

Caprine commercialisation systems and carcass sections in the Northeast of Brazil

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18813

SUMMARY

The Brazilian Northeast region framework complexity in relation to goat products trade, generates a more careful analysis and prospecting for economic agents, interacting structural components and inputs spatial allocation. This paper identifies the main circuits of goat meat commercialisation, their features and carcass cuts in the Ceará's State. A pilot countryside survey with four focus cities was conducted to provide a basic information framework on this area. The commercial relationships among the market agents in the different circuits and the Gross Value Added incorporation process are analysed. It was identified four fundamental commercialisation types. The necessity of an appropriated support prices policy to the semiarid conditions to the Artisan and Traditional Circuits type was recommended. Furthermore, the point of commercial activity strangulation is found in the small power of bargain and decision of the small farm households. Higher organisation level of the small farm households is associated with better familiar income in some commercialisation circuits.

1. INTRODUCTION

The goat production in the Northeast of Brazil has been associated to the families of small and medium income. Therefore, it is fixing population into the semiarid areas, unsuitable for the implantation of a farming model of industrial regions (Graziano da Silva, 1989; Vidal, 1987). Estimated Brazilian Northeastern population, by the year 2000 will be around 54 million people and the social statistics show that the infant mortality is about 10% (IBGE, 1997). This mortality ratio could be reduced with the promotion of bigger number of initiatives to incorporate the meat of goat in the children's diet, such as it is being currently carried through the North-eastern State of Bahia (Tribuna do Ceará Newspaper, 1999). In the *bahiana* locality of Jequié, the Municipal City Hall is implementing the supply of goat meat in the lunch pertaining to school daily of 3.5 thousand students of elementary school.

This initiative came to contribute partially to solve the chronic infantile innutrition in that municipal network, and also to facilitate the problems of the goat production draining for a guaranteed local market.

2. CIRCUITS OF COMMERCIALISATION

The study of the commercialisation circuits of goat products are related directly to questions about economic viability of the Brazilian north-eastern semiarid region, as well as, a mean for the governmental sector to promote the development of this area. The following circuits of commercialisation had been identified until November 1999, in the north-eastern State of the Ceará, according to data of ongoing research (Vidal, 2000).

Circuit of Commercialisation Artisan Type: the productive agents are constituted by low income families (< US\$ 200/month). The elaborated goat products are: meat of *charque* and the *green* meat. The *charque* is constituted by boned and cut meat in layers of 3 the 5 cm immersed of thickness and in pickling brine. The salting consists in a more common form to conserve meats in the Northeast of Brazil. The "dry meat" is a generic designation for a variety of manufactured products from diverse meats, as the half-dry ones without thermal handling. In the "dry meat", they use piles up

salty-dry noble cuts also (Dias, 1998). The commercialisation of this one is made under the form of "blankets" or "mantles". The salty meat of goat can remain steady, under normal conditions, for a maximum period of three days. In the broken up form, salty and it dries, this meat presents microbiological stability in the semiarid climate. Those meats offer recommendable protein levels to the low income consumer sector of rural population. The "Green" meat is the north-eastern popular denomination for the meat *in natura*. In this case the carcass is cut in two pieces (in the longitudinal direction) to be commercialised. Animals are slaughtered in clandestine or informal mode in domestic slaughterhouses of the rural or urban area. The producers operate as commercial agents and sale the living animal in the destinations. Another commercial agents are the intermediary-slaughterer, who function as wholesalers. The intermediary-slaughterer purchase the animal and sell the entire carcass to the destinations. The retail are characterised by small size rural local level: the municipal central market, local free fairs and butchers. The consuming market is localised in the rural area and urban periphery and is constituted by families of low income. This commercial circuit comprises 45% of the goat production's population pertaining to the state of Ceará, according preliminary appreciation.

Circuit of Commercialisation Traditional Type: it is constituted basically by families of average income (from US\$ 200 to US\$ 500/month). The goat products are the same ones of the previous circuit: the *charque* and the "Green" meat, with the difference that the meat *in natura* besides being presented through right and left pieces (*bands*), also appears divided in quarter parts. In relation to the slaughter type, this continues being clandestine or informal. The producer also functions as mercantile agent of sale beyond the Intermediary-merchant. The Intermediary-merchant purchases the living animals and sells them to the retailers of the city to be slaughtered, or, carries them to other urban centres from the inward, where the animals are sold to the retailers. The small size rural and urban commercial stores are the main destinations: municipal central market, popular free markets and butchers. The consuming segment is characterises for low income families of the agricultural zones and urban periphery. It is estimated that this commercial circuit approximately encloses 30% of the producing agricultural families of goat in the Ceará's State.

