

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PRODUCTIVE RESPONSES IN MOMBAÇA GRASS RECEIVING NITROGEN DOSES UNDER INTERMITTENT STOCKING

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The mombaça grass (*Panicum maximum* cv. Mombaça) is the most tropical forage used in intensive production systems on Brazil. In these systems, the nitrogen doses use is a form of intensification but it is necessary to find a balance between grazing management and use of nitrogen due to potential of response of mombaça grass. The objective of this work was to evaluate herbage accumulation, sward structural characteristics and animal production in mombaça grass pastures receiving nitrogen doses and managed with intermittent grazing. The experimental design was the randomized blocks with three nitrogen doses and four area replicates (1.5 ha each), totaling 12.5 ha. Nitrogen doses were: 100, 200 and 300 kg ha⁻¹ in the form of urea. The intermittent grazing method with variable stocking was used. Where used 54 Brangus animals, with 200 kg of initial live weight (LW). Animals were placed on paddocks when sward reached 80-90 cm of height and were removed when the residue height reached 45-50 cm. The stocking rate adjustment was realized as paddocks approached the sward height target. Each 28 days animals were weighed to evaluate the average daily and per area gains. Sward height, herbage mass and sward components were evaluated on pre and post-grazing condition. Herbage daily accumulation rate was calculated by difference between pre and post-grazing samples. Pre and post-grazing height target were reached in all nitrogen doses. Higher herbage accumulation rate (84.5 kg ha⁻¹ day⁻¹), average daily gain (680 g animal⁻¹ day⁻¹), stocking rate (5.3 animal unity (AU) ha⁻¹) and per area gain (1,656 kg ha⁻¹ LW) were observed when mombaça grass received 300 kg ha⁻¹ of nitrogen. Lower herbage accumulation rate (59.6 kg ha⁻¹ day⁻¹), average daily gain (515 g animal⁻¹ day⁻¹), stocking rate (2.9 AU ha⁻¹) and per area gain (835 kg ha⁻¹ LW) were observed when 100 kg ha⁻¹ of nitrogen was used. Grazing and rest periods were different according nitrogen doses because was necessary to maintain pre and post sward height target. For this reason, pre and post-grazing herbage mass and its components did not differ ($p>0.05$) among nitrogen doses. The grazing management based on sward target is fundamental to reach animal production responses when nitrogen is used on mombaça grass. The use of 100, 200 or 300 kg ha⁻¹ in mombaça grass pastures is an important alternative to reach higher herbage and animal production but the best dose depends on objective of production system.

Keywords: average daily gain, herbage accumulation, per area gain, sward height

Promoção e Realização:

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