Journal of Agricultural Engineering and Food Technology
Print ISSN: 2350-0085; Online ISSN: 2350-0263; Volume 2, Number 1; January-March, 2015 pp. 66-66

http://www.krishisanskriti.org/jaeft.html

EFFECT OF ZINK, IRON AND MOLYBDENUM ON GROWTH, CHLOROPHYLL AND YIELD OF SOYBEAN UNDER RAINFED CONDITION IN VERTISOL

R.B. Nazirkar* Reshma B. Sale and Ritu S. Thakare**

Division of Soil Science and Agricultural Chemistry, College of Agriculture Dhule.(M.S)
***Research Scholars(Ph.D) Department of Soil Science and Agricultural Chemistry, MPKV Rahuri*
*E-mail: *ramchandranazirkar@gmail.com*

Abstract—*A field experiment was conducted at Agriculture Research Station, College of Agriculture, Dhule in2012-2013.The experiment was laid out in randomized block design with nine treatments and three replications viz.T_1: Control, T_2: Water spray, T_3: $FeSO_4$ spray (0.5%), T_4 :$ZnSO_4$ spray (0.5%), T_5: Seed fortification with Na_2MoO_4, T_6 : $FeSO_4$ spray (0.5%) + $ZnSO_4$ spray (0.5%), T_7: $FeSO_4$ spray (0.5%) + Na_2MoO_4, T_8: $ZnSO_4$ spray (0.5%)+ Na_2MoO_4, T_9: $FeSO_4$ spray (0.5%) + $ZnSO_4$ spray (0.5%) + Na_2MoO_4. The results revealed that the highest number of branches (16.83 plant^{-1}) observed in the application of zinc and iron with seed fortification of molybdenum (T_9). The higher number of (44.66) nodules were recorded in treatment in seed fortification of molybdenum. The higher values of chlorophyll content at 20 DAS (19.90 mg 100 g^{-1}), 60 DAS (18.14 mg 100 g^{-1}) and 80 DAS (10.14 mg 100 g^{-1}) of soybean was recorded in treatment T_9 (foliar application of zinc and iron with seed fortification of molybdenum). However, the higher chlorophyll content at 40 DAS (28.06 mg 100 g^{-1}) of soybean was observed under foliar application of zinc and iron. The highest grain (22.65 q ha^{-1}) and straw yield (19.66 q ha^{-1}) were observed in foliar spray of zinc and iron. It can be concluded that foliar and seed fortification of micronutrient is one of the suitable alternative to fulfill the micro-nutrient requirement to under moisture stress condition.*

Keywords: *foliar pplication, iron, molybdenum, seed fortification, soybean, zinc*