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A CASE STUDY

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Evaluation of biochemical changes during the storage of poultry composts for effective land application

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ABSTRACT : An incubation experiment was conducted to assess the storability of poultry droppings compost for effective utilization and field application. In general, the nutrient content of the compost will vary depending upon the quantity and nutrient content of the manure, age of the compost and the method of storage. In our present study, we found that the storage of poultry droppings under normal condition did not influence the pH of the compost in the first 30 days but a slight reduction in pH (0.1 to 0.2) was observed between 30th day and 45th day. The Electrical Conductivity (EC) of the stored compost was increased but the level of increase was not exceeded 0.02 dS m^{-1}. A slight increase in total nitrogen content was recorded during storage of poultry compost and this might be due to moisture loss and reduction in volume. A slight decrease in total phosphorus and total potassium was also recorded in the stored compost during 75th and 90th day of storage. The microbial population was high between 30th and 45th day of storage. Compost contained a relatively large amount of micro-organisms associated to organic nitrogen mineralization which might have altered the chemical properties. There was no much variation in the nutrient status of the compost during first 45 days of storage and hence the poultry compost can be applied to land within 45 days after its maturity to derive maximum benefits.

KEY WORDS : Poultry compost, Storage, Biochemical changes

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