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STUDY OF CELLULOLYTIC FUNGI ASSOCIATED WITH SOILS OF CASUARINAS FROM MAHARASHTRA

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ABSTRACT

Casuarinas are the important nitrogen fixing non-leguminous tree species. The study was conducted during 2018-19 from the soils of *Casuarina* plantations which were abundantly growing in coastal and interior parts of Maharashtra. Total of 5 cellulolytic fungal genera and 18 species from rhizosphere soils and 9 species from non rhizosphere like *Aspergillus, Chaetomium, Penicillium, Trichoderma* and *Rhizoctonia* were isolated from these soils. The abundance of cellulose degrading enzymes of cellulolytic fungi indicated the recycling of nutrients is done efficiently by use of enzymatic system of organisms and that will help in soil reclamation. Thus, Plants are important in agroforestry is because of the presence of these fungi in rhizosphere .

Key words: *Casuarina, Cellulolytic fungi, soil reclamation*

Article History

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➢ INTRODUCTION:

Casuarinas are the important nitrogen fixing non-leguminous tree species. It is a native of Southern hemisphere and comprise of a group of trees and shrubs of about 80 species. They are economically important plants grown as plantations under agro-forestry programmes for fuel and fodder all over the world (Crowley G.M 1994). Due to its capacity to improve infertile soils, it is introduced in arid and semiarid regions of the world successfully. The tree is multipurpose and helps to improve physical and chemical properties of soil, suppresses the weeds, helps in maintaining the fertility of soil. The success of the plantation is contributed to various properties of the plant and soil interactions.

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