

**CANKER DISEASE OF *PSIDIUM GUAJAVA* L. CAUSED BY  
*PESTALOTIOPSIS PSIDII* AND HOST DEFENSIVE RESPONSES**

B.M.R.P. BANDARANAYAKE AND N.K.B. ADIKARAM

*Department of Botany, Faculty of Science, University of Peradeniya*

Canker disease caused by *Pestalotiopsis psidii* in unripe guava is characterized by browning and cracking of outermost epicarp. Cracking exposes the internal tissues of fruits resulting secondary infections. Infection and development of limited symptoms occur in the field and may develop into progressive fruit rot during ripening. It does not penetrate deeply but reduces the market value. When fruits are severely infected, mummified fruits fall off resulting in yield losses.

Causative agent was isolated from the infected areas as well as from healthy internal tissues where symptoms were not visible. The fungus may therefore exist as an endophyte.

Healthy and canker infected epicarp tissues of mature and immature fruits were extracted in ethyl acetate for antifungal zones. Four pre-formed antifungal zones were detected on TLC bioassay in healthy tissues. Only two antifungal zones were present in TLC, which was extracted from infected tissues. No additional or larger antifungal zones were present in the extracts taken from infected tissues.

Infected tissues observed were yellowish brown in colour and the cells had disintegrated. The infected necrotic tissues did not show deposition of lignin, suberin or tannins. Measurement of pH at the canker infected and healthy areas of the guava fruits, did not show a significant difference.

These investigations have revealed that the primary defense response in guava fruit against the canker pathogen brings about rapid necrosis development in which no phytoalexins were accumulated.