



## Fusarium Head Blight Newsletter III – August 2004

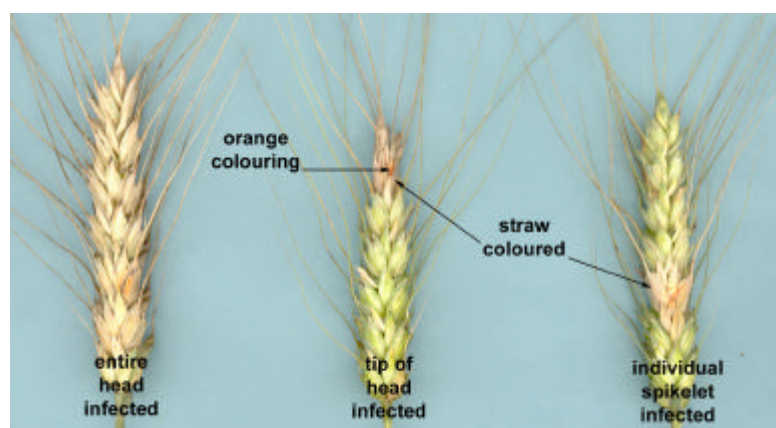
Recognizing Fusarium Head Blight in the field is not difficult especially on wheat. To measure the full impact of the disease, however, you must also assess yield loss, down-grading and mycotoxin content. Symptoms of the disease can appear as early as the end of flowering but are more commonly observed in the milk and soft-dough stages. Individual florets or spikelets initially develop an off-green colour tinged with brown or beige. As the disease progresses infected spikelets die prematurely and bleach to the color of straw. With extended wet weather a cottony mould can often be seen growing on the affected areas which may also have small patches of pink or orange colouring. Grain from affected spikelets may be lighter in weight, shriveled and white or pinkish in appearance.



Fusarium head blight on barley and oats has very similar symptoms but the separation between diseased spikelets and the rest of the head is not as clear. Affected barley and oat kernels may be darker than normal with traces of pink or orange. Unlike wheat they are not usually shriveled. The correlation between the level of Fusarium symptoms in the field and mycotoxin contamination is not as direct as you might suspect. For the 2004 season we are recommending a DON mycotoxin analysis when the average infection level is 3 or more affected heads per square meter. If you would like more help with recognizing the symptoms of Fusarium head blight check out the images of affected barley, oats and wheat on the NBDAFA website: <http://www.gnb.ca/0316/03160001-e.asp>.

Weather conditions over the past few weeks have resulted in Fusarium infections in Carleton and Victoria grain fields. Symptoms have been greatest in winter wheat and some early barley fields. It is anticipated that symptoms will become more evident in barley fields and spring wheat fields soon after flowering.

Early field scouting of winter wheat fields have indicated a high incidence



of head blight infections. This will reduce yields in these fields but does not indicate the level of DON that may be present or the number of Fusarium damaged kernels. The best means of reducing the potential DON level is to harvest early (starting at 18% moisture), and to immediately dry down the grain in order to stop the spread of infection. With Fusarium damaged kernels present at harvest a slower ground speed is recommended (increasing separation) and air speeds should be increased to separate and remove infected kernels. This is less effective with barley and oats than wheat.

The first step in harvest management is to **scout fields** prior to late dough stage to assess the level of infected heads and consider pre-harvest DON testing. This may identify certain production areas of your farm with higher potential for problems and allow for segregation. There are 'quick test kits' available to allow for on-farm assessments to target certain lots for segregation. Kits can be purchased at a cost of approximately \$450.00 for 25 tests from;

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Ph: 450-771-7291  
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Post harvest monitoring is essential when managing Fusarium. Fusarium levels change between species, variety, field and location therefore, it is essential to sample effectively at harvest. Samples should be taken randomly during combining from numerous locations within a field and then mixed for a composite sample. There are numerous ways samples can be collected, however, the best method is to take small samples from a stream during loading or unloading. Stream samples should be composited and sub-sampled by field to provide for reasonable segregation if necessary. Field sampling will allow lots to be segregated if DON levels exceed acceptable thresholds. Samples need to be dry, stored in an air tight container in a cool dry area and sent for testing as quickly as possible. Mycotoxin levels will increase in infected samples that have not been properly dried and stored. This is also true with grain stored on-farm, therefore, it is very important that grain is cool and dried to appropriate storage moisture levels as quickly as possible.

Field management after harvest is also important and producers should be sure to plow cereal stubble down in the fall. This will bury the remaining inoculum reducing the potential for infection next season. Additional information can be found at the following address on the DAFA web site; [http://www.gnb.ca/0316/2004FHB\\_AGIC.pdf](http://www.gnb.ca/0316/2004FHB_AGIC.pdf)