



Best Management Practices for Fields with Poor Grain Quality

SCOUT FIELDS PRIOR TO HARVEST

- 1) Scout fields at kernel maturity (R6 Growth State; Black Layer) and just before harvest and determine your ear rots present.
- 2) Scout field areas that are subject to drought-stressed, damaged, or exposed to extreme environmental conditions. (Areas of hillsides with drought stress may contain more Fusarium and Aspergillus while low areas where moisture from fog or high-dew conditions occur may have more Gibberella ear rot.)
- 3) Select 5 random spots in the field, husk 20 consecutive plant ears at each location, totaling 100 ears per field.
- 4) Determine ear rot present and at what levels. Fields in which 10% or more of the ears are infected with Gibberella, Aspergillus, Fusarium and Penicillium ear rots could have concerning levels of mycotoxin and should be tested. [Grain and Silage Sampling/Mycotoxin Testing](#)
- 5) Contact your crop insurance agent prior to harvesting field if there is suspected mycotoxin present as claims are usually performed prior to harvest.

HARVESTING POOR QUALITY GRAIN

- 1) Harvest problem fields first. Fungi and vivipary that can continue to grow and spread until the grain is less than 15% moisture.
- 2) Adjust Combine Settings to reduce kernel damage
 - a. Cylinder / Rotor Speed: Reduce speed to lowest possible to shell the grain effectively while maintaining acceptable loss levels of less than 1%. Lower speeds prevent cracking and breaking kernels.
 - b. Concave Clearance: Set concave clearance to match average cob diameter to avoid breaking cobs. In general, round bar concaves shell corn with wet and rotten cobs better than large wire concaves. (typically cob thickness setting is between 18-25 mm)
 - c. Cleaning Fan Speed: Increase fan speed levels to allow sufficient airflow. Moldy, lightweight, and shrunk kernels float out in the air stream, reducing the overall levels of poor-quality grain
 - d. Sieves and Chaffer: Bottom sieve should be wide open, and adjustments the top sieve/chaffer to maintain a clean sample while preventing excess un-threshed material from moving through
 - e. Ground Speed: Use reduced speeds and slower gears to ensure an even feeding of material into machine
- 3) Combining fields at a higher moisture level then utilizing rapid, high heat drying to 15% or below moisture levels can help reduce the spread of ear rots, mycotoxins and vivipary.