

Colletotrichum truncatum Causing Anthracnose of Tomato (*Solanum lycopersicum* L.) in Malaysia

ABSTRACT

Tomato (*Solanum lycopersicum* L.) is a popular nutritious vegetable crop grown in Malaysia and other parts of the world. However, fungal diseases such as anthracnose pose significant threats to tomato production by reducing the fruit quality and food value of tomato, resulting in lower market prices of the crop globally. In the present study, the etiology of tomato anthracnose was investigated in commercial tomato farms in Sabah, Malaysia. A total of 22 fungal isolates were obtained from anthracnosed tomato fruits and identified as *Colletotrichum* species, using morphological characteristics. The phylogenetic relationships of multiple gene sequence alignments such as internal transcribed spacer (ITS), β -tubulin (*tub2*), glyceraldehyde 3-phosphate dehydrogenase (*gapdh*), actin (*act*), and calmodulin (*cal*), were adopted to accurately identify the *Colletotrichum* species as *C. truncatum*. The results of pathogenicity tests revealed that all *C. truncatum* isolates caused anthracnose disease symptoms on inoculated tomato fruits. To our knowledge, the present study is the first report of tomato anthracnose caused by *C. truncatum* in Malaysia. The findings of this study will be helpful in disease monitoring, and the development of strategies for effective control of anthracnose on tomato fruits.