

Brown Patch in Tall Fescue Lawns: Information for Homeowners

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Brown patch, caused by the fungus *Rhizoctonia solani*, is common on tall fescue lawns in Kansas during the summer. The fungus becomes highly active when conditions are moist and nighttime low temperatures are above 65° F, with dew and high humidity. In Kansas this frequently occurs in July and August, but those conditions can occur at other times. This article provides information for homeowners with tall fescue lawns. Information for commercial turfgrass managers dealing with brown patch in lawns and other sites is available here: <http://www.bookstore.ksre.ksu.edu/pubs/EP146.pdf>

SYMPTOMS

Brown patch symptoms develop within a few days during warm, humid weather. Patches initially are dark purple-green, but then quickly fade to light tan or brown as the diseased leaves dry out. Diseased turf may appear drought stressed even when the soil is moist. The pattern of damage is variable, including distinct patches up to several feet in diameter (Photo 1) as well as irregular/diffuse blighting (Photo 2).

The pathogen mainly infects the foliage and causes tan lesions (leaf spots) with a brown border (Photos 3-4-5). Presence of the lesions can help you determine if the damage is caused by brown patch or other problems, since tall fescue can turn brown from drought, insects, thick thatch, and other problems too. The leaves in brown patch affected areas are killed. On warm, dewy mornings you might find white, cobweb-like fungal growth in the foliage. Changes in the weather or applications of fungicides will slow down the pathogen, new turfgrass foliage will emerge, and the turf will recover in a few weeks. In extreme cases the pathogen can infect crowns or stems, leaving weak areas of turf that are susceptible to invasion by weeds.

CULTURAL MANAGEMENT

Appropriate practices can reduce the risk of brown patch.

- Do not irrigate in the evening—this leads to a long, wet period overnight that extends into the dew period in the morning. Water in the morning instead.
- Don't over fertilize, and don't fertilize if you have active brown patch. For cool-season grasses such as tall fescue, most of the fertilizer should be applied in the fall (Sept, Oct, Nov). Any spring-applied fertilizer should be a slow-release formulation.
- If you are seeding or re-seeding, don't use overly high rates. Overly thick, lush lawns are highly susceptible to brown patch
- Note – returning clippings to the lawn will NOT increase your risk of brown patch. Mow the lawn at the recommended height of 3-3.5 inches.

FUNGICIDES

Fungicides to manage brown patch are available. There are ready-to-use products available for homeowners and additional products available to commercial lawn companies. The homeowner products mainly contain myclobutanil, propiconazole, or thiophanate-methyl as their active ingredients.



Photo 1: Distinct patches



Photo 2: Diffuse blighting symptoms

However, in recent published research of a 3-year study at Oklahoma State University (see reference below), the ready-to-use homeowner formulations of myclobutanol, propiconazole, and thiophanate-methyl they evaluated did **not** reduce disease compared to nontreated controls. In addition, some of the products increased disease compared to the nontreated controls. Several commercial grade products in the study containing the active ingredient azoxystrobin did reduce disease. In several other one-year studies in other states, the homeowner products also did **not** reduce disease compared to untreated controls. In some studies, the homeowner products did moderately reduce disease compared to untreated controls, but in some of those cases it was not an acceptable level of control. Azoxystrobin and others in the same mode-of-action class and a handful of other classes available for commercial application tend to perform better than the active ingredients typically available to homeowners.

TURFGRASS RECOVERY

Brown patch tends to occur during July and August, when tall fescue is at its highest stress and lowest growth rate. Even with an effective fungicide, the appearance of the turfgrass may not improve because new green growth is not emerging. It is difficult for cool-season turfgrass to recover from any damage or injury during the peak of summer stress.

In many cases, the turf recovers on its own after a couple of weeks, especially after a change in the weather, like starting in early September when the nighttime temperatures start to cool off. Finally, keep in mind that other conditions can lead to a brown lawn (insects, thick thatch, poor soil conditions) so if you have any doubts contact your local K-State Research and Extension office for help with a diagnosis.

Always check the label to make sure the site (ex: home lawn/residential lawn) and use are allowed. Follow all label instructions. Labels can change. It is the responsibility of the user to read, understand, and follow the label. Mention of a product does not imply endorsement, nor does lack of mention of a product imply non-endorsement.

*Photos by Megan Kennelly
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Reference: Smith, D. L., and Walker, N. R. 2013. Fungicide management of brown patch of tall turf-type fescue in the residential landscape in Oklahoma. Online. Plant Health Progress doi:10.1094/PHP-2013-1022-01-RS



Photo 3-4-5: Brown patch lesions: tan with dark border.