

Impact of Grazing on Forage Quality and Quantity for Ungulates of the Kainji Lake National Park, Nigeria

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Abstract

The study examined the effect of grazing as simulated by clipping on forage quality and quantity in terms of above ground biomass, live, total production and nutrients content of forages utilized by ungulates of Kainji Lake National Park. Three 2.5 x 2.5 m plots were constructed in the three main vegetation communities in the Park, the plots were in three replicates in each vegetation community. Each plot received separate treatment including medium clipping, heavy clipping and unclipped, average forage biomass production and forage nutrients were measured. The results revealed that higher total annual above ground biomass was recorded in clipped plots which values ranged between 1642 and 2458 g m⁻² year⁻¹ when compared to unclipped plots which values ranged between 1.394 and 1.435 g m⁻² year⁻¹. Equally, the values of annual total production of clipped and unclipped plots ranged between 250-471 and 210-254 g m⁻² year⁻¹ respectively, the values were significantly different at (p = 0.05). It was observed that forages in clipped plots contained higher values of crude protein and fat. Also they contained nitrogen, phosphorus, calcium and sodium values above minimum values required by herbivores for body maintenance, pregnancy and lactation. Measures to improve forage quality and quantity in the Park are also discussed.

Keywords: Forage biomass, nutrients quality, grazing, clipping, herbivores