

# Crop Scan



Trusted Advice  
Local Knowledge  
Accessible Information

With reports of ear molds and ear rots beginning to filter in from several areas of the market, the following basic ear rot ID references along with mycotoxin information may be helpful. Some keys to remember include:

- 1) Not all ear molds produce mycotoxins.
- 2) Just because a particular ear mold is present that can produce mycotoxins, does not necessarily indicate that mycotoxins are present.
- 3) Testing must be utilized to confirm both the presence and level of a particular mycotoxin.
- 4) Herculex® I and Herculex XTRA insect protection technology can significantly reduce ear mold risk by eliminating and greatly reducing ear feeding insect activity.

**DIPLODIA EAR ROT** – Initially appears at the base of the ear and works its way to the tip. Insect damage such as WBCW and ECB often provide an entry point for infection. Favored by wet weather during grain fill and generally more severe on hybrids with upright ears and loose husks. **Does NOT produce harmful mycotoxins.**



Diplodia



Gibberella

**GIBBERELLA EAR ROT** – Overwinters in corn residue, infecting ears through the silk and is a result of the same fungus that causes stalk rot. Favored by cool, wet weather after silking and is identified by red or pink color of the mold usually starting at the ear tip. **Mycotoxin producing fungus = Vomitoxin (DON) and Zearalenone.** DON causes feed refusal and poor weight gain in swine while Zearalenone is the primary toxin causing infertility, abortion or other breeding problems, especially in swine.

**ASPERGILLUS** – Most severe when drought (especially drought during pollination and grain fill), extreme heat, or insect injury occurs and grows best on corn at 18 to 18.5% moisture. **Aspergillus is the fungus that can produce aflatoxin**, however, just because the fungus is present does not mean that aflatoxin is present.

- Acceptable levels of aflatoxin established by the FDA:
  - 20 ppb for immature animals and dairy.
  - 100 ppb for breeding beef cattle, breeding swine or mature poultry.
  - 200 ppb for finishing swine .
  - 300 ppb for finishing beef cattle.



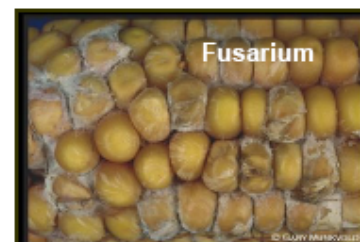
Aspergillus



Penicillium

**PENICILLIUM** – Powdery green or blue-green mold on ears that develops with mechanical or insect damage, usually at the ear tip. **Does not produce any mycotoxins.**

**FUSARIUM** – Usually infects individual kernels or groups of kernels scattered over the ear and **can produce fumonisin, a mycotoxin that causes fatalities in swine and horses.** Fusarium is often most severe when hot, dry weather occurs both during and after flowering. Produces whitish-pink fungal growth on infected kernels, or a "starburst" symptom (white streaks radiating from where silk was attached).



Fusarium



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