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Editorial

Danger of Mycotoxin Contamination in Recent Grain Crops

Paul Bond Jr*

Department of Natural Science and Mathematics, Shorter University, Rome, GA, USA

***Corresponding Author:** Paul Bond Jr, Department of Natural Science and Mathematics, Shorter University, Rome, GA, USA.

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It has long been recognized that extreme weather conditions will increase the likelihood of mycotoxin contamination in cereal crops [1]. Robertson [2] has reported of a wet start to the 2022 corn (maize) growing season followed by a prolonged drought. These weather conditions have resulted in rot in the corn stalks and mold growth on ears as well as other pathophysiology [2]. Consumers of these cereal crops, in whatever form, should be made aware of the possibility of the dangers of these mycotoxins and the possible affects upon their health.

In a recent survey, Hawkins [3] reported on the extent of mycotoxin contamination in the 2021 USA harvest of wheat, barley and corn (maize). A total of 1596 corn (maize) samples and 538 samples of wheat and barley were analyzed for the presence of mycotoxins. The results of the corn analysis indicated the presence of at least two mycotoxins in 87% of samples though most were below accepted limits of 20 ppb. The results of the wheat and barley analysis indicated the presence of at least two mycotoxins in 58% of the samples. All mycotoxins were below accepted limits [3]. Borutova reported on the extent of mycotoxin contamination in the European 2020 crop and 1194 samples were taken of wheat, barley and corn (maize). The analysis indicated that 86% of samples contained two or more mycotoxins though most were below accepted limits [1].

The World Health Organization's (WHO) fact sheet on mycotoxins lists several specific mycotoxins that are a concern to human health. Among these are Aflatoxin that is a possible cause of liver cancer in humans. This toxin is found in wheat and rice and many spices. Ochratoxin A has been associated with kidney failure in many animal species and is often found in cereal grains, cereal products and coffee. The Fusarium family of fungi produce a wide array of toxins that are possible causes of gastrointestinal inflammation, esophageal cancer and other disorders in humans. These toxins are most often found in corn (maize) [4].

The impact of mycotoxins on human health is largely not well understood and may have greater ramifications than we now currently know. What we do know is that in years of drought or erratic weather that the levels of mycotoxins tend to increase, and the danger of these fungi produced toxins also increase. Warnings of these potential human health hazards should be more pronounced during these times of food shortages around the world.

Bibliography

1. Borutova Dr Radka. "European Technical Support Manager". Extreme weather patterns cause moderate to high mycotoxin risk (2021).
2. Robertson AE. "The 2022 growing season challenges continue: ear, crown and stalk rots". Iowa State University Extension Blog (2022).
3. Hawkins M Dr. "Mycotoxin risk from 2021 global grain production". Alltech blog (2022).
4. World, World Health Organization Factsheet. "Mycotoxins". WHO website (2018).

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