

Yellow Patch of Turfgrass

Yellow patch, also called cool-season brown patch, primarily affects cool-season grasses. Creeping bentgrass, perennial ryegrass, and bluegrass are its primary hosts. In Kansas, the disease usually occurs on putting greens and collars. The disease often results in superficial ring patterns in turf that quickly recover during warm weather. However, yellow patch can cause significant turf discoloration during periods favorable for infection.

Symptoms

Symptoms appear as reddish-brown or yellow rings (figures 1 and 2), arcs, and patches on closely mowed turfgrasses. The size ranges from a few inches to several feet in diameter. Symptoms may initially appear in late October or early November during relatively cool (40 to 60 degrees Fahrenheit) and wet weather. Turf inside the ring may show no adverse effects, resulting in a frog-eye or doughnut-shaped appearance. In other instances, turf inside the ring turns light yellow, giving the disease a patch-like appearance (Figure 3). Early stages of yellow patch are most noticeable early in the morning and become difficult to see by midday. Affected plants exhibit a light, water-soaked lesion at the base of the leaf sheath or on the crown tissue. Leaf lesions are rarely visible. A cobwebby growth of mycelium may be visible early in the day if dew is present.

Symptoms tend to subside in December because the fungus is inactive at temperatures below 40 degrees Fahrenheit and the turf itself is brown and dormant. The symptoms often reappear in late February and March. The rings are most conspicuous at this time because they contrast sharply with the newly emerging leaves. Affected plants remain yellow but recover quickly as the temperature increases. Rings can become necrotic and sunken during prolonged cool, wet weather. Under this condition, the damaged areas do not recover quickly.

Cause

Yellow patch is caused by the fungus *Rhizoctonia cerealis*. This fungus is similar to, but distinct from *Rhizoctonia solani*, the fungi responsible for the large patch of zoysiagrass and brown patch of cool-season grasses.

Disease management

Yellow patch is mostly a superficial disease and does not affect the playing surface of putting greens. The disease usually disappears after only a few days of warm weather



Figure 1. Yellow patch on bentgrass greens with a brownish ring symptom. Photo courtesy of Derek Settle.



Figure 2. Yellow ring-like symptom of yellow patch disease on creeping bentgrass. Photo by Ken Obasa.

and with regular mowing. The warm temperature inactivates the fungus, and new growth of the turf is healthy. Consequently, fungicide application is usually not recommended for its control. However, under conditions favoring severe infections or where the disease is a chronic recurring problem, it can be suppressed using preventative fungicides.

Make the first fungicide application before or as soon as symptoms begin to develop in late October or early November. During wet, mild winters with high disease activity, a second fungicide application can be made in

late March. Several fungicides (see table) are available for the control of yellow patch, although they are more effective when applied as preventative rather than as curative treatments.

Additionally, core cultivation can help improve water infiltration and consequently reduce disease severity. Avoiding excessive nitrogen fertilization in the fall is a suggested practice although there is no direct evidence that high nitrogen rates in fall increases disease severity.

Fungicides for management of yellow patch

- Always read the label. It is the responsibility of the user to read, understand, and follow the label directions.

Additional references:

Identification and management of turfgrass diseases by B. Corwin, N. Tisserat and B. Fresenburg. Available online at: ipm.missouri.edu

Compendium of Turfgrass Diseases. Third Edition. 2005. RW Smiley, PH Dernoeden, and BB Clarke. American Phytopathological Society



Figure 3. Yellow patch on bentgrass greens with patch-like symptom. Photo by Megan Kennelly.

Active ingredients	Efficacy*	Application/ Interval (days)	Examples of products
azoxystrobin	L	28	Heritage
chlorothalonil	L	7-14	Daconil Ultrex
fludioxonil	Fair-Good	L	Medallion
fluoxastrobin	L	28	Disarm
flutolanil	Good	21-28	Prostar
metconazole	L		Tourney
polyoxin D	L	7-14	Endorse
propiconazole	Fair	Preventative in fall (Nov.)	Banner MAXX, Spectator

* L = limited published data on effectiveness.

Table modified and used with permission from *Chemical Control of Turfgrass Diseases 2009* by P. Vincelli and A. J. Powell, University of Kentucky.

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

EP-164

April 2010

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