



Taxonomy of Soil Fungi Isolated from Muddy Soil of Lucknow

*Anshul Pant

Department of Botany, Lucknow University, Lucknow.

Email: pantanshul@rediffmail.com

J. K. Misra

SLM Bhartiya Vidhya Bhawan Girls Degree College, Lucknow.

Abstract

A total of 58 fungi belonging to different groups were isolated. Of these, 9 belongs to Zygomycetes, 10 to Ascomycetes (Including ascosporic Aspergilli and Penicilli) and the rest belong to the dominant class of Deuteromycetes. Six genera viz., Absidia (2 species), Circinella (1 species), Cunninghamella (2 species), Mucor (2 species), Rhizopus (1 species) and Syncephalastrum (1 species) were of Zygomycetes. The members of Ascomycetes recovered belong to 6 genera and 10 species of fungi and that were: Chaetomium (2 species), Emericella (1 species), Eurotium (1 species), Sordaria (2 species), Talaromyces (2 species) and Thielavia (2 species). The class Deuteromycetes which dominated the fungal flora of the sites studied was represented by 39 species belonging to 17 genera viz., Alternaria (1 sp.), Aspergillus (14 spp.), Cephalosporium (1 sp.), Cladosporium (2 spp.), Curvularia (1 sp), Fusarium (5 spp.), Helminthosporium (1 sp.), Humicola (1 sp.), Monilia (1 sp.), Nigrospora (1 sp.), Paecilomyces (2 spp.), Penicillium (4 spp), Scopulariopsis (1 sp.), Stachybotrys (1 sp.), Trichoderma (1 sp.), Trichothecium (1 sp.) and Rhizoctonia sp. only were isolated. Among the Deuteromycetes, species of the genus Aspergillus dominated the myco-flora of the habitat followed by Fusarium. Penicillium ranked next to Fusarium in order of dominance.

Keywords: Soil Fungi, environment, organic matter, ubiquity, terrestrial, mycoflora.

References

1. Buee, M, Courty, P. E, Mignot, D & Garbage, J. (2007). Soil niche effect on species diversity and catabolic activities in an ectomycorrhizal fungal community. Soil Biology and Biochemistry. Elsevier.
2. Fierer, N, Jackson, R.B. (2006). The diversity and biogeography of soil bacterial communities. National Acad Sciences.
3. Misra, J. K. (1980). *Ph.D Thesis*, Lucknow University, Lucknow.
4. Misra, J. K. (1983). *Bibliotheca Mycologica* 91:425-455.
5. Rai, J. N. & Mukerji, K. G. (1959). A quantitative study of the micro organic population of "Usar" soil with special reference to the soil pH and seasonal variations. *Proc. Indian Microbiol. Assoc.* 1: 3.
6. Rai, J. N, Agarwal, S. C. & Tewari, J. P. (1968). *Cunninghamella brunnea* sp. nov. A possible product of ecological specialization. *J. gen. appl. Microbiol. Tokyo.* 14: 443-446.
7. Rai, J. N. & Agarwal, S. C. & Tewari, J. P. (1971). Fungal microflora of Usar soils of India. *J. Indian bot. Soc.* 50: 63-74.
8. Taylor, D. L., Hollingsworth, T. N. (2014). A first comprehensive census of fungi in soil reveals both hyperdiversity and fine scale niche partitioning. Wiley Online Library.
9. Torsuik, V, Ovreas, L. (2002). Microbial diversity and function in soil. From genes to ecosystems. Current opinion in microbiology. Elsevier.
10. Tresner, M. D, Backus, M. P. & Curtis, J. T. (1954). Soil microfungi in relation to the hard wood forest continuum in S. Wisconsin. *Mycologia*, 46: 314-333.