218/B

Performance of Guinea grass under different fertilizer application in the Sandy regosol of the dry zone in Sri Lanka

S Lavanya, L S David, E Subalini*, and M M Mahusoon

Department of Animal Science, Faculty of Agriculture, Eastern University.

The Guinea (*Panicum maximum*) is a tall growing tufted perennial fodder grass with a shallow root system and has fairly drought resistant. This fodder grass is recommended for the dry zone by the Department of Animal Production and Health as this has the ability of tolerating drought. A study was conducted to evaluate the performance of Guinea grass-Ecotype B with the application of different livestock manure (cow dung, goat droppings and poultry litter), urea and control (without manuring) at the Livestock Farm, Eastern University, Sri Lanka. Five plots were assigned to each treatment with four replicates in Randomized Complete Block Design. The plant height, number of tillers, number of leaves and leaf/stem ratio were measured at two weeks interval. Fresh and dry weights of forage were recorded at the time of harvesting (45th day). In addition to these parameters the percentage of establishment was estimated at two weeks after planting. The data were analyzed using Statistical Analysis Software (version 6.12). The results of the study revealed that there were no significant differences among the treatments for the mean plant height. The highest mean value for the fresh yield per plant at 45 days (540.55 g) was observed in the pastures treated with cow dung followed by poultry manure and the dry matter was higher (52.1%) in the control treatment followed by goat manure. The numbers of tillers (31 tillers per plant), leaves (124 leaves per plant) and pseudostem (31 stems per plant) produced in the pasture fertilized with urea were found to be the highest. Leaf/Stem ration was found to be highest in pastures treated with cow dung. Based on the results, it could be concluded that cow dung and poultry manure can be recommended as organic manures for pastures in the dry zone of Sri Lanka.

lavanyah2002@yahoo.com Tel: 065-2240761