FOOD SAFETY SITUATION IN ALBANIA, MYCOTOXIN'S IMPLICATION

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ABSTRACT

Recently, the food safety issue has been of relevant importance, due to a number of chemical contaminants of anthropogenic activity origin as well as secondary metabolites, produced by a number of microorganisms, and associated with a number of human and animal outbreaks. Mycotoxins, a family of secondary metabolites, produced by moulds have shown adverse effects on humans, animals, as results of crops contamination, used for food and feed, resulting in enormous economic losses of these commodities forbidden to go to the market, and secondly due to the healthcare system dealing with effects of foodborne diseases. Mycotoxins are found in different raw agricultural commodities and especially in cereal commodities, such as wheat, corn, and barley. Food consumption data in Albania show that wheat and wheat products consist the basis of the staple food, and consequently exposure to human population from mycotoxins present in this group of food remain important task for governmental stakeholders. Mycotoxins may impose various acute and chronic health effects on humans and animals. The major classes of mycotoxins are aflatoxins (AFs), with four major aflatoxins; fusarium toxins produced by *Fusarium* species, including Zearalenon (ZEN), Deoxynivalenol (DON), Fumonisins (FBs); Alternaria toxins etc. In this study, we have analysed the mycotoxins contamination in wheat flour from retail market in Albania. Twenty random samples were taken from different market in Albania. The objective of this study was to assess risk of mycotoxins exposure posed to humans. The samples were analysed for the presence of main mycotoxins: AFB1, AFB2, AFG1, AFG2, DON, ZEN, FB1, FB2 and OTA contamination by LC-MS/MS. Data produced through the analysis of wheat flour, we found none samples contaminated over the maximum limits as defined by national and European legislations. According to obtained results it can be concluded that the risk of the presence of mycotoxins in wheat flour samples during investigated period is very low.

Keywords: Mycotoxins, wheat flour, Albania.