

Research Article

Fungal Diversity and Mycotoxin Production on Mustard Seeds (*Brassica juncea* L.) at the Time of Harvest and During Storage

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Abstract

Fifty samples each of mustard pods and seeds were collected at the time of harvest from different farms located near Bihar Agriculture College Sabour, during 2009 and 2010 crop years. Species of *Alternaria*, *Aspergillus*, *Cladosporium*, *Curvularia*, *Fusarium*, *Penicillium*, *Rhizopus*, and *Verticillium* were found to be associated with some of the pods and seeds of those samples whose percentage incidence varied from 6-24 per cent. Above fungi were also isolated from stored mustard pods/seeds after 6 months intervals up to one year. The percentage incidence of these fungi varied from 8-46 per cent. Isolates of *Aspergillus flavus*, *Fusarium moniliforme* and *Penicillium citrinum* were toxigenic which produced aflatoxins, zearalenone and citrinin, respectively in culture media. Out of 50 harvested samples analysed, 13 in pod and 17 in seed samples were found to be naturally contaminated with aflatoxin, zearalenone and citrinin in the range of 880-1220 and 680 - 1210 μgkg^{-1} , 80-140 and 110-240 μgkg^{-1} and 40-110 and 60-80 μgkg^{-1} in pods and seeds samples, respectively.

Key words: Harvest and storage, mustard pods/seeds, mycotoxins

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