EFFECT OF ZINC AND IRON APPLICATION ON YIELD AND ACQUISITION OF NUTRIENT ON MUSTARD CROP (*BRASSICA JUNCIA* L.)

Anuj Kumar, Satendra Kumar, Pradeep Kumar* and Pramod Kumar

Department of Soil Science, College of Agriculture Sardar Vallabhbahi Patel University of Agriculture and Technology, Meerut 250 110 *Email : sehravat@gmail.com

Abstract: The field experiment was conducted on Pusa Bold variety of Mustard with 10 treatments in RBD in rabi season-2009-10 at Crop Research Centre of, Sardar Vallabhbai Patel University of Agriculture and Technology; Meerut (U.P). Maximum primary branches (11.05), secondary branches (31.33), Siliqua per plant (545.35), number of seed per Siliqua (13.55), seed weight per plant 30.38 g and test weight (1000 seed weight, 6.50 g) were recorded, the biological yield was observed highest (114.80 q ha⁻¹) and the grain yield was also (23.40 q ha⁻¹) in T9{100 per cent NPK (RDF) + Zn @ 25 Kg ha⁻¹ (B) + Fe @ 25 Kg ha⁻¹ (B)}. The maximum Stover yield noticed 91.40 q ha⁻¹ as compared to T1 (control) (40.82 q ha⁻¹), highest total nitrogen uptake by mustard crop, recorded 97.87 kg/ha, in case of phosphorus and potassium uptake by mustard crop was also observed 21.82 kg/ha and 152.82 kg/ha , respectively. The all over present investigation shows that the maximum yield attributes was found when zinc and iron was applied basal with recommended dose of fertilizers.

Keywords: Mustard, micronutrient, uptake Kg ha⁻¹

REFERENCES

Chandra, D. and khandelwal, R.B. (2009). Effect of zinc and phosphorus on yield, nutrient uptake and oil content of mustard grown on the gypsum –treated sodic soil. *J. Indian soci. Soil Sci.*, 57 (1): 66-70.

Chaudhary, H.C., Khan, S. and Uttam, S.K. (2007). Effect of N, P, S and Zn nutrition and moisture conservation practices on nutrient uptake, quality and yield of rainfed Indian mustard in eroded soil. *Indian Agriculture*, 53 (3/4): 125-130.

Giri, M.D., Hamid, A., Giri, D.G., kumar, R.P. and Sajid, M. (2003). Effect of irrigation and sources of iron on quality and uptake of nutrients of mustard. *J. soils and crops*, 13 (1):131-134.

Husain, M.F.and Kumar, R. (2006). Influence of sowing dates application of zinc on the performance of mustard in South-West semi arid zone of Uttar Pradesh. *International J. Agriculture Sci.*, 2(2):601-604.

Jat, J.R. and mehra, R.K. (2007). Effect of sulphur and zinc on yield, macronutrient content in and uptake by mustard Haplustepts. *J. Indian soci.soil sci.*, 55 (2): 190-195.

Kumar, N., Singh, S. and Singh, V. (2006). Effect of Iron and Sulphur levels on yield, oil content. and their uptake by on Indian mustard (*Brassica juncea*). *Indian J.Agronomy*, 51(1):63-64. Malewar, G.V., Kate, S.D., Waikar, S.L. and Isnail, S. (2001). Interaction effects of zinc and boron on yield, nutrient uptake and quality of mustard (Brassica juncea L.) on a typic Haplustert. J. Indian soci. Soil sci., 49(9):763-765.

Meena, M. C., Patel, K. P. and Rathod, D. D. (2006). Effect of Zinc, Iron and Sulphur on mustard in loamy sand soil, Indian J. Fertilizer, 2(5):55-58.

Ravi, S., channel, H.T.,Hebsur, N.S.,Patil,B.N.and Dharmatti, P.R. (2008). Effect of sulphur, zinc and iron nutrition on growth, yield, nutrient uptake and quality of safflower (carthamus tinctorius L.). Karnataka J.agric.sci., 21 (3): 382-385.

Saxena,K.K.,Kumar,A.and Verma,H.R. (2005). Growth, yield and oil content of mustard (*Brassica juncea* L.) as influenced by application of phosphorus and iron. Farm Sci J. 14(1): 97-98.

Sudhakar, P.C., Chandel, R.S. and Singh, K. (2002). Effect of sulphur, iron and silicon on the growth and yield of irrigated mustard. *Annals of Agricultural Res.*, 23 (3): 483-485.

Yadav, R.b., Singh, R.V., Singh, H.R. and yadav, H.S. (2007). Effect of different levels of zinc and sulphur on Indian mustard (Brassica juncea L.). *crop res. Hisar*, 33 (43): 74-76.

Zizala, V.J., jadav, N.B. and Gorfad, P.S. (2008). Effect of sulphur and zinc on yield, quality and its concentration on mustard. *Asian J. soil sci.*, 3 (1): 173-177.