

Research Article

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Effect of mineral enriched compost on soil microbiological properties

■ BRAJENDRA, K. SUREKHA, P. C. LATHA, M.B.B. PRASAD BABU AND V. RAVINDRABABU

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MEMBERS OF RESEARCH FORUM:

Corresponding author :
BRAJENDRA, ICAR-Indian Institute
of Rice Research, HYDERABAD
(TELANGANA) INDIA

Co-authors :
K. SUREKHA, P.C. LATHA, M.B.B.
PRASAD BABU AND V. RAVINDRA
BABU, ICAR-Indian Institute of Rice
Research, HYDERABAD
(TELANGANA) INDIA

Summary

Two years field experiments were conducted at the Indian Institute of Rice Research Farm, Hyderabad, to compare the performance of field fortified poultry manure applications on some of the microbiological properties of soil. Continuous application of MEC treatments resulted in decline in the pH of the soil in all the treatments from the initial levels of 8.07. Analysis of post harvest soils of MEC for physical parameters revealed that plots treated with inorganic fertilizer alone had an adverse effect on soil dehydrogenase activities, soil phosphatase activities and soil microbial carbon. Soil microbial biomass C $\mu\text{g C/g}$ soil dry wt was recorded in all the MEC plots compared to control and RDF. Soil enzyme observations such as Alkaline phosphatase $\mu\text{g p-nitrophenol/g soil/ha}$ assayed in all the MEC plots were highly skewed. Lowest value of dehydrogenase $\mu\text{g TPF/g soil/24h}$ activity was observed in the RDF plots. Higher values of soil dehydrogenase activities were recorded in all the MEC plots compared to control and fertilized plots.

Key words : Mineral enriched compost, Dehydrogenase activities, Phosphatase activities, Soil microbial carbon

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