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EFFECT OF INOCULATION WITH TWO STRAINS OF *Azospirillum brasilense* AND *A. argentinense* ON BIOCHEMICAL PARAMETERS IN TWO VARIETIES OF IPOMEA BATATAS UNDER SALINE STRESS CONDITIONS

Zunino, Ignacio Martin^{1,2} -Flores S²- Salotti A.H.^{2,3} - Arizio C^{2,3} -Larraburu E.E.^{2,4}

1) Instituto Nacional de Tecnologia Agropecura-Mercedes-Buenos Aires-Argentina.

2) Laboratorio de Cultivo de Tejidos Vegetales "Berta. E. Llorente" (CULTEV). Departamento de Ciencias Básicas. Universidad Nacional de Luján. Provincia de Buenos Aires. Argentina.

3) Comisión de Investigaciones Científicas de la Provincia de Buenos Aires (CIC). La Plata. Provincia de Buenos Aires. Argentina.

4) Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET). Ciudad Autónoma de Buenos Aires. Argentina.

5) Instituto de Recursos Biologicos-Hurlingham Bs As Argentina

Contacto: ezequiel.e.larraburu@gmail.com

The plant has different mechanisms to mitigate salt stress. One of the action mechanisms is activating antioxidant enzymes that eliminate reactive oxygen species (ROS). In addition, plants interact with a microbiota that can activate no harmful reactions. The use of plant growth-promoting bacteria is a promising tool to mitigate the detrimental effects of saline stress. This study aimed to evaluate the effect of *Azospirillum brasilense* Cd and *Azospirillum argentinense* Az39 on the activity of oxidative enzymes in two sweet potato varieties (Morada INTA and Blanca Brasil) under *in vitro* conditions. A completely randomized factorial design was used, considering varieties, bacterial strains, and salinity. Two-centimeter shoots were placed in 200 cm³ glass with 50 cm³ of MS medium supplemented or not with NaCl and inoculated with 100 µL (10⁷ cfu mL⁻¹) at the base of the explant. Non-inoculated treatments were controls. The activity of polyphenol oxidase (PPO), phenylalanine ammonia-lyase (PAL), and peroxidase (PO) enzymes was evaluated, expressed as delta absorbance (? Abs) per mg of fresh weight (mg FW) of root and leaf. From the analysis of the means of polyphenol oxidase and phenylalanine ammonia-lyase activity, there is a significant increase in activity in leaves and roots in treatments with both strains combined with 80 mM NaCl, compared to non-inoculated treatments and the effect of the same NaCl concentration. An exception was observed in Blanca Brasil's leaves, where no significant differences were found. Significant increases in enzymatic activity in roots and leaves were observed only when salt was applied with *A. brasilense* Cd. Peroxidase activity detected in leaves showed no significant differences between treatments, while in roots, increase in NaCl concentration (80 mM) when shoots were inoculated with Cd. In other inoculation conditions, the behavior of enzymatic activity in response to salinity was erratic, raising intriguing

questions about the underlying factors influencing this response. Despite this, enzymatic changes could indicate greater protection of inoculated plants under stress conditions.

Palabras clave: Salt stress-in vitro culture- plant bacteria interaction-oxidative enzymes