

DISEASE NOTE

**FIRST REPORT OF *LASIODIPLODIA THEOBROMAE* CAUSING APPLE AND IMMATURE NUT ROTS ON CASHEW IN INDIA**

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During January-February 2015, nearly 8 to 10% incidence of cashew (*Anacardium occidentale* L.) apple and nut rot was observed in the East Godavari districts of Andhra Pradesh (India). The immature (one to two months old) cashew apples and nuts exhibited dark brown lesions that finally turned dark grayish. Five *Lasiodiplodia* strains were consistently isolated from infected samples, characterized by white color colonies with dense aerial mycelium that later turned to dark grey on the upper surface and black on the reverse side. Oval-shaped, first hyaline then brown conidia  $19.2-22.3 \times 11.0-13.3 \mu\text{m}$  in size, with a single septum and longitudinal striations were produced from cylindrical-shaped conidiogenous cells. Based on these traits, the fungus was tentatively identified as *Lasiodiplodia theobromae* (Alves *et al.*, 2008). For confirmation, the internal transcribed spacer (ITS) rDNA and the translation elongation factor 1- $\alpha$  gene regions were amplified and sequenced. The sequences of ITS (LC074359) and translation elongation factor 1 $\alpha$  (LC146471) genes showed 99% identity to those of *L. theobromae* (CBS 164.96). Pathogenicity was conducted on detached 30-45-day-old cashew nuts and apples of cv. Ullal (10/strain) that were inoculated with 5  $\mu\text{l}$  spore suspension from  $5 \times 10^5 \text{ ml}^{-1}$  spore load and incubated in a growth chamber at  $26 \pm 1^\circ\text{C}$ . Three days post inoculation dark brown lesions were observed on inoculated cashew apples and nuts, similar to those observed in the field but not in controls. *L. theobromae* was consistently re-isolated from inoculated apples and nuts. To our knowledge, this is the first report of nut and apple rot caused by *L. theobromae* on cashew in India.

Alves A., Crous P.W., Correia A., Phillips A.J.L., 2008. Morphological and molecular data reveal cryptic speciation in *Lasiodiplodia theobromae*. *Fungal Diversity* **28**: 1-13.

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