

AFLATOXINS IN PAKISTANI FOODS: A SERIOUS THREAT TO FOOD SAFETY

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Abstract

Finished products have always been the main focus of food safety. Aflatoxins are the fungal toxins mainly produced by *Aspergillus flavus* and *Aspergillus parasiticus* species. The contamination level depends upon pre and post-harvest practices, processing as well as storage conditions of the foods. The warm and humid environment of Pakistan is very favorable for the growth of aflatoxigenic fungi. Moreover, the lack of awareness among the masses, improper pre and post-harvest practices, usage of contaminated equipment and poor processing and storage conditions are the major contributing factors towards the contamination of aflatoxins in a variety of foods in Pakistan. In this study, occurrence and toxicity of aflatoxins in Pakistani foods i.e. cereal grains, chilies, dry fruits and milk etc., are briefly described.

This base line data about the prevalence of aflatoxin contamination will certainly help to devise the effective strategies to tackle this significant problem. Moreover, different approaches for the exposure assessment of aflatoxins to the consumers are also discussed and analyzed. Advances in research have developed some techniques to minimize the risk of aflatoxins contamination. These include the application of bio-control agents (amycotoxigenic and antagonistic activities), bio-degrading agents (microbes and/or their enzymes) and some other physical or chemical treatments during processing of foods.

Continuous monitoring and surveillance, as well as improved testing and analytical facilities at grass root level will facilitate to tackle this potential food safety threat in Pakistan.

Key words: *Aflatoxins, Pakistan, Exposure assessment, Remediation.*