



Ácidos húmicos inducen crecimiento y protección contra el estrés hídrico en maíces nativo de México [

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text (article)

Analítica

Under controlled conditions, it has been shown that the application of humic substances (HS) favors the growth and development of plants. But, scientific evidence in open field conditions with and without irrigation has been poorly documented. The objective was to characterize the humic acids (HA) extracted from vermicompost of urban solid waste using chemical and spectroscopic techniques, and to evaluate the effect of its root application on the reproductive stage, with continuous irrigation and with induced water deficit, in three selections of maize (*Zea mays*L.) from three regions of the state of Oaxaca, Mexico, grown under field conditions. The regional corn selections used were identified as Cajete (Caj), Zapalote (Zap) and Cuilapam (Cuil). Three concentrations of HA were tested: 140, 150 and 160 mg L⁻¹, a control treatment was included, without application. The product was applied by radical spraying, before, during and after the flowering stage of the corn plants. The HA promoted higher values in plant height, stem diameter, and production of root and shoot biomass, in the presence of irrigation and with induced water deficit. The relative content of water and proline werealso stimulated, as well as the content of chlorophylls a, b, and a+b. The negative effects caused by an induced water stress were attenuated by the application of HA. HA from municipal solid waste vermicompost stimulated growth parameters in the reproductive phase and induced stress protection when irrigation use was limited

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