

## Procedure for the closure of the production chain of bovine meat in livestock entities

### Procedimiento para el cierre de la cadena productiva de la carne bovina en entidades pecuarias



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#### ABSTRACT

The management in the closing of the productive chain of the bovine meat constitutes at present an imperative to which efforts must be dedicated, within the cattle sector, because of the challenges imposed by the scenarios of industrialization and marketing at international and national level, together with the current call to improve the Cuban economic and social model. The presence of a procedure that makes such management viable becomes a powerful tool at the disposal of the decision makers involved in this process, especially those who focus on the closure of production chains. The objective of this work is to propose a procedure that, from a systemic vision, responds to the enterprise reality of the state bovine meat sector, in the closing of the productive chain until the final consumer, with added value. From the premises and objectives that make up

#### RESUMEN

La gestión en el cierre de la cadena productiva de la carne bovina constituye en la actualidad un imperativo al que se debe dedicar esfuerzos, dentro del sector ganadero, a causa de los desafíos que imponen los escenarios de industrialización y marketing a nivel internacional y nacional, unido al actual llamado de perfeccionar el modelo económico y social cubano. La presencia de un procedimiento que viabilice dicha gestión se convierte en una potente herramienta a disposición de los decisores involucrados en dicho proceso, sobre todo, aquellos que se enfocan en el cierre de las cadenas productivas. El presente trabajo tiene como objetivo: proponer un procedimiento que, desde una visión sistémica, responda a la realidad empresarial del sector estatal pecuario de la carne bovina, en el cierre de la cadena productiva hasta el consumidor final, con

the proposed procedure, composed of two closely interrelated stages, in which the map of chain closure is articulated, with the diagram of determined processes, it was possible to identify the most relevant actors and processes within each link of the closure of the bovine chain. This interrelation made it possible to have a practical management solution for the closure of production chains within the municipality of Consolación del Sur.

**Keywords:** chain closure; productive linking; livestock; management; chain closure procedure

incremento de valor agregado. A partir de las premisas y objetivos que conforman el procedimiento propuesto, compuesto por dos etapas estrechamente interrelacionadas, en las que se articula el mapa de cierre de cadenas, con el diagrama de procesos determinados, fue posible identificar los actores y procesos más relevantes dentro de cada eslabón del cierre de la cadena de la carne bovina. Esta interrelación permitió contar con una solución praxis a la gestión, en el cierre de cadenas productivas dentro del municipio de Consolación del Sur.

**Palabras claves:** cierre de cadenas; encadenamiento productivo; ganadería; gestión; procedimiento cierre de cadenas

## INTRODUCTION

The study of the closure of the productive chain represents a factor that has a determining influence on the functioning of productive processes. For the conditions in Cuba, within the agro-livestock sector, the trend in recent decades has been more oriented towards boosting milk production than beef and veal production, the latter line which is mainly aimed at guaranteeing volumes destined for the priority and vulnerable sectors of society (children, the elderly, pregnant women and the hospitalized), in addition to producing surpluses which are destined for foreign currency markets, with the purpose of minimizing imports and providing greater liquidity for those who promote this type of livestock.

Since Pyke's valuation (1994), the formation of chains allows cooperation among companies to be an important way to increase their individual capacities. Cooperation can be justified for several

reasons; one of them is to share information and ideas, skills and technologies that, in combination, allow innovations to be implemented in production processes, as well as new products that could be derived from a enterprise's combination of traditional techniques with the innovations introduced, making them themselves more competitive and attractive to the market.

According to Gomes, Valle and Neves (2002), production chains are sets of social actors-groups of social actors involved in the different links of a production-interactive chain, such as agro-livestock and agroforestry production systems, service and input suppliers, processing and transformation industries, distribution and marketing, as well as final consumers of the product and by-products of the chain. The social actors in each

production chain may be cooperative or conflictive in different situations.

In this sense, it is of vital importance, in the context of the current Cuban economy, the achievement of a path towards a management process, in the closing of the productive chain of bovine meat, that promotes substantial changes in the ways of acting and projecting, in function of an efficient and effective management that in turn strengthens and makes increase the highest ethical-professional values.

