

INFLUENCE OF H₂O₂ ON THE INTERACTION OF COWPEA [*VIGNA UNGUICULATA* (L.) WALP.] WITH *COLLETOTRICHUM GLOEOSPORIOIDES*

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Cowpea is an important legume of the Northeast of Brazil. Its yield is affected by *Colletotrichum* fungi. As plant H₂O₂ is believed to have direct antimicrobial effects on pathogens it was raised the hypothesis that alteration of H₂O₂ concentrations by pharmacological compounds could confer differences in susceptibility of the cowpea genotype BR-3-Tracueteua to *C. gloeosporioides* attack. Seeds were germinated on humid Germitest[®] paper and after four days seedlings were transferred to hydroponic solution. After 8 days, the primary leaves were excised, infiltrated with catalase, glucose oxidase or salicylic acid, transferred to Petri dishes and inoculated with 2.0 x 10⁵ spores mL⁻¹ fungal suspension on the adaxial surface. Leaves were placed in darkness and collected at 12, 24, 48 and 72 hours. By catalase treatment leaves presented 55.50 nmol H₂O₂ g⁻¹ fresh mass (FM) and the fungus showed hemibiotrophic infection-type, with vesicles and primary and secondary hyphae formation. However, glucose oxidase and salicylic acid leaf treatments showed 144.96 and 186.05 nmol H₂O₂ g⁻¹ FM, respectively, and the fungus presented a subcuticular, intramural necrotrophic strategy, forming secondary hyphae associated with a quick spread and a rapid killing of the host cells. Overall the results suggest that whereas H₂O₂ influenced directly the fungal infection process-type it does not confer resistance of cowpea to *C. gloeosporioides*.

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