

Title Distribution of fungi and aflatoxins in a stored peanut variety

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Abstract

The objective of the present study was to evaluate the mycoflora and occurrence of aflatoxins in stored peanut samples (hulls and kernels) from Tupã, State of São Paulo, Brazil. The samples were analyzed monthly over a period of one year. The results showed a predominance of *Fusarium* spp. (67.7% in hulls and 25.8% in kernels) and *Aspergillus* spp. (10.3% in hulls and 21.8% in kernels), and the presence of five other genera. The growth of *Aspergillus flavus* was mainly influenced by temperature and relative humidity. Analysis of hulls showed that 6.7% of the samples were contaminated with AFB₁ (mean levels = 15–23.9 µg/kg) and AFB₂ (mean levels = 3.3–5.6 µg/kg); in kernels, 33.3% of the samples were contaminated with AFB₁ (mean levels = 7.0–116 µg/kg) and 28.3% were contaminated with AFB₂ (mean levels = 3.3–45.5 µg/kg). Analysis of the toxigenic potential revealed that 93.8% of the *A. flavus* strains isolated were producers of AFB₁ and AFB₂.