

RESPONSE OF ZINC ON GROWTH AND BIOCHEMICAL CHANGES OF WHEAT (*TRITICUM AESTIVUM* L.) UNDER SODIC SOIL

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Abstract: The present investigation was carried out under field condition at main experiment station (MES) of Narendra Deva University of agriculture & Technology, Narendra Nagar, Kumarganj, Faizabad U.P. during Rabi season 2010-11. The experiment was executed in completely randomized block design (factorial) with three replications. Six treatments comprised of zinc application *i.e.* (control 1%, 1.5% ZnSO₄ seed soaking, 15 kg and 25 kg ZnSO₄ ha⁻¹ basal application and 1% ZnSO₄ +2.5% urea foliar spray and three wheat varieties (Raj-3077, NW-1014, UP-2425). Seed soaking, basal application and foliar spray of ZnSO₄ increased growth characters in all varieties of wheat. Wheat variety UP-2425 responded better in comparison to NW-1014 and Raj-3077. Variety UP-2425 performed maximum plant height number of tiller, Leaf area, dry weight plant⁻¹ as compared to Raj-3077 and NW-1014 at the crop growth stages. A control sets was also maintained. Seed soaking, basal application and foliar spray of ZnSO₄ increased growth characters and biochemical changes in all varieties of wheat. Application of 25kg ZnSO₄ha⁻¹ in soil significantly increased in chlorophyll content, carbohydrate content obtained. Wheat variety UP-2425 responded better in comparison to NW-1014 and Raj-3077. It is concluded from the results that basal application of 25 kg ZnSO₄ha⁻¹ was found superior and economical in comparison to other treatments.

Keywords: Zinc, Foliar application, Growth, Soluble carbohydrate, Chlorophyll

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