

Antagonistic Potential of Trichoderma Strains against Colletotrichum musae

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Abstract : The experiment was conducted to evaluate the antagonistic potential of three commercially available Trichoderma strains viz., *T. harzianum* (armigera), *T. harzianum* (Ispahani), and *T. viride* against *Colletotrichum musae* isolates from three banana varieties viz., sagar, sobri, and katali. Mycelial growth rates of *C. musae* isolates were observed, the highest mycelial growth (11.62, 15.75, and 23.12 mm diameter) was observed by *C. musae* from sagor banana at 1, 2 and 3 days after inoculation, respectively. All the Trichoderma strains were capable of growth inhibition of *C. musae* isolates. After 4 days of duel culture, the highest mycelial growth reduction (10.33 mm diameter) was observed by the interaction between *T. harzianum* (armigera) with *C. musae* from sagor banana. Moreover, the highest growth inhibition (46.29%) was observed by the interaction between *T. harzianum* (armigera) with *C. musae* from the sobri banana. All the Trichoderma strains fully affected the viability of all the *Colletotrichum* isolates. Interestingly, both cultural filtrates and mycelial powders of all the Trichoderma strains showed a very nice inhibitory effect against *C. musae* isolates, where cultural filtrates were more potential than that of mycelial powders. So, all the tested Trichoderma strains may be used for the control of banana anthracnose disease.

Keywords : biological control, banana, anthracnose, Trichoderma, Colletotrichum

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