Based on the above, it is defined as a central objective of the work: to propose a procedure that, from a systemic vision, responds to the enterprise reality of the state livestock sector, with emphasis on the closure of the beef production chain, the integration of direct and indirect actors involved in the different links to the final consumer.

## MATERIALS AND METHODS

In accordance with the essence of the work, the proposed procedure is aimed at the interrelation of four fundamental dimensions: socioeconomic, juridical-administrative, environmental and political-institutional. Its design is carried out fundamentally through Research-Action-Participation, theoretical and empirical methods. Among the methods, procedures and techniques used are:

- The historical-logical method, applied to determine the theoretical-methodological antecedents of chain closure management, the evolution of these terms and their relationship with the country's socioeconomic development.

- The analysis and synthesis, used as procedure for the study of the different aspects related to the closure of the productive chain of bovine meat and its relation with the economic management; in this concrete case of the cattle companies, within the agro-livestock sector.
- The systemic method, which facilitates the characterization of the object and field of action of the research by specifying the constitutive elements and the relations established between them.

For their part, the empirical methods that were specified are:

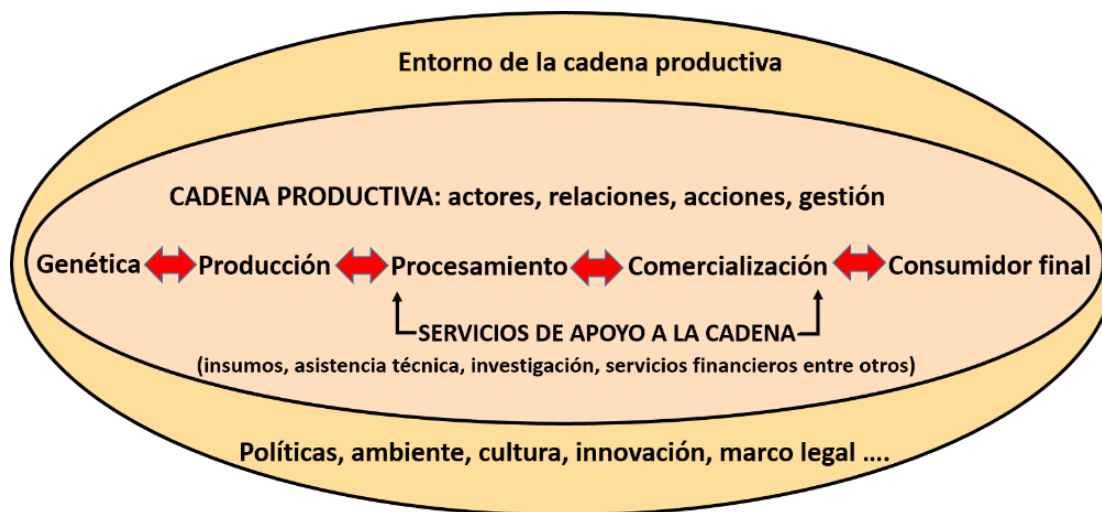
- Scientific observation. Participant and non-participating observation and the focus group applied to boards of directors, boards of directors, in consultations between government and researchers and in meetings with advisors and specialists were used to assess the characteristics of the chain closure processes and chain management, as well as their contribution to the preparation of the directors, from a systemic and participatory viewpoint.
- Documentary analysis, which consisted of the study of resolutions and documents that legitimize the training processes and legal norms that make viable the design and implementation of the procedure for the closure of the productive chain of bovine meat.
- The interview was conducted with different experts on the subject. The semi-structured interview and the in-depth interview with cadres, specialists and advisors to confirm the importance of the subject and its theoretical enrichment.

- Another of the research techniques used was the consultation with specialists, which allowed to corroborate the reality of the problem posed and the veracity of the solution proposed from different conceptions.
- According to the object of the study, a list of information needs related to the closing of the productive chain was drawn up and the sources of information to be used were defined. An instrument was designed that contained dichotomous closed-ended questions and several alternative answers with 32 items, related to the closing of the productive chain of beef. The results were collected in templates previously elaborated in Microsoft Excel for the compilation and processing of the data obtained.
- Similarly, the research was based on semi-structured dialogues to focused groups to define the key factors of value creation within the closure of the beef chain.

