

CRITICAL LIMIT OF AVAILABLE ZINC FOR WHEAT IN SOILS OF SUB-HUMID SOUTHERN ZONE (IV- B) OF RAJASTHAN

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Abstract : A pot culture experiment was conducted during the year 2006-07 to assess the critical limit of zinc in soils as well as in wheat plant with eighteen alkaline soils collected from different sites of Zone (IV-b) of Rajasthan. The DTPA-extractable Zn in these soils was found positively correlated with organic carbon, clay and per cent dry matter yield of wheat. A significant negative correlation was observed between pH, sand, calcium carbonate (CaCO₃) and electrical conductivity (EC). The critical limits of available Zn for soil and plant were worked out to 0.63 mg kg⁻¹ and 38.98 mg kg⁻¹, respectively. Application of 10 mg Zn kg⁻¹ soil recorded maximum mean dry matter yield of wheat i.e. 17.59 g pot⁻¹. Bray's per cent yield (Wheat) versus DTPA-zinc in soil was found to be 0.58 mg kg⁻¹ by graphical method and 0.63 mg kg⁻¹ by statistical method.

Keywords : Critical limit, Zinc, Bray's per cent yield, Alkaline soil

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