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RESEARCH ARTICLE

DOI: 10.15740/HAS/IJFCI/6.2/127-131

Performance evaluation of vermicompost on yield of *Kharif* groundnut and cotton crops

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ABSTRACT : The vermicompost contains plant nutrients including N, P, K, Ca, Mn, Zn and Cu. The uptake of which has a positive effect on plant nutrition, photosynthesis, chlorophyll content in the leaves and improves the nutrient content in different plant component (Root, Shoot etc.). The overall results indicated that organic farming with application of vermicompost @ 3 tons/hectare in groundnut crop during *Kharif* 2011-12 to 2013-14 found higher yield, gross return, per cent increase in yield and BC ratio *i.e.* 2144 kg/ha, Rs. 80888/-, 15.39 per cent and 6.16 BCR, respectively as compared to local check yield of 1858 kg/ha by application of only of recommended dose of fertilizers. Whereas, application of vermicompost @ 5 tons/hectare in cotton crop resulted during *Kharif* 2011-12 to 2012-13 produced higher yield, gross return, per cent increase in yield and BC ratio *i.e.* 3500 kg/ha, Rs. 172375/-, 14.98 per cent and 4.66 BCR as compared to local check yield of 3044 kg/ha. Both the crops (groundnut and cotton) were also observed in organically amended plot did not show any moisture stress during the period of dry spell due to better moisture holding. Further, available soil moisture in organically amended plots found better soil moisture conservation compare to local check in pre seasonal or severe moisture stress or in dry spell period. In the nutshell observed that, the use of vermi compost as fertilizer in groundnut as well as cotton crop performed better as compare to using of chemical fertilizers. Therefore, recommended for large scale adoption in farmer's field of Gir Somnath and Junagadh district of Gujarat.

KEY WORDS : Vermicompost, Plants growth, Pest incidence, Cotton, Groundnut, Organic waste

HOW TO CITE THIS ARTICLE : Chavda, Vallabh N. and Rajawat, Brijendra Singh (2015). Performance evaluation of vermicompost on yield of *Kharif* groundnut and cotton crops. *Internat. J. Forestry & Crop Improv.*, 6 (2) : 127-131.

ARTICLE CHRONICAL : Received : 16.09.2015; Revised : 17.11.2015; Accepted : 28.11.2015

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