

Plant Pathology Fact Sheet

Black “Sooty” Head Mold of Wheat

Donald E. Hershman
Extension Plant Pathologist

Introduction

Each year, just prior to and during wheat harvest, the Plant Disease Diagnostic Laboratories at Princeton and Lexington receive many samples with questions about severe head molding. This condition is known as black head mold or sooty head mold.

Symptoms

Affected heads exhibit an extensive dark, olive-green, and black discoloration which gives them a very weathered appearance. The growth is superficial in nature; that is, the tissue surrounding the grain is affected, but not the grain itself. This condition, although rough in appearance, does not significantly affect crop yield or test weight. If harvest is significantly delayed due to wet weather, the mold fungi can colonize the kernels, resulting in small dark lesions known as black point. Black point can damage grain and negatively impact both grain quality and marketability.

Cause and Disease Development

Sooty head molds are caused by a large number of weakly parasitic and saprophytic



BLACK SOOTY HEAD MOLD DUE TO *ALTERNARIA* SP.

fungi, especially species of *Cladosporium* and *Alternaria*. Other genera of fungi that have been associated with this condition include *Stemphyllium* and *Epicoccum*.

Head mold fungi develop on senescing and damaged wheat heads when wet, humid weather occurs during the latter stages of grain development and crop maturation. Molding is frequently most severe when harvest is delayed. In addition, heads that

are shaded, weakened, undersized, or prematurely ripe are frequently affected by sooty molds. Head molding is also prevalent when plants are deficient in nutrients, lodged, or damaged by insects (especially aphids) or other diseases. Thus, severe sooty head mold can be a red flag that other production problems may also have affected the crop. However, this is not always the case as many high yielding crops can be affected by sooty head mold in any given year.

Disease Management

Avoid sooty head mold by harvesting crops in a timely fashion.

Additional Resources

These University of Kentucky publications are available at County Extension offices, as well as on the Internet.

- Comprehensive Guide to Wheat Management in Kentucky, ID-125
<http://www.ca.uky.edu/agc/pubs/id/id125/id125.htm>
- Kentucky Integrated Crop Management Manual for Small Grains, IPM-4 (2009)
<http://www.uky.edu/Ag/IPM/manuals/ipm4smgr.pdf>
- Kentucky Plant Disease Management Guide for Small Grains, PPA-10c (1993)
<http://www.ca.uky.edu/agc/pubs/ppa/ppa10c/ppa10c.pdf>

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*Photo by Mary Burrows, Montana State University,
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