

PONDERAL PERFORMANCE OF BUFFALOES IN INTENSIVE ROTATIONED GRAZING WITH SUPPLEMENTATION OF AMINOACIDS, MINERALS AND VITAMINS, PARA STATE, BRAZIL

¹LOURENÇO-JÚNIOR, J. B.; ¹COSTA, N. A.; ¹TEIXEIRA-NETO, J. F.; ¹BAENA, A. R. C.;
²MOURA CARVALHO, L. O. D.; ³SANTOS, N. F. A.; ³MONTEIRO, E. M. M.

¹Researches of Embrapa Eastern Amazon. P.Box, 48. CEP 66.095-100, Belem, Para State, Brazil - E-mail: lourenço@cpatu.embrapa.br.

²Agronomist Trav. Serzedelo Corrêa, Edifício Manoel Pinto da Silva, Aptº. 1104 - Belém, Pará State, Brazil. CEP 66.0000.

³Grant holders PIBIC/CNPq/Embrapa.

ABSTRACT

Were utilized 30 buffaloes Murrah fifteen months old, on intensive rotationed grazing of *Brachiaria humidicola*. Group I, weighing 289 kg, received three applications of 10 ml, deep intramuscle of aminoacids, minerals and vitamins, in the beginning, middle and end of the 204 days of experimental period, while group II - control, weighed 299 kg. The data of the ponderal development were analyzed by SAS. The daily gain of weight of group I (0.645 kg) was statically superior than group II (0.548 kg), demonstrating that supplementation is efficient on the ponderal performance of buffaloes. The economical evaluation indicates that the supplementation increased around 25% the profit/ha/experimental period.

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

INTRODUCTION

Buffaloes have been studded as alternative for meat and milk production in Amazon, were find favorable conditions, both in the flooded areas and in highlands. The high annual supply of solar energy, plenty rainfall, allows high forage production of good quality all year over, besides of its adaptation to the tropical environment. The intensive rotationed grazing, with the incorporate of technologies that elevates the sustained productivity of farming, allows to incorporate the huge areas of degraded pastures to the productive process, avoiding the opening of new agricultural frontiers, on tropical forest. The prohibition of the use of anabolizers by most of the countries, including Brazil, justifies the effort to find an alternative as supplementary feeding for bovideos, basically when the forage is of low nutritive value. Thus the use of free aminoacids, derived from a external source, with minerals and vitamins constitutes supplemental source to enlance the precocious slaughter of buffaloes. This work objectives to test the efficiency of the supplementation of a product resultant of the acid hydrolysis and enzymatic of bovine organs associated to minerals and vitamins, in buffaloes fattened in cultivated pasture of *Brachiaria humidicola*, on intensive rotationed grazing, searching to slaughter animals with more weight and less age.

MATERIAL AND METHODS

This work was developed during 204 days (09/01/2002 to 03/24/2002) on the farm "Monte Castelo", Castanhal, Para State, Brazil, utilizing thirty buffaloes males of the Murrah race, uncastrated, with about fifteen months of age, randomly separated in two lots and kept in eight plots of "quicuío-da-amazônia" (*Brachiaria humidicola*), an intensive rotationed grazing system (2), with five days of grazing and 35 days of resting, with allotment rate of 2,4 head/ha. The animals received free mineral salt and water of good quality and quantity to drink and bath. The weighings were done in absence of food of 14 hours. The animals were distributed in completely randomized design, in two treatments. Group I, four doses of 10 ml of the product with free aminoacids, obtained by the acid hydrolysis and enzymatic of bovine glandule and organs, with minerals and vitamins, via deep intramuscle on the gluteus region, on the beginning of the experiment, at 36, 71 and 120 days, of the research, and group II - control.

The composition of the supplement in 200 ml of distilled water, is of: 420 mg of L-glutamic acid; 1,000 mg of L-lysine chloridrate; 210 mg of acetyl metionin; 60 mg of L-triptofan; 210 mg of L-hystidin chloridrate; 5,000 mg of hydrolyzed of organs and glandules, 16 mg of sodium; 3 mg of cobalt; 42 mg of magnesium; 15 mg of cupper; 15 mg of manganese; 8 mg of zinc; 10 mg of ferrous dextran; 500 mg of vitamin B₁ (Thiamin chloridrate); 500 mg of vitamin B₆ (Pirodoxin chloridrate); 2,200 mg of niacin (Nicotinic acid). The statistical analysis was made trough the program SAS (3).

RESULTS AND DISCUSSION

The results in Table 1 indicate that the animals who received the compost of free aminoacids associated to minerals, vitamins and synthetic aminoacids, had better ponderal performance (0.645 kg vs. 0.549 kg), around 18% superior than the control group. This values are similar to the ones observed in other places in Amazon, that varies from 0.372 kg to 0.686 kg, in *Brachiaria humidicola* (1).

Table 1 - Averages of weights of groups supplemented and control.

Treatment	Initial weight (kg)	Final weight (kg)	Weight gain in day (kg)
Supplemented	289.00	422.33	0.649a
Control	298.67	410.67	0.548b

Averages followed by the differents letter vertically, doesn't differs (0,05).

The economical evaluation (Table 2) indicates that the supplementation increased around 25% the profit/ha/experimental period, in the phase of buffalo fattening in cultivated pasture on intensive rotationed grazing system (US\$ 91.87 vs. US\$ 73.25).

Table 2 - Economical evaluation of experimental treatments.

Parameter	Supplementation (US\$1.00)	Control(US\$ 1.00)
Income/ha/period experimental	122.60	102.98
Costs/ha/period experimental	-	-
Application of product supplementary	1.00	-
Maintenance of pasture ¹	26.82	26.82
Maintenance of animals ²	2.91	2.91
Total cost	30.73	29.73
Net income	91.87	73.25

¹ Clearing and phosphate fertilization. ² Vaccines, vermifuge and workers.

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