

## IDENTIFICATION OF FUNGAL PATHOGENS ASSOCIATED WITH FINGER MILLET (*Eleusine coracana*) IN SRI LANKA

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Finger millet is a ‘security crop’ and a ‘climatic-smart’ crop due to its high nutritional value and low input requirement. This study aims to isolate the foliar fungal pathogens in finger millet and to characterize those using morphological, pathological and molecular data. Diseased samples were collected from farmer fields and research fields in Kurunegala, Anamaduwa and Gannoruwa. Causative fungi were isolated following standard protocols, and pathogenicity was established by adopting Koch’s postulates. Methods for culturing, sporulation induction, morphological characterization of the isolates and re-inoculation to host plants were optimized. The fungal isolates were PCR amplified using primers in the Internal Transcribed Spacer (ITS) region; ITS4 and ITS5. The amplified fragments were sequenced. Six distinct leaf disease symptoms and two sheath symptoms were identified and nine different fungi were isolated from diseased samples. Based on morphological and molecular data, three fungal isolates; *Pyricularia grisea*, *Epicoccum* sp., and *Nigrospora* sp. were identified. Inoculation of leaf *ex-plants* and potted plants confirmed the pathogenicity of these three isolates. *Pyricularia grisea*- anamorph causes blast, one of the most devastating diseases in finger millet worldwide. Economic losses due to blast disease are previously reported in Sri Lanka, but this is the first report of sequence data on local strains of *Pyricularia grisea* isolated from finger millet. Although not previously reported on finger millet, *Epicoccum* sp. is a pathogen in related cereals such as sorghum, wheat and maize and further studies and field inoculation will confirm the pathogenicity of this strain. Protocols that were optimized in this study for isolation, sporulation induction are useful in further research in finger millet cultivar screening for disease tolerance.

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