

The Importance of Mycotoxins in Food Safety

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Summary

Mycotoxins are secondary metabolites of fungi, and pose a threat to human and animal health. The importance of mycotoxins in food safety was recognized worldwide through a discovery of aflatoxin, which was found to be a potent carcinogen in the process of investigation of the turkey X disease that occurred in the UK in 1960.

Ergotism is known as a human mycotoxicosis which has occurred since ancient times. The toxin, ergot alkaloids, killed more than 40,000 people in the Middle Ages in Europe. Some other well known human diseases that have happened by natural contamination of foods with mycotoxins are: ATA (alimentary toxic aleukemia) in Siberia, acute aflatoxicosis in India and Kenya, food poisoning caused by *Fusarium* toxins in Japan, Balkan nephropathy and hepatic cancer in some regions of Asia, Africa and China. Famous outbreaks of animal diseases include reproductive disorders in swine in Canada and U.S.A., equine leucoencephalomalacia in South Africa and U.S.A. and porcine nephropathy in Denmark.

In recent years, the need for mycotoxin research has increased with the increase of public demands for food safety. It should be emphasized that the control of mycotoxin contamination in Asia is a key for assurance of food safety in Japan, whose foods depend largely on Asian agricultural products.