Abstract:

There has been a significant concern regarding the potential health risks for humans and animals via foods and feeds that are contaminated with different agents. Particularly, mycotoxin contamination is of great importance as it is widespread and unpreventable. In both foods and feeds, molds produce secondary metabolites called mycotoxins; these are produced generally after the fungi reach their maturity. Depending on the definition used, hundreds of fungal compounds are recognized as mycotoxins. However, the attention is mainly focused on aflatoxins, ochratoxins, fumonisins, and zearalenone which are considered the most important threats for human and animal health. Mycotoxin contamination causes a fundamental problem all over the world including developed countries. Additionally, the economic impact of mycotoxins is another global concern on the agricultural markets. These concerns are based on toxicological data, which show that naturally occurring levels of mycotoxins have adverse effects in farm and laboratory animals as well as humans. The diversity of mycotoxin structures induces various toxic effects. Owing to the significant health risks and economic impacts, considerable investigations are being performed to diminish their harmful effects and to prevent their formation. In order to limit their levels, much research has been focused on detecting the mycotoxins in contaminated food and feedstuffs. This review will focus on information about primary mycotoxins, their occurrence, related regulations, prevention and methods of detection within the light of the current literature.

Keywords:

Aflatoxin, Fumonisins, Mycotoxins, Ochratoxin, Zearalenone

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