## RESULTS AND DISCUSSION

In the specialized literature, different definitions of "productive chains" can be found. One of them, enunciated by Van der Heyden and Camacho (2006), considers the productive chain as the "strategy by means of which the social actors that intervene in the production, commercialization and transformation of a product or species interact in an organized manner, seeking to add value to agricultural products until they are placed at the disposal of the final consumers, which allows, in this way, collective efficiency".

The simplified description of the steps in the meat production chain is shown in Figure 1. This simplified view of the chain corresponds to the results reported by Porres (2013), Espinosa (2015) and Fornesi y Alonso (2017), although these authors only conducted studies of the value chain of beef at the national and local levels with dual-purpose livestock, without being able to typify the closing of the chain; hence they suffer from the typification to reach the closing of the beef chain that is carried out in this research.



**Fig. 1** - Simplified diagram of the production chain  
Source: Own elaboration from Fornesi y Alonso (2017)

For the closure of the productive chain, according to Briz and Felipe (2003), every day a greater effort is demanded from the economic agents participating in the commercial circuit so that they adapt their strategies and actions to the socioeconomic environment in which the new information and communication technologies are developed and adopted; hence Van der Heyden and others (2004), maintains that the management of the commercial chain has been a subject of interest in recent decades.

Within the closing of the chain (chain support services), a broad group of indirect actors were identified who assume the functions of regulation and provision of services and inputs, among which the Ministry of Agriculture (livestock entities dedicated to bovine fattening), the Ministry of Food Industry, the Ministry of Internal Commerce, the Ministry of Economy and Planning and the Ministry of Finance and Prices of the Republic of Cuba stand out.

The chain of production in the beef and veal chain does not always have a closed-chain approach, since it is organized under a framework of integral analysis, depending on actors or intermediaries that intervene in the general context; therefore, in many cases, the levels of competitiveness and equity that ensure the satisfaction of the final consumer are ignored.

From that, in the present research, for the closing of the bovine meat chain in the municipality of Consolación del Sur, province of Pinar del Río, the production link at the level of industry and commercialization is considered as primary and, at the same time, the most complex in the closing of the productive chain of bovine meat, because it is there where the optimal patterns of quality and

quantity are reached by means of the incorporation of cuts of deboned meat, that allow the management in the closing of the chain until the final consumer (figure 2).

From the analysis of the results obtained in the application of the instrument, which contains items related to the closing of the productive chain and processed through Microsoft Excel templates, it could be determined that, in the industry link, 87.5% of the opinions obtained consider that the productions that are achieved have good quality, while 12.5% consider it as regular. Among the causes that originate such results, are the breaches found in the contractual agreements established with the support entities (cattle entities that are dedicated to bovine fattening) when not complying with the guarantee of the agreed quantities, the quality of the bovines sent to slaughterhouse and the instability in the supply of implements for the slaughtering of the animals to be slaughtered in the industry, which generates instability in the flow, reason that motivates the dissatisfaction with the services of support to the closing of the bovine meat chain.

In the distribution and commercialization link, 75 % of the services qualified with good quality were found, while 25 % consider to regulate the quality of the same ones. The main causes focus on the instability of inputs for the packaging of special cuts and the obsolescence of the refrigerated means of transport existing in the entity.

To these valuations, a compilation is added on the existing business development services in the closing of the chain for the production of bovine meat, to know the gaps in the support services, applying the methodologies of Van der Heyden and others (2004) and Martino

Vinci (2014), without finding, until the moment, reports of studies in this stage of the closing of the productive chain of bovine meat, in the literature consulted.

