

Isolation and Identification of Soil Mycoflora in Agricultural Fields of Aurangabad District, Maharashtra, India

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Abstract: Soil Mycoflora play an important role in soil environment. The soil samples were collected from agricultural fields at Aurangabad district during Kharif season (July 2022 to October 2022) to Rabi season (Nov 2022 to Feb 2023) in two intervals. The soil sample of sugarcane (*Saccharum officinarum*), corn (*Zea mays*), gram (*Cicer arietinum*), cotton (*Gossypium herbaceum*), and ground nut (*Arachis hypogaea*) were isolated. The Mycoflora were isolated by using soil dilution method and soil plate technique on Potato Dextrose Agar medium supplemented by suitable antibiotics such as streptomycin. A total of 11 species belonging to 5 genera of fungi were isolated from agricultural field. The isolated species belongs to Deuteromycotina, Zygomycotina, and Ascomycotina. No species of Basidiomycotina was found in soil. Mycoflora were identified and characterized with the help of relevant literature and manuals of fungi. The dominant genera in all the agricultural fields were *Aspergillus*, *penicillium* and *Fusarium*. The most frequent identified genera are *Aspergillus niger*, *Aspergillus flavus*, *Aspergillus fumigatus*, *Penicillium frequentans*, and *Fusarium oxysporum*. The percentage frequency of the Mycoflora were statistically analyzed.

Keywords: Aurangabad, Kharif, Mycoflora, Soil sample, Rabi season

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