

Symptomatology and range of the blood disease bacterium A2 HR MARDI strain (*Ralstonia syzygii* subsp. *celebensis*) on selected hosts

ABSTRACT

Bacterial wilt disease is one of the major diseases in banana. In Malaysia, banana blood disease (BBD) is caused by the blood disease bacterium (BDB) A2 HR MARDI (*Ralstonia syzygii* subsp. *celebensis*). This disease bears similarities in symptomatology with Moko disease which caused by *Ralstonia solanacearum* and BBD in Indonesia, which caused by BDB R229. To determine the symptoms and host range of BDB, a pathogenicity test and host range study were carried out. In this study, there are four stages of external and internal symptoms which were observed. The pathogenicity of the bacterium cultures was then tested on banana, tomato and heliconia plantlets to determine the host range for BDB. To reconfirm that the banana was infected with BDB, re-isolation of BDB from the infected banana plants and Koch's postulates test were performed. The results showed that there were symptoms of wilting and yellowing of leaves, which eventually caused plants death in the banana plantlets but no symptoms appeared in tomato and heliconia. The results indicate that BDB A2 HR MARDI is host-specific pathogen, only infecting banana similar to BDB R229 and is not as a broad range pathogen as *R. solanacearum*.

Keyword: Banana; Blood disease bacterium; Host range; *Ralstonia syzygii* subsp. *celebensis*; Symptomatology