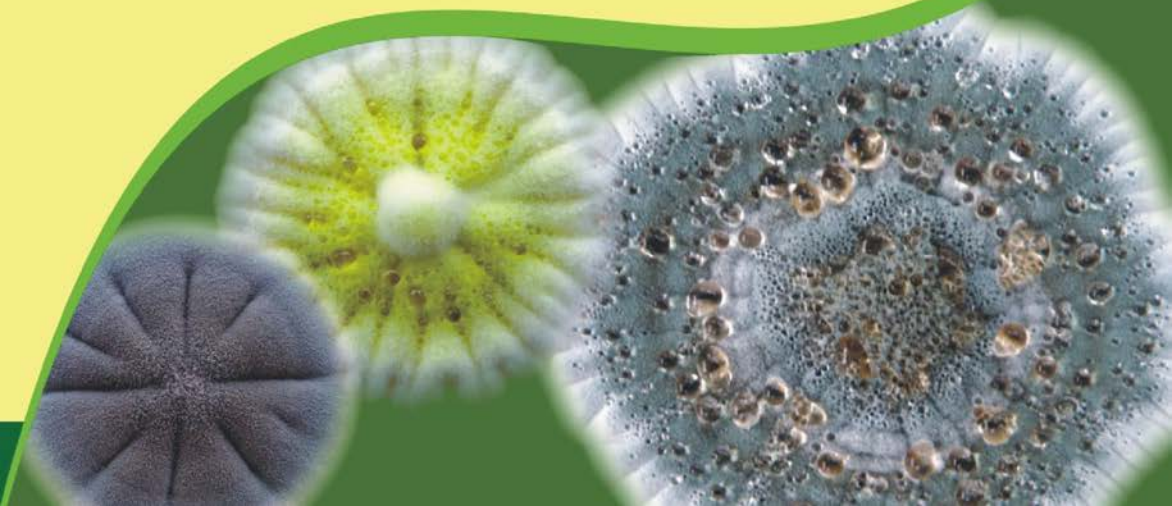




Taxonomy of MYCOTOXIGENIC FUNGI

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Preface

Mycotoxins are extremely toxic chemical substances produced by certain moulds growing naturally in many agricultural commodities especially cereals and oil seeds both in the field and as well as in storage and later when processed into food and feed concentrations. These toxins are toxic to warm blooded animals including man. Infact term mycotoxin is a misnomer as the etymological meaning is toxic to fungi by analogy to zootoxins and phytotoxins which are toxic to animals and plants respectively. Though human mycotoxicoses are less well understood, they are increasingly diagnosed and studied. Human intake of these toxins mainly occurs from plant based food and animal-derived foods such as milk, cheese and certain meat products. Mycotoxins are in general low molecular weight, non-antigenic fungal secondary metabolites formed by way of several metabolic pathways and still some mycotoxins are derived from a combination of two or more of the principle pathways.

Though wide varieties of mycotoxins are elaborated their number may range more than 300 which are elaborated by not more than 100-150 fungal species. The potential of mycotoxin production is complex and needs to be studied in depth in the literature as there are multimode number of fungi. This is mainly due to misidentification. The gap between mycologists and toxicologists is increasing.

In view of their pleomorphic nature or large production of spores, it is becoming difficult to make proper identification of mycotoxin producing fungi. Most of the times the toxigenic moulds are misidentified. The concept of mycological identification is fast changing as a result only trained mycologist are in a position to make correct identification. Most of the times, identification of mycotoxin producing fungi is critical in the diagnosis of mycotoxicosis. Global concern is given to the mycotoxin contamination of food products. Numerous activities at National, Regional and International levels have been carried out in order to prevent mycotoxin monitor and control mycotoxin contamination, and to train various staff involved in research prevention, *surveillance*, and control activities in both public and private sectors. The present authors have studied these fungi for more than 20 years with in depth knowledge on different features of these fungi. Such manuals for identification of these fungi are also not available.

Detailed aspects of identification have been discussed. It is profusely illustrated which would facilitate easy identification. A key is also provided to make it easy for correct identification. An attempt has also been made to refer the recent nomenclature.

The authors would like to thank to all those who helped directly or indirectly to successfully complete the herculean task. We thank Head Department of Microbiology and authors for providing necessary encouragement. We are also thankful to UGC for financial assistance.

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