Circuit of Commercialisation Industrial Type: the production segment is formed by small size rural families associated or organised into co-operatives. The products identified in this circuit are the *charque* and *in natura* meat cut in quarters or presented in standardised industrial cuts: the thigh, loin, chest are those of better quality and higher price, and the neck and rib with inferior quality and values (Dias *et al.*, 1999). Moreover, have been identified the use of derived products as fresh and cured *linguiças*, cured ham, sausages, *salames* and triturated salty-drought meats. In the commercialisation of those industrial cuts and derived products, the retail-sellers use the cold chain through cooled cuts and frozen products packed in bags protected by nylon or polyethylene films. Some selected establishments present these packed products in vacuum system. The slaughter is carried through the official slaughterhouses. The commercial agents had been identified as the Intermediary-merchants, whom purchase the living animals and then, carry them in trucks to sell to more distant urban

centre retailers. The retailers normally also perform the butcher role, as they can be owners of local sale ranks, as butchers. Moreover the retailer carry out the distribution of meat in standardised cuts to the region supermarkets, where the cuts pass to be packed for sale to the consumer. Butchers and supermarkets of this circuit generally are of medium or great size. The consuming market had been identified as the sectors of the urban middle class and bourgeoisie. It is estimated that this circuit encloses 20% of the goat market in the State of the Ceará according ongoing research (Vidal, 2000).

Commercialisation Circuit Advanced Industry Type: the productive segment is constituted by small rural families in partnership with Slaughter-Refrigerated house located in the inward of the Ceará's State. This circuit encloses *in natura* meat industrial cuts, frozen cuts, sliced plates, delicatessen, hamburger and sausage in vacuum packing (Dias, 1998) to retail in Fortaleza city (the capital of the State of the Ceará). Two hundred houses specialised in selling goat products of high quality had been identified in the capital city. The slaughters are carried through the *Pé-de-Serra* Slaughter-Refrigerated house, located in the City of Quixadá, in the Central Backlands of the Ceará. This industry signed a contract of partnership with 200 small agricultural families of the region. The main objective of that partnership is to supply animals in good sanitary conditions to the *Pé-de-Serra* Industry. In the year 2000 this company will extend the number of partnerships for 600 agricultural families of small income in the region of Quixadá. The commercial agents who act in the carrier of the goat ones are the intermediate-trucker contracted for the cold storage room. The level of consumers was a population with high purchasing power and the university people. A new associated service for sale of sophisticated goat meat was also observed in this commercial circuit: the «Call Goat». It is a telephonic service of ready home delivery and cash payment. This circuit encloses 5% remainders of the pertaining to the state of Ceará goat market second estimates of that previously cited ongoing research.

In the *Artisan and Traditional Circuits types*, the identified factors that make it difficult to increase the income for the small producers can be grouped in two sectors: intra-farm household and out-farm, or either, in the organising and institution environment (banks and state agencies of promotion). At the intra-farm household level, the inadequate handling of the flock and the careless with the sanitary and nutrition aspects, are compromising the final product quality were recorded. Furthermore, the predominance of slaughter and products conservation by inadequate processes also was observed. At the institutional level, the insufficiency and high cost of the available financial capital is a big obstacle to implement the adoption of suitable techniques to the farm households. In this way, the improvement of the appropriated support prices policy to the semiarid conditions are necessary and pressing. At the organising level, the point of commercial activity strangulation related to these circuits, is found in the small power of bargain and decision of the low income farm households. These small producers have not a solid system of production organised commercialisation co-operatives. Because this lack, they are to the disposal of the purchase prices stipulated by the merchants.

To illustrate the process of gross value aggregation in the diverse links of the commercialisation *Artisan and Traditional Circuits Types*, typical case of low income agricultural family, situated in the city of Quixeramobim (Central Hinterland of Ceará) was studied. The producer receives R\$ 1.0 = US\$ 0.5/kilo live-weight sold in the free municipal market and the intermediary-slaughter receives R\$ 2.25 = US\$ 1.12/ kilo goat carcass sold to the local retailer. The retailer receives R\$ 3.25 = US\$ 1.64/ carcass quarter piece sold to the consumer. The Gross Value Added (GVA) calculated for the small producer, the intermediary-slaughter and the butcher are respectively: R\$ 0,7 = US\$ 0.35/ kg live-weight, R\$ 1.25 = US\$ 0.63/ kilo of carcass and R\$ 1.0 = US\$ 0.50/ carcass quarter piece (Vidal, 2000).

In these two types of productive chains (*Artisan and Traditional*), are observed that the key factors in goat pricing can be readily manipulated by market participants, especially wholesaler.

An example of *Circuit of Commercialisation Industrial Type* and the process of GVA incorporation is presented. It analyses a entitled project «Goat Ours of Each Day», implanted recently in the City of Sobral (Ceará). The establishment of this project was possible through local research institutions, municipal and international communities and international support. In this project, 253 agricultural families of low income with children until 5 years of age, had received donations from goat reproducers in their respective productive units. The objective of this is to foment the production, assuring better incomes to these families. The strong Agricultural Association formed by the farm households turned into a Production and Commercialisation Co-operative that guarantees better prices to the primary sector. The products commercialised by this co-operative, are the *charque* and *in natura* meat in quarter cuts. Besides, the castrated young males are sold like living animals. The agricultural family organised in co-operatives sells the kilo of live-weight goat, directly to the retailer in the municipal market for R\$ 1.40 = US\$ 0.70, getting a GVA of R\$ 1.10 = US\$ 0.55/ kilo live-weight. The slaughter-butcher sells the kilo of different industrial cuts from R\$ 3.00 = US\$ 1.5 to R\$ 4.00 = US\$ 2.00, depending on the quality on the products. Thus, the retailer gets a GVA profit that varies from R\$ 1.00 = US\$ 0.50 to R\$ 2.00 = US\$ 1.00 /kilo meat (Vidal, 2000).

