First record of *Asperisporium caricae* causing black spot of papaya in the Philippines

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Abstract. Black spot of papaya caused by *Asperisporium caricae* is reported for the first time in the Philippines. Among the four provinces surveyed, the disease was found on papaya variety ‘red lady’ in Batangas and Cavite, but not in Laguna and Quezon.

Asperisporium caricae causes black spot of papaya, also known as leaf blight and leaf spot of papaya. It has been reported in Asia, Africa, the Western Hemisphere, USA and Oceania. In Asia, the disease was reported to be widespread in China, particularly in Taiwan, and India (EPPO 2005). The disease is also present in Sri Lanka (Adikaram and Wijepala 1995) but has not been recorded in the Philippines. The disease can cause significant damage to the leaves and fruits.

A survey of papaya diseases was conducted in four provinces in the Philippines: Batangas, Laguna, Cavite and Quezon. In March 2007, typical symptoms of black leaf spot of papaya were collected in Silang and Indang, Cavite and Lipa, Batangas, south of Manila, on variety papaya ‘red lady’. Symptoms of the disease and the causal organism were similar to that previously reported. The disease was not found in Laguna and Quezon.

The fungus on the infected papaya leaves was identified as *A. caricae* by comparison with the description and illustrations in Ellis and Holliday (1972) and Liberato and Shivas (2006).

Asperisporium caricae (Speg.) Maubl.,
Lavoura 16: 212 (1913)

Leaf spots visible on both leaf surfaces are black, circular or sometimes angular, 1–4 mm in diameter, with yellow margins (Fig. 1). Later the lesions become necrotic and whitish. The lesions are covered with black masses of fungal spores, which are conspicuous on the lower surface of the leaf. Leaf lesions can cover a wide area causing premature drop. *Sporulation* hypophyllous ranging from dark blackish brown to black. *Stroma* well developed, erumpent (Fig. 1). *Conidiophores* olivaceous brown, geniculate, smooth in dense fascicles with several prominent conidial scars at the tip up to 52 µm long × 6–9 µm wide. *Conidiogenous cells* polyblastic with thickened and darkened scars. *Conidia* solitary, ellipsoidal, pyriform or clavate, 1-septate (mature), hyaline to mid pale brown, verrucose, 16–32 × 5–11 µm (Fig. 2). *Hila* thickened and darkened, one hilum per conidium.

Fig. 1. The underside of a papaya leaf with black spot caused by *Asperisporium caricae*.

Specimens have been deposited in the Mycological Herbarium, University of the Philippines Los Baños with accession number 11654 and 11655. This is the first record of *Asperisporium caricae* in the Philippines.

Fig. 2. *Asperisporium caricae* on *Carica papaya* (11564). (a) Stromata and (b) conidiophores and immature conidia (bars = 20 μ m).

References

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