

Effect of Organic Manures on Growth and Yield of Finger Millet

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ABSTRACT

Organic farming is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. The continuous use of inorganic fertilizers under intensive cropping system has caused widespread deficiency of macro and micronutrients in soil. Healthy soil is a web combination of minerals, water, air, organic matter, microorganisms, insects and earthworms. Keeping in view of sustained crop yields as well as soil health, an experiment was conducted at Agricultural Research Station, Vizianagaram, Acharya N.G. Ranga Agricultural University, Andhra Pradesh, during *Kharif* 2014 to study the effect of use of complete organic method of farming in comparison to conventional method on soil health, yield and quality of finger millet crop. The organic inputs were supplied in the form of farmyard manure, neem cake and biofertilizers (*Azospirillum* and Phosphorus Solubilising Bacteria). The results of both the years revealed that significantly highest grain yields (29.0 q ha⁻¹), straw yields (74.8 q ha⁻¹), N uptake (68.2 kg ha⁻¹), Zn uptake (286.1 gm ha⁻¹), No. of productive tillers/plant (2.2) were recorded in inorganic treated plot when compared with organic treated plot (26.7 q ha⁻¹, 71.8 q ha⁻¹, 61.2 kg ha⁻¹, 242.6 gm ha⁻¹ and 1.8 respectively). Whereas the soil available macronutrients and micronutrients were found high in organic treated plot. The soil available phosphorus was found significantly high in organic plot (87.4 kg ha⁻¹) when compared to conventional plot (79.7 kg ha⁻¹).

Key words: *Finger millet, Organic, Conventional, yield, soil fertility and nutrient uptake.*