

WEIGHT GAIN OF MURRAH BUFFALOES IN SYSTEM OF INTENSIVE ROTATIONED GRAZING WITH SUPPLEMENTAL FEEDING IN PARA STATE, BRAZIL

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ABSTRACT

This work is installed in Embrapa Eastern Amazon, in Belém, Para State, Brazil. The experimental area is constituted about six hectares divided in six paddocks, with *Cynodon nlemfuensis*. Along the electrified fences, are planted African mahogany (*Kaya ivorensis*) and Indian nim (*Azadirachta indica*), 4 m intercalated. Were used 25 males of Murrah race, with about 213 to 303 days of age, with supplementary feeding. The preliminaries results, indicates a daily gain average of weight of 0,588 kg/animal, considered low, due to the adaptation period of the animals and of the availability and nutritive value of the forage.

Key words: Amazon, artificial insemination, cultivated pasture, reproduction

INTRODUCTION

From Asia, the domestic buffalo was taken to Africa, and later it was introduced in Europe and recently in America. In Brazil, its introduction occurred in 1895, with animals of Mediterranean race, proceeding from Italy, in the Marajó island, Pará State, through the farmer Vicente Chermont de Miranda (7). From that time, several importations of lots of buffaloes brought to diverse brazilian regions were initiated. Currently, Amazon region has the privilege of shelting the three subspecies of Brazil buffaloes (*bubalis*, *kerebau* and *fulvus*), that group animals of the Mediterranean, Murrah, Jaffarabadi and Carabao races, besides the Baio type. The rising of buffaloes to the world-widely is spreading out, due to its economical superiority in relation to the others domestic ruminants, mainly through its rusticity and adaptation weather variations and handling (11). The economical importance in the exploration these animals is also due to the fertility, longevity, efficiency of the alimentary conversion and aptitude for milk and meat production, and work (8). One of the most serious impediments in the development of the brazilian buffalo ranching is the consanguinity, because of the fact that for the last four decades it has no different ancestry was introduced in our country, what would allow the improvement of the different races bred. Moreover, in the beginning of the 60 decade, only a reduced number of animals of Indian origin (50 buffaloes Murrah and Jaffarabadi races) was brought to Brazil (5). In 1990, Embrapa Eastern Amazon introduced semen from Italy and Bulgaria, derived from reproducers of detached ponderal performance and known composition of Murrah and Mediterranean blood, sons of great milk production matrices (3.500 kg/300 days), and also Jaffarabadi race semen. The importation and use of this semen and the development of an artificial insemination program, in partnership with the University of Para State, has tempted to revert this situation in benefit of the national and regional community. This project aims to improve genetically the flock of Murrah buffaloes in Amazon region, through the selection of elite animals, in test of weight profit, in intensive system of rotationed grazing, with supplemental feeding, and to evaluate its semen, through its harvest, analysis and planting, for posterior application in tests of lineage and commercialization for farmers, in the Biotechnology Center of Animal Reproduction.

MATERIAL AND METHODS

This work is installed in Embrapa Eastern Amazon, in Belém, Para State, Brazil (1° 28' S and 48° 27' W). The climatic type is the Afi, characterized by abundant rains during the entire year, more intensive, from december to may, and less rainy, from june to november, with 2.870 mm/year of pluviometric precipitation. The annual average temperature is 26°C, the relative humidity 85% and annual insolation of 2.400 hours (2, 3, 4). The experimental area of about six hectares divided in six paddocks, with cultivated pasture *Cynodon nlemfuensis*, managed with five days of occupation, 25 days of rest and pasture cycle of 30 days. For implantation of the pasture plowing and harrowing to break clods and leveling were effected. After that 300 kg/ha of natural phosphate Arad was applied, contends 33% of P₂O₅. Along the electrified fences, are planted african mahogany (*Kaya ivorensis*) and indian nim (*Azadirachta indica*), 4 m intercalated (Figure 1), and fertilized with chemical and organic fertilizers, aiming to improve the animal ambience and to add value to the property, through the implantation of silvipastoril system.



Figure 1. Electrified fences with *Kaya ivorensis* and *Azadirachta indica*.

The zootechnic installation involve places to drink and supplemental feeding (Figure 2).

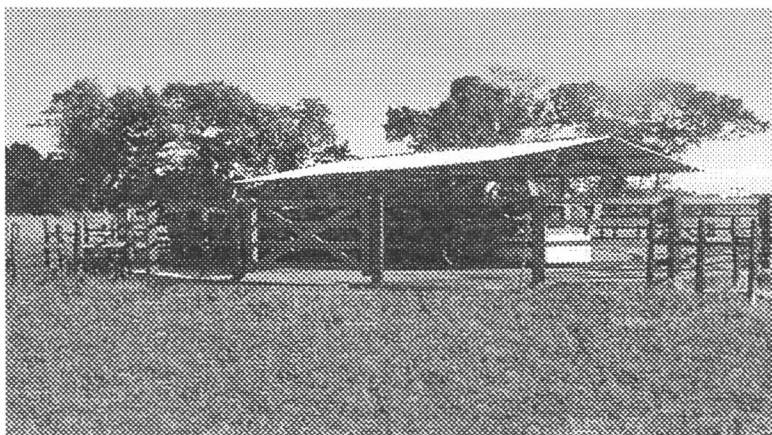


Figure 2. Zootechnic installation to drinking and supplemental feeding

Were selected 25 weaned males of the Murrah race, with ages varying from 213 to 303 days, in order to be submitted to the test of weight gain at pasture, with supplementary feeding constituted by a ration having 14% of crude protein. The animals will receive handling and alimentary regimen similar, during 294 days, being 70 days of adaptation and 224 days of test. Before the beginning of the adaptation, the animals were vermifuged. Periodically, they will be vaccinated against foot and mouth disease, eventually, treated against ectoparasits attack. The animals were weighed in the beginning of the adaptation period. The final weighing will be proceeded in two consecutive days. All the weighing will be effected in the morning period, starting at eight a.m. In the evaluation of the segment Development and Harmony of the set will be considered, basically, the skeleton of the animal, being observed the general aspect, the osseous constitution and height of the animal. The

sexual characteristics will be evaluated searching the virility of the experimental animals.. Testicles (its form, size, position and its measure) will be evaluated. The available fodder of the cultivated pasture will be evaluated to chemical analyses effected at Embrapa Eastern Amazon. The nutritive value of forages will be determined, using ruminal liquid of fistulated buffaloes (1, 6, 9, 10).

RESULTS AND DISCUSSION

Table 1 shows the data of the weight of the experimental animals. The data collection was initiated in 03.05.2002, with initial weight of 265.36 kg. After thirty days the weight of animals were 283.00 kg. These preliminaries results, indicates a daily gain average of weight of 0.588 kg/animal, considered low, due to the adaptation period of the animals in experimental area and of the availability and nutritive value of the forage that was old when the test began.

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