in diameter, are straw-colored and without a sign of life. Surrounding turf is generally lush green.

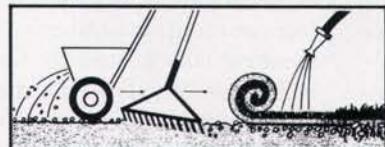
Stems, roots, and stolons within the infected area appear black and rotted. Infected spots do not increase in size during the growing season. However, the following spring, they will reappear in the same location, often larger and more damaging. □

*Joe Bell is project leader, fungicide development for the O.M. Scott & Sons Company, Marysville, OH.*

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