



Mycotoxin Producing Fungi

Ravikiran Regeti^{1,2}, Praveen Boddana^{1*}

^{1,2}Department of Plant Pathology, M.S. Swaminathan School of Agriculture, Centurion University of Technology and Management, Odisha, India.

Corresponding Email: bpraveen@cutm.ac.in

Abstract:

Most of the filamentous fungi are able to grow in food and feed produce toxic metabolites. Mainly occurs in grains, cereals, oilseeds and some by-products. The growth of fungi in a particular food & feed by a large series of physical and chemical parameters. These toxic secondary metabolites known as mycotoxins. The mycotoxin can cause toxic effects in humans, animals and economic losses. The major mycotoxins found in food and feed are the aflatoxins, fumonisins, ochratoxins, patulin, zearalenone, and trichothecenes, generally stable at high temperatures and long storage periods. The major groups of the mycotoxins in groups are produced by mainly three fungal genera: *Fusarium*, *Aspergillus*, and *Penicillium*. The metabolites affect the seed quality, germination, viability, seedling vigour, growth of root and cleoptile. These fungi are responsible for the production of mycotoxins are often endophytes that will infect and colonize living plant tissues, accumulation of mycotoxins will show plant disease symptoms.

Keywords: Mycotoxin, fungus, Genetic engineering, endophytes

Fungi grow in practically all ecological niches. Fungi can be found prevailing particularly in dead organic matters present in the soil. Fungi include eukaryotic organisms known as yeasts, it normally grow in the form of single cells, and molds grow by forming ramified chains called hyphae. Even though many fungi are harmless, the exposition to specific lineages and their metabolites may result in some clinical manifestations in men and other animals.

Fungi are either terrestrial or aquatic, the latter living in freshwater or marine environments. Freshwater species are commonly found in clean, cool water because they do not tolerate high degrees of salinity. Some species are found in slightly brackish water, and a few thrive in highly polluted streams. Soil that is rich in organic matter furnishes an ideal habitat for a large number of species; only a small number of species are found in drier areas or in habitats with little or no organic matter. Fungi found in all

temperate and tropical regions of the world where there was sufficient moisture to enable them to grow. Few species of fungi live in the Antarctic and regions, although they are rare and are more often found living in symbiosis with algae in the form of lichens. There are about 144,000 species of fungi identified and described, but mycologists estimate that there may be between 2.2 million and 3.8 million total species.

The term mycotoxin first termed in the 1960s to describe the toxin associated with contaminated peanuts in animal feed and the loss of turkeys in England (Turkey-X-disease). This mycotoxin was later identified as the *Aspergillus flavus* toxin

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