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Fungi Associated with Decline of Kikar (Acacia nilotica) and Red River Gum (Eucalyptus camaldulensis) in Faisalabad

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Abstract : During this research, a comprehensive survey of tree growing areas of Faisalabad district of Pakistan was conducted to observe the symptoms, spectrum, occurrence and severity of A. nilotica and E. camaldulensis decline. Objective of current research was to investigate specific fungal pathogens involved in decline of A. nilotica and E. camaldulensis. For this purpose, infected roots, bark, neck portion, stem, branches, leaves and infected soils were collected to identify associated fungi. Potato dextrose agar (PDA) and Czepak dox agar media were used for isolations. Identification of isolated fungi was done microscopically and different fungi were identified. During survey of urban locations of Faisalabad, disease incidence on Kikar and Eucalyptus was recorded as 3.9-7.9% and 2.6-7.1% respectively. Survey of Agroforest zones of Faisalabad revealed decline incidence on kikar 7.5% from Sargodha road while on Satiana and Jhang road it was not planted. In eucalyptus trees, 4%, 8% and 0% disease incidence was observed on Jhang road, Sargodha road and Satiana road respectively. The maximum fungus isolated from the kikar tree was Drechslera australiensis (5.00%) from the stem part. Aspergillus flavus also gave the maximum value of (3.05%) from the bark. Alternaria alternata gave the maximum value of (2.05%) from leaves. Rhizopus and Mucor spp. were recorded minimum as compared to the Drechslera, Alternaria and Aspergillus. The maximum fungus isolated from the Eucalyptus tree was Armillaria luteobubalina (5.00%) from the stem part. The other fungi isolated were Macrophamina phaseolina and A. niger.

Keywords : decline, frequency of mycoflora, A. nilotica and E. camaldulensis, Drechslera australiensis, Armillaria luteobubalina
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