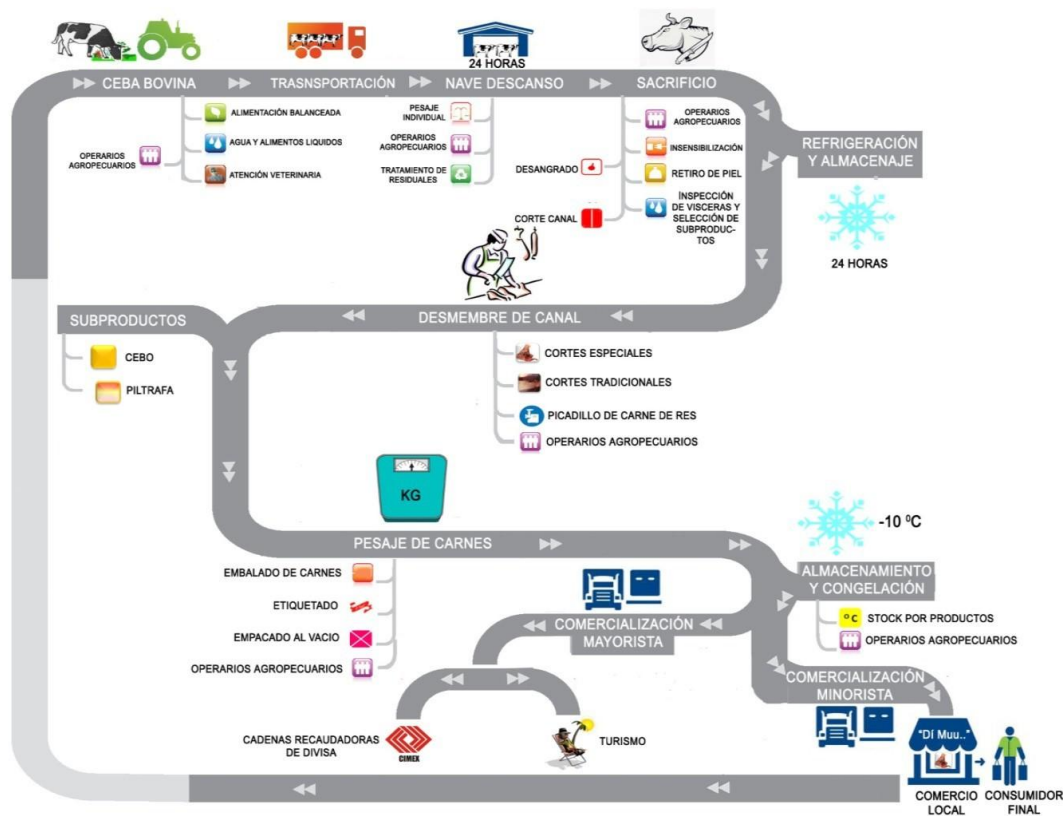
The wholesale commercialization carried out by the industry, in the municipality of Consolación del Sur, achieves the sale of its productions to the wholesale entities belonging to Tourism and the chain of stores collecting currency (TRD), both becoming the main actors of this stage, which assume the retail commerce of the productions obtained in the Business Unit of the Meat Packing Base "El Canal", in compliance with the social commercialization commission for which they were created; This leaves gaps in the closing of the beef production chain in the "El Canal" industry, since it is not possible to evaluate the level of satisfaction of the final client within the chain.

In general, the commercialization circuit is the most difficult link within the current beef chain in the municipality of Consolación del Sur, since the aforementioned instances function as intermediaries in the process of commercialization of the products generated in the industry; hence they are the main actors within the closing of the productive chain and value in the

distribution process, before the final clients.

This particular has a strong impact on the approach of cycle closure with the final consumer, which makes it difficult to measure the level of satisfaction achieved with the parameters established in costs and product quality, however, the insertion of the entity where the productions are made to the Municipal Local Development Initiatives (IMDL), which advocate for the use of endogenous resources, allows the opening of a specialized store in the sale of beef cuts in the municipality of Consolación del Sur and thus contributes to closing the cycle in the face of the final client.

The detailed study of the commercialization circuit in the productive chain, of bovine meat, allowed to determine the stages of increase of creation of value to the product and satisfaction to the final consumer, inside the closing of this chain, which favors the success factors, represented in the horizontal flow map (figure 2), where each one of the processes that define the main activities is identified with a closing approach, which allows an effective visualization of the links incorporated to this procedure.



