

## Diagnosis of the quality subsystem in the Basic Unit of Cooperative Production "Julián Alemán"



### Diagnóstico del subsistema calidad en la Unidad Básica de Producción Cooperativa "Julián Alemán"

### Diagnóstico do subsistema qualidade na Unidade Básica de Produção Cooperativa "Julián Alemán"

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## ABSTRACT

The present research was developed in the Basic Unit of Cooperative Production "Julián Alemán", in the municipality of Consolación del Sur in the province of Pinar del Río, an entity noted for its economic and social results in recent years; however, the predominant management approach does not contribute to the adoption of quality as a general management function, which allowed to deepen the research problem addressed

here. The objective of this article was to present the results of the diagnosis of quality as a management subsystem, which constitutes a starting point on the road to improving this function in the cooperative. In order to solve the problems identified, the historical-logical method was used to analyze the evolution of quality in the agro livestock sector; the analysis-synthesis, which allowed revealing the essential relationships and more general characteristics of quality, leadership and people's commitment. Among the research techniques used were interviews, surveys, checklists and documentary analysis. The main results of the diagnosis were the predominance of an approach to quality that privileges inspection with a tendency towards control in the production process, which contributed to reach conclusions, among which stand out the inadequate administration of resources, as well as the lack of integration between functional and business areas, which has a negative impact on the efficacy and effectiveness of cooperative management in general.

**Keywords:** quality management; agro livestock cooperative enterprises; basic unit of cooperative production

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## RESUMEN

La presente investigación se desarrolló en la Unidad Básica de Producción Cooperativa "Julián Alemán", del municipio de Consolación del Sur en la provincia de Pinar del Río, entidad destacada por sus resultados económicos y sociales en los últimos años; no obstante, el enfoque de gestión predominante no contribuye a la adopción de la calidad como función general de dirección, lo que permitió profundizar en el problema de investigación que aquí se aborda. El objetivo del presente artículo fue exponer los resultados del diagnóstico de la calidad como subsistema de gestión, lo cual constituye punto de partida en el camino hacia la mejora de esta función en la cooperativa. Para la solución de los problemas identificados, se utilizó el método histórico-lógico a fin de analizar la evolución de la calidad en el sector agropecuario; el análisis-síntesis, el que permitió revelar las relaciones esenciales y características más generales de la calidad, el liderazgo y el compromiso de las personas. Entre las técnicas de investigación utilizadas, se encuentran la entrevista, la encuesta, las listas de verificación y el análisis documental. Como principales resultados del diagnóstico, resalta el predominio de un

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enfoque hacia la calidad que privilegia la inspección con tendencia hacia el control en el proceso productivo, lo que coadyuvó a arribar a conclusiones, entre las que se destacan la inadecuada administración de los recursos, así como la falta de integración entre las áreas funcionales y las de negocio, lo cual repercute desfavorablemente en la eficacia y eficiencia de la gestión cooperativa en sentido general.

**Palabras clave:** gestión de la calidad; empresas cooperativas agropecuarias; unidad básica de producción cooperativa

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## RESUMO

A presente investigação foi desenvolvida na Unidade Básica de Produção, Cooperativa "Julián Alemán", do município de Consolación del Sur, na província de Pinar del Río, entidade que se destacou por seus resultados econômicos e sociais nos últimos anos; entretanto, a abordagem gerencial predominante não contribui para a adoção da qualidade como função gerencial geral, o que nos permitiu aprofundar o problema de pesquisa aqui abordado. O objetivo deste artigo foi apresentar os resultados do diagnóstico da qualidade como subsistema de gestão, o que constitui um ponto de partida no caminho para o aprimoramento dessa função na cooperativa. Para a solução dos problemas identificados, foi utilizado o método histórico para analisar a evolução da qualidade no setor agrícola; a análise-síntese, que permitiu revelar as relações essenciais e características mais gerais de qualidade, liderança e empenho das pessoas. Entre as técnicas de pesquisa utilizadas estão a entrevista, levantamento, checklist e análise documental. Como principais resultados do diagnóstico, destaca-se o predomínio de uma abordagem da qualidade que favoreça a fiscalização com tendência ao controle do processo produtivo, o que contribuiu para a obtenção de conclusões, entre as quais se destaca a gestão inadequada dos recursos, bem como tal. como a falta de integração entre as áreas funcionais e de negócios, o que afeta negativamente a eficácia e eficiência da gestão cooperativa de um modo geral.

**Palavras-chave:** gestão da qualidade; empresas cooperativas agrícolas; unidade básica de produção cooperativa

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## INTRODUCTION

The agro livestock product or supply includes a combination of goods and services. Deciding on the quality the product is going to have is one of the most important decisions to be made within the product strategy in the agro livestock sector. According to Guerra (2002), a product, whatever it may be, should not necessarily be produced with the highest possible quality, but with the highest quality demanded by the client.

The main parameters to consider in an agro livestock product may be (Aguilar Valdés et al., 2016):

- Quality level (high, medium or low)
- Consistency of quality (permanence of the same level of quality over time). For example: that grains or meat production always have the same defined attributes, with no variability between consignments

One of the important specifications of a contract in the field of agro livestock production is to specify the quantity and quality of the product to be purchased and sold. The total weight or volume is specified in number of physical units of product (kilograms, tons, liters, etc.), or the number of units of packaging when the net (weight or volume of product per unit of packaging, excluding packaging) or gross (with packaging) has been specified; however, the attributes of the service component are rarely specified.

