

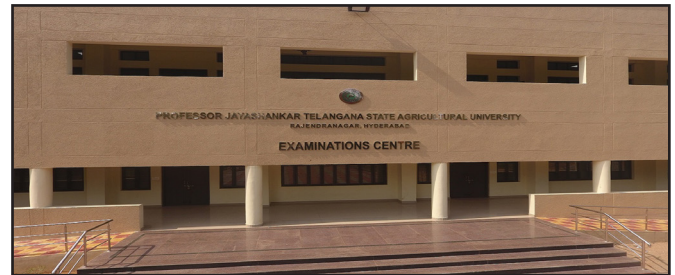
## Effect of Zinc Fertilization on Yield of Baby Corn (*Zea Mays L.*)

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### Abstract:

A field experiment was conducted on sandy clay loam soil at College farm, College of Agriculture, Rajendranagar, Hyderabad during kharif, 2016 to evaluate the soil and foliar applied zinc response in baby corn. The experiment was laid out in a randomized block design consisting of twelve treatments and replicated thrice. In the present experiment significantly higher growth parameters, yield and yield attributes and quality parameters was recorded with soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + foliar spray of ZnSO<sub>4</sub> @ 0.2% at 25 DAS and at 40 DAS over control (no zinc). Increasing level of zinc application had a marked effect on all the growth characters and yields. Likewise cob yield, corn yield, husk yield and green fodder yield were highest with soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + foliar spray of ZnSO<sub>4</sub> @ 0.2% at 25 DAS but remained on par with treatments T9: soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup>, T10: soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + Foliar spray of ZnSO<sub>4</sub> @ 0.2% at 25 DAS, T11: soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + Foliar spray of ZnSO<sub>4</sub> @ 0.2% at 40 DAS whereas no zinc treatment resulted lower yield and yield attributes. Zinc treatment either by soil or foliar application led to an increase in cob yield by 10.0% to 35.5%, in corn yield by 0.4% to 31.4%, in husk yield by 13.2% to 37.1% and in green fodder yield by 3.1% to 24.0% over control (no zinc) and also registered higher net returns and B:C ratio with soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + foliar spray of ZnSO<sub>4</sub> @ 0.2% at 25 DAS and at 40 DAS among all treatments. Each increment of zinc application correspondingly improved growth parameters, yield and yield attributes and quality parameters. The present study suggested that soil application of ZnSO<sub>4</sub> @ 25 kg ha<sup>-1</sup> + foliar spray of ZnSO<sub>4</sub> @ 0.2% at 25 DAS and at 40 DAS treatment was suitable for baby corn under sandy clay loam soils of Telangana State.



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### Publication of speakers:

1. Dugasa, Tesfaye & Cao, Fangbin & Ibrahim, Wasim & Wu, Feibo. (2018). Genotypic difference in physiological and biochemical characteristics in response to single and combined stresses of drought and salinity between the two wheat genotypes (*Triticum aestivum*) differing in salt tolerance. *Physiologia Plantarum*. 165. 10.1111/ppl.12743.
2. Ibrahim, Wasim & Ahmed, Imrul & Chen, Xianhong & Cao, Fangbin & Zhu, Shuijin & Wu, Feibo. (2015). Genotypic differences in photosynthetic performance, antioxidant capacity, ultrastructure and nutrients in response to combined stress of salinity and Cd in cotton. *BioMetals*. 28. 10.1007/s10534-015-9890-4.
3. Dugasa, Tesfaye & Cao, Fangbin & Ibrahim, Wasim & Wu, Feibo. (2018). Genotypic difference in physiological and biochemical characteristics in response to single and combined stresses of drought and salinity between the two wheat genotypes (*Triticum aestivum*) differing in salt tolerance. *Physiologia Plantarum*. 165. 10.1111/ppl.12743.
4. Dai, Huaxin & Ibrahim, Wasim & Zheng, Wei-Te & Dawood, Muhammad & He, Xiaoyan & Zhao, Jing & Zhang, GP & Li, Chengdao & Wu, Feibo. (2013). Characteristics of Photosynthetic Performance, Antioxidant Capacity and Nutrient Concentration of Tibetan Wild Barley in Response to Aluminium Stress. *Asian Journal of Chemistry*. 25. 10.14233/ajchem.2013.14582.

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