Q&A

Kentucky Orange Grass

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Questions?

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RUST OCCURS EVERY YEAR on cool-season sport fields but as a general rule fungicide applications are not necessary. This year was the exception to that rule. Several calls from June through September with specific circumstances led me to recommend fungicides for rust control.

Before we get to the rest of the story let's review the normal approach to dealing with rust. As diseases go, rust can be easily identified by the yellow to orange flecks that develop on leaves and stems. As the disease progresses orange and cinnamon colored blisters and pustules form. Clouds of spores can turn shoes orange when walking through turf heavily infested with rust.

• Rust occurs on Kentucky bluegrass and perennial ryegrass, but we are even seeing it on tall fescue this year. Immature turf that was seeded in the spring or early summer has been especially impacted by rust this year.

• Rust is usually more severe in turf that is growing slowly. Low light intensity, inadequate fertilization (especially nitrogen), drought stress, and infrequent mowing encourage rust development. A little extra shot of nitrogen is usually all that is needed to stimulate leaf growth that allows mowing to remove infected tissue. Keep the grass growing fast enough so that grass clippings are generated each week. Sufficient nitrogen and irrigation are required to "out grow" the rate of rust infection. If the grass stays at the same height and mowing is not needed, then rust can eventually cover the entire plant. Our bluegrass turned to Kentucky Orange Grass this year.

• Excessive irrigation and irrigation practices that extend the period of free moisture on the leaf surface encourage rust. The best time to water is at dawn because the turf is usually already wet from dew. Avoid watering from 10 am through dusk, this only extends the period of leaf wetness. Night time irrigation, after dew has formed, would be the next best time for watering to reduce rust.

Those of you with actively growing turf and mild rust infestation may not have needed rust control. However, here are the circumstances from my university extension visits from June through September that resulted in fungicide recommendations to control rust in 2009. Remember, rust is not normally a major killer of turf, however, because it disrupts playing quality during summer baseball and weakens turf just before the fall football season, rust may warrant fungicide application.

• Rust calls started in June this year, but our peak season typically occurs in August and September. When practice football fields were covered in rust and not growing just before the start of August football practice, something needed to be done.

• Three calls had fields that were newly seeded in the spring and early summer. Germination and establishment were going quite well with the mild summer temperatures this year. However, the establishing grass did not have substantial vertical growth so when the rust hit, it quickly covered the entire plant and growth completely stopped. Four lbs of N per 1000 sq. ft. had already been used on the native soil field during establishment so the manager was reluctant to use more nitrogen that could incite other summer turf diseases such as brown patch and pythium. "It is full of rust and they want to play football in 14 days … I need to do something." I recommended a fungicide and another pound of nitrogen. At a separate spring seeded field they were using a rain train to irrigate. It takes three 8-hour sets to irrigate the entire field so the rain train was running 24-7 for over a month. That also means that leaves were wet for too long because half of the water was being applied during the day time. The field was covered with rust and turf growth had stopped. I recommended a half pound of nitrogen per 1000 sq. ft., a rust control fungicide, and cutting back on irrigation by only watering for one 8-hour set during the night from 10 pm to 6 am.

• Another field had no means of irrigation and was intended for practice only. The worn field was overseeded in May and the grass was establishing nicely with the mild summer, but again the new turf was stunted and covered with rust. For this field I recommended a pound of nitrogen per 1000 sq. ft., but did not recommend a fungicide. It just didn't seem logical to apply fungicides when turf was not irrigated.

• Fungicide treatments. It is unlikely that fungicides would reduce the blemishes on plants that were already infected. New growth is very important to recovery from existing rust. The fungicide applications were intended to reduce infection on new growth. Some of the fungicides that I recommended for this control strategy were: azoxystrobin (Heritage), chlorothalonil (Daconil Ultrex), propiconazole (Banner MAXX), and triadimefon (Bayleton).

It has been a cooler than normal year with little pressure from our typical warm weather turfgrass diseases. This year I found myself recommending fungicides to control, the normally non-destructive, rust on athletic fields where the disease pressure was turning baseballs orange and making football turf weaker just before the start of the season. ■