

GREEN AND GROWING

D. Bruce Bosley
Extension Agent/Cropping Systems
Colorado State University Extension
508 S 10th Ave., Ste 1, Sterling Co 80751
(970) 522-3200 Ext. 285
Bruce.Bosley@colostate.edu

FOR IMMEDIATE RELEASE – July 6th, 2009

Our very wet June weather conditions have promoted Fusarium head blight (FHB) to develop on late maturing wheat in fields in Northeast Colorado. We almost never see this disease here due to our normally very dry wheat maturing weather. Wheat producers and crop scouts may also see grey flecking on wheat heads that are the symptoms of sooty mold, which is a generalized fungus that occurs on many plants. Fusarium head blight is a serious wheat disease, especially in wetter parts of the wheat belt, but sooty mold is not considered a serious wheat disease.

Fusarium head blight (FHB), or scab, is a fungal disease that can occur on all small-grain crops. FHB can cause significant yield losses and quality reductions. Yield losses in all crops occur from floret sterility; additional yield and quality losses can occur when shriveled, light test-weight kernels are produced as a result of infection. Quality reductions also may occur if fungal toxins (mycotoxins) are produced in infected seed. The toxins are unacceptable for certain end uses, so toxin-containing grain is downgraded at the market.

In small grains, any part or all of the head may appear bleached if the disease infects the wheat in the early reproductive stages. Additional indications of FHB infection are pink to salmon-orange spore masses of the fungus often seen on the infected spikelets and glumes during prolonged wet weather.

Many infected wheat and durum kernels are shriveled, lightweight and dull grayish or pinkish. These kernels sometimes are called "tomb-stones" because of their chalky, lifeless appearance. If infection occurs late in kernel development, Fusarium-infected kernels may be normal in size, but have a dull appearance or a pink discoloration.

The most common species causing FHB is *Fusarium graminearum*, which is the same one that causes corn stalk rot. The fungi persist and multiply on infected crop residues of small grains and corn. During moist weather, spores of the fungi are windblown or splashed onto the heads of cereal crops. Spores can come from within a crop or can be blown from surrounding crops sometimes long distances away.

Wheat is susceptible to infection from the flowering (pollination) period up to hard dough stage of kernel development. Infection can continue until close to grain maturity under environmental conditions favorable for the fungus organism. The most favorable conditions for infection are prolonged periods (48 to 72 hours) of high humidity and warm temperatures (75 to 85 degrees Fahrenheit). However, infection does occur at cooler temperatures when high humidity persists for longer than 72 hours.

Seed treatment and the use of high-quality seed will help reduce seedling blight due to infected seed but will not protect against subsequent head blight. In Colorado, use

seed treatment fungicides for controlling Bunt or loose smut in seed for fall plantings. If scabby grain is to be used as a seed source, it should be cleaned and conditioned thoroughly to remove the majority of scabby kernels and to improve test weight. A germination test should be run to indicate percent of germ and vigor of the seed.

Adjust harvest combines to remove the lightweight FHB kernels along with the chaff. However, this will not remove all FHB kernels because some FHB infections occur late in the development of the kernel, and these infected kernels still may be fairly plump.

After harvest of wheat, gravity table grain separation may be very effective in removing light-weight, FHB-damaged kernels. The resultant product may have a high enough test weight to pay for the cost of the clean-out process.

Please contact me, Bruce Bosley about this or other cropping systems or natural resource topics at 522-3200 extension 285 at Sterling or 542-3540 at Fort Morgan.