

# Winter Disease Watch

by Kristen Hampshire

Winter disease is a bit misleading if you ask Lee Miller, extension turf-grass specialist at the University of Missouri in Columbia, Mo. "The term winter disease is a misnomer - it's really fall and spring diseases," he says.

That's because diseases, in general, crop up during times when turf-grass is not in all-out growth mode: fall and spring. And, Lee explains, the timing of those dormant, or "rest breaks," for lawns really depend on whether cool- or warm-season grass is involved.

Once freezing temperatures hit, fungi aren't too happy in the turf-grass and will not thrive. So regions that experience a true winter with snow and frozen ground don't actually deal with "winter" disease. It's during fall, when air and soil temperatures drop to consistent 65- to 70-degree daytime temperatures (and in the forties at night), that turf-grass begins to downshift out of growing, into dormancy.

That vulnerable in-between state makes plants more susceptible to fungi - namely red thread and microdochium patch (pink snow mold) with cool-season grasses; and large patch in the transition zone and areas where warm-season grasses grow.

So, is this fall and spring **[referring to 2014/2015]** predicted to be heavy disease seasons?

"I think there is a possibility," says Jim Kerns, Ph.D., turf-grass pathologist at North Carolina State University in Raleigh, N.C. "Most of the country has had a good amount of precipitation," he says, relating to a precursor for diseases that set in during fall.

"But what are the chances of getting disease?" Kerns continues. "The answer to that is: It depends on what Mother Nature gives us."

Lawn care operators can be prepared by knowing what symptoms to watch for in cool- and warm-season grasses, adopting proper fertility and maintenance practices and exercising control measures such as applying fungicides when necessary.

The good news about these diseases - mainly snow molds and red thread - is that turf-grass recovers from them, and treatment really depends on clients' tolerance for imperfect appearance. "These are foliar diseases that will not kill the plant outright in most cases," Kerns says.

**BEST PRACTICES FOR ALL REGIONS.** Proper fertilization for warm- and cool-season grasses sets the stage for strong turf-grass that will stand up against disease.

"Spring is a sensitive time for putting on input such as fertilizer," Miller says. "It's like people - when we overeat, we tend to be weaker overall. So if we (over-fertilize) tall fescue that is fat and happy into summer, it actually becomes more susceptible to disease (in fall)."

Miller advocates light fertilization in spring **[Note - unless you missed an opportunity to fertilize in the fall, I recommend that you don't apply any fertilizer in the spring - Gene]** and greater attention to fertility in fall. "Then, we should be concentrating on putting on nitrogen and fertilizer to help turf-grass recoup from summer disease and stress so it will go into winter a stronger plant," he says. Zoysia grass fertilization is the opposite of other varieties, such as tall fescue or Bermuda grass. It

should be fertilized in late May and through summer growing months when the turf-grass is active to encourage lateral spread. "When we get into September and October, that Zoysia grass is trying to shut off, so nitrogen applications can increase disease pressure," Miller says.

Warm-season grasses should not be fertilized into fall. "Let warm-season Zoysia grass go softly into dormancy," Miller says.

Meanwhile, fall cleanup keeps the turf canopy free of green waste that can harbor fungi. And, mowing into the fall is important for maintaining healthy turf.

"Continue to mow turf-grass until it stops growing," Miller says. **[Note – In Md that usually means until the first or second week of December - Gene]**

LCOs that put these best practices in place can decrease the likelihood of disease development. But should problems arise, proper identification is critical prior to taking treatment measures. Know your turf-grass species. Know your disease symptoms. For economic and environmental reasons, confirm the problem before applying product. "I am not a proponent of using fungicides unless they are absolutely necessary," he says.

**COOL-SEASON STRATEGIES.** Proper maintenance to maintain turf health is the best defense against winter diseases - again, speaking of diseases that crop up in fall before winter, and can emerge in spring once temperatures warm again. Pink snow mold is a common colder-weather disease in the Midwest and Northeast, and in most cases the best treatment is to allow the turf-grass to repair itself, Kerns says.

