

Investigation of the variability of the isolates of *Botryodiplodia theobromae* Pat. causing stem-end-rot of fruits.

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Stem-end-rot caused by *Botryodiplodia theobromae* Pat. (= *Lasiodiplodia theobromae*) is one of the most destructive post harvest diseases of fruits in Sri Lanka as well as in many other sub tropical and tropical countries in the world. Little or no information is available on the genetic diversity of this particular fungus. Perhaps this could be the reason for the failure for finding a successful control measure. In the present study, attempts were made to detect variability in *B. theobromae* isolates from banana, king coconut, mango, papaya and rambutan.

Preliminary studies on pathogen variability were carried out by investigating the cultural characteristics (macro and micro) and pathogenicity of these five isolates. In general, no major differences were observed in the morphological traits of the five isolates. These results revealed that it is impossible to distinguish separate groups of isolates based on colony characters. In the pathogenicity test all fruits were subjected to cross inoculation and disease severity was compared using mean diameters of lesions produced by each isolate. The pathogenicity of each isolate on different hosts was also proved by adopting Koch's postulates. All the five isolates produced 100% stem-end-rot incidence on each commodity. When analyzing the graphical interpretation, no significant variation was observed in their pathogenicity. However, of the five isolates tested, the isolate IS2 from king coconut can be identified as the least virulent pathogen on other fruits examined. The remaining four isolates caused more or less similar disease severity.

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