Third National Congress of Recycling and Reuse of Renewable Organic Resources in Agriculture
Islamic Azad University, Khorasgan Branch (Isfahan)
Agricultural Faculty, Waste and Wastewater Research Center
13-15 May 2008

Comparison of vermicomposting processes in cattle, sheep and poultry manures in different levels of moisture

N. Torkamani[1] and H. Alikhani[2]
1. M.Sc of Biology and Biotechnology, Tehran University
2. Assistant Professor, College of Agriculture and Natural Resources, Tehran University

Simply, Vermicompost is a compost made by earthworms activity on organic wastes in different conditions.vermicompost includes an active biological mix of Bacteria,Anzymes, Plant wastes, Animal manures and earthworms cocoons, which may have differing quality depending on moisture and temperature conditions.The aim of this research was to compare chemical and biological properties of cattle, sheep and poultry vermicomposts and find the best moisture regime for vermicomposting process.For this purpose, one thousands pair of adult *Eisenia foetida* were collected from vermicomposting station of Tehran university's Agriculture faculty.40 pairs of worms were inoculated to 27 pots and kept under greenhouse conditions with a temperature of 15-20 °C and defined water content.Five month later ,the vermicomposts were assessed for their micro and macro nutrients , pH and EC. The test was carried on RCD-in-factorial design with 3 kinds of manure (cattle, sheep and poultry) and 3 different moisture levels (45, 55 and 65%) in 3 replications. There was a significant difference in all of the parameters in different manures. The results imply that poultry vermicompost has the most content of Mg, P, Zn and Cu and cow vermicompost has the most content of K and Fe. For the rest parameters sheep vermicompost has the maximum content.There is no significan difference in moisture content except in potassium, because of its run off from manures.

Keywords: Vermicompost,*Eisenia foetida*,Cow manure, Sheep manure, Poultry manure, Moisture content

[1] Corresponding author Email: negar326@yahoo.com