

A Greener View: Brown patch diseases prevalent in humid, wet climates

by Jeff_Rugg

Q: We have a problem with dead areas of grass in our four-year-old lawn. The front yard was sodded and has the problem, while the backyard was seeded and doesn't have the problem. We have tried using fungicides. Nothing seems to kill it. We take good care of the grass by fertilizing and watering it with the sprinkler system on a regular basis. Can you suggest to us what we can do to kill this fungus?

A: There are several diseases that cause similar looking brown dead areas in lawns. Turf grass scientists keep changing the names of the fungi that cause the diseases, but they get similar treatments. They are often generically called brown patch diseases.

There are hundreds of fungi species living in your lawn. They are necessary and usually beneficial, since they break down the dead grass blades and other organic matter into basic chemicals that the grass can use. Sometimes the grass becomes weak, and at the same time the conditions are proper for the fungus to grow vigorously. Since the fungus can already break down the dead grass cells, it isn't a big step to infect weak or dying grass cells.

The biggest environmental changes that fungi need in order to make this change from beneficial to harmful is a steady high humidity and proper temperatures. Different fungi will attack the grass depending on the temperature, but the humidity is the key to all of them. Many areas of the country experienced dry conditions this summer, but some had steady rains every few days for several weeks at a time. The high humidity and wet grass were perfect conditions for the fungi to infect the grass.

Cool season grasses like fescue and bluegrass are supposed to go dormant in the warm summer weather, which these fungal diseases need in order to infect lawn grasses. Brown patch diseases affect all species of lawn grasses, but are more common on lawns that are overfertilized. When the lawn is fertilized later than mid-spring, the grass continues growing into the warmer weather, especially if it is also irrigated. Grass being forced to grow when it should be dormant will be weaker and more susceptible to disease problems. Being sensitive isn't a guarantee that it will get the disease, just that it could.

Even more problems occur if the lawn is irrigated in the evening or at night when the fungi grow better.

Irrigation needs to be in the early morning, so the grass can dry off quickly in the sunlight. Water the lawn only once or twice every week to 10 days during dry spells, since more frequent watering can help the fungi grow.

Brown patch diseases are not always deadly, usually only the grass blades turn an off-color greenish-brown. The outer, dying edge of the circular patch of brown grass may be purplish in color. In the early morning, while dew is on the lawn, there may be a white film of fungal growth visible. In a few weeks, the grass plant will regrow new leaf blades in the center of the brown circle. In bad outbreaks of the disease, it will kill the crown of the plant and no new grass develops.

One of the best ways to reduce the severity of brown patch diseases is by planting a mixture of grasses instead of having only one species. Disease organisms spread rapidly when everything in front of them is food, but progress is slowed when different kinds of grasses are encountered.

If you need to reseed portions of the lawn, use a mix not a blend to get more variety of grasses in the lawn. A batch of seeds that is made of different varieties of one species is called a blend, while a batch of seeds using different species of grasses is called a mixture. Blends are often prettier and they are usually used to make sod; therefore, they don't have the disease resistance of a seed mixture. Also, get seeds that are labeled as being disease resistant. Keep in mind that lawn disease resistance is not guaranteed. It will change with the different environmental conditions and the types of fungi available in your lawn.

It is actually common to see sodded front lawns with disease problems, while the less expensive seeded backyard doesn't have the issue. Sometimes this is due to the seed blend in the sod and seed mixture in the backyard. Or it is because the backyard is left to go dormant in the dry season, while the front yard is forced to keep developing due to the sprinkler system.

Seeded grass plants grow their roots into the existing soil. Sod occasionally has roots, which came with the sod, that rise mostly sideways and not downward into the new soil. The sod may look fine for a year or more, but eventually this weak root system will weaken the whole plant and then the diseases will come on strong. Poor root development may lead to a thatch problem as well. A core aeration, a thin layer of top dressing soil, and some new grass seeds will help alleviate the sod disease problem.

Chemical control of brown patch diseases is difficult. Several fungicides will work, but must be applied continuously as long as conditions are proper for the fungi to infect the lawn. Be sure the label says it will treat brown patch diseases. Apply it weekly as long as the daytime temperatures are up into the 70s and there is high humidity. In other words, all summer if you are irrigating the lawn.

The problem then becomes one of using chemicals too often. We actually want fungi growing in the lawn to assist with the breakdown of dead grass clippings and decaying of organic matter. The continuous application of fungicides will inhibit the good fungi.

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