

Fungal Disease Fact Sheet

Disease Name:	Gibberella Ear Rot
Grain Affected:	Corn
Mycotoxin:	Deoxynivalenol (Vomitoxin, DON), Zearalenone, T-2
Pathogen:	Fusarium graminearum, Fusarium roseum (sexual stage), Gibberella zeae
Synptom:	Pink to reddish <u>mold</u> beginning at the ear tip. Occasional blue-black specks (<u>perithecia</u>) found on husk and ear shank.
Conditions:	Enhanced by cool wet periods within 3 weeks after silking. Moisture >20%, Temperature DON 21 -29 C (70 -85 F), Temperature ZEA, T-2 <15 C (59 F), Humidity High
Inoculumn Dispersal:	Waterborne via rain, splashing water, airborne and also transmitted through insect and bird damage.
Inoculumn Survival:	Overwinters on / near soil surface in <u>host</u> residues such as grasses, corn, and wheat stubble.
Effect on Crop:	Decreased yields, grain quality and lower test weights.
Management:	Crop rotation, deep soil tillage to bury crop residues. Post harvest drying to <18% moisture for whole ear storage, <15% for shelled corn. Early harvest and resistant <u>hybrids</u> .
FDA Action Level:	No Action Level; FDA has issued DON advisory levels 1ppm finished wheat products, 5ppm grain/ grain by-products for swine (<20% of diet), 10ppm grain/ grain by products for cattle/poultry (<50% of diet). 5ppm grain/ grain by-products all other animals (<40% of diet),
Livestock Affected:	Predominately swine with concentrations as low as 1ppm.
Livestock Symptoms:	DON-Vomiting, decreased weight gain, diarrhea, lethargy, blanched skin color, dermal irritation, hypothermia, intestinal hemorrhage, and ultimately feed refusal. ZEA-Infertility, abortion and other breeding problems.
Human Symptoms:	None shown to date. On going research.



Photo 18. Gibberella ear rot (G. Munkvold)



Photo 19. Kernels infected with *Gibberella zeae* (APS)



Photo 20. Gibberella ear rot (APS)