

# When to test for Aflatoxins



Aflatoxin Testing with Hillary Emick, Lab Manager

In 2020, the University of Vermont E. E. Cummings Crop Quality Testing Laboratory expanded testing services to include assessment of grains for aflatoxin concentrations.

**Aflatoxins are fungal toxins. These carcinogenic compounds are produced by several different molds in the *Aspergillus* family.**

The FDA limit for human consumption for aflatoxins is 20 parts per billion (ppb). Different crops and growing regions have different levels of susceptibility for aflatoxin contamination and aflatoxin testing should be considered on a case-by-case basis.

## Grains that should be tested for aflatoxins include:

- Corn grown in hot, humid conditions
- Corn and small grains from fields that have been flooded
- Corn and small grains stored at moisture content above 14%

*Aspergillus* infection is almost never observed as an infection in the field in small grains. It can occur as a field infection in corn grown in hot, humid conditions. New England very rarely experiences the conditions to foster *Aspergillus* as a field infection in corn. While our laboratory is located in northern New England, we receive samples from across the country for testing. New England farmers will rarely need to worry about field infection with *Aspergillus* in corn, but our customers in the southern states should consider testing their corn for aflatoxin, especially during particularly warm years.

Grain should also be tested for aflatoxin if fields were flooded during the growing season, particularly if flooding occurred after grains have flowered. Mold issues are not the only potential issues with crops that have been flooded, and such grains should also be tested for other toxins, heavy metals, pathogenic bacteria such as *E. coli* and *salmonella*, and for presence of pesticides and other chemicals.

*Aspergillus* infection can also develop after harvest if grains are improperly stored. Grain with a harvest moisture over 14% should always be dried down for storage. Grain that is over 14% moisture content can develop multiple mold issues including aflatoxins. Grain that has been in storage for some time or was not tested for moisture content before storage should be tested for aflatoxins before use.

If you ever have any questions about if any of our lab tests are necessary for your grains, please call us at 802-656-5392 or email us at [uvmgrain@uvm.edu](mailto:uvmgrain@uvm.edu) and we'd be happy to discuss which tests are appropriate for your grain.

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