EFFECT OF STORAGE DURATION AND GRAZING SYSTEM ON NUTRIENT CONTENTS OF CATTLE MANURE IN THREE DISTRICTS OF TANZANIA

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ABSTRACT
The study was carried out to investigate the effect of duration of manure storage and grazing system on nutrient contents of cattle manure in three districts of Tanzania. The experiment on storage duration involved collection of manure samples of three age categories from three villages of Kongwa and Dodoma rural districts, respectively. Samples for the assessment of the effect of grazing system on manure quality were collected from Kilosa and Moshi rural districts in three randomly selected villages in each district. Manure samples for the two experiments were processed and analyzed for total nutrient contents. Results of the storage duration experiment indicated that on average; N, P, K, Ca, Mg, Zn, Cu and Fe contents of the cattle manure increased with storage duration, from the first to the tenth year of storage beyond which there was a decline. This anomalous trend was attributed to manure storage practices in the two districts whereby manure accumulate an open kraal for several years without being removed. Results of the grazing system experiment indicated that nutrient contents of the manure from intensive grazing system were higher compared to those of extensive livestock keeping system reflecting differences in manure management practices. It is recommended that animal manure should properly be handled and stored before application in order to minimize nutrient losses. Farmers are advised to compost animal manure in order to minimize extent of nutrient losses.

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