Mycotoxin contamination of cereals affecting technological quality of cereal-based products and health

Microbial contamination is the most common cause of foodborne illnesses in humans and animals, but it also has a deleterious effect on the technological quality of food products. Aspergillus is one of the most important genera of toxigenic molds in the spoilage of foods and animal feeds that produce a variety of aflatoxins. Many other mycotoxins produced by Aspergillus are of great significance from the point of view of human health in cancer induction and immunosuppresion. The most important group of mycotoxigenic molds other than Aspergillus species that contaminate the human food and animal feeds are species of the genus Fuzarium. Cereal grains, beans and oil seeds can be contaminated by these species among which the most commonly contaminated are wheat, corn, barley, rye, triticale, oats and millet. Fuzarium toxins, particularly deoxynivalenol and fumonisins, have been detected in finished human food products, while zearalenone has been found naturally occurring in numerous cereal grains, especially in those for animal feed. In addition to their deleterious health effects, Fuzarium species worse the technological quality of the products made from cereal grains. Detection, control and prevention for both toxins will be discussed in this presentation.

Biography

Mirjana Menkovska, PhD is a full Professor for Department of Food Technology and Biotechnology at the Institute of Animal Science, Ss. Cyril and Methodius University in Skopje, Macedonia. Her background is Food Technology. She graduated at the Faculty of Technology and Metallurgy in Skopje, took MS degree in Instrumental Analysis in Chemistry and Technology at the same University and PhD degree in Food Technology at the University of Belgrade, Serbia. She has published more than 150 papers in domestic and foreign scientific journals and participated at 90 scientific meetings in the country and abroad. Her bibliography data counts over 200 references. She has also translated scientific books (3) and reviewed scientific books (3) from English into Macedonian language. She has been many years a member of AACC, RACI, ISEKI, National contact person at EUCheMS - Division of Food Chemistry, ICC National Delegate, and member of many Scientific and Organising Committees at many international and domestic scientific meetings and conferences, such as Food Technology Conferences.

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