The most common cool-season species are tall fescue, Kentucky bluegrass and perennial rye-grass. These cool-season grasses are still growing in fall and spring, so Kerns says: "Landscape managers have to make a judgment all about whether or not to treat the disease based on their customer."

Pink snow mold and red thread are induced by cool, wet conditions. Both present with foliar blight, leaves that deteriorate, fold into each other, and turn tan, brown or sometimes dark-brown or black. The spots form in patches, starting as small as a golf ball and expanding to the size of a basketball, depending on the conditions and turf-grass variety, Kerns says. Gray snow mold requires 60 consecutive days of snow cover to infiltrate turf-grass "It's pretty limited where in the country it can develop," he points out.

Because cool-season grasses still grow in fall, they can work against disease and repair gradually if left alone. "Fertility and making sure that homeowners aren't mowing the lawn too low **[Note – generally its best to keep your mower at its highest setting - Gene]** are great ways to prevent a lot of winter injury with cool-season grasses," Kerns says.

"Keep these diseases on the radar," he says. And, if treatment is required, "Those diseases are easy to control compared to large patch or spring dead spot," Kerns says.

**WARM-SEASON STRATEGIES.** **[Note - the following generally does not apply to Howard County and surrounding areas - Gene]** In the Carolinas, Kerns is already spotting cases of large patch in warm-season grasses. The most popular warm-season varieties are St. Augustine grass, centipede grass, Bermuda grass and Zoysia grass. These grasses grow southeast through Texas into Oklahoma and Arizona, out west to California.

"Large patch becomes active as soon as soil temperatures get to about 70 degrees, and that is when

we will start making any fungicide applications," Kerns says. Large patch is mostly a problem on centipede, St. Augustine and Zoysia grasses. "Bermuda grass is pretty tolerant of the disease," he says.

### ***WARM DAYS FOLLOWED BY COLD NIGHTS MAKE TURF VULNERABLE TO RED THREAD.***

Large patch presents as brown patches the size of dinner plates that can expand rapidly to 2 to 3 feet in diameter, or larger. "I have seen some patches 12 feet across," Kerns says.

Large patch tends to crop up on turf-grass that is over-maintained. These warm-season grasses are designed to require fewer inputs. "We try to over-manage them, over-fertilize them and over-water them to make them look deep, dark green like some of the cool-season grasses," Kerns says. "Physiologically, those grasses don't want to green up like that. We are asking the plant to do more than it should, and essentially it produces so much succulent tissue, and that is what the fungus attacks."

That said, Kerns says there are plenty of cases where large patch develops on warm-season grasses that were minimally maintained. It tends not to spread from lawn-to-lawn in homeowner properties, but once it sets in, treatment with a fungicide is necessary for control.

Kerns says one to two applications in the fall will prevent large patch all winter long and into spring. Wait to treat until soil temperatures reach 70 degrees for five days in the fall. (Call your local extension or weather service to find our soil temperatures.)

A follow-up application of fungicide may be required in spring to control more difficult cases of large patch. "We may have a banner year for large patch development - we just don't know yet," Kerns says.

Another issue facing some warm-season grasses is spring dead spot, which occurs mainly in the transition zone (the Carolinas into northern Georgia, Virginia, Tennessee, Arkansas, Missouri, Oklahoma and northern Texas). When dormant grass begins to green up in spring, you'll notice brown patches. "We rarely see this in home lawn settings - it's more in sports fields, parks and other high-traffic areas," Kerns says, noting that soil compaction is a predisposing factor of the disease.

**KEEP IN MIND.** Knowing your turf-grass type and related diseases to watch for is half the battle - the other half is properly maintaining turf-grass during the growing season, and understanding (while managing) customers' expectations before setting out to treat properties.

As always, if in doubt about turf-grass matters, contact the local extension, Kerns says. He reminds, "Conditions and treatment vary from location to location." 1&1