Over the past ten days, we have observed wheat leaves and heads that have gone from very clean (disease-free) to showing significant disease symptoms very quickly. In addition to leaf symptoms (see top photo), in some cases, heads or small portions of the glumes have developed a purplish discoloration (see bottom photo with purplish areas on the head).

In some fields, a second fungicide (for scab) was applied and these symptoms are still showing. All of this has happened very quickly. These brown lesions are bacterial leaf streak/black chaff and can appear on beards (awns), leaves, glumes (head), and on the stem itself. Symptoms appear after heading and are often confused with those of Septoria glume blotch. Fungicides do not control bacterial diseases.

According to one University specialist, “the greatest difference between bacterial diseases and glume blotch has to do with the short period of time required for the bacterial diseases to develop... when lesions associated with glume blotch are fully mature... fungal fruiting structures will appear as black pepper grains within the lesions”.

According to Mississippi State, “upon close inspection the lesions caused by the bacterial pathogen will appear to be contained between the veins of the leaf rather than crossing the veins. Lesions will begin as water-soaked spots with this particular phase disappearing within one day. Moreover, lesions can and oftentimes only appear on the flag leaf. Typically, Septoria will start from the bottom of the plant and move up while the bacterial disease will begin at the top of the plant.”

Bacterial diseases in wheat have four different names but come from two different bacteria: Bacterial Leaf Streak, Bacterial Stripe and Black Chaff are the same bacteria while Bacterial Leaf Blight is another bacteria.

Kernels are infected after head emergence and wet weather is required for infection. **Yields are generally not affected** but test weight may be reduced depending on when the infection occurs. Leaf injury from hail offers a path for infection.

Bacterial streak/black chaff is difficult to control; however, according to the University of Kentucky, the following practices may help:

- Best results can be obtained by using only certified seed and allowing 2 years between wheat crops in a field. Do not rotate wheat with barley as the bacterium will be maintained in the field at high levels.

*Current research has indicated varying degrees of susceptibility for different varieties. However, this information is not sufficiently developed to be used as a reliable control measure.*

*Control insects, where practical, to reduce the frequency of sites available for the causal bacterium to move and enter plant tissue.*

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