



Aflatoxin Fact Sheet

Background Information: Aflatoxins are a family of extremely toxic, mutagenic, carcinogenic, and teratogenic compounds.

Major crops affected: Corn, Corn Silage, Milo, Sorghums, Peanuts, and Cottonseed

Associated mold: *Aspergillus sp.* (primarily *Aspergillus flavus*, *A. nomius*, and *A. parasiticus*)

Conditions favoring production: Heat and drought stress pre-harvest. Heat and humidity post-harvest.

Symptoms: Primary target is the liver resulting in abnormal blood clotting, jaundice, hemorrhaging, and reduced immune response. Affects rumen function *in vitro* and *in vivo* by decreasing cellulose digestion, volatile fatty acid formation, and proteolysis.

Acute: Inappetance, lethargy, ataxia, rough hair coat, and pale/enlarged fatty livers.

Chronic: Reduced feed efficiency and milk production, jaundice, decreased appetite, and reduced immune function.

Interpretation Guidelines

Detection Limit	Concern Level* (TRDM)	Potentially Harmful Level** (TRDM)	
		Cattle	Swine
1 ppb	20-40 ppb	20-132 ppb	20-102 ppb
<p>*Level indicating possible favorable conditions for mycotoxins and probable need for further testing of all feeds or the TMR. Pending further tests, negative samples should be considered at concern levels in the presence of moderate symptoms and at harmful levels with marked symptoms. Limit amounts fed if moderate performance effects are present. Discontinue use at least temporarily if pronounced performance effects or acute clinical symptoms are present. Closely observe animals and continue checking for other possible causes.</p> <p>**Mycotoxins at these levels indicate probably involvement in performance effects or acute clinical symptoms. Discontinue feeding at least temporarily in the presence of either type of symptoms. Observe animals closely in the absence of symptoms and do further testing of all feeds or the TMR.</p> <p>TRDM = total ration dry matter</p>			

Dairyland Lab Packages that include Aflatoxins:

- Individual Mycotoxin request
- Mycotoxin Basic Package
- Mycotoxin Select Package
- Mycotoxin Complete Package

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FDA Action Levels

Class of Animal	Commodities	Aflatoxins Action Level
All animal species	All feed (exceptions below)	20 ppb
Breeding cattle, breeding swine, and mature poultry	Corn and peanut products	100 ppb
Finishing swine (>100 lbs.)	Corn and peanut products	200 ppb
Finishing beef cattle	Corn and peanut products	300 ppb
Beef cattle, swine or poultry	Cottonseed meal	300 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
Milk		<0.5 ppb

Sources

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