## World Academy of Science, Engineering and Technology International Journal of Biological and Ecological Engineering Vol:11, No:04, 2017

## Effect of Water Activity, Temperature, and Incubation Time on Growth and Ochratoxin a Production by Aspergillus fresenii and Aspergillus sulphureus on Niger Seeds

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**Abstract :** Mycotoxin contamination of foods and feeds poses a high risk for human and animal health. Ochratoxin A (OTA) is a ubiquitous mycotoxin produced by Aspergillus and Penicillium fungi. It exhibits nephrotoxicity, teratogenicity, mutagenicity, and immunotoxicity in both humans and animals. OTA has been detected in foods such as cereals, coffee, grapes, cocoa, wine, and spices. Consumption of food contaminated with OTA has been linked to kidney and liver diseases. Niger (Guizotia abyssinica) is an oil seed that is used for extracting cooking oil in countries like Ethiopia and India. The seed cake (a byproduct from oil extraction) is also used as dairy cattle feed in Ethiopia. It is also exported to North America and Europe to be used mainly as bird feed. To our knowledge, there have been no studies on the growth and production of OTA on niger seeds. In this study, the environment conditions that support OTA production including effects of water activity, temperature, and incubation time on growth and OTA production by A. fresenii and A. sulphureus were investigated.

Keywords: mycotoxin, ochratoxin A, aspergillus, niger seed

Conference Title: ICMPT 2017: International Conference on Mycotoxins, Phycotoxins and Toxicology

**Conference Location :** Paris, France **Conference Dates :** April 18-19, 2017