**Fig. 2** - Closing map of the beef production chain  
Source: Own elaboration

In the most contemporary literature, it is not usual to find a map of the closure of beef production chains in Livestock Enterprises, only descriptions of procedures and mapping of the beef production chain; such is the case of the contributions made by Antúnez and Ferrer (2016) and Fornesi (2017), when describing diagrams of certain processes of the beef chain or of a specific product of this chain.

According to the requirements of a procedure that responds to particularities of the process of closing of the chain in bovine meat, in cattle entities, the suggested one is an extension of the one proposed by Fornesi (2017), that only carries out a deep analysis within the chain

of bovine meat in the links of production and genetics; whereas the commercialization only analyzed it taking into account the wholesale clients (intermediaries) that acquire the product of the industry; this impedes to know the level of satisfaction of the final consumer.

The procedure is structured in two general stages, which in turn involve five steps, which together make it possible to manage the closure of the beef chain in livestock entities. For each stage, the objective, the steps and their description are proposed, as well as the objectives, techniques, responsible and approximate time of duration of each step and a brief explanation of how these techniques

should be applied. The objectives of each stage of the procedure are shown below:

For the proposed procedure, two stages of value creation were identified and named:

- **Stage I: Positioning of specialized beef cuts (Dismemberment of the carcass)**

**Objective:** To reach, by means of the specialized cuts that will be made, the positioning in the market of the bovine meat for its commercialization until the final consumer, verifying the fulfillment of the established premises.

- **Stage II: Distribution and retail marketing**

**Objective:** Promote, with high quality standards, the specialized beef cuts, taking advantage of the territorial policies of local development, with the opening of the "Di Muu..." butcher's shop as a local trade.

The first stage, as already mentioned, is articulated with the result described by Fornesi (2017) for the beef chain in the municipality of Consolación del Sur; is intertwined from the slaughter of the bovines to the dismemberment to obtain the special cuts, with emphasis on the differentiation of traditional and special pieces, corresponding to the quartering, phase through which the cold carcass passes, (1st success factor) to be related to the cleanliness, quality and tenderness of the meat that the client expects, coming from young animals, in optimal health conditions.

The traditional special cuts made to carcass meat (2nd success factor) correspond to the client's expectation; for this, their characteristics, tastes and

preferences in meats are analyzed, which has allowed the implementation, within the closing of the bovine meat chain, of new special cuts. These simple attributes that take into consideration the opinion of the client make the same consider different and exclusive the product that is offered which allows greater traceability to the same.

On the other hand, the new ways of packaging the product by cuts, the presence given to it for marketing, together with the label that is done under the trademark "El Canal", constitute the (3rd success factor), added values that are incorporated under the quality standards established.

The second stage of the procedure begins with distribution to the retail network, created from the IMDL project (Specialized Butchery "Di Muu...") and culminates with marketing to customers or end consumers who purchase the product. Here the key success factors in the creation of value are linked to the consistency and regularity of the supply of meat (1st success factor) according to agreed standards and customer requirements regarding the presentation of marketed products; the positioning of the trademark "El Canal" in the market (2nd success factor), as well as the maintenance and consolidation of relationships with customers (3rd success factor) so that the products reach the final consumers with the requirements and quality demanded from the knowledge of the level of satisfaction of each of the final customers of the product.

The result allowed to identify and determine the stages of value creation and success factors in the closing of the bovine meat chain, in the municipality of Consolación del Sur, those who are similarly informed by Fornesi & Alonso (2017), who applied this technique to the



bovine meat value chain and were not found in the literature similar reports, applied to the closing of the productive chain of bovine meat.

As a conclusion, it can be inferred that the study of the closing of the productive chain of beef, in the municipality of Consolación del Sur, made it possible to identify the most relevant actors and processes within each link of the same, the quality of support services to the production chain at the level of industry and the stages of

value creation, until reaching the final consumer, as well as its success factors. This has allowed, besides contributing to the local development of the municipality, to be able to make different improvements in the creation of value to the product, aimed at achieving maximum satisfaction of the end customer. The achievement achieved responds to strategic lines included in the Development Strategy of the municipality Consolación del Sur, which contributes to strengthening the development and autonomy of the territory.

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