Disease Note

FIRST REPORT OF *CHOANEPHORA CUCURBITARUM*, CAUSING LEAF BLIGHT OF HYACINTH BEAN IN INDIA

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In September 2014, leaf blight was observed on hyacinth bean [*Lablab purpureus* (L.) Sweet] in West Bengal, India, with a disease incidence of 5–20%. Symptoms included leaf discoloration with velvety sporulation of the pathogen on the leaf. Isolation of the pathogen was done by placing small pieces (5 × 5 mm) of infected tissue, disinfected with 1% NaOCl for 1 min, onto potato dextrose agar (PDA), and kept for 48 h at 28 ± 2°C. Based on the multispored sporangia (38-104 µm) and sporangiospores measuring 12.5-20 × 5-12.4 µm, the fungus was identified as *Choanephora cucurbitarum* (Kirk, 1984). Specimens were deposited in collections in ARI, Pune, India, with infected plant tissue in AMH (accession 9820), and isolate L.P-12 in NFCCI (accession 4007). Molecular identification was done by amplifying the ITS region of nuclear DNA using ITS1 and ITS4 primers (White, 1990). The ITS region is appropriate barcoding marker in Mucorales (Walther *et al*., 2013). A BLAST search revealed the sequence from isolate L.P-12 (KU886142) had 99% identity with JN206234 (CBS 445.72). A pathogenicity test was conducted by spraying of spore suspension (1×10^6 spores/ml) on 5 detached leaves with three replications. Both inoculated and control (water sprayed) plants were kept in a humid chamber at 28 ± 2°C. Water soaked necrotic lesions developed within 96-120 h and typical blight symptoms and emerging sporangiola were observed 8-10 days after inoculation. This is the first report of leaf blight disease of hyacinth bean [*Lablab purpureus* (L.) Sweet] caused by *Choanephora cucurbitarum* in India.

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Disease Note

FIRST REPORT OF *ALTERNARIA ALTERNATA* CAUSING LEAF SPOT ON *FICUS BENGHALENSIS* IN PAKISTAN

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In January 2014, brown, irregular, 3-10 mm necrotic spots with darker margins and yellow halos were found on about 90% of leaves of *Ficus benghalensis* growing in a garden at Lahore, Pakistan. The pathogen was isolated from surface sterilized infected leaf portions incubated on 2% malt extract agar (MEA) at 25 ± 2°C. Morphological observations were made on pure culture grown on Potato Carrot Agar (PCA) for 7 days. Colonies were olive brown and 3-3.5 cm in diameter. Clear concentric growth rings of highly sporulating colony were observed. Conidia produced in short chains of upto 6 conidia on simple or branched conidiophores, were dark brown, geniculate, with or without longitudinal septa and range in size from 5-13 × 25-50 µm. *Alternaria alternata* (FCBP1519) was identified based on morphology (Simmons, 2007). This identification was confirmed by sequencing of ITS region of rDNA. A DNA fragment of approximately 600 bp, amplified by ITS1/ITS4 primers (White *et al*., 1990) was analysed by BLASTn. Results indicated that this nucleotide sequence (KT283683) was 100% similar to many strains of *A. alternata* in GenBank. Pathogenicity of fungus was verified by spraying conidial suspension at the concentration of 1×10^6 CFU/ml on the leaves of three young plants. Three control plants were sprayed with sterilized water. All plants were covered with polythene bags, incubated at 27 ± 2°C, watered regularly and observed daily for disease development. Re-isolation of same pathogen from the necrotic areas of artificially inoculated leaves confirmed the pathogenicity. The present study reports *A. alternata* leaf spot on *F. benghalensis* for the first time in Pakistan.

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