

SUPPLEMENTAL FEEDING FOR BUFFALOES FATTENING ON INTENSIVE ROTATIONED SYSTEM, IN BELEM, PARA STATE, BRAZIL.

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ABSTRACT

42 buffaloes of Murrah race had been fattened, with one year of age, supplemented twenty and four daily with concentrated (13% of CP and 60% of TDN), constituted of brans of maize (70%), wheat (20%) and soy (10%), 1 kg/150 kg of alive weight, more mineral, while 18 remaining animals had only received mineral. The data had been analyzed by the SAS. The supplementation raised in 5% the performance of animals (0.485 kg vs. 0.464 kg) and the economic evaluation indicated not to be interesting supplemental buffaloes during the period rainiest.

Key words: Amazon, cultivated pasture, , intensive rotationed pasture, supplementary

INTRODUCTION

From Asia, the domestic buffalo (*Bubalus bubalis*) was taken to Africa, later to Europe, and recently to America. In Brazil was introduced in 1895, on Marajo island, Para State, Brazil. Today, Amazon has the privilege of having the four subspecies of Brazil's buffalo (bubalis, kerebau and fulvus), of the Mediterranean, Murrah, Jaffarabadi and Carabao races, and the Baio type (5). In Amazon, is raised milk, meat and work production. The long dry season on most of the cultivated pasture areas in Amazon decreases. The pasture productivity and the revenue of the farming systems. Supplemental feeding, given on the field, using agroindustry residue, such as cakes and brans, constitutes na alternative to raise the regional farming performance during the dry period. This study was delineated to measure the productivity performance of buffaloes in intensive cultivated pasture systems, with supplemental feeding.

MATERIAL AND METHODS

The work was conducted on the Research Unity "Dr. Felisberto Camargo", of Embrapa Eastern Amazon, in Belem, Para State, Brazil. The climate is rainy tropical, with higher precipitation (jannuary to june) and less rainy (july to december), annual medium temperature of 26°C, annual rainfall of 2,761mm, air relative humidity of 86% and 2,389 hours of sun exposure (1). The soil is a story oxisol. Were utilized 12 ha of *Brachiaria humidicola*, divided in 12 padocks of one ha each, half for supplemented animals, on the pasture pressure of four animals/ha, and half to the cries not supplemented, on the pasture pressure of 3 animals/ha, on intensive rotationed system, with cycles of seven days occupation and 35 days resting. Were fattened 42 weaned Murrah buffaloes, about one year old. Twenty four animals received free mineralization daily, and supplemental feeding, on appropriated troughs, constituted of concentrated ration having about 13% of crude protein and 60% of TDN, made of corn bran (70%), wheat bran (20%) and toasted soybean (10%), on the rate of 1 kg/150 kg of alive weight, while the others 18 buffaloes received only mineral salt. The gramineous was fertilized annually by cover, with 50 kg of P₂O₅ (phosphate reactive of North Caroline), on the begining of the rainy season. The maintenance fertilization of N and K₂O was made parceled on each padock, after grazing, with 50 kg of N and 60 kg of K₂O/ha/year, on the N:P:K combination of (30:00:20). Was measured the availability and quality of the forage, at each 84 days on the entering and exit of the animal from the plots.

The animals were weighed at the end of each grazing cycle. The data was analyzed on completely randomized design, using the SAS (6). Was done the economical analysis of the treatments.

RESULTS AND DISCUSSION

On Table 1 and Figure 1 is observed similarities on the daily weight gains of buffaloes with and without supplemental feeding.

Table 1 - Ponderal performance of buffaloes

Treatment	Daily weight gain (kg)	Period weight gain (kg)	Period weight gain/ha (kg)
Supplemented	0.485 a	96.04 a	384.12 a
Animal control	0.464 a	91.34 a	275.61 b

Averages followed by the same small letter vertically, do not differ (0.05).

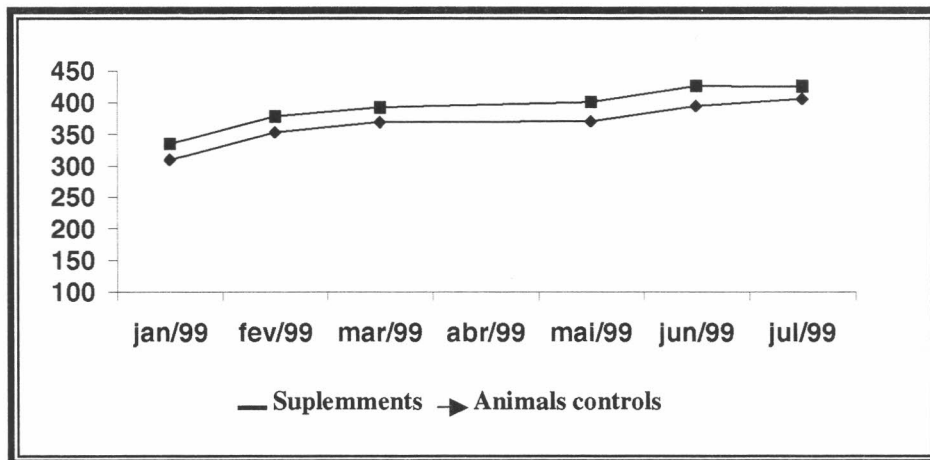


Figure 1. Ponderal performance of buffaloes.

The supplementation raised only about 5% the ponderal performance of the animals (0.485 kg vs. 0.464 kg). On the beginning of the fattening, the daily weight gains reached almost 1kg/ animal, considered exceptional. This performance may be due to the compensatory gain and the high forage availability on the rainy season. At the 84th days, the daily weight gains were lower, of 0.655 kg and 0.658 kg, respectively for supplemented animals and control, similar to the others observed in another places of Amazon (2,3,4) that changes from 0.508 kg to 0.686 kg. On Table 2 are the levels of crude protein on the stem and leaf of *Brachiaria humidicola* on the entering and exit of the animal from the paddock. It is observed that on the leaf, the proteic levels are higher than the once considered critical for N positive balance (6%).

Table 2 – Medium text of crude protein (% MS) in stem and leaf of *B. humidicola*.

Picket	Part of plants	01/04/99	02/17/99	03/25/99	05/07/99
Entra	Stem	5.9	5.5	4.1	3.1
	Leaf	7.2	8.2	9.4	8.8
Exit	Stem	4.5	3.4	2.2	2.4
	Leaf	7.9	8.4	8.7	8.6

The economical evaluation indicated that it isn't of interesting supplement fattening buffaloes, during the rainy season, probably due to abundance of forage of better nutrition valuable (Table 3). Better performance on meat production can be obtained with the use of gramineous, more supplemental feeding, basically in the dry season.

Table 3 - Economic evaluation of experimental treatments.

Parameter	Supplementation (US\$1.00)	Animal control (US\$1.00)
Revenue/ha	147.17	105.59
Costs/ha	-	-
Supplemental ration	95.40	-
Maintenance of pasture	2.91	2.91
Maintenance of animals	16.00	12.05
Total Cost	114.31	14.96
Revenue net	32.85	90.63

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