XXXII Encontro de Jovens Pesquisadores

e XIV Mostra Acadêmica de Inovação e Tecnologia

BIC-UCS

PROMISSING APPROACH WITH *Bacillus velezensis* S26 FOR GRAPEVINE ANTHRACNOSE DISEASE MANAGEMENT CAUSED BY *Elsinoë ampelina*

BAC S26
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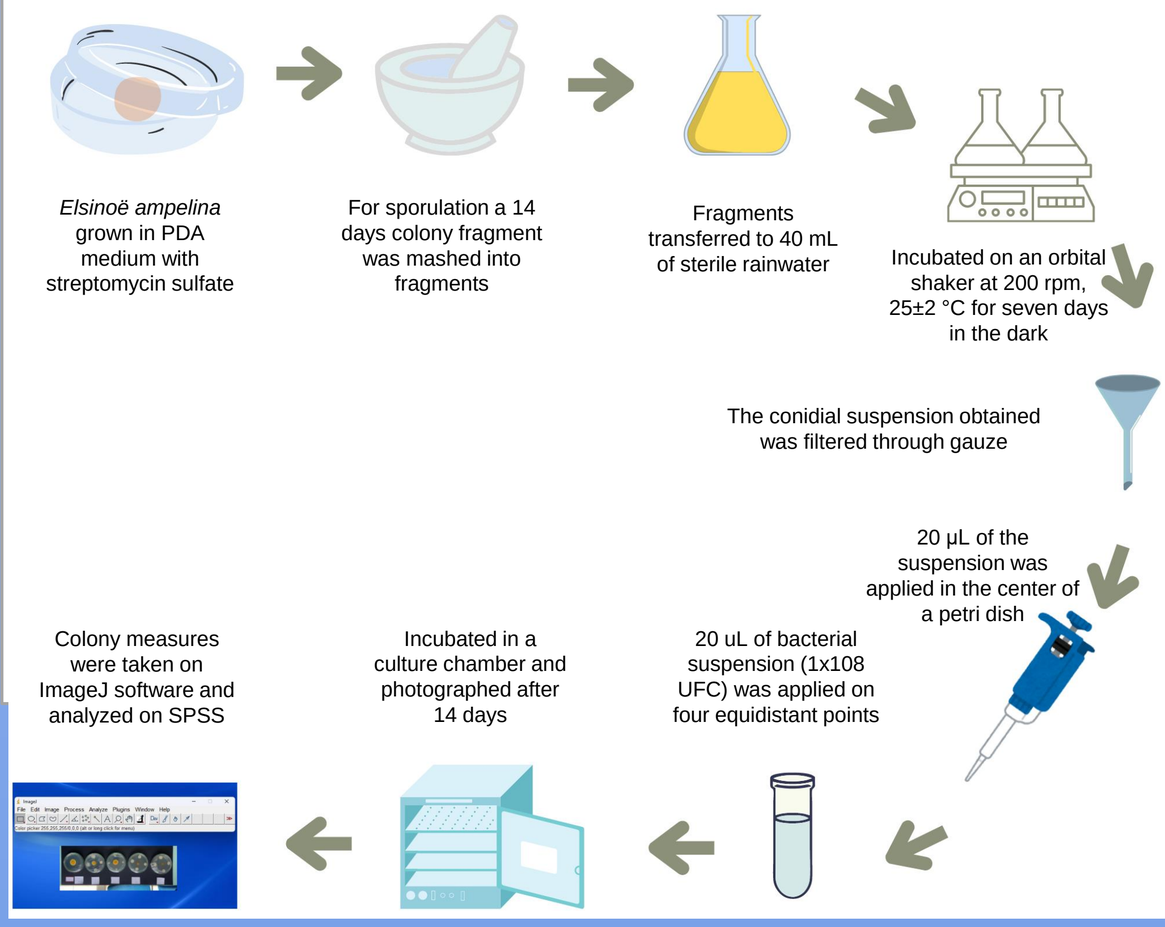
INTRODUÇÃO / OBJETIVO

*Elsinoë ampelina (*Avbr2018) cause infections in all area parts of the plant and has been associated with grapevine anthracnose, related to production losses when vine is contamineted. Strategies for controlling anthracnose in grapevines consist in application of chemical fungicides that persist on the fruit as residues, impacting human health and contributing to the emergence of resistant pathogens. However biocontrol strategies are gaining interest as an alternative to disease management. This work had the objective to evaluate the biocontrol potential of *Bacillus velezensis* S26 against *Elsinoë ampelina* in paired culture assay.

