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Isolation and characterization of rhizosphere mycoflora in some agricultural crop plants

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Abstract

Rhizosphere is a soil ecological region where soil is subjected to specific influence by plant root due to the interface. The great array of root- microbe interactions results in the development of a dynamic environment known as the rhizosphere where microbial communities also interact. The differing physical, chemical, and biological properties of the root – associated soil compared with those of the root – free bulk soil, are responsible for changes in microbial diversity and for increased numbers and activity of microorganisms in the rhizosphere micro – environment Experiments were carried out in the P.G Department of Botany and Microbiology, Government Science Chitradurga. Chitradurga located at 14^0 14N 76` 24`E/ 14.23^{0}N 76.4^{0}E it has average elevation of 732m (2401 ft). Characterization of mycoflora in phyllosphere and Rhizosphere were done with the help of K.R.Aneja (1996). Macerated slides and spores were photographed by using digital camera Nikon D500.Our investigation reveals that their enough diversity in the fungal flora from the study area The highest number of fungal species obtained as A*spergillus niger*, *Aspergillus flavus, Aspergillus flavipes, Aspergillus fumigatous, Aspergillus terrus* followed by *Curvularia, Chetomonium, Cladosporium, Penicillium, Fusarium & Trichoderma.* Which constitutes 70% dominant *Aspergillus* and remaining species 30%. This study shows that Colony Fungal Unit (cfu) /plate were always higher during evening exposure period than morning period. When the comparison is made between the four sites with respect to the total number of colonies per site, the highest numbers of colonies were recorded in the crops like Jowar and Ragi than Maize and Mustard. Therefore the present investigation reveals that four sites containing more number of mycofloral diversity in the study area.

Biography:

Dr. Ramesh H Ratageri has completed M.Sc, M.Phil,Ph.D from karnataka University and working as Associate Professor, Post Graduate Deparment of Botany Governement Science college Chitradurga,karnataka INDIA.I have 25 years of teaching experiance. I have attended several national and International level conferences/seminars. I have visited and presented the research paper in SETAC, New Orleans, North America.I have published more than 25 research papers and also articles.I have evaluated M.Sc Dissertation work. I have published two books and six chapters in different books and also a member of BOE. BOS and BOAE of Microbiology and Botany,Kuvempu University and Daverege University,Karanatak. I received District leve Best NSS Programe Officer.

Speaker Publications:

1. Rolli, Ningappa & Suvarnakhandi, S & Mulgund, Gangadhar & Ratageri, R & Taranath, Tarikeri. (2010). Biochemical responses and accumulation of cadmium in Spirodela polyrhiza. Journal of environmental biology / Academy of Environmental Biology, India. 31. 529-32.
2. Ratageri, R & Taranath, Tarikeri & H C, Lakshman. (2006). Toxicity of Dimethoate on Primary Productivity of a Lentic Aquatic Ecosystem: A Microcosm Approach. Bulletin of environmental contamination and toxicology. 76. 373-80. 10.1007/s00128-006-0931-0.

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