

2012 Corn Harvest
 Steve Ensley, DVM
 ISU Veterinary Diagnostic Laboratory
 Iowa State University

The 2012 growing year and now harvest have presented some issues for producers. Elevated nitrates in corn stalks has been an issue because of the drought. Plants were not able to grow normally and accumulated nitrates as a result. Nitrate levels are highest at ground level and decrease we move up the plant. Grazing stalks can be an issue because of concerns with nitrate levels. If cattle are not forced to consume the stalks and can consume the debris left over from combining, nitrate toxicosis should not be an issue in grazing corn stalks. Baling corn stalks and feeding ground stalks may be more of a problem since the animal may eat the entire stalk. It is advisable to test a sample of your corn stalks to determine nitrate levels. Nitrate levels in the total ration can be diluted out by mixing with an appropriate amount of grass or alfalfa hay. Corn stalk bales of unknown origin should be probed and tested for nitrate concentration.

This has been a good year for Aspergillus to grow on corn because of elevated night time temperatures (> 70 F) during silking and damage to the corn because of the drought. Aspergillus growth may or may not result in aflatoxin production, just because the mold is there does not mean that aflatoxin will be produced. Testing is the best method to determine the presence of aflatoxin. Aflatoxin when present is present in very low concentrations, part per billion (ppb) amounts. One ppb is 1/16th of an inch in a mile or 1 second in 32 years. Because of the low concentration collecting a sample that represents the entire field is difficult. The best method of collecting a sample for aflatoxin testing is to collect several samples from moving grain, combine these into 1 sample and then take a sample to test from this composite sample. The following chart contains the guidelines from FDA about aflatoxin contaminated feedstuffs.

Action levels for total aflatoxins in livestock feed

Class of Animals	Feed	Aflatoxin Level
Finishing beef cattle	Corn and peanut products	300 ppb
Beef cattle, swine or poultry	Cottonseed meal	300 ppb
Finishing swine over 100 lb.	Corn and peanut products	200 ppb
Breeding cattle, breeding swine and mature poultry	Corn and peanut products	100 ppb
Immature animals	Animal feeds and ingredients, excluding cottonseed meal	20 ppb
Dairy animals, animals not listed above, or unknown use	Animal feeds and ingredients	20 ppb