

## **THE IMPACT OF CRUDE AFLATOXIN B<sub>1</sub> ON PHYSIOLOGICAL AND BIOCHEMICAL PROCESSES IN MAIZE ( ZEA MAYS L. ) VARIETIES**

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### **ABSTRACT**

Aflatoxin B<sub>1</sub> was extracted from a locally isolated strain of *Aspergillus flavus* and applied to three commonly available varieties of maize ( *Zea mays L.* ) viz : Ganga 5, Nutan 517 & Nutan 101. An inhibition in seed germination between 24.0 to 38.7%, maximum being in case of Nutan 101, was recorded. Seedling growth, comprising root and shoot lengths also had a marked reduction in all the three varieties. The Suppression in root length was between 25% to 33.0% and shoot length 21.4 to 27.6%. The synthesis of chlorophyll in the emerging leaf and the protein contents in the treated seeds also recorded a significant reduction. The depletion was 45.3, 27.8 and 45.4% for total chlorophyll and 52.8, 31.6 and 46.7% for protein formation in Ganga 5, Nutan 517 and Nutan 101. respectively.

**KEYWORDS:** *Aflatoxin B<sub>1</sub>, Chlorophyll, Maize, Protein, Seed Germination, Seedling Growth*

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