

# Mycotoxins : toxicology, health risks and integrated management

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**Abstract** - Mycotoxins are secondary metabolites produced by certain filamentous fungi which are toxic to crop plants, man and animals; the disease caused by them is called Mycotoxicosis. Based on intermediates from which these secondary metabolites are derived, there are three board categories of mycotoxins, they are polyketide derived mycotoxins, formation of which requires acetyl coenzyme (Patulin, Aflatoxin and Citonin), terpene mycotoxins having mevalonic acid as intermediate (Trichothecin) and cyclic polypeptide derived mycotoxins (Giotoxin and Sparldesmium). The effect of mycotoxins may be categorized into three forms acute primary mycotoxicosis, chronic primary mycotoxicosis and secondary mycotoxin diseases. There are geographic and climatic variations in the production and occurrence of mycotoxins, exposure of these substances occur all over the world and much of the world's food supply is contaminated to some extent. FDA has estimated direct economic loses of nearby a billion dollars a year due to crop loss and another half a billion dollars in mitigating costs. Monitoring of mycotoxins is needed to avoid adverse effects on health. Risk analysis approach dealing with the problem of mycotoxins involves risk assessment and risk Management. Risk management is to ensure safe food supply will range from prevention of mould growth and setting of regulatory limits to diversion into alternate uses, control through good agricultural practices, control through processing and consumer / producer education.

**Key words** - Mycotoxins, Mycotoxicosis, Aflatoxins, Fungi, Secondary metabolites

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