

# 3<sup>RD</sup> GLOBAL FOOD SECURITY, FOOD SAFETY & SUSTAINABILITY CONFERENCE

May 21-22, 2018 | New York, USA

## Effect of organic farming on soil fertility, microbial diversity, growth and yield of tomato (*Solanum lycopersicum*) under rainfed red sandy loam soils of Karnataka, India

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A field experiment was conducted at Organic Farming Research Centre, University of Agricultural and Horticultural Sciences, Navile, Shivamogga, Karnataka, India to study the effect of organic farming on soil fertility, microbial diversity, growth and yield of tomato under rainfed regions of red sandy loam soils during Kharif season from 2012-13 to 2015-16. The treatment receiving 100% N through FYM (spot application) + 50% N through vermicomposting as top dressing + mulching with glyricidia green lopping @ 1 kg/m<sup>2</sup> recorded significantly higher plant height, branches per plant, fruit weight per plant, fruit yield as well as net return and benefit to cost ratio. Significant variation in soil available nitrogen, potassium, phosphorous, Ca, Mg, Cu, Mn, Fe, Zn, Organic carbon, population of bacteria, phosphorous solubilising bacteria (PSB), N fixers, actinomycetes and fungal populations were recorded in treatment receiving 100% N through FYM (spot application) + 50% additional N through vermicomposting as top dressing + mulching with glyricidia green lopping @ 1 kg/m<sup>2</sup> as compared to other treatments studied.

### Biography

Ganapathi is currently associated with University of Agricultural and Horticultural Sciences Shivamogga, Karnataka, India as an Associate Professor. His areas of specialization include Nutrient Management, Organic Farming, Soil Fertility, Land Resource Characterization and Grey Water Management.

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