

ANTIFUNGAL POTENTIAL OF ACTINOMYCETES ISOLATED FROM FIVE DIFFERENT SOURCES AGAINST *Aspergillus flavus* AND *Fusarium verticillioides*

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ABSTRACT

This research work is to investigate the antifungal potential of actinomycetes isolated from five different sources against *Aspergillus flavus* and *Fusarium verticillioides*. Isolation of microorganisms from the soil samples was carried out by serial dilution and pour plate techniques. The soil isolates were screened for their antagonistic ability against mycotoxigenic fungi: *A. flavus* and *F. verticillioides*. The isolates include *Actinomyces* spp, *Mycobacterium* spp, *Rhodococcus* spp, *Nocardia* spp, *Streptomyces* spp, and *Streptomonospora* spp. The results indicate that all the bacteria species exhibited varying degrees of biological control potential against the tested fungi. Out of all the actinomycetes use, *Streptomyces* spp appeared to have the highest diameter zone of inhibition against *A. flavus* of 16.00 mm and against *F. verticillioides* of 21.00 mm. The results showed the antimicrobial activity of the actinomycetes species, and thus indicate the potential of using them as bio-fungicidal agents in reducing the damages and threat caused by *A. flavus* and *F. verticillioides* in crop production.