

The occurrence of anthracnose disease caused by *Colletotrichum gloeosporioides* on dragon fruit (*Hylocereus* spp.) in peninsular Malaysia.

ABSTRACT

This study was carried out to identify the suspected pathogenic micro-organisms associated with anthracnose disease on dragon fruit (*Hylocereus* spp.) and to investigate the occurrence of this disease in Peninsular Malaysia. Fifty posts of dragon fruit crops from several surveyed dragon fruit-growing areas were randomly sampled to assess the disease occurrence. The results revealed that anthracnose, caused by *Colletotrichum gloeosporioides* (Penz.) Penz. & Sacc., was one of the main diseases on this crop. This disease not only infected the stem but also the fruit. Diseased stem and fruit had symptoms of reddish-brown lesions with chlorotic haloes. The lesion had brown centers and coalesced to rot. Identification of the isolated pathogen showed that it had a whitish-orange colony, septated hyphae and capsule-like conidia (6-10 μm \times 2-2.5 μm in size). The highest disease incidence (80%) was recorded from Pekan (Pahang), a farm with unfavorable environmental condition for the optimum growth of dragon fruit crops; while the most severe disease (32.0%) was documented from a Durian Tunggal (Malacca) farm where the crop hygiene was poor. Correlation of disease incidence and severity showed a positive linear correlation with an R² value close to 1; while regression analysis results highlighted that the occurrence and progress of disease were highly influenced by environmental conditions, alternative sources of inoculum and agricultural practices rather than by climatic factors.

Keyword: Anthracnose; Disease incidence; Disease severity; Sampling; Survey.