Disease Note

FUSARIUM spp. ASSOCIATED WITH *XYLOSANDRUS COMPACTUS* CAUSING WILTING IN COCOA

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Black coffee twig borer (BCTB), *Xylosandrus compactus* (Eichhoff) was recently reported as a pest of cocoa in Uganda (Kagezi *et al*., 2014). Females bore into primary branches and introduce an ambrosia fungus, *Fusarium solani* (Mart.) for feeding their brood (Ngoan *et al*., 1976). Infested materials wilt and die, but the cause is not fully understood. It could be due to disruption of nutrient and water movement across BCTB-damaged galleries or disease effect by *F. solani* (Greco and Wright, 2015). We therefore tested the pathogenicity hypothesis by isolating the fungus from mycangia of the female beetles and scrapings from BCTB-infested galleries of coffee. Isolates were identified using spore description (microconidia) as *Fusarium* spp. and maintained separately on potato dextrose agar (PDA) at 25°C. Spores from 7-day-old cultures designated as isolates 36, 37 and 63 were diluted to a concentration of 1.36×10^6 spores per ml and injected into 10 healthy coffee and cocoa seedlings per isolate. Controls were injected with distilled water. Seedlings were grown in screenhouse and observed for wilting symptoms after 30 and 90 days. At 30 days, 20, 10 and 30% of cocoa seedlings inoculated with isolate 36, 37 and 63, respectively, had wilted. No more wilting of other seedlings was observed. Re-isolated fungus from wilted seedlings confirmed that *Fusarium* spp. causes wilting of cocoa consequent to BCTB attack. To the best of our knowledge, this is the first report of BCTB-associated *Fusarium* spp. causing wilting in cocoa. However, confirmation of species involved needs to be done.

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Disease Note

FIRST REPORT OF *DIAPORTHE INCONSPICUA* ASSOCIATED WITH SHOOT BLIGHT OF *ATRIPLEX NUMMULARIA* IN BRAZIL

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Atriplex nummularia Lindl. is used in phytoremediation of saline soils in Brazil. In May 2014, plants with shoot blight were collected in Serra Talhada, Pernambuco state, Brazil. Fragments of surface sterilized symptomatic tissue were plated on potato dextrose agar (PDA) amended with 0.5 g/l streptomycin sulfate. After 5 days at 25°C in the dark, grayish white mycelial growth appeared, without formation of pycnidia after 3 weeks. A pathogenicity test with one isolate (Atn3) was conducted on 10 asymptomatic superficially sterilized green shoots of *A. nummularia* (20 cm in length, *ca*. 1 cm in diameter). Shoots were wounded at the center using a sterilized scalpel. Mycelial plugs (0.5 mm in diameter) from the margin of actively growing colonies (PDA) were placed in the wounds and covered with parafilm, with non-colonized PDA plugs used as control. After 15 days at 25°C, all inoculated branches showed superficial blackened lesions, from which the pathogen was re-isolated. No symptoms were observed in the controls. To identify the isolate, the ITS region and the EF1-α gene were sequenced using ITS1/ITS4 (White *et al*., 1991), and EF1-728F and EF1-986R primers (Carbone and Kohn, 1999). The sequences showed 98% identity with the ex-type of *Diaporthe inconspicua* (CBS 133813) for the ITS region (KC343123) and 99% for the EF1-α gene (KC343849). Sequences of Atn3 were deposited in GenBank under accession Nos. KM816789 (ITS) and KY288068 (EF1-α). *D. inconspicua* was first described by Gomes *et al*. (2013) in *Maytenus ilicifolia* and *Spondias mombin* in Brazil. This is the first report of this fungus causing shoot blight in *A. nummularia* in Brazil.

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