

Sooty Mold of Barley and Other Small Grains

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Sooty mold of barley and other small grains can be caused by a number of fungal species, including *Alternaria*, *Cladosporium*, *Stemphylium*, or *Epicoccum*. These can be weakly parasitic, but generally, are saprophytic fungi that colonize dying plant parts when conditions are favorable. In Maine, *Cladosporium* spp. is the dominant species causing sooty mold. Sooty molds are not limited to small grains and have a worldwide distribution. While the effects of sooty mold are generally not thought to be economically important, the symptoms can increase markedly with delayed harvest under wet and warm conditions. Crops that are weakened by poor nutrition, insect damage, or

disease are more susceptible to sooty mold than healthy, pest-free crops. The appearance of severe sooty mold can result from crop-production problems or delayed harvest.

Symptoms

Other cereal-head diseases differ in that they are more than just superficial. Sooty-mold-affected grain heads have black discoloration and are covered with sooty-looking mold, giving them a weathered appearance. In cases where symptoms are not severe, only the tissue surrounding the grain is affected, but not the grain itself. In these cases, yield or test weight is not affected. Severe symptoms associated with delayed harvest can result in lesions on the kernels and this can reduce the quality of the harvested grain. Harvest releases spores from the sooty-mold-infected seed heads. In crops with high levels of sooty mold, combines may be dirty and dusty and covered with released spores, which can be an indicator of high levels of sooty mold.

Management

Proper crop nutrition and pest control, combined with proper harvest timing, will keep sooty mold at a minimum.



Sooty mold on grain head.
Photo by Steven B. Johnson.

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