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News Release

Serious Scab Problems in Southern Wheat States

By the time the calendar flipped from May to June, Fusarium Head Blight (FHB) infection levels had reached very worrisome levels in several southern soft winter wheat states, according to university small grain specialists. Commonly referred to as “scab,” the disease, caused by the fungus *Fusarium graminearum*, can produce significant yield losses, as well as serious grain quality issues due to the presence of the mycotoxin known as “DON” (deoxynivalenol).

Fusarium Head Blight was “very prevalent” in wheat fields viewed by Virginia Tech extension plant pathologist Erik Stromberg during an early June evaluation trip through the state’s northern and western growing areas. “This is likely to be the worst it has been in 15 years,” Stromberg believes. The Virginia scab situation was fueled by spring weather very conducive to FHB infection, *i.e.*, significant rainfall during the wheat flowering period.

“I would suggest that growers turn up the fans in their combines when they harvest,” Stromberg advises. “This should get rid of most of the infected grains.” It also will result in more volunteer grain in second-crop no-till soybeans. The Virginia Tech pathologist strongly encourages growers to kill off volunteer grain after the bean harvest to remove the “green bridge” for other diseases such as take-all, barley yellow dwarf, tan spot, powdery mildew and stagonospora leaf and glume blotch.

In North Carolina, wheat flowered seven to 10 days later than usual due to low winter-early spring temperatures and late planting, reports North Carolina State University-based USDA-ARS small grains pathologist Christina Cowger. “Flowering

occurred across the state during the last week of April and first two weeks of May,” she says. Several days of rain during the first half of May created conditions conducive for scab development in the state’s Piedmont and Tidewater districts.

“Severe scab symptoms have been observed in a number of fields of susceptible varieties, while nearby fields of moderately resistant varieties have much less severe scab,” according to Cowger. “In affected counties of the Tidewater and Piedmont areas, the epidemic appears to be patchy, with the determining factors being timing of planting and variety resistance.”

A 2009 variety trial in Beaufort County points to the impact that varietal choice and timely fungicide treatment can have on scab infection levels, Cowger adds. A timely fungicide application in this trial led to a 50-70% reduction in disease symptoms compared to untreated checks. Unfortunately, she says, “most growers did not use scab resistance as a criterion in selecting varieties, were unaware of their scab risk, and did not apply a fungicide for scab control during flowering.”

All wheat-growing regions in Kentucky have been affected by scab this year, with the western third of the state being hardest hit. Unfortunately, that is where the bulk of the wheat is produced. Wheat harvest was beginning in the southwestern corner of Kentucky as of the first of June, with most of the state’s fields two to three weeks away from combining.

Though no yield or quality information was available as of June 1, the situation looked “ugly” in numerous fields, according to University of Kentucky extension plant pathologist Don Hershman. “Some fields have been destroyed due to excess scab,” he reports. Attempts to spray some of those fields were hindered by rains; in others, the results were unsatisfactory due to the wet conditions. In those cases where fungicides were applied properly in a timely manner, fields visually seemed to be holding up well, the UK pathologist indicates.

“Resistant varieties, where used, have also made a difference,” Hershman emphasizes. “This is good news, since [the development of resistant varieties] has been a focus of the [U.S. Wheat & Barley] Scab Initiative. We should get some outstanding data in soft red winter wheat this year. That is the silver lining in the cloud.”

The scab situation in Maryland was still quite fluid as of the end of May. Jose Costa, University of Maryland wheat breeder, says high infection levels had shown up at three Eastern Shore yield trial locations (Quantico, Allen and Queenstown). Differences between susceptible varieties and those with at least moderate resistance were very apparent.

In Georgia, the wheat harvest was well underway by late May — though often working around wet conditions. Jerry Johnson of the University of Georgia says scab levels were high (up to 35%) in some fields in the state’s Piedmont region.

To the west, wheat in central Arkansas appears to be severely impacted by Fusarium Head Blight this year due to the crop’s vulnerable growth stage during an extended period of rainfall. “Wheat in southern Arkansas was more mature when the rains started and matured before many [scab] symptoms developed,” according to University of Arkansas plant pathologist Gene Milus. The scab situation was still developing in the northern part of the state as of late May.

The widespread, prolonged May rains in Arkansas came on the heels of a warm, dry and windy spring, so there was not much concern about Fusarium Head Blight. Milus points out that until 2009, Arkansas had not incurred serious scab problems since the early 1990s. Thus, few if any growers were prepared to apply a fungicide for FHB management; nor has there been much interest in (or availability of) wheat varieties with moderate resistance to scab. “When conditions [for scab development] abruptly change from ‘unfavorable’ to ‘extremely favorable’ after flowering, as they did this year, there is nothing that can be done to avoid huge losses,” the UA pathologist observes.

Overall, Milus anticipates a poor wheat crop in Arkansas this year. “But hopefully there will be some areas that escape serious damage” from scab, he remarks.

Growers are encouraged to visit the U.S. Wheat & Barley Scab Initiative’s website — <http://www.scabusa.org/> — for links to information on harvesting scabby wheat fields, testing for DON, marketing scabby grain, crop insurance adjustments for DON, and other scab-related postharvest issues.

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