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Comparing ability of two pathogens to cause crown-rot on embul bananas, & mode of antagonism of Flavobacterium sp.

Conidial suspensions of *Colletrotichum musae* and *Botryodiplodia theobromae* were inoculated on to the cuts fo crowns of banana hands. Lesion sizes were significantly (p=0.076) large in hands inoculated with *C. musae* only, than those with *Botryodiplodia theobromae* only, and a mixture of both. Therefore, C. musae appeared to be stronger.

To determine mode of antagonism of *Flavobacterium sp*. on pathogens, slide germination assays were carried out by mixing fungal conidia with, I) cell free culture filtrates (CFCF), ii) autoclaved CFCF, iii) viable cells (107 CFU/ml) in sterile distilled water, iv) viable cells with spent culture medium of *Flavobacterium.* Inhibition of germination of *B. theobramae* and *C. musae* were significant (p=0.0001) in iv. (47 and 55% reduction), whole that of I and ii were 28 7 30% and 25 & 26% respectively for the two pathogens.

Agar well diffusion assays were carried out in seeded (with each pathogen separately) Potato Dextrose Agar, by placing autoclaved (20mins) and fresh CFCFs (200 µ) in wells. CFCFs were prepared by centrifuging and millipore - filtering a 48h culture (250ml) or Flavobacterium in PDB, and concentrating 5ml) supernatent. Clear halos around wells were noted after 96h.

To extract antifungla compounds, water was evaporated form fresh and autoclaved CFCF (250ml), replaced with methanol and placed in orbital shaker (24h). Filtrates were concentrated (2ml). TLC plates were spotted (200µ), and developed with methonol:chloroform, (60:70v/v). TLC-bioassays with each pathogen, and C. cladosporiades (standard procedure) separately, showed a single clear inhibitory zone on all (after 96h) at Rf value ca.0.3. Results indicate that *Flavobacterium* sp. Produces heat stable antibiotics into the medium.