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Associations of Arbuscular Mycorrhizal (AM) fungi in the Phytoremediation of Trace Metal (TM) Contaminated Soils.

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ABSTRACT:

Arbuscular mycorrhizal fungi (AM) are integral, functioning parts of plant roots, widely recognized as plant growth enhancing beneficial mycobionts and tolerance to variety of stresses such as nutrient, drought, salinity and trace metals (TM). A study was undertaken to access the influence of paper mill effluents on mycorrhizal colonization and mycorrhizal spore count. Plants grown in metal contaminated site were found less mycotrophic than their counterparts on the non-polluted one. Regression analyses revealed that the mycorrhizal colonization and mycorrhizal spore count are significantly and positively correlated with various soil physio-chemical properties in the polluted and non-polluted site. *Glomus* was the most frequently isolated mycorrhizal species from the polluted site. The isolated indigenous strains of AM can be used for inoculation of plant species that might be used for rehabilitation of contaminated site. The study highlights the potential use of AM as bioremediation agent of polluted soils and as bioindicator of pollution for future research priorities.

Keywords:
Arbuscular Mycorrhiza, Heavy metals, Phytoremediation, Glomus, Paper mill effluents.