



## First report of *Cercospora beticola* on lettuce (*Lactuca sativa*) in Benin

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Leafy vegetables such as lettuce are important components of daily diets in Africa and important sources of income, especially in urban areas. In April 2009 diseased lettuce plants were first brought to Mobile Plant Clinics operating at Ouidah in the South of Bénin (Boa, 2009). Disease symptoms consisted of numerous foliar necrotic lesions, light brown circular with grey centres and purple margins, 0.3-0.6 mm in diameter. Leaves covered with necrotic lesions were swabbed with alcohol and sections (1 mm<sup>2</sup>) bordering the lesion perimeter were surface sterilised by immersing in bleach (1.2% available chlorine) for three minutes, rinsed in sterile distilled water, plated onto potato dextrose agar (PDA) and incubated at 25°C on the laboratory bench. Subculturing was performed every seven days onto PDA. In addition, infected leaves were swabbed with alcohol and then maintained on the laboratory bench out of direct sunlight at 25°C in humid chambers (autoclaved plastic bags). Leaves in bags and pure cultures sporulated to produce hyaline conidiophores that were short and unbranched and often in bundles although occasionally solitary with a black scar on the conidiogenous cell from where conidia were detached. Conidia were hyaline, septate with a black scar where previously attached to the conidiogenous cell. Conidia were 65-165 µm long and 4-5 µm wide. The morphological characteristics confirmed the identity of the fungus to be *Cercospora beticola* (syn. *C. longissima*) (Chupp, 1954; Crous & Braun, 2003). This description differs from that for *Cercospora lactucae* which has long dark brown conidiophores and much shorter conidia. The culture has been deposited at IITA under the reference no. 984.

Koch's postulates were satisfied by adding PDA plugs (0.5 mm<sup>2</sup>) from seven-day-old cultures of the recovered fungus onto lettuce leaves of three-week-old plants and covered with sterile moistened cotton wool for one day. Within 10 days the same characteristic symptoms were produced as those first observed on lettuce plants brought to Mobile Plant Clinics, from which *Cercospora beticola* was recovered into pure culture on PDA. *C. beticola* is primarily a pathogen of beet, but is also reported on other members of the *Chenopodiaceae*, as well as *Amaranthus* and lettuce. The

disease significantly reduces production and the quality of lettuces produced and is currently distributed across the southern coastal areas of Bénin (from Porto Novo to Cotonou to Grand Popo) and as far North as Bohicon in central Bénin. No surveys have been undertaken further north (Yoro, 2009; James *et al.*, 2010). This is the first report of *C. beticola* in Bénin.

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