



# BEST MANAGEMENT PRACTICES

## BROWN PATCH



### Overview

*Rhizoctonia solani* (brown patch) is a foliar disease of cool-season turfgrass. It is one of the most common diseases turf managers face. While brown patch can affect all cool-season turf, the most susceptible are tall fescue, creeping bentgrass, and perennial ryegrass. Brown patch can infect golf, sports and residential turf types.

### Environmental Conditions Favoring Disease Development

Brown patch can develop overnight during the summer months. Daytime temperatures that are 80°F or higher and nighttime temperatures are above 65°F favor disease development. As with other foliar diseases, extended leaf wetness (dew, rainfall, or improperly timed irrigation cycles) increases disease development. Brown patch survives in the thatch layer even when the disease is not actively growing.

### Symptoms and Identification

On higher cut turfgrass, white mycelium may be observed on the leaf blades under humid conditions. Tan lesions with dark reddish margins can be observed on the leaf blades. As these lesions coalesce infected turfgrass

becomes blighted creating large irregular-shaped patches. Mycelium is typically not observed on short cut turfgrass like golf course putting greens. Instead, symptoms develop into tan to brown irregular-shaped patches up to 1 ft in diameter with purple margins referred to as a “smoke ring” pattern.

### Management

#### Cultural

The main cultural strategy to reduce brown patch severity is ensuring turf is healthy. Proper timing of irrigation and fertility can go a long way in managing brown patch. Adjusting irrigation cycles to occur in early morning as opposed to late afternoon or early evening will also help as it reduces the amount of time the turfgrass stays wet. Turfgrass variety selection may also be an option for establishment or interseeding situations. Research has found that some varieties are less susceptible to brown patch than others. It is important to select a turfgrass variety that performs well in your geographic area.

#### Chemical

Preventative fungicide applications are important to achieve acceptable brown

control. Applications should be made when nighttime temperatures first appear consistently above 65°F under high relative humidity with daytime temperatures consistently above 80°F.

The Fame® Fungicide portfolio is built on strong and lasting brown patch control.

Fame® SC is a proven strobilurin fungicide for effective brown patch control. In trials done in higher cut turfgrass, such as home lawns or golf course roughs effective brown patch control was achieved using 28-day application intervals. On golf course greens where other diseases may occur along with brown patch, products like Rayora®, Kalida™, Fame® +T and Fame® +C deliver. With the varied combination of active ingredients, controlling multiple diseases that occur under the same conditions as brown patch can be accomplished with Rayora, Kalida, Fame +T and Fame +C.



#### References

- Smiley RW, Dernoeden PH, Clarke BB. 2017. Compendium of Turfgrass Diseases, Third Edition. American Phytopathological Society. St. Paul, MN. Pp. 78-85.
- Latin, R. 2011. A Practical Guide to Turfgrass Fungicides. The American Phytopathological Society. St. Paul, MN. pp. 186-188.

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