

Research
Paper

Organic farming of turmeric (*Curcuma longa*) in Central India

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ABSTRACT

Turmeric is very important spice crop commercially grown throughout the country from last many centuries; it has used in various commercial industries as well as in pharmaceutical industries. It has a great demand in domestic as well as in international markets, due to its wider adaptability and also various schemes sponsored by Spice Board of India and National Horticulture Mission. Its acreage significantly increased in last few years especially in central India. Considering the importance of this crop, the present experiment was undertaken at Department of Horticulture, Dr.PDKV Akola to explore the possibility of organic farming in turmeric and standardization of organic manures for quality as well as export oriented production of turmeric. The initial results were found promising and it was suppose to confirm that application of vermicompost @ 13.5 t/ha application resulted in better vegetative growth performance, where as application of FYM @ 20 t/ha was found to be better for yield attributing characters in turmeric.

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Key words : Turmeric, Organic manures, Organic farming of turmeric

INTRODUCTION

Turmeric (*Curcuma longa*) is very important spice crop commercially grown throughout the country. It is used in various commercial industries as well as in pharmaceutical industries. It has a great demand in domestic as well as in international markets, due to its wider adaptability and also various schemes sponsored by spice board of India and National Horticulture Mission. Its acreage significantly increased in last few years especially in Central India.

Turmeric being a rhizomatous crop requires a heavy input of fertilizers. Owing to the high cost of fertilizers and sustainable soil management, demanded the organic farming in turmeric. Considering the importance of this crop, the present experiment was undertaken to explore the possibility of organic farming in turmeric and standardization of organic manures for quality as well as export oriented production of turmeric.

MATERIALS AND METHODS

The experiment was conducted at Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. Experiment was laid out in Randomized Block Design with three replications. The treatments were T₁ – RDF (200 + 100 + 100 kg NPK ha⁻¹), T₂ – Neem cake (4 t ha⁻¹), T₃ – Safflower cake (4 t ha⁻¹), T₄ – Vermicompost (13.5 t ha⁻¹), T₅ – Farm yard manure (20 t ha⁻¹), T₆ – Poultry manure (13.5 t ha⁻¹), T₇ – Sheep and goat manure (20 t ha⁻¹), T₈ – castor cake (4.6 t ha⁻¹), T₉ – Fish meal (2.85 t ha⁻¹) and T₁₀ – Control. Turmeric rhizomes were planted in plot size of 5.40 x 4.50 m² (Gross plot) and 4.95 x 4.25 m² (Net plot) at the sides of ridges with spacing of 45 x 25 cm. Initial soil status was soil pH (8.57), soil EC (0.38 dSm⁻¹), organic carbon (0.73%), available N, P₂O₅ and K₂O (157.89, 20.16 and 418.88 kg ha⁻¹, respectively.

Calculated quantity of fertilizers were applied as per the treatments. Urea, single super phosphate and muriate of potash were used as source of N, P₂O₅ and K₂O, respectively for T₁ treatment. One fifth of N and K₂O