



Plant Disease in Kansas

Wheat foliar diseases on a push, freeze damage more apparent



Figure 1. Bacterial leaf blight from a field at the Scott Schroeder farm outside of Lorraine in Ellsworth County. Frequent rains and standing water in many fields and ditches have contributed to high humidity enabling bacterial disease to spread rapidly to an already damaged crop.

In the last 10 days or so, frequent rains and high humidity over central and eastern Kansas have enabled fungal and bacterial diseases to increase several fold.

Speckled leaf blotch in EC and SE Kansas were observed at high to severe levels with some impressive tan spot severities. Counties surveyed were Linn, Allen, Crawford, Cherokee, Labette, Montgomery, Chautauqua, and Cowley. The most severe fields were in extreme eastern counties with speckled leaf blotch severities commonly at 50-80% of the flag leaf. Tan spot not as common but in certain fields had severities greater than 40%. In the western counties mentioned around Ark City and Coffeyville, foliar disease levels were not as great but still in the moderate range of 20-40% severity. No rust diseases was observed in fields that were

in the late grain fill stage.

As one moved westward into SC and C Kansas, the disease occurrence changed as speckled leaf blotch was not as common and severities were below 10%.

Tan spot levels remained fairly steady compared to disease pressure of eastern Kansas fields as severities were noted sometimes around 30-40% of the flag leaf. What was different especially in central Kansas counties of McPherson, Rice, Saline, and Ellsworth was the impact of bacterial leaf blight (Figure 1). Many fields had severities of this bacterial disease above 50%.

How much damage from bacterial foliar disease will have on the yield remains to be seen. The wheat was well into grain fill and had plenty of moisture. Stems were still very green and it seemed that the heads were filling well. That is all good and

should minimize the impact of BLB. Last year, estimates were 0.03% loss for the state and BLB is more extensive than in 2012. Look for losses to be several times greater than in 2012 because of the distribution.

Rust? One field outside of Geneseo in Rice county had trace amounts of stripe rust.

Staying in central Kansas—the wheat here is where one finds entire fields damaged from the cold weather. Certain fields were turning white from plants with heads that had died (Figure 2). This was a result of node injury (blackened nodes, Figure 3). Many of these fields had blasted plants exceeding 50% and what plants were left were in dire straits. Don't confuse this though with standing water injury. See next page>



Figure 2. Blasted wheat heads from cold injury to stems and nodes.



Figure 3. Blackened node from a dead plant caused by sub freezing temperatures.

PLANT PROTECTION AND WEED CONTROL
PROGRAM

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INVASIVE SPECIES

Plant Protection and Weed Control Program

Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plants diseases or weeds, is beneficial to the economy and the environment.

Our Mission is to:

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantine pests;
- Provide customers with inspection and certification services.

The Plant Disease Survey in Kansas has been conducted since 1976. The survey addresses disease situations in field crops, native ecosystems, and horticultural trade. The Kansas Department of Agriculture works cooperatively with Kansas State University and Extension programs, United States Department of Agriculture, and various commodity groups.

Wheat disease continued...

Standing water injury is spotty in fields compared to the freeze damaged wheat.

Looking ahead to next week, the predicted temperatures of 90-100 F will take an even greater toll on these freeze damaged fields. There seemed to be some evidence (a few discussions with farmers) that summer fallow fields were not as affected as continuous cropped fields.

In far western counties, the wheat is struggling at best. Freeze damage has caused many farmers to have already written fields off. In remaining fields, wheat disease survey reported

low levels of bacterial leaf blight, wheat streak mosaic, and barley yellow dwarf. Counties of survey included Lane, Finney, Seward, Scott, and Haskell. Disease will not be much a player in western Kansas production as extreme cold and heat will.