
Keeping Corn Safe

Aflatoxin management and prevention: Extended periods of extreme high temperatures and low rainfall help create ideal conditions for the development of aflatoxins in growing corn. Weather is a key contributor to mold growth, but you do have some control over the extent of that growth. Taking the following steps can help you reduce or minimize the likelihood of aflatoxin development, particularly with preharvest scouting, testing, and proper drying and storage.



Scout your fields early

- Agronomists should scout for Aspergillus ear rot at several (5-10) locations in a field prior to harvest
- Target areas where plants appear most stressed
- Peel back the husks of 10 ears at each location and inspect them for olive-green powdery mold
- Infected kernels will be brown, shrunken and lightweight
- If 10% or more show signs of Aspergillus, you should schedule the entire field for early harvest

Harvest early

- Harvest and dry infected crop early to allow corn to dry down and stop fungus from becoming an aflatoxin issue
- Fungi infects damaged kernels more than intact ones, so adjust combines to minimize kernel damage

Dry your grain

- Dry moldy corn immediately to 15% moisture or less
- Cool grain after drying and maintain at 35 to 40 degrees Fahrenheit, if possible
- Use aeration fans to help control grain temperature
- Check grain frequently to help ensure grain quality and proper temperature

Store your grain

- Grain storage, even for short periods of time, can promote mold growth, so check it at least every two weeks
- Stored grain of above 15% moisture and/or 50° F can enable fungus growth, so examine it for temperature, crusting, hot spots, moisture and mold
- Help prevent damage to kernels that encourage mold growth by controlling insects

Test your grain

- Perform rapid, on-site tests to determine the possible presence of aflatoxin, or ask your co-op to perform a chemical test
- If your onsite test identifies the presence of aflatoxin, request additional testing by your co-op
- Studies have shown that using a black light (ultraviolet light) test to detect aflatoxin in corn produced unreliable results, so don't rely on it for identification

Don't use if contaminated

- Corn contaminated at levels greater than 20 ppb for aflatoxin may not be sold for interstate commerce*
- Do NOT use for silage, because livestock could be harmed and result in a claim
- Infected silage should be destroyed

*Food and Drug Administration (FDA)

Aflatoxin, a natural toxin and known carcinogen, is produced by the mold Aspergillus, which can develop on the kernels of growing corn. Stress from drought, extreme heat and corn ear injury from insect feeding create an environment favorable for aflatoxin production.

When livestock feed is contaminated with infected corn, it can result in severe liver damage, reduced egg production, reduced milk production, weight loss, reduced fertility and even death. If introduced into the human food chain, aflatoxin has been shown to have a carcinogenic effect.

Aflatoxin is considered toxic and can be harmful to animals and people. Aflatoxin acceptable limits have been established and published by the FDA. Contact your local university extension service for additional information.



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