



Research Paper

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Effect of micro-nutrients on growth, yield and economics of turmeric (*Curcuma longa* L.) cv. RAJENDRA SONIA

■ S.P. SINGH

Author for correspondence :

S.P. SINGH

AICRP on Spices, Department of Horticulture, Tirhut College of Agriculture, Dholi, MUZAFFARPUR (BIHAR) INDIA
Email : spicestadholi@yahoo.com

ABSTRACT : An experiment was conducted during *Kharif* 2010-11 to 2012-13 to assess the influence of micro-nutrients on growth, yield and economics of turmeric at the experimental field of Department of Horticulture, T.C.A., Dholi, Muzaffarpur. The experiment was allotted by ICAR under AICRP on spices. Among four types of micro-nutrients such as zinc sulphate, ferrous sulphate, borex and manganese sulphate were tested with three methods of application such as no application of micro-nutrients (control), soil application of micro-nutrients @25kg ha⁻¹ and two foliar applications of micro-nutrients @ 0.5% at 60 and 90 days after sowing. Among the micro-nutrients, none of the micro-nutrients were found significant effect regarding yield and yield attributing characters. Among three methods of application, soil application of micro-nutrients @25kg ha⁻¹ and two foliar applications of micro-nutrients @0.5% at 60 and 90 days after sowing gave significant effect regarding yield and yield attributing characters as compared to no application of micro-nutrients (control). Two foliar application of micro-nutrients @ 0.5% at 60 and 90 days after sowing was found at par with soil application of micro-nutrients @25kg ha⁻¹ regarding yield and yield attributing characters. Among four type of micro-nutrients and three methods of application, ferrous sulphate @0.5% at 60 and 90 days after sowing gave the maximum plant height (127.23cm), number of tillers per plant (4.74), number of leaves tiller (12.57), length of leaves (56.75cm), width of leaves (13.89cm), area of leaves (811.34 cm²), number of plant per plot (40), dry mater production per plot (1.79kg), yield per plot (19.80kg) and yield per hectare (60.39t) as compared to other micro-nutrients and other methods of application. Economics of the experiment, two foliar sprays of ferrous sulphate @0.5% at 60 and 90 days after sowing gave the maximum return Rs.1,81,950 with cost of Rs.1,20,000 and it also gave the highest benefit: cost ratio Rs.2.52:1.

KEY WORDS : Turmeric, Zinc sulphate, Ferrous sulphate, Borax, Manganese sulphate

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