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Agronomic traits of forage maize (*Zea mays* L.) in response to spraying of nanofertilizers, ascorbic and salicylic acid

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ABSTRACT:

Only limited work has been focused on the simultaneous evaluation of foliar application of nano nutrients, salicylic and ascorbic acid on agronomic traits of forage corn. Therefore, to evaluate these treatments, the split plot experiment based on RCBD with three replications was used in this experiment. Foliar spraying of nano-fertilizers Fe, Zn, K, NPK and control (without fertilizers) were arranged in main plots. The subplots consisted of the foliar spraying of corn with growth regulators including ascorbic acid (2%) and salicylic acid (2%) and control. Results showed that application of nano iron chelate increased leaf chlorophyll by 29%, 20%, 20% and 16% compared with control, NPK, potassium and zinc respectively. The highest leaf chlorophyll was observed in the salicylic acid (47.85) and lowest belonged to control treatment (44.38). The highest and lowest plant height belonged to nano iron chelate (2.90 m) and control (2.35) treatments, respectively. The highest value of stem and total dry weight were achieved when NPK fertilizers were applied and the highest leaf dry weight was obtained in nano iron chelate treatments. Salicylic acid caused a 3% increase in leaf dry weight compared to the control. Nano zinc spraying increased plant height by 23.6 m (5%) compared to the control. Among the growth regulators, the highest crude protein was observed in salicylic acid treatments.

Keywords:

Growth regulators, Iron, Nanoparticles, Potassium, Zinc

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