

## ABSTRACT

Grazing And Supplementation Studies With  
Growing And Lactating Dairy Cattle At  
Moblissa, Guyana

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Four grazing experiments were conducted to evaluate the potential of unfertilised grasses for animal production at Moblissa.

Experiment 1 evaluated the responses of six grasses to periodic grazing in a Randomised Complete Block Design. The six grasses were: Brachiaria humidicola (UF 717); Brachiaria humidicola (Rendle) Schweickt; Brachiaria decumbens (local); Brachiaria decumbens (CIAT 606); Andropogon gayanus and Pennisetum purpureum x Pennisetum typhoides. Herbage mass, Ground cover, Leaf coefficient, Dry matter utilisation and proportion of animals grazing the grasses at various times were estimated.

Experiments 2, 3 and 4 used change-over designs to evaluate animal performance on Brachiaria humidicola (UF 717) pastures.

Experiment 2 compared milk production from four stocking rates (0.4, 0.5, 0.6, 0.9 AU/ha; 1 AU = 400 Kg liveweight). There were no significant differences between milk yield/cow/day (average 5.4 Kg) ( $P > 0.05$ )

for the stocking rates resulting in higher milk production/ha on the higher stocking rates.

Experiment 3 compared the liveweight gains of heifers at stocking rates of 2.8, 4.1, 5.0, 8.4 AU/ha. Liveweight gain/animal differed significantly between stocking rates ( $P < 0.05$ ). An optimum stocking rate of 4.7 AU/ha and carrying capacity of 2.7 AU/ha were estimated.

Experiment 4 compared milk production from zero grazing, night grazing and day and night grazing with and without supplements of Molasses/Urea and dairy ration. Grazing systems did not differ ( $P > 0.05$ ). The effects of supplement and the interaction (grazing systems x supplement) were significant ( $P < 0.01$ ). Cows averaged 3.3 Kg milk day<sup>-1</sup> without supplementation. Milk yield increased with supplementation by 100 percent with day and night grazing as compared to 40 percent with zero grazing and night grazing.

A sustainable stocking rate of 1 AU/ha for unfertilised B. humidicola (UF 717) was recommended. The stocking rate 4.7 AU/ha in the rainy season improved pasture utilisation. A. gayanus and B. humidicola (Rendle) Schweickt were promising alternatives to B. humidicola (UF 717) and need further evaluation.