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Cob Rot Damaged Corn

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Fact Sheet #28 October 10, 1996

Purdue University

Task Force

Cob Rot Damaged Corn

Charles Woloshuk, Botany and Plant Pathology

Don Scott, Botany and Plant Pathology

Cob rot damage is one of the many reasons why grain inspectors dock the price paid on a load of corn. There has been a steady increase of cob rot damage over the past few years in parts of Indiana. Cob rot is primarily caused by a preharvest disease known as Diplodia ear rot.

Diplodia ear rot occurs primarily in the western half of the state. When infection occurs within two weeks after silking, husks prematurely become bleached or straw colored, and entire ears are white to grayish or grayish brown, shrunken, and lightweight. Lightweight ears generally stand upright with the inner husks adhering tightly to each other. Black specks (pycnidia) may be scattered on the husks, cobs, and sides of kernels. Ears infected later in the growing season generally have a somewhat uniform whitish to grayish mold growth over and between the kernels starting at the base of the ear and progressing towards the tip. Infected kernel tips are discolored. Some isolates of the causal fungus may cause vivipary (premature germination).

Diplodia ear rot is enhanced by dry weather prior to silking followed by wet conditions at and just after silking. Hybrids may differ in their susceptibility to Diplodia ear rot. Ears are most susceptible to this disease during the first 21 days after silking. Diplodia ear rot is more severe where corn follows corn with reduced-tillage practices. The disease is usually not severe with crop rotation or clean plowing of corn residues.

Proper storage at or below 15% moisture prevents further development of this disease. Long term storage is not recommended because of the damage to kernel integrity and the increased amounts of foreign matter (cob and broken kernels) in the grain. There are no known mycotoxins produced by the Diplodia fungus in the United States, therefore feeding the grain to livestock is possible, keeping in mind that the nutrient value of the grain may have diminished.

Grain Quality Fact Sheets can be accessed on-line through:

World Wide Web (Mosaic or Netscape) URL address: http://hermes.ecn.purdue.edu:8001/server/purdue/acspub.html

(select) Grain Quality

or

Almanac:

send e-mail to: almanac@ecn.purdue.edu

message: send grain guide

or send grain catalog

or send grain factsheet#12 (for example)

or send acsonline GQ-12