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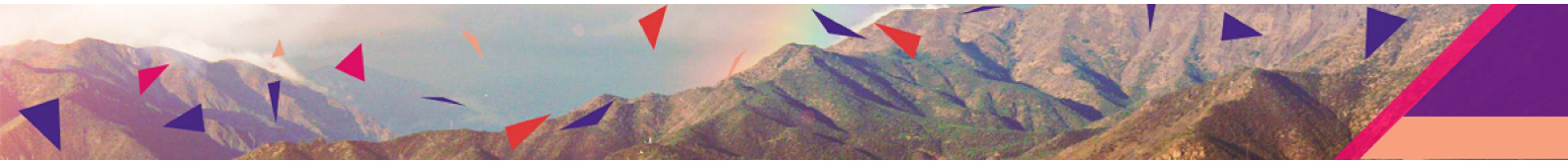
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**LIBRO DE RESÚMENES**





## MI133

### **Preliminary screening and characterization of antagonistic actinobacteria against *Fusarium verticillioides* isolated from the Cerrado in central region of Brazil**

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The fungi belonging to the *genus Fusarium* are well-known plant pathogens. These microorganisms cause significant losses of grain yield and quality in several agriculturally important crops in the Brazil, beyond its deleterious impacts on human and animal health. In this study, it was sought to select and characterize strains of efficient actinobacteria for the biocontrol of *Fusarium verticillioides*, *in vitro*. A total of 246 isolates of the actinobacteria from the Collection of Multifunctional Microorganisms of Embrapa Maize and Sorghum was used. These isolates, obtained from the samples collected under different systems of management and use of the cerrado soil, were screened for their antagonistic activity against *F. verticillioides* using primary screening techniques based on the percent inhibition of radial growth after 8 days, in three steps: (i) initially, groups of six actinobacterial isolates were spot-inoculated at equidistant points around the edges of three PDA plates containing a centrally placed 8 mm mycelial agar disc of *F. verticillioides* 27 isolate, (ii) only 20% exhibited antifungal activity and were tested again against two fungi isolates (*F. verticillioides* 27 and 43). Groups of four actinobacterial isolates were spot-inoculated at equidistant points around the edges of three PDA plates containing a mycelial agar disc and, (iii) only 12% selected isolates with antagonist activity above 50% of inhibition were reassessed against five *Fusarium* isolates (*F. verticillioides* 12, 27, 37, 43 e 295). In this, case, each actinobacterial isolate was spot-inoculated at three equidistant points around the edges of three PDA plates containing a mycelial disc. It was noted that the degree of inhibition of radial growth of the fungus depends on the genotype of the actinobacteria and phytopathogen. The selected actinobacterial strains with high antagonist activity were characterized and identified as *Streptomyces* sp. The results of this study revealed that actinomycetes from cerrado soil present potential for formulation of bioproducts to control *Fusarium verticillioides*, as an environmentally friendly and appropriate technological strategy to mitigate costs and losses of agricultural profitability.

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