

First report of *Erwinia psidii* associated with papaya dieback disease in Malaysia

Abstract

Aims: The outbreak of papaya dieback disease in Malaysia has been reported since 2003. Several reports previously confirmed *Erwinia papayae* and *E. mallotivora* to be the causal pathogen of the disease. The present study aimed to identify the causal pathogen of papaya dieback disease in Sabah.

Methodology and results: Infected tissues of papaya dieback disease were collected from Kota Belud, Sabah and the bacterium responsible for the infection was isolated on Luria Bertani (LB) agar and nutrient agar (NA). Seven isolates with similar characteristics to *Erwinia* were isolated, subjected to the Koch's Postulates test and then identified using 16S rRNA sequencing technique. The bacterium was identified to be *E. psidii*, a common pathogen to guava but not to papaya.

Conclusion, Significance and Impact of study: This report serves as the first confirmation of the *E. psidii* in causing papaya dieback disease, suggesting the possibility of this bacterium undergoing host shifting to papaya plants and the possibility of becoming another major threat to the papaya industry in the future.