Integrated nutrient management studies in Banana (cv. ARDHAPURI)
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ABSTRACT
Field experiments were conducted to study the effect of fertilizer doses and their combination with micronutrients (Fe and Zn) and some organic manures like organic booster slurry, vermicompost and farm yard manure on yield of banana fruits, availability of plant nutrient in the soil and their concentration in index leaf tissues. The treatments included three fertilizer doses (200 g N, 150 g P2O5 and 200 g K2O, 150 g N, 112.5 g P2O5 and 150 g K2O and 100 g N, 75 g P2O5 and 100 K2O g per plant). Each fertilizer level was supplemented with micronutrients (Fe 9.0 g + Zn 4.5 g/plant), organic booster slurry @ 6 l/plant, vermicompost 1.125 kg/plant and farm yard manure @ 10 kg/plant. The results of two years experimentation revealed that the banana yield, availability of plant nutrients in the soil and their concentration in the index leaf tissues were increased with increasing level of fertilizer doses. Integration of organic and inorganic fertilizer was more effective than the inorganic fertilizers alone. Among the various combinations 200 g N + 150 g P2O5 + 200 g K2O per plant combined with organic booster slurry @ 6 litre per plant was found the best over all the treatments in respect of producing maximum bunch weight (18.4 kg) and yield per hectare (81.8 t). This treatment also raised the availability of N, P and K in soil and enhanced the nutrient concentration in index leaf tissues.

Key words: Banana, Organic fertilizer, Inorganic fertilizer, Nutrients