

Seeing spots?



Summer patch spots begin as small, circular patches of wilted turf, and can become as large as 24 inches in diameter.

If you're starting to see spots when looking over the lawns you've planted, your turf may be suffering from summer patch. It's the most common turf-grass root disease in the Northeast and it starts to show up at the beginning of summer.

Summer patch spots begin as small, circular patches of wilted turf, 1½ to 3 inches in diameter. Some can get as big as 24 inches in diameter, although most stay in the 2- to 12-inch range. As the summer progresses, patches turn from a grayish-green to a light straw color.

Summer patch is caused by the fungus *Magnaporthe poae*. It moves between plants by growing along roots and rhizomes, and can spread at a rate of 1½ inches per week.

Since summer patch affects the root system of the plant, a change in the environment surrounding the root—the rhizosphere—may help suppress the disease. According to Dr. Joseph Heckman, soil fertility specialist at Rutgers University, plant roots can alter their immediate environment in response to the form of

nitrogen fertilizer applied to the soil.

"The ammonium form of nitrogen lowers the pH while nitrate raises the pH."

Heckman explains that the summer patch pathogen grows best in soil with a high pH. "By lowering the pH of the rhizosphere, the environment is no longer conducive to summer patch growth."

A low pH in the rhizosphere also promotes uptake of elements such as phosphorus, iron and manganese. Manganese in particular has been associated with the reduced incidence of summer patch.

Heckman recommends fertilizing turf during cool weather with small amounts of ammonium sulfate fertilizer every three weeks—fertilizer blends containing ammonium sulfate will get the job done. Applications of nitrogen as ammonium sulfate reduce the rhizosphere pH, thereby suppressing summer patch development.

Any soluble chemical fertilizer, such as ammonium sulfate, ammonium nitrate and urea, can burn turf during hot weather. Make sure to apply these products only in the spring and fall months.

Dr. Bruce Clarke, extension turf pathologist at Rutgers University and Director of the Center for Turfgrass Science, offers additional suggestions:

- Avoid mowing turf below recommended heights. Low mowing (1 to 2 inches) enhances the symptoms of summer patch.
- Overseed affected areas with a mixture of resistant turf species such as perennial ryegrass or tall fescue.
- Apply systemic fungicides at a two-inch soil depth in late spring or early summer when soil temperatures stabilize between 60° and 65° F. **LM**

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