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E-mail: h_mohseni81@yahoo.com

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/ a	/ a	T
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/ abc	/ abcd	T
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/ a	/ ab	/ b	/ ab	/ ab	/ ab	/ b	/ b	/ b	/ b	(mg/kg)
/ a	/ cd	/ abc	/ bcd	/ bc	/ abc	/ abc	/ ab	/ abc	/ d	(mg/kg)
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/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	
/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	/ a	
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(%)	(%)	(%)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
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/ ab	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ b	/ a	/ a	/ a	/ ab	/ ab	/ bc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ b	/ a	/ a	/ a	/ a	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ bc	T
/ b	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ a	/ a	/ a	/ a	/ ab	/ a	/ ab	T
/ b	/ a	/ a	/ a	/ ab	/ b	/ c	T
/ b	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ b	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ b	/ a	/ a	/ a	/ a	/ ab	/ abc	T
/ b	/ a	/ a	/ a	/ ab	/ ab	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ ab	/ bc	T
/ b	/ a	/ a	/ a	/ ab	/ b	/ abc	T
/ ab	/ a	/ a	/ a	/ ab	/ a	/ a	T

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REFERENCES

11. Christensen, N. W. & T. L. Jackson. 1981. Potential for phosphorus toxicity in zinc treated corn and potato. *Soil Sci. Soc. Am. J.* (45): 904-909.
12. Gupta, A. P., R. S. Autil, & V. K. Gupta. 1986. Effect of pressud zinc on the yeild and uptake of zinc and nitrogen by corn. *J. India Soc. Soil Sci.*(34): 810-814.
13. Karimian, N. & J. Yasrebi. 1995. Predicition of residual effects of zinc sulfate on growth and zinc uptake of corn plants using three zinc soil tests. *Commn . Soil and Plant. Anal.* 25(1-2): 256-363.
14. Leblance, D. V., U. C. Gupta, & B. R. Christie. 1997. Zinc nutrition of silage corn growth on acid podzol. *J. Plant Nutr.* (20):345-355.
15. Loneragan, J. F., D. L. Grunes, R. M. Welch, E. A. Aduayi, A. Tengah, V.A. Lazar, & E. E. Cary. 1982. Phosphorus accumulation and toxicity leaves in relation to zinc supply. *Soil Sci. Soc. Am. J.* (46): 345-352.
16. Marschner, H. 1995. Mineral nutrition of higher plants. Academic press. New York. USA., 889pp.
17. Marschner, H. 1988. Mineral nutrition of mineral elements with emphasis on univalent contions. *Annual. Review of plant physiology.*(17): 47-76.
18. Morgahan, J. T. 1994. Accumulation of zinc, phosphorus and magnesium by navy bean seed. *J. Plant Nutr.*(17):1111-1125.
19. Parker, D. R. 1997. Response of six crop species to solution zinc activities buffered with HEDTA. *J. Soil Sci.* (61): 167-175.
20. Singhal, S. K. & R. K. Rattan. 1996. Zinc supplying power of some alluvial soils soybean and mustard. *Annals of Agricultural Research.* (17): 133-139
21. Takkar, P. N., M. S. Mann, R. L. Bansal, N. S. Randhawa, & H. Singh. 1976. Yeild and nutrient uptake response of corn to zinc as influenced by phosphorus fertilization. *Agron. J.* (68): 942-946.
22. Tandon, H. 1995. Micronutrient in soil, crops and fertilizers. New Dehli. Fertilizer Development and Consultation Orgaization(c-110) Greater Kailash. New Dehli. India.
23. Umesh, C. G. 1993. Boron and its role in crop production. C. R. C. press. Island. Canada. 256pp.
24. Yilmaz, A., H. Ekis, & I. Cakmak. 1997. Effect of different zinc application methods on grain yeild and zinc concentration in wheat. *Journal of plant nutrition.*(20): 461-471.