

**Effects of Different Fertilizer Treatments on the Vigour of Vetiver Grass
(*Chrysopogon Zizanioides*) and Its' Associated Cost in Accra**

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ABSTRACT

Investigations were conducted on a plot of land at the University of Ghana farms at Legon to study the effects of and cost involved in different fertilizer treatments on growth characteristics of vetiver grass (*Chrysopogon zizanioides*). The plot of about 0.045 ha was divided into four equal portions. On each plot, sixteen replications each containing four (4) treatments of approximately 8 g of Urea (V), 8 g of Poultry Manure (PM), 8 g of NPK fertilizer per hole and a control treatment without fertilizer were randomly distributed. The fertilizer was applied only at planting, and was not repeated over the 20 week study period, to determine whether any significant differences in vigour of the grass may be observed for the treatments applied. Mean number of tillers, height, fresh weight, dry weight, nitrogen (N), phosphorus (P) and potassium (K) contents from randomly harvested vetiver grass from the study were measured. Initially, soil samples on each plot were also taken and subsequently at 5-week intervals up to the 20 weeks duration to determine the pH, organic carbon (OC), N, Available P, K, Ca, Mg, sand, silt and clay contents. It was observed that, there were significant differences between the treatments for the first 15 weeks. The treatments were, however, not significantly different from each other at 20 weeks. Urea treatment had the least vigour even though it was expected to do as well as NPK. Treatments with PM and NPK fertilizers had accelerated growth with respect to fresh weight and did better than the other treatments. On the average, the vigour of the control treatment was better than the V treatment. The overall best fertilizer treatment in all the measured parameters was NPK followed by PM, C and V. In terms of cost, control treatment was the cheapest, as no

fertilizer was applied, followed by PM, V and NPK. Based on the study, therefore, it would seem that the most cost effective treatments for the growth ofvetiver under the conditions were Poultry Manure (PM) and Control (C). In addition, the vigour of PM was better than the C treatment even though in terms of cost, it is comparatively higher than the C treatment.

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