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Oxidative stress criteria as potential indicators of drought-tolerant soybean genotypes

*Carla Guzzo**, IFRGV-CIAP-INTA, Córdoba, Argentina

Mariela Monteoliva, IFRGV-CIAP-INTA, Córdoba, Argentina

Alejandro Carrio, INTA Marcos Juárez, Córdoba, Argentina

Javier Gilli, INTA Marcos Juárez, Córdoba, Argentina

Drought is a critical factor reducing yield productivity in many crops. The legumes are a family with the greatest economic importance in Argentina and their yield is also affected by drought. Faced with the growing demand for food, the search for physiological traits that allow the identification of drought tolerant genotypes to abiotic stress is a major aim. Between others, mechanisms related to drought tolerance include the Antioxidant Response, which counteracts oxidative stress. The aim of this work was in an experimental model system under controlled conditions to characterize the oxidative stress response in soybean cultivars (*Glycine max*) from the germplasm bank of INTA Marcos Juárez. Drought was carried out by suspension of the irrigation until reaching 15% of Soil Water Content and controls were maintained at field capacity. In drought, a reduction in height and foliar area and Water Relative Content were observed. We obtained variability in FRAP (biochemical marker of total non-enzymatic antioxidant capacity) and MDA (biochemical marker of membrane damage). The analysis of the physiological and biochemical parameters allowed differentiating cultivars according to their tolerance to drought stress.