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IMPORTANT MYCOTOXINS IN AGRICULTURAL PRODUCTS AND THEIR TOXICITY TO ANIMALS AND HUMANS

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A number of cereal and other crops are infected by fungi either in the field or during storage. Fungi growing on grain, feed, or food may produce mycotoxins as secondary metabolites (Goodman, 2004) and may pose serious risks to human and animal health. Mycotoxin contamination of the world food supply is estimated to be about 25% annually depending on seasonal weather patterns and harvesting and storage conditions. The average annual economic cost of mycotoxin (aflatoxin, fuminosins, and deoxynivalenol) contamination is about $900 million in the USA. Among the toxin producing fungi, *Aspergillus*, *Penicillium*, and *Fusarium* are the most important genera. Although almost 400 mycotoxins have been identified to date, only a few contaminate food and animal feedstuffs, such as grains and seeds. Six mycotoxins (or groups of mycotoxins) contaminate foods and feed quite often and represent the major classes of mycotoxins: aflatoxin, trichothecenes (deoxynivalenol/nivalenol/T-2 toxins), zearalenone, fumonisins, ochratoxins, and patulin. In this review, the most important mycotoxins, the favorable environmental factors that trigger their production, their chemical structures and toxicity to animals and humans was discussed briefly.

Key words: Mycotoxin, toxicity, *Aspergillus*, *Penicillium*, *Fusarium*, aflatoxin, fuminosins, deoxynivalenol