


For a full discussion on synonymy and taxonomy see Sivanesan (1985) and Mason (1928).
Leaf spots circular, tan. *Ascomata* globose, subepidermal, mostly epiphyllous, brown or dark brown, ostiolate, wall thin, up to 10 µm diam. and composed of pseudoparenchymatous cells. *Asci* cylindric, tapering towards the base, with two obvious walls, thick-walled, 8-spored, 44–60 × 8–9.5 µm. *Ascospores* hyaline, tapering at both ends, two celled with the upper cell slightly broader than the lower. *Conidiomata* mainly subepidermal, amphigenous, ranging in size from rudimentary to 30 µm diam. *Conidiophores* grouped in dense fascicles, mononematous, pale olivaceous brown, not branched, with 0–2 slight geniculations, uniform in colour and width, 1–2-septate, 30–80 × 4.5–6 µm. *Conidiogenous* cells terminal, on the main axis of the conidiogenous cell, with a thickened terminal spore scar and old indistinct laterally displaced scars, conidia produced in succession from the rounded apex which elongates sympodially after each conidium has been produced. *Conidia* not in chains, pale olivaceous, slightly curved, cylindric to cylindro-obclavate, 30–60 × 5–7 µm, outer walls somewhat thickened, tip obtuse, base rounded or short obconic, 2–8-septate, spore scar more or less thickened, 1.5–2 µm diam.

**HOSTS:** *Manihot esculenta* (cassava, manioc), *M. glaziovii* (manicoba, ceara rubber), *M. palmata* and, under laboratory conditions, *Ipomaea* sp. (36: 82).

**DISEASE:** Brown leaf spot, sometimes referred to as leaf blight of cassava. At first the lesions start as small circular greenish yellow spots. These enlarge and become angular as they are delimited by the major leaf veins; on the upper leaf surface the spots are tan to light tan, 1–8 mm diam. with a dark brown slightly raised border. Minor leaf veins crossing the leaf spot are seen as black necrotic lines. In severe infections the leaf spots are surrounded by a yellow halo caused by a toxin produced by the advancing mycelium (Teri et al., 1977). On the lower leaf surface the spots are less distinct. Eventually the lesions may coalesce, and cause premature defoliation.

**GEOGRAPHICAL DISTRIBUTION:** Generally found wherever cassava is cultivated (Teri, 1977). Africa: most countries; Asia: Jordan, Philippines, Sri Lanka, Thailand; North America: Dominican Republic, USA (Florida); South America: Bolivia, Brazil, Colombia, Peru, Venezuela.

**PHYSIOLOGIC SPECIALIZATION:** None reported.

**TRANSMISSION:** Probably by wind-borne and water-splash dispersed conidia. During the dry season the fungus survives on the crop debris.

**NOTES:** The disease incidence and severity is higher in the rainy season (21, 242; 32, 52) as humidity and warmth promote growth of the fungus. The effects range from mild leaf spots to premature defoliation and yield losses of 20–30% were reported in Tanzania (Teri et al., 1984) and 10–23% in Colombia (Teri et al., 1977). The older lower leaves of the cassava plant are more susceptible to the disease than the younger (5–15 day old) leaves and young plants, from 3–5 months old, are more resistant than older plants (Chevaugeon, 1956, Teri et al., 1981). To reduce disease incidence good crop sanitation has been strongly recommended and during the dry season diseased plants should be cut back (Powell, 1968). Three to five year crop rotations and planting at wide spacings are also recommended (Powell, 1968). Planting after the peak of the rainy season, so that plants reach the most susceptible age of 6–8 months during the dry season reduces infection (Teri et al., 1981). Some varieties of *M. esculenta* showing a degree of resistance have been reported but more research is required (Teri et al., 1977). Application of fungicides is rarely cost-effective, although several are effective (Bordeaux mixture (Viegas 1941), orthiophanate and benomyl (Lozana & Booth, 1974)).

In pure culture *C. henningsii* sporulates on PDA and host extract agar (49, 38; 36, 82). For a key to *Cercospora* and allied genera on *Manihot* see Teri et al., (1977).


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