

Title Co-occurrence of aflatoxin B₁ and cyclopiazonic acid in sour lime (*Citrus aurantifolia* Swingle) during post-harvest pathogenesis by *Aspergillus flavus*

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Abstract

During hot and humid seasons, extensive rot of sour lime was observed to be caused by *Aspergillus flavus*. In view of this, investigations were undertaken to obtain data on the production of various toxins by *A. flavus* during post harvest pathogenesis of sour lime. Sixty percent of the pathogenic *A. flavus* isolates were detected to be aflatoxin B₁ producers in sour lime tissue. It was also noted that thirty three percent of aflatoxigenic *A. flavus* isolates had the potential to coproduce cyclopiazonic acid (CPA). Such aflatoxigenic isolates produced quantitatively more CPA (ranging from 250.0 to 2501.3 mg/kg) than aflatoxin B₁ (ranging from 141.3 to 811.7 mg/kg) in the affected sour lime. This study demonstrates for the first time that sour lime are a favourable substrate for aflatoxin B₁ and cyclopiazonic acid production by *A. flavus* isolates. This is of great concern to the health of consumers.