

INCOME EVALUATION AND PHYSICAL-CHEMICAL CHARACTERISTICS OF SUN MEAT ELABORATED WITH SECONDARY CUT OF "BABY BUFFALO"

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ABSTRACT

This work aimed to determine the physical-chemical characteristics of the "sun meat" elaborated with secondary cut of "baby buffalo" (*Bubalus bubalis*) of about 20 months old. The product was elaborated through the addition of 10% of salt, placed by 17 hours and after 17 hours extended in room with temperature of 20°C. Samples for the physical-chemical analyses (protein, lipid, humidity, ashes and caloric value) were removed, in Belem, Para State, Brazil. The "sun meat" presented excellent physical-chemical characteristics and is appropriated to consume.

Key words: Amazon, food technology, protein, fat, buffalo meat.

INTRODUCTION

The chemical components of buffalo meat are the same of bovine, however in variable proportions. Buffaloes possess more lean meat and higher protein content, more pigmentation and less humidity than the bovines and the standard of fat deposition is slightly different, with lesser fat accumulation between and inside muscles, what results in lesser marbling. Its characteristics is a red-dark color, larded for white fat, that gives the carcass a attractive appearance of good quality, and possess thicker fibre than the bovine meat (5). In Para State, the studies on the physical-chemical characterization are reduced, as well as the viability of formularization, elaboration, conservation and durability of the products processed from buffaloes meat, such as the sun meat, objectifying transfer of technology, what would allow to stimulate processing industry of meat in Amazon region. The objective of this work was to evaluate the income and the physical-chemical characteristics of the sun meat, proceeding from secondary cut of animals fattened in cultivated pasture, to get information on the quality of this product, with consequent contribution to its economical valuation.

MATERIAL AND METHODS

Was used buffalo meat of secondary cut of "baby buffalo" of the Murrah race, created in cultivated pasture and abated on the age of 20 months. After weighing, in diet of food and water for the last 24 hours, they were slaughtered. The derivative was elaborated with meat of the secondary cut (Figure 1).

After boned the meat was cut in blankets and placed in one basket where 10% of ground salt were added at few, in a process of rubbing. After that, the meat was piled for cure for 17 hours and after extended in room with 20° C temperature for more 17 hours. After the drying process the sun meat was weighed and packed in plastic bag and conditioned in refrigerator (Figure 2). The physical-chemical analyses of the sun meat were carried out in the Laboratory of Chemical Engenieer of the Federal University of Para, in Belem, Para State, Brazil.

The physical-chemical analyses were carried out using a sample in three sun meat categories, which were considered as: A - Light; B - Lean; and C - Fat (3). The caloric value was determined by the sum of texts of carbohydrate and protein contents, multiplied by 4, and of the lipid, by 9 (6).

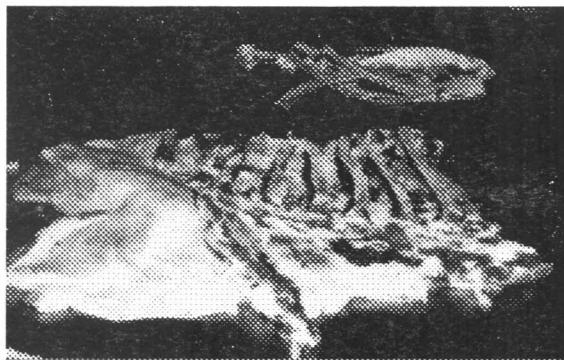


Figure 1. Secondary cut of “baby buffalo” used in the sun meat

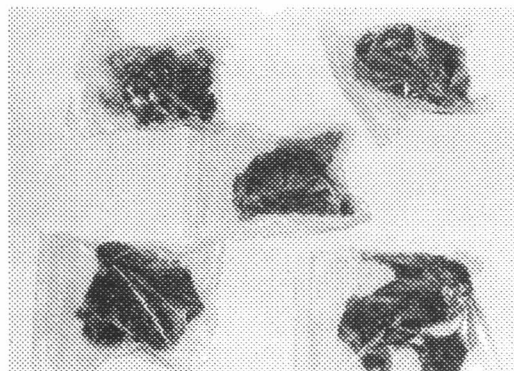


Figure 2. Sun meat packed in plastic bags.

RESULTS AND DISCUSSION

In Table 1 are presented average contents of humidity, lipid, protein, ash, carbohydrate and caloric value of the sun meat of “baby buffalo”, in the three categories. The contents of humidity of the sun meat varied from 46.17% to 55%. Contents of humidity (1) between 50% and 55%, in buffalo meat, what demonstrates that the product elaborated on this work has humidity on the acceptable standards for consumption. With relation to the lipids the content was of 0.41%, in the sun meat considered light, 1.87% in lean and 4.58% in the fat. This raised value was observed in the derivative with less humidity, what seems to prove that the lipid was raised in consequence of the relatively low humidity.

Table 1 - Physical-chemical composition and caloric value of “baby buffalo” sun meat.

Sample	Humidity (%)	Lipid (%)	Protein (%)	Ash (%)	Carbohydrate (%)	Caloric value (cal)
A	55.00	0.41	29.74	13.41	1.44	128.41
B	51.18	1.87	33.73	10.39	2.83	163.07
C	46.17	4.58	35.16	12.85	1.24	186.82

The protein content was raised in the fat sample, of 35.16%, while in the light and lean, were of 29.74% and 33.73%. These contents are a little superior to the observed in meat of buffalo and bovine, 26.83% and 24.07%, respectively (7). Other analyses show contents of 21.93% in buffaloes (4) and 20.94% in bovines (7). The ashes contents were, respectively, 13.41%, 10.39% and 12.85%, in the samples A, B and C. The levels of carbohydrate, obtained by difference, were, respectively, 1.44%, 2.83% and 1.24%. The caloric values of the samples A, B and C were 128.41 cal, 163.07 cal and 186.82 cal, in the same order. These information demonstrate a caloric value lower in relation to the composition of the sun meat mentioned in literature (2), with 295.05 cal. The cost of the kilogram of sun meat was about US\$ 1.82 and is commercialized in Belem, Para, Brazil, for US\$ 2.68, what represents 47 % of economical income. The removed shavings of the secondary cut (46%) can be used for the elaboration of flour of meat and bones, that can be used as fertilizer, consequently reducing the cost of production of the sun meat and raising its final profit. The secondary cut of “baby buffalo”, of lesser value for commercialization, can be used for the sun meat preparation, resulting in one derivative of excellent physical-chemical characteristics. It is a product of cost of production relatively reduced, what allows the producer to get about 50% of net profits, consisting in alternative of income generation, through aggregation value to these secondary cut.

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