

# Corn & Soybean News

## Corn Ear Rots Observed in Kentucky

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Scouting reports have indicated that two important ear rots have been observed in Kentucky corn as harvest begins: Diplodia ear rot and Fusarium ear rot. A different fungus causes each of these rots, and the environmental conditions at and just after silking influence which ear rot may be problematic in a given year. Additionally, the fungus that causes Fusarium ear rot produces mycotoxins as a byproduct of the infection process. It is important to identify fields that may have ear rots to ensure timely harvest, proper storage of moldy grain, and determine the potential for mycotoxin issues.



### Diplodia ear rot

Diplodia ear rot is caused by the fungi *Stenocarpella maydis* and *S. macrospora*, and is very common in cornfields across the Corn Belt. This fungus survives in residue and infects plants shortly after pollination. Humid weather and rains prior to and after pollination will favor disease development. Diplodia ear rot is identified by white fungal growth on the cob, often forming a mat of fungus across the ear (Fig. 1).

Figure 1. Diplodia ear rot  
(photo provided by Kiersten Wise)

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Infected kernels may also be brown-gray in appearance. Small, black fungal structures called pycnidia may form on the kernels or the cob. The fungus is reported to produce a mycotoxin called diplodiatoxin in South America and South Africa, however, no reports of toxic effects of grain on livestock or humans due to *Diplodia* ear rot have been reported in the United States.

Grain dockage may still occur, however, due to moldy grain. More information on *Diplodia* ear rot can be found in University of Kentucky publication:

<http://plantpathology.ca.uky.edu/files/ppfs-ag-c-05.pdf>

### Fusarium ear rot

*Fusarium* ear rot is primarily caused by the fungus



*Fusarium verticillioides*. This fungus infects corn after pollination, and infection is favored by warmer temper-

atures. *Fusarium*-infected ears may have white to purple fungal growth on the cob, or symptoms may appear as discolored kernels scattered throughout a cob or associated with insect feeding (Fig. 2). Visible fungal growth may not be obvious on the cob, but a white “starburst” pattern in kernels can sometimes be observed on ears infected by this fungus. The mycotoxin fumonisin is associated with *Fusarium* ear rot.

### Ear rot management

Regardless of which ear rot is present in a field, farmers should scout fields prior to harvest and determine the level of incidence of any ear rot in the field. If ear rots are observed in a field, affected areas should be harvested early and grain segregated to avoid contamination of non-infected grain. Grain harvested with suspected ear rots should be dried to below 15% moisture. If grain is stored above this moisture content, mold can continue to grow, and any mycotoxins present can continue to accumulate in grain. All grain contaminated by any ear rot fungus should be stored separately from good grain, and if stored long term, it should be stored below 13% moisture to prevent further growth of fungi.

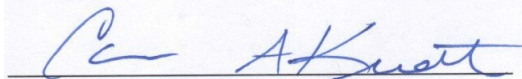
Several publications on ear rots and mycotoxin management are available through the Crop Protection Network:

<https://cropprotectionnetwork.org/resources/publications>

These publications provide information on ear rot identification and management, as well as answers to frequently asked questions about mycotoxins, and storing moldy grain.



  
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