

Research Article

Effect of bio- inoculants on composting and its effect on soil chemical and biological regimes for sustaining soil health

■ B. APARNA, SUSHAS. THARA AND P. R. GEETHALEKSHMI

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MEMBERS OF RESEARCH FORUM :

Corresponding author :

B. APARNA, College of
Agriculture, Kerala Agricultural
University, Vellayani, TRIVANDRUM,
(KERALA) INDIA
Email: aparnaraju1995@yahoo.co.in

Co-authors :

SUSHA S. THARA, Farming
Systems Research Station, Kerala
Agricultural University, KOLLAM
(KERALA) INDIA

P.R. GEETHALEKSHMI, Krishi
Vigyan Kendra, Kerala Agricultural
University, KOLLAM (KERALA)
INDIA

Summary

An investigation was carried out in a typical laterite soils on farmers field at Chengamandu Village of Kottarakkara Taluk Kollam district, during the year 2010-11 to study the effect of biofungicides such as *Pseudomonas* and *Trichoderma* as a potential inoculants for composting and the yield and growth of okra. From the data on the treatment involving the application of *Azospirillum* 1 % ,0.5% and 1% , *Pseudomonas* (1%), *Trichoderma* (1%) were reported to significantly higher values for urease, phosphatase , protease, dehydrogenase and cellulase, respectively. *Pseudomonas* and *Trichoderma* @1 % were reported to record higher values for secondary, micronutrients and nutrient uptake. A higher fruit yield was realized when compost enriched with *Pseudomonas* as in T₁ (*Pseudomonas* @ 1 %) + NPK fertilizer was applied (15.74 t ha⁻¹). The quality of the resultant compost was also influenced significantly by the application of inoculants *Pseudomonas* 1 % and 0.5 % and *Azospirillum* (1%) This study thus, clearly showed that the judicious use of bioinoculants such as *Pseudomonas*, *Trichoderma* and *Azospirillum* as potential source of enrichment which improves the soil parameters as well as yield of the crops.

Key words : *Pseudomonas*, *Trichoderma*, *Azospirillum*, Enzymes

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