

OCCURRENCE OF MYCOTOXIGENIC *ASPERGILLUS* SPECIES ON AGRICULTURAL PRODUCTS IN HUNGARY²⁰

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Aspergillus species are filamentous fungi which are widespread on agricultural products in subtropical and tropical areas of the world. Aspergilli are able to produce a range of mycotoxins which can be harmful to animals or humans, including aflatoxins, ochratoxins, fumonisins and patulin. According to recent studies, climate change accompanied by global warming affects the occurrence of fungi and their mycotoxins in our foods and feeds. A shift has recently been observed in the occurrence of *Aspergillus* species, especially aflatoxin producers in Europe. Our aim was to examine the occurrence of mycotoxin producing Aspergilli in Hungarian agricultural products to evaluate their importance in food safety. The examined agricultural products included various cereals, onions, nuts and spices. The surface-sterilized products were placed on selective media, and the isolated fungal strains were identified using morphological and sequence-based methods. Regarding cereals, several *Aspergillus flavus* isolates were identified, which are potential aflatoxin producers. This species was identified on various cereal seeds including maize, wheat and barley in different regions of Hungary. Several of the *A. flavus* isolates were found to be able to produce aflatoxins. Onions were found to be infected by *Aspergillus awamori*, a recently described ochratoxin and fumonisin producing species. This species together with other black Aspergilli was also identified on cereal seeds. Besides *A. flavus*, several potential mycotoxin producing species including *A. westerdijkiae*, *A. melleus*, *A. terreus*, *A. awamori* and *A. niger* have also been identified on nuts and spices (chilli, red pepper, spice mixes). Several species including *Aspergillus eucalypticola* and *Aspergillus neoniger* were identified for the first time in Europe. Further studies are in progress to examine the mycotoxin producing abilities and genetic variability of the isolates identified, and to examine the mycotoxin content of the samples.

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