



EFFECT OF ELECTRICAL CONDUCTIVITY OF THE NUTRIENT SOLUTION ON FRUIT QUALITY OF THREE NATIVE TOMATO GENOTYPES (*LYCOPERSICON ESCULENTUM* VAR. *CERASIFORME*)

Authors: P. Juárez-López, R. Medina-Torres, E. Cruz-Crespo, D.W. Reed, M. Kent, L. Cisneros-Zevallos, S. King, P. Ramírez-Vallejo

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Abstract:

Mexico is considered the domestication center of tomato. However, in Mexico, studies are scarce regarding quality assessment of native tomato fruits. Some tomato genotypes that may have the potential to compete with commercial hybrids in terms of quality can be cultivated in the greenhouse using hydroponics with a low input of fertilizer. The objective of this study was to assess the effect of Steiner nutrient solution at three levels of electrical conductivity (1.0, 1.5 and 2.0 dS m⁻¹) on the fruit quality of three native tomato genotypes (JCPRV-05, and JCPRV JCPRV-09-10) from Guerrero, Mexico, compared to a commercial cherry tomato (Super Sweet 100[®]). Firmness, pH, titratable acidity, total soluble solids, ascorbic acid concentration, and lycopene concentration were evaluated. The increase in electrical conductivity of the nutrient solution from 0.5 to 2.0 dS m⁻¹ increased firmness (10.8%), titratable acidity (4.1%), total soluble solids (5.6%) and lycopene concentration (15%) of tomato fruits, but did not affect the concentration of ascorbic acid or fruit pH.

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