MATERIAL E MÉTODOS

Santos, R. F. et al (2018) described a method using steril rainwater to induce conidia production because *Elsinoë ampelina* has slow mycelial growth. In this work we developed a tecniche for paird culture tests in the figure bellow.

Figure 1: Method for paired culture antagonist test of *Elsinoë ampelina* against *B. velezensis* S26.



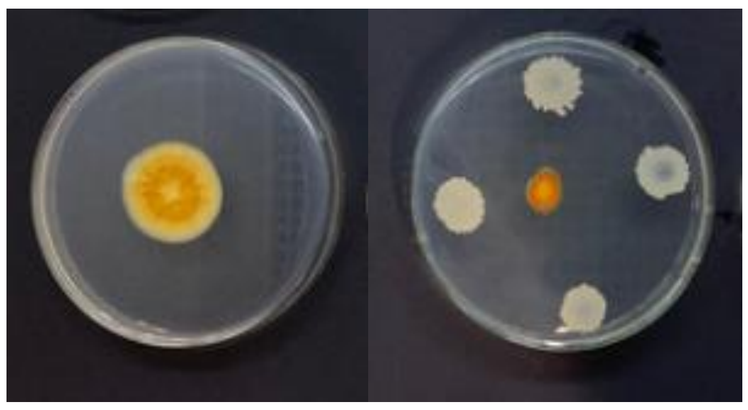
RESULTADOS E DISCUSSÕES

The bacteria *B. velezensis* (S26) was able to control pathogen mycelial growth.

Biocontrol activity of S26 has already been confirmed in Debastiani, G. L. et al (2023) against *Colletotrichum* and it´s endospore had controlled *Colletrotrichum* and *Botrytis* (Russi, A. et al, 2024).

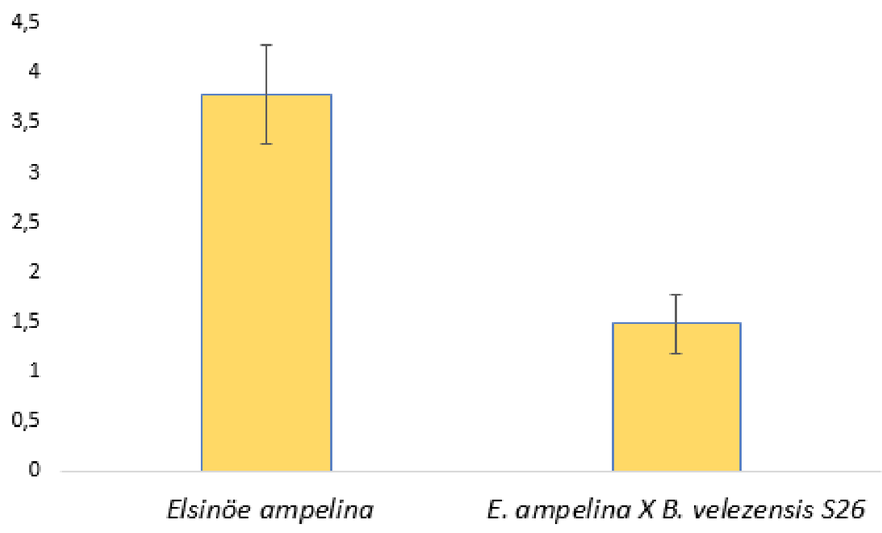
RESULTADOS E DISCUSSÕES

Figure 2: Biocontrol potencial of *Bacillus velezensis* S26 againt in paired culture test..



In previous tests, *Eucalyptus staigeriana* essential oil had shown antifungal activity inhibiting mycelial growth and conidial germination at 0.15 and 1 µL mL^{-1} concentration against *E. ampelina* (Avbr2018) (Pedrotti, C. et al, 2022).

Graphic 1: Mycelial growth index of *Elsinöe ampelina* against the bioagent.



CONSIDERAÇÕES FINAIS

Bacillus velezensis S26 had shown significative difference from the control of the pathogen when comparing the grown área and has shown biocontrol potecial in other studys. Further tests are require to assure how the bacteria could serve as an efficient agent for biocontrol of anthracnose in grapevines.

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