

**Research Article**

## **Prevalance of Fumonisin Producing *Fusarium* spp. Associated with Maize Ear Rot in Punjab**

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### **Abstract**

To know the fungi associated with maize ear rot under Punjab conditions, surveys were conducted in main maize growing areas of the Punjab and isolations were made from the diseased grains / cob samples collected during *Kharif* and spring seasons. Isolations generated cultures of *Fusarium*, *Aspergillus*, *Penicillium*, *Rhizopus* and *Alternaria*. Incidence of ear rot was comparatively more in spring season crop than in *Kharif* season. Total thirty isolates of *Fusarium* were obtained. Production of fumonisins was first assessed by PCR by using fumonisin biosynthesis gene specific primers FUM5 & FUM13. Seventeen isolates gave 845 bp band with FUM5 primer pair and eighteen isolates gave 998 bp band with FUM13 primer pair. Isolates positive for FUM gene were analyzed for fumonisins production by HPLC using standards of FB1 & FB2. Only four isolates of *F. verticilloides* i.e. F14, F15, F22 & F27 produced fumonisins above detection limit (> 0.05 ppm) and among them F27 isolate produced maximum amount of FB1 i.e. 73.3 ppm.

**Key words:** *Fusarium verticillioides*, FB1, FB2, FUM gene, Mycotoxins, Fumonisin

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