

Effects of *Colletotrichum gloeosporioides* and *Monilinia fruticola* on quality of red flesh dragon fruit (*Hylocereus polyrhizus*).

ABSTRACT

Colletotrichum gloeosporioides and *Monilinia fruticola* have been identified as important pathogenic fungi of dragon fruit in Malaysia. Based on external appearance, fruit are unlikely to be acceptable a few days after infection. A study was conducted to examine changes in several fruit quality attributes of red flesh dragon fruit (*Hylocereus polyrhizus*) following inoculation with *C. gloeosporioides* and *M. fruticola* at two spore concentrations (10⁴ and 10⁶ spores ml⁻¹). Three days after inoculation, disease symptoms were apparent on fruit inoculated with *C. gloeosporioides* at both spore concentrations while fruits inoculated with *M. fruticola* were only infected at a concentration of 10⁶ spores ml⁻¹. At 10⁶ spores ml⁻¹, lesions caused by *M. fruticola* were larger than those caused by *C. gloeosporioides*. Once infected, fruit quality was markedly reduced but the magnitude of the effect was dependent on spore concentration. Fruit soluble solids content decreased from 8.9% in uninoculated control fruits to 6.0 and 6.1, respectively in *C. gloeosporioides* and *M. fruticola* inoculated fruits (10⁶ spores ml⁻¹), while titratable acidity was reduced from 0.11 to 0.06% under similar conditions.

Keyword: Pitaya; Anthracnose; Brown rot; Fruit quality.