1. PaDIL Species Factsheet

Scientific Name:
*Colletotrichum gloeosporioides* (Penz.) Penz. & Sacc.
Anamorphic fungi

Common Name
Papaya Anthracnose

Image Library
Australian Biosecurity

Partners for Australian Biosecurity image library

- Museum Victoria

- CRC National Plant Biosecurity

- Plant Health Australia

- Department of Agriculture, Fisheries and Forestry

- Department of Agriculture and Food, Western Australia
2. Species Information

2.1. Details

**Specimen Contact:** Dr Jose Liberato - jose.liberato@dpi.qld.gov.au  
**Author:** Liberato JR  
**Citation:** Liberato JR (2006) Papaya Anthracnose (*Colletotrichum gloeosporioides*) Updated on 10/9/2012  
Available online: PaDIL - http://www.padil.gov.au  
**Image Use:** Free for use under the Creative Commons Attribution 3.0 Australia licence

2.2. URL

Live link: http://www.padil.gov.au:80/pests-and-diseases/Pest/Main/136592

2.3. Facets

**Status:** Native Australian Pest Species  
**Group:** Fungi  
**Commodity Overview:** Horticulture  
**Commodity Type:** Fresh Fruit, Cotton & other fibres, Citrus, Pome fruits, Berries  
**Distribution:** Cosmopolitan

2.4. Diagnostic Notes

The fungus:

Mordue (1971) published a detailed description of this species. A brief summary of his description is given here: Perithecia aggregated, globose to obpyriform, dark brown to black, 85-300 µm in diameter; The ostioles are periphysate and paraphyses are present. The asci are 8-spored and have short stalks, clavate to cylindrical, thickened at apex, 35-80 x 8-14 µm. The ascospores are hyaline, unicellular, narrowly oval to cylindrical to fusiform. Acervuli are produced on lesions, and usually setose. Conidiophores are cylindrical phialidic. The conidia are cylindrical with obtuse ends, 9-24 x 3-6 µm, unicellular, hyaline or faintly brown. Appressoria are 6-20 x 4-12 µm, ovate to obovate, sometimes lobed. See Arx (1957), Mordue (1971) and Sutton (1980) for additional information.

Symptoms

The fungus can infect immature green fruits attached to the plant and remain quiescent until the fruit begins to ripen, when symptoms of anthracnose or chocolate spot appear. A single isolate can causes both symptoms.

Anthracnose: The first symptoms are small well defined dried pink spots on the surface of ripening fruit. Later, these lesions grow to 5 cm diameter, become rounded, sunken (from 3 to 5 mm deep) and brown to black in colour. The lesions can be water-soaked or dried and hard. In the centre of the lesions, the fungus produces dark acervuli, frequently in a concentric pattern and orange to pink gelatinous mass of conidia can be observed. The whole lesion can be easily separated from the flesh of the fruit as a corkscrew, using a knife, leaving a well defined hole in the fruit.

Symptoms on immature fruits and leaves are uncommon. Post-harvest infection usually produces stem-end rot. On the petioles, it occurs as elliptical lesions, up to 1.5 x 0.5 cm, with dark acervuli in a concentric pattern.
Chocolate spot: Post-harvest, superficial lesions, seldom slightly sunken, irregular to rounded, up to 1 cm in diameter, well defined, with characteristic reddish-brown colour. As the fruit ripens the lesions can either remain superficial or grow and become sunken, resembling anthracnose. Sometimes these symptoms together with latex exudation on the centre of the lesion can be observed several days before harvest.

Usually, this fungus occurs on papaya as the anamorphic state. The teleomorph has been found on papaya in Brazil, Venezuela, Hawaii and Australia. Isolates of _C. gloeosporioides_ in culture can produce the teleomorph.

Notes:

Synonyms: There are around 600 synonyms of _C. gloeosporioides_ (Arx, 1957), among them are _Gloeosporium papayae_ P. Henn. (1895), _Colletotrichum papayae_ P. Henn. and _C. papayae_ Petrak.

2.5. References
3. Diagnostic Images

Results Generated:
Wednesday, October 9, 2019

Anthracnose on papaya fruit
**Host symptoms - fruit:** J.R. Liberato (Liberato & Zambolim, 2002) DPI&F

Chocolate spot on papaya fruit
**Host symptoms - fruit:** J. R. Liberato DPI&F

Symptom of anthracnose on inoculated papaya fruit.
**Host symptoms - fruit:** J.R. Liberato DPI&F

Lesion with acervuli of the fungus on inoculated papaya fruit
**Host symptoms - fruit:** J.R. Liberato DPI&F