ABSTRACT

Biomass Yield and Quality of Fodder from Selected Varieties Of Lablab (*Lablab Purpureus L*) In Nandi South Sub-County of Kenya

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Low quality feeds is the main challenge ailing livestock production among the small-scale farmers in the tropics. Cheaper sources of alternative high quality fodder supplements are needed to improve livestock productivity. The objective of this study was to determine biomass yield and quality of fodder from selected lablab varieties. Eight lablab varieties namely, DL1002, Ngwara Nyeupe, Echo-Cream, Black-Rongai, Eldo-KtCream, Eldo-Kt-Black1, Brown Rongai and Eldo-Kt-Black2 were established in three sites of Nandi south sub county, Kenya. Randomized complete block design was used at farm level with four replications per site. Data on biomass yield, chemical composition and in vitro-dry matter digestibility of the eight lablab forages was collected. Biomass yield differed significantly among the lablab varieties ranging from 5.6-12.6 t DM/ha across the three sites. Highest biomass yield was recorded for Brown Rongai (12.6 t DM/ha) and lowest with DL1002 (5.6 t DM/ha). Crude protein (CP) content varied significantly between varieties with sites ranging from 19.6- 23.9 g/100g. Highest CP was recorded with Eldo-Kt-Cream and Black Rongai (23.9 g/100g and 23.7 g/100g) across the three sites. For all the varieties, Neutral detergent fibre (NDF) ranged from 44.4-48.6 g/100g, acid detergent fibre (ADF) 31.6-35.7 g/100g and acid detergent lignin (ADL) 9.0-11.9 g/100g across the three sites. Highest NDF was recorded with DL1002 (48.6 g/100g), ADF with Eldoret-Kitale-Black2 (35.9 g/100g) and acid detergent lignin with DL1002 (11.7 g/100g). In vitro dry matter digestibility (IVDMD) varied significantly between varieties and sites ranging from 67.6-75.7 g/100g between the varieties across the three sites. Eldo-Ktcream and Black Rongai had the highest IVDMD (75.7 and 74.4 g/100g) across the three sites. Eldoret-Kitale-Cream and Black Rongai varieties had better dry matter yield, crude protein and low fibre fractions compared to the other varieties signifying their potential to be recommended as supplement to low quality fodder by small-scale farmers.

Keywords: Biomass yield, Digestibility, Feed, Fodder, Lablab.