TITLE: AFLATOXINS PRODUCTION IN FUNGIC ISOLATES OF BLACK-EYED BEAN (*Vigna unguiculata*)

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ABSTRACT: Some filamentous fungi produce mycotoxins, secondary metabolites detrimental to the health of humans and animals. The most studied mycotoxins are aflatoxins due to their toxicity and carcinogenicity. The black-eyed bean (*Vigna unguiculata*) is a legume of high nutritional value, which is part of typical Bahian dishes. The objective of this work was to analyze the fungal contamination index and aflatoxin production in fungal isolates of black-eyed bean, commercialized in Salvador city, Bahia, Brazil. Ten black-eyed bean samples were analyzed. To the mycological analysis was performed sowing the grains in Sabouraud Dextrose Agar (SDA) plus 6% sodium chloride. The sowing was done in duplicate and the plates were incubated at room temperature for seven days. After incubation, the macroscopic characteristics of each colony were described and the identification of the fungus was performed through the microculture technique, in parallel, the fungi were preserved in distilled water and mineral oil. Aflatoxins (B_1, B_2, G_1 and G_2) were determined in the isolated fungi using immunoaffinity column (IAC) for extraction with subsequent analysis by thin layer chromatography (TLC) and reading under ultraviolet light at 366 nm. All samples showed fungal growth in less than seven days. *Aspergillus flavus*, *A. niger*, *A. fumigatus*, *Penicillium* sp., *Curvularia* sp. e *Fusarium* sp. were found in the analyzed samples. In the fungal isolates of *Penicillium* sp., *A. flavus* and *Curvularia* sp. the presence of aflatoxin B was identified.

Keywords: mycotoxin, extraction, aflatoxin B

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