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RESEARCH PAPER

Estimation of aflatoxin production in the seeds of *Beta vulgaris* var. *Cicla*, *Amaranthus tricolor* and *Portulaca oleracea* at different relative humidity levels during storage

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Abstract : The experiment was conducted to study the effect of relative humidity and moisture content on seed germination and aflatoxin production of three vegetable seeds during storage. Six *Aspergillus flavus* strains were isolated from the three leafy vegetable seeds and screened for aflatoxin production. The evaluation of toxigenic potential of the isolates showed that 73.33 per cent of the *A. flavus* strains isolated from the seeds of three different leafy vegetables collected from Mbnr and RR districts presented a toxigenic potential. Among the *A. flavus* 66.67 per cent isolates were producers of aflatoxin B₁ and 33.33 per cent of the isolates produced aflatoxin G₁. Aflatoxin B₁ was detected in the *A. flavus* treated seeds of Bv and At collected from both Mbnr and RR dist. While, aflatoxin G₁ was detected only in Bv samples of Mbnr and RR dist. The results showed that the storage period of vegetable seeds is a critical phase, as indicated by the high percentage of aflatoxigenic isolates.

Key Words : Aflatoxin, *Aspergillus flavus*, Relative humidity, Seed germination

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