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Scab Incidence Varies Across Midwestern States

Levels of *Fusarium graminearum*, the fungus that causes Fusarium Head Blight (FHB), also known as head scab, are ranging from very low to quite serious in the Midwest this year. That's the bottom line of an early June spot check among small grains specialists in several states.

The most serious developments appear to be in Nebraska and Kansas. As of the end of May, University of Nebraska small grains breeder Stephen Baenziger said his observations were suggesting "the makings of another bad scab year." Rainfall during late May and early June appeared to be substantiated by that prediction.

Writing on June 8, Baenziger reported that much central and eastern Nebraska had been continuously wet through the wheat flowering period. As of June 10, scab was very common in his nurseries at Lincoln and Mead. Baenziger also witnessed what appeared to be scab on wheat at McCook in the southwestern part of the state. If confirmed, that would be "as far west as I have ever seen scab in Nebraska and would extend our range of potential damage," he noted.

Stephen Wegulo, UN-Lincoln extension plant pathologist, reported having seen scab in nearly every southeastern Nebraska field that he examined during the second week in June. He also was seeing it further west — including one irrigated wheat field near Imperial (Chase County), where incidence exceeded 50%. He additionally discovered scab in a dryland field near McCook. With more rain being forecasted for much of Nebraska into mid-June, "scab is certainly going to be a problem this year," Wegulo concluded.

Across the state line, it appeared scab levels would be "above normal in some parts of southeastern Kansas this year, with some fields exceeding 10% incidence," stated Erick De Wolf on June 9. The Kansas State University extension plant pathologist added

that scab also was being found at trace levels in central Kansas — a region where the disease is very rare. "We have had frequent rains in north central Kansas this year, suggesting that conditions were favorable for disease development," he continued. "However, it is too early to know if scab will be an issue in this area."

"Scab is here," reported David Tague, senior research specialist with the University of Missouri, on June 16. "It is hard to tell how much of a footprint it will make on yields and quality." Plenty of heat, moisture and other diseases in addition to scab have characterized late spring in the Missouri wheat growing areas, Tague noted.

In his observations to date, the varieties 'Bess' and 'Truman' looked "nearly immune to scab this season," the Missouri researcher added. However, "many of the better-looking plots [as of] a week ago are just fair now," Tague said in mid-month. "So I guess we did 'go bad' with wheat and heat, like I feared. It is a good year to discard susceptible types from the breeding program."

Further east, cool growing conditions in April and May are producing a later-than-normal wheat crop in Illinois, according to Carl Bradley, assistant professor of plant pathology with the University of Illinois. As of his June 9 report, scab symptoms were just starting to appear in his central Illinois plots.

For those southern Illinois fields and research plots Bradley had viewed by that date, "scab incidence ranged from very low to approximately 5%." Disease symptoms were just starting to become evident in the central part of the state as of his report; "but 5% seems to be fairly common." Bradley was not aware of any scab sightings in the northern part of Illinois as of June 9.

In Indiana, Purdue University agronomy professor Herb Ohm had witnessed only occasional infected spikes in wheat fields as of June 9. The one exception was in his test plots just north of Evansville, where most entries in the Uniform Southern Winter Wheat Nursery had 5% to 50% infected spikes in both replications. Ohm believes those levels were weather-related, *i.e.*, very cool nights during flowering resulted in lines incurring

some pollen sterility — which meant the flowers remained open longer than usual. In Ohm's advanced lines yield nursery, located adjacent to the Uniform Southern Winter Wheat Nursery, there were only occasional infected spikes.

Despite early concerns to the contrary, the 2008 Fusarium Head Blight threat in Kentucky appears to be minimal. "Most fields I've seen have about one infected head [per] 5,000-10,000 heads — way less than 1%," reported University of Kentucky extension plant pathologist Don Hershman at the end of May.

Though the state's wheat areas received plenty of rain this spring, "we never had more than 12 hours of rain at a time in most parts of the state," Hershman pointed out. Rains typically would be followed by cool temperatures, "and then the next morning the sun was out and the wind was blowing." Such conditions were not conducive to the development of scab.

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