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Occurrence of noni anthracnose caused by *Colletotrichum siamense* in Amazonas, Brazil.
Ocorrência de antracnose em noni causada por *Colletotrichum siamense* no Amazonas, Brasil.

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Noni (*Morinda citrifolia* L.) is native from Southeast Asia and was introduced in Brazil recently, where it has well adapted to the edaphoclimatic conditions. The fruits are consumed because of their numerous therapeutic properties. From March to November 2018, circular brown spots with concentric rings were observed on leaves of noni plants, at Federal University of Amazonas campus (UFAM), where the temperature and rainfall ranged from 23°C and 32°C, and 47 mm and 335 mm in this period. Leaves with typical symptoms of anthracnose were taken to the laboratory and washed with tap water. Fragments (5 mm) were removed from the margin of leaf lesions, superficially disinfested with 70 % alcohol (1 min.) and 1,5 % sodium hypochlorite (1 min.) followed by three washes with distilled water, dried on filter paper and plated in Petri dishes with Potato Dextrose Agar (Kasvi). Plates were incubated at 25 °C. After 48 h, mycelial fragments were transferred to new PDA plates and incubated at 25 °C under fluorescent light (T8 tubular lamps, 40 w, 6400k daylight), located 25 cm above the plates. Morphological characteristics were observed after 7 days. Colonies were light grey to white and orange conidium masses in the center. Reverse of the colony was orange to white (Figure 1A). Conidia were hyaline, aseptate, oblong-elliptical and 5.75 to 8.26 × 1.82 to 2.39 µm (n= 30) (average ± SD = 7.09 ± 0.51 × 2.09 ± 0.17 µm). The morphological characteristics were similar to *Colletotrichum siamense* into *Colletotrichum gloeosporioides* species complex (Sharma et al., 2015; Weir et al., 2012). The 3 Kbp ribosomal, beta-tubulin 2 (TUB2) and glycerol-3-phosphate dehydrogenase (GAPDH) sequencing (accession number: MK299421, MK821246, MK821247) was carried out using NS1-NS8, ITS1, ITS4, Uni-R primers, T1-T2 and GDF-GDR (White & Lee, 1990; Fell, 1993; O'Donnell & Cigelnik 1997; Templeton et al., 1992). Maximum parsimony phylogenetic tree (MEGA v. 7.0) fed with *Colletotrichum* sequences from noni and the reference isolates of

Colletotrichum spp. deposited in GenBank, revealed that the isolate belonged to *C. siamense* species. The pathogenicity test was conducted with healthy noni leaves. The leaves were washed and disinfected superficially. Leaves were inoculated with mycelial discs and with agar disc as a control. Typical anthracnose lesions were observed on noni leaves after 7 days (Figure 1B). *C. siamense* was reisolated from the lesions, and their identity has been confirmed as described above. *Colletotrichum* species is also responsible for anthracnose of *M. citrifolia* in the Brazilian states of Goias, Mato Grosso and Ceara. In countries like Mexico and India, anthracnose causes significant losses in noni culture (Ayvar-Serna et al., 2018; Hubballi et al., 2010). To the best of our knowledge this is the first report of *C. siamense* anthracnose of leaf noni in state of Amazonas (Brazil).



Figure1. *Colletotrichum siamense* on *Morinda citrifolia*. A) Colony of *Colletotrichum siamense* on PBA medium. B) Symptoms of anthracnose caused by artificial inoculation on noni leaf.

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