

MINIMIZING RISK IN YOUR OPERATION

Aflatoxin is one of the biggest causes of grain and feed claims. It can cost money, damage your brand and harm your reputation.

As a grain handler or feed mill operator, you can no longer rely on the farmer and outdated practices to reduce or minimize the likelihood of Aflatoxin contamination in your grain. Due to increasing pressure from food processors and customers to provide reliable, high-quality grain, implementing a comprehensive quality assurance program is your best strategy to effectively manage your grain.

Aflatoxin contamination can develop in the field, but also if grain is improperly handled or stored. To counter this risk, the following guidelines can assist your operation in developing a quality assurance program to help reduce the chance of buying and selling Aflatoxin contaminated grain.

Determine the severity of Aflatoxin contamination

- Speak with your county extension service and local farmers to identify the areas that may potentially have the highest levels of Aflatoxin
- Assist farmers in scouting fields for Aspergillus ear rot at five to 10 locations per field
- Peel back husks of 10 ears at each location and inspect for olive-green powdery mold that's characteristic of Aspergillus
- Infected kernels are brown, shrunken and lightweight

Keep the end-user in mind

- The end use of your grain determines acceptable
- Aflatoxin levels and consequently your grain management protocols
- If your grain is used as feed, you need to know and follow FDA guidelines for acceptable Aflatoxin levels based on intended use (see below)
- Corn contaminated at levels greater than 20 ppb for Aflatoxin may not be sold for interstate commerce*
- Ethanol plants often have lower thresholds for Aflatoxin

Test all truckloads

Do NOT rely on the blacklight (ultraviolet light) test for Aflatoxin identification, as studies have shown this method produces unreliable results.

There are two sampling options for testing:

1. In-bound method.

- Use grain probe to collect at least 10 samples from numerous locations per truckload
- Combine these samples to obtain a composite sample, and then test

Advantage: Detection can occur before grain is unloaded, if rapid test kit is used.

2. In-house method.

- Use small container to collect at least 10 samples from moving stream of grain at various stages of unloading
- Combine these samples to obtain a composite sample, and then test
- Advantage: Results will most likely represent the corn contained in the total load

On-site testing should be performed using commercial test kits with immunoassay or ELISA techniques.

Intended use	Aflatoxin level (ppb)
Milk (Dairy Feed)	None detected
Corn of unknown destination	<20
Corn for young animals	<20
Corn for dairy cattle	<20
Corn for breeding beef, cattle, swine and mature poultry	<100
Corn for finishing swine	<200
Corn for finishing cattle	<300



Dry your grain

- Dry corn to 15.5% moisture or lower within 24 to 48 hours of harvest to minimize the risk of Aflatoxin development
- If in-bin drying systems are used, grain depth must be limited to a level that allows for over two cubic feet per minute of airflow for each wet bushel of corn
- Cool hot-dried corn within 48 hours

Segregate all contaminated grain

- Segregate all contaminated grain to help prevent cross contamination
- Control insects
- Maintain bin storage records

Blend contaminated grain (only in certain cases)

- Blending may be a good alternative for an end-user who is blending feed for a less susceptible livestock species
- Accurate sampling and testing is essential

To learn more about Aflatoxin and how to better protect your business, contact your local university extension service or a Nationwide risk management consultant today.



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