The *Circuit of Commercialisation Advanced Industrial Type* is exemplified by *Pé-de-Serra* Slaughter-Refrigerated house, situated in Quixadá city. The agricultural families who had formed partnership with the *Pé-de-Serra* Industry receive R\$ 1.20 = US\$ 0.60/kilo live-weight, getting R\$ 0.80 = US\$ 0.40/kilo live-weight of GVA. The intermediary-trucker of the slaughterhouse receives R\$ 2.00 = US\$ 1.00 /kilo live-weight and gets a GVA of R\$ 0.60 = US\$ 0.30/ kilo live-weight. However the slaughter-cold storage room receives from R\$ 4.0 = US\$ 2.0 to R\$ 5.0 = US\$ 2.5/ kilo industrialised meat, incorporating a GVA that varies from R\$ 2.5 = US\$ 1.25 to R\$ 3.0 = US\$ 1.5/ kilo of meat. Meantime, the houses specialised on sale industrialised goat meat located in the capital of Fortaleza (one of them belonging to the *Pé-de-Serra* complex), sell the kilo of processed goat meat (frozen, sliced plates, delicatessen, etc) between R\$ 6.00 = US\$ 3.00 and R\$ 7.5 = US\$ 3.75/ kilo, depending on the sophistication degree reached by the products. The incorporation of GVA by this last segment of market is expressive and varies between R\$ 3.5 = US\$ 1.75 and R\$ 4.20 = US\$ 2.10/ kilo of processed meat.

The clear trend to favour the biggest aggregation of value to the tertiary and quaternary circuit segments is observed in the mechanisms that control the vertical link of the commercialisation elements in the *Advanced Industrial Circuit*. Nevertheless, in the commercialisation process of the small farm households it was observed that, although to get a lesser GVA when compared to the families of the *Industrial Circuit*, the *Advanced Industrial Circuit* families have permanent opportunity throughout the year to drain all their production, as much as the first and second quality. This complete drain guarantee is due to the industrialised and distributed products diversification by *Pé-de-Serra* Industry. A way to add greater value to the familiar agriculture production consists in to improve the organisation into associations and/or co-operatives in the rural zone. Aiming the decrease of production dispersion, the small farmers would organise the Supplying Central for the goat commercial activity regularisation and standardisation to get a bigger price of sale. In this way the income transference of the primary sector for other marketing sectors will diminish.

3. FINAL REMARKS

Future research will extend this investigation for another specific meat circuits or sub-circuits accounting for new micro-regions and specialised market agents in the Ceará's State. Another possible extension of the analysis would be to consi-

der characteristics of farm woman market labour in different commercial segments and circuits, as they relate to the type and cost of feminine action such as their spatial location. The latter extension would show more specifically the influence of lobbying technology and possible distortions on different circuits and sub-circuits.

Dias, R. P. 1998. Potencial das carnes caprina e ovina para o processo industrial. In: Segundo Seminário Nordestino de Pecuária, Fortaleza. FAEC.

Dias, R. P.; Beserra, F. J.; Batista, A. S. M.; Filho, J. M. dos Santos. 1999. Rendimento de carcaça e de cortes industriais de caprinos em Sobral, CE. Embrapa Caprinos. Pesquisa em Andamento, 31.

Graziano da Silva, J. 1989. Estrutura agrária e irrigação no Nordeste. In: Irrigação, estrutura agrária e organização dos

agricultores. Instituto de Economia da Universidade de Campinas. 143pp. Estado de São Paulo, Brasil.

IBGE, Instituto Brasileiro de Geografia e Estatística, 1997. Anuário Estatístico do Brasil. Rio de Janeiro, RJ.

Tribuna do Ceará Newspaper. 1999. Bode na merenda. Fortaleza, CE, Segunda-feira, 15 de março. Pg 05 A.

Vidal, D. de L. 1987. Manejo, reprodução e nutrição de Caprinos Sem Raça Definida (SRD) na Caatinga Paraibana. In: Proceedings of the Survey Countryside Study on the Zootechny Graduation Course, Rural Sciences Center (CCR) of the University of Santa Maria, 60 pp. Santa Maria, Rio Grande do Sul, Brazil.

Vidal, D. de L. 2000. Relatório de Andamento de Pesquisa de Campo. Project no. 102.98.102-04. EMBRAPA Caprinos, Ceará, Brazil. (ongoing research data).