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Investigating the ability of *Bacillus macerans* and *Candida lusitaniae* to control growth and toxin production by *Aspergillus flavus*

Effect of *Bacillus macerans* and *Candida lusitaniae* on growth and toxin production by *Asspergillus flavus* (from copra) was investigated. Spore suspension (200 µL) of a. flavus (ca. 10^4 CFU/ mL) and cell suspensions (200 µL) of each antagonist, (ca.10^7 CFU/ mL) were inculated to flasks containing Corn Meal Broth enriched with Nutrient Broth oconut
mlk (100 mL).The control was this broth medium (100 mL) inculated only with 200 µL of *A. flavus* (ca. 10^4 CFU/ mL).

Broth (1 mL) from each flask was recomved daily for analysis. The experiment was done in a randomized complete block design, replicated 5 times. Mycelial growth appeared in controls on day 2, and profuse growth and sporulation were noticeable in all three treatments on day 4. The following observations were made in the control, B. macerans treated and C.lusitaniae treated sets respectively; mean mycelial dry weights were 1.1 $\pm$ 0.26g, 0.98$\pm$ 0.13 g and 1.12$\pm$ 0.26 g.
Aflatoxin B1 (AOAC standard TLC method) appeared on day 3 in the tow former, and day 4 in the latter. In all three, toxin reached a maximum on day 5 (0.4 µg/ mL and 0.08 µg/ mL respectively on day 10.

Plate counts of *B. macerans* and *C. lusitaniae* on Nutrient Agar and Nutrient Yeast Dextrose Agar respectively increased upto 10^9 CFU/ mL and 10^{10} CFU/ mL respectively. When the amounts of maximum aflatoxin B1 levels of each treatment was statistically analysed; Candida lusitaniae significantly (P=0.05) reduced aflatoxin B 1 production by A. flavus. There was no reduction of growth of A. flavus by the antagonists.