

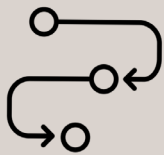


TOXIC MOLD IN GRAINS



Mycotoxins are toxic substances produced by fungi—or molds—that reduce crop productivity and quality. Mycotoxins often develop in grains when they are stored or handled improperly. Contaminated grains that are used for animal feed or food products are a health hazard for livestock and humans. Exposure can lead to cancer, organ failure, and reduced immune system function. Scientists across the U.S. have come together to conduct research and outreach that gives farmers, grain elevator operators, healthcare providers, and veterinarians the information they need to detect mycotoxin exposure, assess risks, and treat related diseases.

Research is Protecting Grain and Consumers



Research showed grain processors which steps need to be monitored closely to prevent mycotoxin outbreaks.



Researchers found that adding gaseous ozone reduces Fusarium infection in barley during malting, keeping beer free of toxins.



Researchers identified genes that influence aflatoxin resistance in corn. Breeders can use this information to develop plants with stronger resistance to toxic fungi.



Mycotoxin levels are higher during and after weather extremes like floods and droughts. Farmers who know when to scout for mold are able to deal with infections before losses are incurred.



New absorbents can reduce or eliminate the toxicity of contaminated grain so that they can be used safely in animal feed.



Genetic advances will lead to more resistant grain varieties and reduce the losses suffered by U.S. grain growers each year.



New methods to monitor and reduce mycotoxin levels help ensure a reliable supply of safe grain and food products for domestic consumers and international markets.



Naturally occurring antioxidants can reduce or eliminate toxicity, and probiotics can mitigate the effects of mycotoxin exposure in animals and humans.

This information can be used to design effective dietary supplements.

Icons from the Noun Project:

DNA Research by Scott Lewis
Pills by Joe Manzella
Plant Breeding by Krisada
Flour by Hugo Alberto
Beer by Simon Child
Bread by Franc
Profit by Gregor Cesnar
Popcorn by Blaise Sewell
Plant in rain by Icons8
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Want to know more?

This project was supported, in part, through USDA's National Institute of Food and Agriculture by the Multistate Research Fund established in 1998 by the Agricultural Research, Extension, and Education Reform Act (an amendment to the Hatch Act of 1887) to encourage and enhance multistate, multidisciplinary research on critical issues that have a national or regional priority. Additional funds were provided by contracts and grants to NC-1183 members. For more information on NC-1183, visit <http://www.nimss.org/projects/view/mrp/outline/16916>. For more information on the Multistate Research Program or the Impact Writing Initiative, visit www.multistateresearchimpacts.org.