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POTENTIAL USE OF THE ACTINOMYCETES FOR BIOCONTROL OF *Pantoea ananatis*, CAUSAL AGENT OF MAIZE (*Zea mays* L.) WHITE SPOT DISEASEJC Oliveira¹, A Tavares², I Melo¹, D Reis¹, C Oliveira³, U Lana³, I Marriel³¹ Federal University of São João Del Rei, Brazil.² College Ciências da Vida, Brazil.³ Embrapa Maize and Sorghum, Brazil

Maize white spot (MWS) caused by the bacterium *Pantoea ananatis* is economically important disease in all producing regions of Brazil. The initial foliar symptoms of the disease include water-soaked lesions that subsequently develop into gray necrotic and coloring straw, varying to elliptical and circular shapes. Currently, the use of pesticide is the most effective strategy to control this disease. There is no information available about the biocontrol of MWS. Actinomycetes are a major source of new compounds with biotechnological applications, including bioactive metabolites against various phytopathogenic microorganisms. The aim of this work was to search actinomycetes with antagonist activity against *P. ananatis* for developing biocontrol strategies for MWS disease. We evaluated 83 actinomycetes strains of the Microorganisms Multifunctional Culture Collection of the Embrapa Maize and Sorghum previously isolated from different tropical environment. Antagonist propagule suspension were deposited approximately equidistant on the plates containing solid selective medium for actinomycetes. After 72 hours incubation at 30°C, all strains were treated with and without UV irradiation for 15 minutes to inactivation of actinomycetes. Thereafter, an aliquot of TSB semi-solid medium containing *P. ananatis* cells was added and the zone of inhibition that that show antibiosis was measured. The results demonstrated that 6.0% and 14.5% of the strains exposed or not to UV light, respectively, showed antagonistic activity against *P. ananatis*. The isolates A470 and ACT86, identified as *Streptomyces* sp. by 16S rDNA partial sequencing, showed the biggest zone of inhibition. The identification of actinomycetes strains with antibiosis activity against *P. ananatis* can be applied in designing control strategies for maize white spot disease in Brazil.