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## Effects of Spacing, Cutting Height and Cutting Interval on Fodder Yield and Nutritional Value of *Cajanus Cajan*

OLUWATOSIN BODE OMOTOSO, ADEBOWALE NOAH FAJEMISIN, OLAWALE JACOB OGUNSHOLA

*The Federal University of Technology, Dept. of Animal Production and Health, Nigeria*

### Abstract

Forage production is one of the ways to sustaining ruminant animal production in Nigeria as these animals depend largely on plant-based feed. Hence, *Cajanus cajan* pasture was established to evaluate the effects of planting space, cutting height and interval at harvest on fodder yield and nutritional value of *C. cajan*. Pre-planting operations (bush clearing, ploughing, harrowing and ridging) were carried out on a hectare of land, sectionalized into fifteen equal portions. 2–3 seeds of *C. cajan* were planted using five different planting spaces ( $40 \times 60$  cm,  $60 \times 60$  cm,  $80 \times 30$  cm,  $100 \times 30$  cm and  $120 \times 30$  cm) of three replicates per treatment. Post-planting operations (thinning, supplying and weeding) were done to ensure uniform plant stands, nursed to maturity and harvested at different cutting heights (50, 100 and 150 cm) with cutting intervals of 2, 3 and 4 weeks respectively for five consecutive times to calculate the initial, total and average yield per plot. Air-dried samples of harvested forages were analysed for proximate composition; and data generated were subjected to statistical analysis. Results showed that; *C. cajan* sown using  $40 \times 60$  cm planting space, cutting height of 50 cm and cutting interval of 4 weeks had the best fodder yield both at the initial (8.95 kg) and cumulative (3.60 kg) compared to other treatments. Crude protein, crude fibre and nitrogen free extract contents were significantly ( $p > 0.05$ ) influenced; and could adequately support the growth of ruminant animals. Thus, it can be concluded that *C. cajan* could be established using  $40 \times 60$  cm planting space, harvested at 4 weeks interval and cutting at 50 cm height for maximum fodder yield with the aim of feeding ruminant (small) animals.

**Keywords:** *Cajanus cajan*, cutting height, cutting interval, fodder yield, plant spacing