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## Mycotoxin contamination of spices and food safety

target areas affected by mycotoxin problems will be discussed.

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**F**ood safety and security are important issues worldwide due to growing request of food at global level and the need to ensure basic levels of safety. Spices have been used for flavoring foods and beverages. They play an important role in the national economy of several of the producing, exporting and importing countries. Tropical climatic conditions under which spices are grown offer a favorable environment for the fungal and mycotoxin contamination. Mycotoxins are natural toxins formed by fungi that can grow on crops in the field, post harvest agricultural processing, industrial processing conditions and storage. Mycotoxins are stable compounds and therefore they cannot be eliminated from those foodstuffs. Thus, it is important to maintain the contamination of mycotoxins in food at the lowest achievable level. Spices such as dried or dehydrated forms of chilli, nutmeg, turmeric, pepper and ginger are traded predominantly in the international market and are contaminated with higher concentrations of mycotoxins. Mycotoxins identified in spices are ochratoxin A (OTA) and aflatoxins (AFT) followed by citrinin, sterimatocystin, zearalenone or T-2 toxins. Prioritization of food illnesses, spoilage, safety prevention and reduction or minimize mycotoxin contamination throughout all stages of the spices production from primary stage consumer use International Agency for Research on Cancer (IARC) have classified aflatoxins and Ochratoxins as carcinogenic to humans. Apart from GAP, GMP, HACCP, physical treatments, use of chemical compounds is a very effective strategy to prevent mycotoxin production. Novel multidisciplinary integration of know-how and technology as a horizontal task and synergic action by disseminating technological solutions developed by the research activities and to address geographic

## Biography

Pushpa S Murthy is presently working as a Senior Scientist at Department of Spices and Flavor Science. She received her PhD degree in Biotechnology at Mysore University, India and also recipient of UNU-Kirin fellow from United Nations University. Her primary field is Microbiology and Biotechnology with research emphasis on Food Biotechnology. Her research work involves production of value-added products, food and pharmaceutical components, bioactivity evaluation of the isolated plant extracts or synthesized compounds on food borne pathogenic microbes and application of the bioactive molecules for food safety. She holds patents, process know –how and is the author of peer-reviewed papers, book chapters, and reviews. She is a fellow of Society for Applied Biotechnology, member of Association of Microbiologist of India, Society of Biological Sciences and also Association of Food Scientist and Technologist of India.

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