

Effect of Micronutrient Application in *Mateera* under Hot Arid Region of Rajasthan

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Abstract

Mateera requires balanced amount of nutrients due to sandy soil and poor fertility of soil in this region. Hence, arid *mateera* crop shows very high response to micronutrients application. Information on response of nutrient has not been generated so far. Therefore, a field experiment was conducted at CIAH research farm with popular *mateera* cultivars *thar manak* during 2014 in the *khariif* season to investigate the role of application of micronutrient on *mateera* performance. The *mateera* crop received differential doses of different micronutrient as per schedule of treatments. The seven treatments consisting of control (full recommended NPK through chemical fertilizer), NPK+Zinc Sulphate @ 15 kg/ha at the of planting, NPK+ Iron Sulphate @ 15 kg/ha at the of planting, NPK+ Managaenese Sulphate @ 15 kg/ha at the of planting, NPK+ Cupper Sulphate @ 15 kg/ha at the of planting, NPK+ Zn, Fe, Mn and Cu Sulphate @ 15 kg/ha each at the of planting and NPK +Zn+Fe Sulphate @ 15 kg/ha each at the of planting were replicated 3 times in a randomized block design. micronutrients were applied as per treatments.

Application of Zn, Fe, Mn and Cu Sulphate @ 15 kg/ha each at the of planting was found superier and gave maximum yield (336.89 q/ha) followed by Zn+Fe Sulphate @ 15 kg/ha each at the of planting (306.21 q/ha) and application of Zn Sulphate @ 15 kg/ha each at the of planting (297.98 q/ha) as compared to other treatments. Same trend was observed for percent yield response of different treatments. This may be due to zinc and iron deficient soil and more partitioning of carbohydrate to *mateera* as a result of balance nutrition in the treatment receiving micronutrient application.