



Task Force

Vomitoxin in Feed Wheat for Hogs

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Because the 1996 wheat crop has a lot of scab damage, it is being diverted from human food to animal feed. This raises questions about the feed-quality of scab-damaged wheat.

Background

Vomitoxin is a toxic chemical produced by the scab-causing fungus. The occurrence of scab does NOT automatically mean that vomitoxin is present, but high levels of scabby kernels in the harvested grain should be suspect. Vomitoxin causes feed refusal and poor weight gain in livestock.

Hogs are most sensitive to vomitoxin, even at one part per million contamination of hog feed. The toxin can also cause problems in horses and in breeding and lactating animals, but at high concentrations. Cattle, sheep and poultry are more tolerant of vomitoxin.

However, in the face of high corn prices, Indiana hog producers might be tempted by alternative protein sources such as discounted feed wheat, screenings, mill run and other wheat milling by-products. Scab-damaged wheat and the milling by-products of such damaged wheat can probably be assumed to be contaminated with vomitoxin.

Recommendations

The Office of the Indiana State Chemist warns hog farmers to be wary of substituting available feed wheat which has significant scab damage. While there are means of testing for vomitoxin, it is probably easier to either avoid using any scab-damaged wheat as a substitute for corn or at least test feed it to a pen of pigs to see if they will eat it. The main result from feeding scab-damaged wheat with greater than 5

ppm of vomitoxin is the pigs will not eat the feed. For swine, wheat should not constitute more than 20% of the ration, and the wheat itself should not contain more than 5ppm of vomitoxin.

Also, there are several feed additives, such as sodium silico aluminate and other related products, that are on the market and are used primarily as anti-caking agents that have been purported to have properties that "tie-up" certain mycotoxins. While there have been some feeding trial tests, these products have not been proven scientifically to work as purported. This is particularly true for higher, potentially unsafe levels of certain mycotoxins.

There has been no definitive work done on vomitoxin, as far as we know. Avoid treating badly damaged, potentially vomitoxin-contaminated wheat with these products in order to feed it to hogs. There is simply no research evidence that it works.

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