

Poor Feed Management Can Lead To Mycotoxin Problems

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LANCASTER (Lancaster Co.) — Some of the mycotoxins found in feed stocks for poultry may be the result of poor feed management and even the genetics of the actual crop, according to a microbiologist speaking at the Penn State Poultry Management and Health Seminar here Monday.

"We may have selected, for drought-resistant type of crops, the problems caused by water retention and the formation of fungi that produce mycotoxins," said Dr. Mark E. Cook, who spoke to about 45 feed suppliers, veterinarians, and other poultry industry representatives at the seminar.

Cook, a visiting Penn State extension professor from the University of Wisconsin, has done research into the formation of fungi and mycotoxins in corn feed since 1983. His "feed and bleed" methodology includes measuring the immune parameters of an organism and monitoring grain mycotoxins and their effects on poultry, including broilers and turkey.

Fusarium moniliforme mold was common in contaminated corn. Birds that were fed the corn developed a leg problem, which

was easily stopped by feeding them stabilized vitamin D-3. In addition, a "spiking" problem in birds was caused by a thiamine decrease in the feed because of molds. After 3 to 5 days of thiamine treatment, the birds were fully recovered.

Fusarium isolated

"In all the corn samples from Pennsylvania, Maryland, and Virginia, fusarium was isolated," Cook said.

He said that if broiler and turkey producers in this country could cut the spread of common molds and decrease residence time of corn by 50 percent, the U.S. would save \$50 million and increase dollars per pound by \$0.00294.

There are about 300 known mycotoxins, said Cook, yet only eight can successfully be tested for. Corn shipments should be tested for known mycotoxin-producing fungi and antifungicides should be used. In addition, producers should prevent moisture contact with grains and feed and take steps to reduce mold growth in the litter.

Many of the problems caused by fusarium, which has become more common in grains, said Cook, is thiamine deficiency in the flock.



Poor feed management could be causing nutrient deficiency problems in poultry, said Dr. Mark E. Cook at the Penn State Poultry Management and Health Seminar in Lancaster.

To prevent this, the mold in the grain must be removed and the immune systems of the birds must be checked.

Fusarium resistance
Cook proposed three hypotheses for the contamination of large amounts of corn feed. First, Cook said, the corn is not selected for fusarium resistance. Wet weather, which helps the formation of the mycotoxin, increases the chances of contamination. As the country stores more bumper crops in illegal piles (including round bins with no ventilation), the mold problems become more real and the toxins increase.

"The steps to prevent mycotoxin proliferation," said Cook, "include reducing mold growth, using anti-fungicide, and screening for molds." Proper treatment

of the corn and nutritional monitoring of the flocks will keep most birds healthy.

"The broiler producer must constantly monitor the feed bins," Cook said. "Constantly monitoring any buildup in the feeder system, or the litter, will help keep the birds from contracting it."

Cook warned that any nutrient deficiency can also be caused by a mycotoxin by robbing the birds' ability to use valuable feed nutrients. "But don't jump on your veterinarian right away and blame it on improper nutrition," he said. "It could be your poor feed management that is causing these problems."

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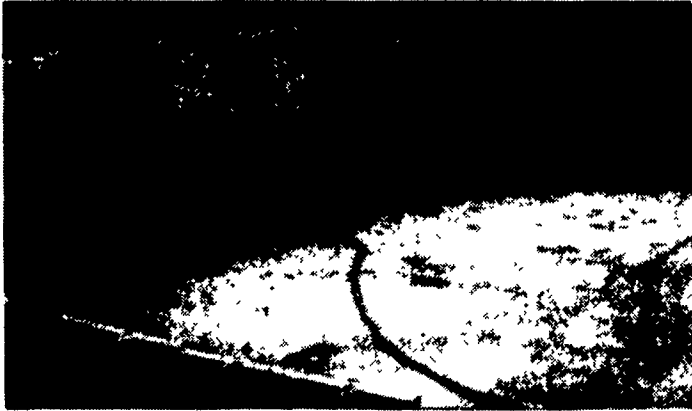
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