

Effect of soil and foliar application of zinc and Boron on growth, yield and micro nutrient uptake of Chickpea

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Abstract

A field experiment was conducted during Rabi 2017 at KVK K, Hassan to study the effect of soil and foliar application of zinc and boron on growth, yield and micronutrient uptake of chickpea with twelve treatments and replicated thrice using RCBD. Results revealed that significantly higher plant height, number of branches, total biomass 1944 (kg ha⁻¹) and seed yield (1262 Kg ha⁻¹) was recorded with POP + foliar application of Zn as ZnSO₄ @ 0.5 % + B as Solubor @ 0.2 % (T₁₁) and on par with POP + soil application of ZnSO₄ @ 15 kg ha⁻¹ + Solubor @ 5 kg ha⁻¹ (T₁₂) and POP (T₂). Higher zinc (15.14 mg/kg & 14.07 mg/kg), boron (18.18 mg/kg & 15.39 mg/kg), copper (15.21 mg/kg & 11.18 mg/kg), Manganese (42.43 mg/kg & 35.58 mg/kg) and Iron (86.81 & 70.89 mg/kg) in seed and haulm recorded in T₁₁ (POP+ foliar spray of Zn as ZnSO₄ @ 0.5 % + B as Solubor @ 0.2 %) and the lowest was found in control (T₁). Significantly higher uptake of Zinc, boron, copper, manganese and iron was recorded in T₁₁ treatment and lowest uptake of nutrient recorded in control.



Biography:

Channakeshava S, Assistant Professor, Soil Science & Agricultural Chemistry, College of Agriculture, Karekere, Hassan serving in the UAS, GKVK, Bengaluru since 2007 and completed 13 years in the cadre of Assistant Professor during the period worked as Scientist(SS&AC) in Krishi Vigyan Kendra for the period of 12 years. Published 8 Research paper in National and International journals, Published 22 Extension leaf folders, 10 Technical Bulletins 2 TV programme and 10 Radio programmes. Established Soil Testing Laboratory at KVK for testing soil samples of farmers. Developed Soil Health Cards and issued to farmers with fertilizer recommendations. Attended National Review workshop of KVK at North Goa and at Wynadu. Organized Important events world soil Day, World Food Day, Women in Agriculture Day and Farmers Day.

Speaker Publications:

1. Ahlawat, IPS, Gangaiah, B and Ashraf Zadid, M. 2007. "Nutrient management in chickpea". In Chickpea breeding and management, Edited by: Yadav, SS, Redden, R, Chen, W and Sharma, B. 213–232. Wallingford, Oxon, UK: CAB International.
2. Bray, R. and Kurtz, L.T. (1945) Determination of Total, Organic, and Available Forms of Phosphorus in Soils. Soil Science, 59, 39-46. FAO, 2010, www.Fao.Org/docrep.
3. Piper C.S. Soil and Plant Analysis. Hans Publishers Bombay. 1966, 135-136.
4. Subbiah B.V., Asija G.L. (1956): A rapid procedure for estimation of available nitrogen in soils. Current Science, 25: 259–260.
5. Tandon, H. L. S., 2009, Micronutrient Hand book- from research to practical application. Fert. Dev. and Consultation Org., New Delhi, India, pp: 19-27.



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