

Abstract

In this work, the effect of ethanolic, methanolic and aqueous extracts of *Agave asperrima* and *Agave striata* on growth and production of aflatoxin (in A&M medium) and cyclopiazonic acid (CPA; in Czpaek-Dox medium) and on growth in corn under storage conditions was determined. *Aspergillus* strains were inoculated (10^6 conidia per ml of medium or per 6 g of corn), then plant extracts were added and incubated without shaking at 28 °C for 8 days (for aflatoxin-producing analysis) or for 12 days (for CPA-producing analysis). Aflatoxin was assayed by HPLC and cyclopiazonic acid by absorbance at 580 nm using the Erlich reagent. The extracts that most effectively inhibited growth were those from the flowers of both plants. These exhibited an MIC from 0.5 to 2 mg/ml in culture media. Extracts from scape showed an MIC from 15 to 30 mg/ml in culture media. The MIC of the flower extracts was higher (>30 mg/g) when examined in corn. However, concentrations lower than the MIC drastically inhibited production of aflatoxins in culture medium or in corn. Half of the MIC inhibited 99% of the production of aflatoxins and 85% of cyclopiazonic acid.