

Morphological identification and in vitro evaluation of *Colletotrichum gloeosporioides* in Chok Anan mango using UV-C irradiation

ABSTRACT

Anthracnose is the most significant mango disease in humid production areas such as Malaysia. It is caused by *Colletotrichum gloeosporioides*. Postharvest fungicides such as benomyl have been widely used to suppress incidence of the disease. However, the incidence of resistance development and the side effects on environment and consumers has prompted the search for alternatives. This study was undertaken to evaluate the effectiveness of UV-C irradiation in suppressing anthracnose of mango. *Colletotrichum gloeosporioides* was identified based on the morphological characteristics that include colony morphology, conidial shape, size and septation. Effects of different UV-C irradiation doses on mycelial growth, sporulation and conidial germination were studied (0, 14.4, 28.8, 43.2, 57.6 and 72.0 kJ m⁻²) and indicated that 72.0 kJ m⁻² showed the most significant inhibition. As for the fungal sporulation, all of the doses reduced the sporulation. Thus, UV-C irradiation could be used to reduce postharvest losses by inhibiting conidial germination and sporulation of *Colletotrichum gloeosporioides* on mango.

Keyword : 'Chok Anan' mango; Conidial germination; Fungal sporulation; Mycelial growth