

MORPHOLOGICAL AND PHYSIOLOGICAL ALTERATIONS CAUSED BY *Nacobbus aberrans* IN TOMATO PLANTS.

Alterações morfológicas e fisiológicas provocadas por *Nacobbus aberrans* em tomateiro. Garita, S.¹; Bernardo, V.²; Ripodas, J.¹; Arango, C.¹; Ruscitti, M.¹⁻³. ¹INFIVE (UNLP-CONICET), Argentina. ²CICBA, Argentina. ³ECANA-UNNOBA, Argentina. E-mail: sebastiangularita@hotmail.com

Nacobbus aberrans is a phytoparasitic nematode that forms galls in the roots of its hosts. Crops affected by this nematode have lower aerial growth, lower productivity and may wilt at times of day when temperature and irradiance are high. The aim of this presentation is to characterize the morphophysiological alterations that *N. aberrans* causes in tomato plants, *Solanum lycopersicon*. A number of 20 tomato seedlings var. Yigido were transplanted into 15 L pots, using tinalized soil as a substrate. Half of them were inoculated with 5000 *N. aberrans* eggs. Taken 90 days after inoculation, measurements of the inoculated plants showed a 42% reduction in the net photosynthesis ($\mu\text{mol CO}_2/[\text{m}^2/\text{s}]$) and a 24,02% reduction in the stomatal conductance ($\text{mmol}/[\text{M}^2/\text{s}]$) compared to the non-inoculated plants. It was also observed that the leaves of the infected plants had a significantly lower content ($p < 0,05$) of chlorophyll and a lower photosynthetic efficiency in photosystem II. When cross sections of the roots were made, galls showed a generalized cellular disorder which included an increase in layers of parenchyma, in which abundant starch grains appeared. It was also observed that the phloem and the secondary xylem were deformed, mainly in areas close to the perforations caused by the adult females. The formation of specific areas where nematodes feed leads to the rupture of the conduction tissues, provoking a water stress that negatively impacts on the growth of the plant.