



## Research Paper

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# Comparative performance of FYM, biocompost and banana pseudostem based vermicompost on productivity of banana

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**Abstract :** Integrated use of FYM or biocompost is recommended for the crops like banana, sugarcane *etc.*, so as to achieve higher yield along with maintenance of soil health on sustainable basis. However, these organics are not amply available which restrict their application to these crops. In the ongoing NAIP (Component – II), it was envisaged to develop vermicompost from banana pseudostem scutcher obtained during extraction of fibre which can be a viable alternative of either FYM or biocompost. In order to evaluate the performance of these organics, an experiment was conducted with six treatments *viz.*, T<sub>1</sub>- FYM @ 5 kg/plant + RDF, T<sub>2</sub> – biocompost @ 3 kg/plant + RDF, T<sub>3</sub> – pseudostem based vermicompost @ 1.5 kg/ plant + RDF, T<sub>4</sub> – pseudostem based vermicompost @ 3.0 kg/ plant + RDF, T<sub>5</sub> – pseudostem based vermicompost @ 5.0 kg/ plant + RDF and T<sub>6</sub> – only RDF (No organics) for two years (2008-09 and 2009-10) at Soil and Water Management Research farm, NAU, Navsari (South Gujarat Heavy Rainfall Zone, AES III). The results of experiment indicated that application of pseudostem based vermicompost @ 3 kg/plant in addition to RDF (300: 90: 200 g/plant) was found to give comparable yield with either FYM (@ 5kg/plant + RDF) or biocompost (3 kg/plant + RDF). The fertility assessed after harvest of crop was either maintained and/ or improved. The economics calculated for each treatment indicated that application of pseudostem based vermicompost @ 3 kg/plant + RDF recorded comparable net income of 1,78,640/ha as compared to FYM +RDF (1,82,408/ha) and biocompost + RDF (1,80,213/ha).

**Key words :** Banana pseudostem based vermicompost, Growth, Yield, Economics

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India is the largest banana consumer and producing country in the world followed by Brazil, contributing about 15 per cent of the total world production. Among the fruits, banana holds first position in production and productivity in India. In India, annual production of banana is 26.21 million tones from an area of 7.09 lakh hectares spread all over the country (Anonymous, 2009). Banana covers 12.50 per cent of the total area under fruits, contributing nearly one third of total fruit production in the country. In India, Tamil Nadu, Maharashtra, Kerala, Gujarat and Karnataka are the leading banana producing states. The highest productivity is 62.0 t/ha in Maharashtra followed by Gujarat 58.7 t/ha in the year

2008-09 (Anonymous, 2009). Being a heavy feeder crop, integrated use of FYM or biocompost and fertilizer is recommended so as to achieve the sustainable production and maintain the soil health. However, these organics are not amply available for their application to the crops. In order to find out an alternative source, banana pseudostem based vermicompost was developed under NAIP. In this project, fibre extraction from banana pseudostem is the major activity. While extracting fibre from pseudostem using raspador machine, huge quantity of scutcher waste (25-30 t/ha) is generated which causes disposal problem. For safe disposal of the scutcher: dung @ 70:30 proportion. The nutrient content wise