

Research Article

DOI: 10.15740/HAS/AJSS/10.1/114-118

Influence of agricultural wastes on quality of vermicompost

■ V.V. KULKARNI AND P.V. KUWAR

Received : 16.04.2015; Revised : 30.04.2015; Accepted : 10.05.2015

MEMBERS OF RESEARCH FORUM:

Corresponding author :
P.V. KUWAR, Department of Soil
Science and Agricultural Chemistry,
Vasantnao Naik Marathwada Krishi
Vidyapeeth, PARBHANI (M.S.) INDIA
Email: poonamkuwar@gmail.com

Summary

The experiment was carried out during 2004-2005 at Radiotracer lab of Department of Soil Science and Agricultural Chemistry, Marathwada Agriculture University, Parbhani with seven treatments and five replications, laid out in design Randomized Block Design (RBD). The nutrient status such as total nitrogen, organic carbon, total phosphorus and potassium were recorded at various stages viz., 30, 60 and 90 days after completion of vermicompost. The total nitrogen content was recorded from 0.51 to 1.84 per cent. There was continuous increase in nitrogen content. Glyricidia found to be superior over other treatments with value 1.84 per cent followed by vegetable waste 1.69 per cent and parthenium 1.41 per cent. Garden waste recorded lowest value of total nitrogen 0.51 per cent. The phosphorus showed similar trend of increased value of phosphorus compared to their initials. Significantly superior value was observed in glyricidia 0.82 per cent followed by vegetable waste 0.73 per cent and parthenium 0.71 per cent. The lowest phosphorus was recorded in garden waste 0.21 per cent. The values of potassium partanis slightly greater than unity, during maturation period of vermicompost. The lowest value was observed in garden waste 0.45 per cent which was increased by 0.15 per cent over initial. Also glyricidia found increased value of potassium 1.18 per cent over its initial. Vegetable market waste recorded highest K content 1.22 per cent followed by parthenium 1.13 per cent. Significant variation in organic carbon content was found during vermicompost preparation which ranged from highest value of organic carbon 26.59 per cent in parthenium to the lowest value of glyricidia 19.02 per cent. Other treatments lies in between them with minor differences in organic carbon content. As compared to original C:N ratio, wheat straw recorded maximum drop from 73.14 to 23.20. All treatments showed narrowed C:N ratio i.e., less than 25 at the end of maturation period. E4:E6 ratio measured during different growth stages of vermicompost were tending towards unity. The highest value was recorded for glyricidia 1.14 followed by vegetable waste 1.09, parthenium 0.78, sugarcane trash 0.71, wheat straw 0.68 and sunflower husk 0.47. The nutritive value of agricultural waste was increased in vermicompost.

Co-authors :
V.V. KULKARNI, Department of Soil
Science and Agricultural Chemistry,
Vasantnao Naik Marathwada Krishi
Vidyapeeth, PARBHANI (M.S.) INDIA

Key words : Vermicompost, Earthworms, Agricultural waste

How to cite this article : Kulkarni, V.V. and Kuwar, P.V. (2015). Influence of agricultural wastes on quality of vermicompost. *Asian J. Soil Sci.*, **10**(1) : 114-118.