



First report of *Ceratocystis fimbriata* causing wilt in *Tectona grandis* in Brazil

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Received: 08 Oct 2011. Published: 21 May 2012. Keywords: teak, drought, fungal plant disease

Teak (*Tectona grandis*) is a species native to the wetlands of the Indian subcontinent and Southeast Asia. Currently, it is cultivated in almost all tropical regions. Teak was introduced to Brazil 80 years ago, into Mato Grosso (MT) among other states. MT has the largest planted area (about 50,000 hectares) with potential for future expansion due to its favourable climate. In September 2009, teak plants were found with wilt symptoms in the region of Cáceres, MT, Brazil. Stem fragments with characteristic symptoms were collected and placed on carrot baits (Moller & DeVay, 1968) in a humid chamber and incubated at 25 ± 2°C under an alternate 12 hour photoperiod. After perithecium formation, a portion of the ascospore mass was transferred to malt extract agar medium (MEA) to allow the formation of colonies which were incubated under the above-mentioned conditions. After 10 days, observed perithecia were black, globose (233.12 x 277.74 µm) and showed a long rostrum (729 µm). Ascospores had the typical format of a "hat" with dimensions of 3.62 x 4.68 µm. Chlamydospores (10.76 x 14.03 µm) and cylindrical endoconidia (19.89 x 3.12 µm) were observed (Fig. 1). Barrel-shaped endoconidia were not found. The morphological characteristics indicated that the isolate belonged to the species *Ceratocystis fimbriata* (Engelbrecht & Harrington, 2005). The ITS1 and ITS4 sequenced region of the isolate (JQ354938) showed 98% similarity to the isolate of *C. fimbriata* strain CMW5312 (AF395687.1).

The inoculation of plants was performed according to Silveira *et al.* (2006), with some modifications. One-centimetre mycelial discs of the fungus (from 10-day-old colonies on MEA) were placed onto the injured stems of six-month-old healthy teak plants. The inoculation site was

wrapped with cotton cloth (moistened with sterile distilled water) and plastic film. Some plants were inoculated with MEA disc as negative control. The inoculated plants were kept in greenhouse (average temperature of 27°C). Wilt symptoms caused by *C. fimbriata* were observed 90 days after inoculation and plant death at 120 days (Fig. 2). The fungus was again isolated in culture from the stem of these inoculated teak plants, confirming the pathogenicity. This is the first report of *C. fimbriata* in teak in Mato Grosso, Brazil.

Acknowledgements

The authors would like to thank Dr. Daniel Dias Rosa, CNPq and Fapesp.

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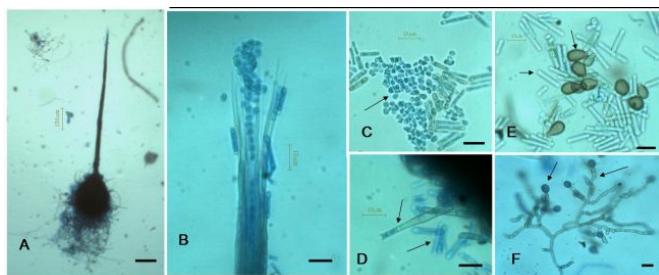


Figure 1



Figure 2

To cite this report: Firmino AC, Tozze Jr HJ, Furtado EL, 2012. First report of *Ceratocystis fimbriata* causing wilt in *Tectona grandis* in Brazil. *New Disease Reports* **25**, 24. [doi:10.5197/j.2044-0588.2012.025.024]

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