
From: K-State turf information [K-STATE_TURF@LISTSERV.KSU.EDU] on behalf of Megan Kennelly [kennelly@K-STATE.EDU]
Sent: Friday, August 28, 2009 5:21 PM
To: K-STATE_TURF@LISTSERV.KSU.EDU
Subject: [K-STATE_TURF] K-State turf, part deux: Gray Leaf Spot

Hello again,

I had an email question later this afternoon about gray leaf spot in perennial ryegrass, and there was one earlier this week, and I realized I probably should have mentioned it in my first email. As far as turf diseases go, this one is a big, bad one. Bad enough that I know of numerous sites where fairways have been switched from perennial ryegrass to another species. There was not much GLS last year. Haven't seen it this year.

So, here goes, paraphrasing the questions:

- 1) "Have there been any reports of gray leaf spot (GLS) outbreaks?"
- 2) "What are the temperature thresholds for GLS infections?"

No, I haven't heard of any outbreaks and have not had any samples. But, depending on local weather conditions, it could be out there. If anyone has seen GLS I would appreciate hearing about it.

As you might know, gray leaf spot is caused by slightly different strains of the same fungus that causes rice blast. And, there was rice blast this week in some KSU field plots for rice research. So, this tells us that conditions were conducive in some places.

The optimal temps for GLS are 82-90. At those optimal temps you can get disease with 9-10 hours of leaf wetness. Over the past week there have been temperatures in this range, and some locations around the state have had rain (leaf wetness). But, to really get an epidemic, you need those conditions over a period of time in order to get multiple infection periods (repeated cycles of sporulation and re-infection). That's when a whole fairway can be taken down in a week or less.

When temps are a little lower, like 68-75, infection can occur but it requires longer periods of leaf wetness (21-36 hours) and therefore it is much less likely to spin out of control.

Below 68 it doesn't occur, but the disease can still be there and could flare up if temps increase and there is a lot of rain.

- 3) What about resistant cultivars?

Rutgers University developed some perennial ryegrass cultivars with reduced susceptibility to GLS. We have planted a few of them at Rocky Ford (Paragon GLR, Prelude GLS, Revenge GLX,

Manhattan 5, Panther GLS, Stellar GL), but we have not had any natural GLS epidemics there, and I have not yet had a chance to try to infect them.

Rutgers has some info online that mentions some of these cultivars:

<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS1048>

For some more information on GLS:

<http://www.plantpath.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=982>