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CHALLENGES AND PERSPECTIVES

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Theme 1 | Animal production systems

Performance of Cattle Fed on Irrigated Pasture by Central Pivot in the Coastal Tableland of the State of Piauí

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The Brazilian livestock industry has undergone considerable technological progress, increasing productivity, profitability and competitiveness of production chains, eliminating negative phases and providing the animal with earlier slaughter conditions. The use of quality pastures reduces the need for concentrated supplementation and allows satisfactory weight gain when associated with a good genetic potential. Thus, the objective of this research was to assess the performance of cattle finishing in irrigated *Mombaçagrass* pasture. The experiment lasted 90 days and was carried out at Fazenda Ideal, in the municipality of Parnaíba, PI, at 02 ° 54'17 "S and 41 ° 46'36"W, with an annual rainfall of 1283 mm and an average temperature of 27.4 W. A total of 155 cattle were used, 40 of which were non-breed (SRD) and 115 of the Nelore breed, aged 18 to 24 months, with a mean weight of 304.22 kg and 324.92 kg, respectively. The animals were vaccinated and dewormed during the period. The area of 20 ha, composed of "Mombaça" grass (Panicum maximum) with 120 days of planting and managed at 22 days of regrowth, was divided into 12 pickets under rotational stocking and irrigated with central pivot, with a period of occupation of two days. Fertilization with 150 kg P2O5 / ha, 350 kg N / ha and 175 kg KCl / ha was used. The pasture support capacity was calculated based on the available forage obtained by cutting the lawn at a height of 35 cm within a 1 m² frame, being carried out at five random points in each picket in the pre-grazing and post-grazing. Weighing procedures were performed every 30 days and the weight gain per cycle was calculated, by the relation between the weights and the days of grazing. The performance data and the effect of the genotype and the grazing cycle on them were assessed according to procedure for linear models (GLM). The means were compared by Tukey test at 5%. There was an effect of the grazing cycle on the performance of the animals (P <0.05), with averages of 1.124 kg /day and 0.559 kg / day for cycles one and two, respectively. There was a reduction in forage mass (P <0.05) in the second grazing cycle (3,625 kgMS /ha) in relation to the first one (7,365 kgMS /ha), which reduced forage supply by 8.23% which, associated to the effect of compensatory gain accentuated in the first 30 days, reduced the weight gain of the animals in the second cycle. There was no effect (P> 0.05) of the genotype on the performance of cattle, with averages of 0.822 kg /day and 0.860 kg /day for SRD and Nelore animals, respectively, with a mean of 0.841 kg /day with mean stocking rate Of 5.65 AU /ha. The use of irrigated pasture of *Mombaça* grass at 22 days of regrowth allows the finishing of cattle under conditions of the Coastal Tablelands of Piauí.

Keywords: cattle, Pannicum maximum cv. Mombaça grass, pasture, completion