MAIZE PHYSIOLOGICAL RESPONSE TO THE FOLIAR PATHOGEN *Exserohilum turcicum* AND THE NATIVE BIOCONTROLLER *Bacillus velezensis* EM-A8 IN GREENHOUSE TRIALS

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Maize is one of the most important cereals in the world. Northern corn leaf blight (NCLB) caused by the pathogen *Exserohilum turcicum* is among the diseases that threaten its yield. In the Laboratorio de Ecología Microbiana, UN de Río Cuarto, *Bacillus velezensis* EM-A8 was selected from the maize phyllosphere for its antagonistic activity *in vitro* and *in vivo* against *E. turcicum*. In order to find biological alternatives for NCLB management, two greenhouse trials were carried out between 2021 and 2022. Two formulations of the biocontroller were applied in pot grown maize plants, both healthy and infected with *E. turcicum*. Treatments consisted of Control (C), biocontroller in formulation 1 (T1), biocontroller in formulation 2 (T2), formulation 1 + *E. turcicum* (T3), Formulation 2 + *E. turcicum* (T4) and *E. turcicum* (T5). Leaf hydrogen peroxide concentration (H_2O_2), salicylic acid concentration (SA), phenolic compounds concentration (PC) and electrolyte leakage (EL) were measured to assess maize physiological response towards the pathogen and the biocontroller. Data obtained was analyzed using analysis of variance test and principal component analysis. Parameters SA, H_2O_2 and PC were significantly lower in C and T1 compared to the rest of treatments ($p<0.05$). Bedises, T3 showed the lowest level of SA in T3. EL was significantly higher in C, and T4 presented the highest membrane stability. Finally, principal component analysis explained 83% of variation and determined an inverse association between SA and EL, and a positive correlation between PC and H_2O_2. T5 was associated with EL, while C aligned with H_2O_2 and SA. These results could indicate that foliar application of *B. velezens*is EM-A8 enhances maize resistance and increases yield through both direct interferences with the pathogen and by influence over the plant sanitary status. Further studies are necessary to evaluate the bacterial biostimulant capacity over dry matter production.