In relation to the qualitative specification and, in general, to the quality of the product, a series of attributes or characteristics are usually specified that are expected and that distinguish them (Aguilar Valdés et al, 2016), such as chemical composition (percentage of fat in milk, acidity of oil, alcoholic strength in alcoholic beverages), nutritional or food composition (proteins, carbohydrates, lipids, vitamins, mineral salts, etc.), organoleptic sensory attributes (type of fruity flavor of a wine, type of smell or aroma of a fruit, shape and color of a fruit or vegetable, etc.) and even the degree of impurities or disposable or negative factors (percentage of fat in a meat, potential cholesterol content, etc.). All this will influence the characterization and quality perception of the product.

The existence of a set of quality standards, i.e., the standardization and typification of products, facilitates this specification and quality reference (Caldentey Albert et al., 1999).

Thus, the quality of agricultural products begins on the farm: land preparation, selection of planting materials (seeds and others), use and application of agrochemicals, harvesting, handling and manipulation in the marketing chain. To maintain quality, a whole protocol must be followed about how to invest in traceability, food safety and good agricultural practices, among others.

Most agricultural products are highly perishable and sensitive to deterioration, which can occur at different stages of production, from planting, to harvesting, handling, transport and storage (Guerra, 2002). This causes great economic and production losses to farmers every year; however, these losses can be reduced to a high degree if there is adequate management at each stage of the agri-food chain. The useful life of fresh products depends on several factors such as the nature of the product, the rate of water loss, handling and storage practices; therefore, it is important to know both the variables involved in the deterioration of agricultural products and the measures necessary to maintain their maximum possible quality throughout the life of the product (Fonseca et al., 2011).

In relation to the service component that is present in the agro livestock supply, the dimensions of service quality should be taken into account. According to De la Nuez Hernández and Collazo (2018), when assessing service quality, customers rely on five factors: reliability, responsiveness, tangibility, security and empathy.

The most important of these, according to this author, is *reliability*, which means that what is promised to the customer must be what can actually be produced, since a promise creates an expectation, which, if not fulfilled, leads to dissatisfaction.

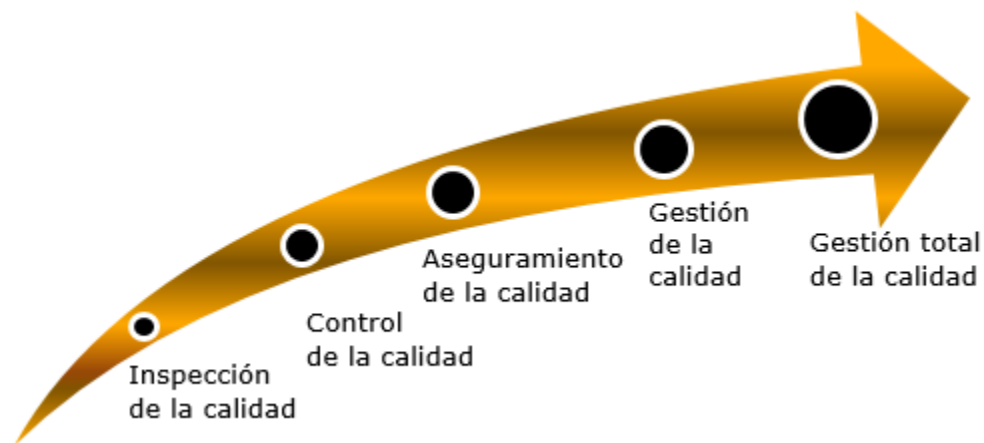
Second in importance is *safety*, because when customers buy the product, they are buying more than that, they are also buying the assurance that they will not be in any physical danger, as well as the professionalism and experience of the staff. Customers need to feel confident that the product providers are trained to perform the tasks they are doing and that they are capable of reacting correctly to the unexpected.

The third is *responsiveness*, since when establishing communication with some aspect of the entity, with the objective of resolving their problem, the customer wants this to happen without delay.

Another service attribute is *tangibility*, i.e., everything that the customer can accurately perceive in the organization's facilities or in some aspect related to its image.

Among other important aspects, *empathy* also stands out, which is given by the staff's expression of sensitivity towards customers, i.e., when they make them feel special and valued customers.

On the other hand, according to Meizoso Valdés and Guerra Breña (2012), the evolution of quality should be studied as the process that starts from the inspection of product quality to its total management in organizations. According to this author, the evolutionary process of quality development has gone through five stages (Fig. 1).



**Fig. 1** - Evolutionary stages of quality development

Source: Prepared by the authors based on González Contreras and De la Nuez Hernández (2020)

Quality management is achieved through the establishment, in the organization, of a management system in which the quality policy and objectives are defined and complied with. In this sense, Camisón, Cruz and González (2006) state that a Quality Management System (QMS) cannot exist by itself, but must be integrated into the processes,

procedures, work instructions, measurements and controls, etc., of the organization's own operations.

The development of these systems provides sources of detection of non-quality generating activities; these elements, if not used and developed taking into account all the circumstances of the activity, can be generators of useless bureaucracy and unnecessary complications for the activities.

When agricultural production units are willing to develop and implement a QMS and decide to comply with a standard or protocol in accordance with the demands of buyers or interest in a given market, this process must be inspected and approved by an independent and specialized entity which, in the Cuban case, is the National Standardization Office, which initiates the implementation process for certification purposes. This is understood as the result of evaluating compliance with the specified requirements, which are compared against defined references such as technical standards, regulations, protocols or codes of conduct (Ortiz Marcos et al., 2012).

In the agro livestock sector, quality systems are oriented more towards product certification, although these schemes are increasingly including aspects related to production systems and related processes (Fonseca et al., 2011).

As for the enterprises belonging to the agro livestock sector in the current Cuban context, specifically the agro livestock cooperatives, the number of entities that have managed to certify their quality management systems based on the Cuban Standards ISO 9001:2015 is still null. In the authors' opinion, these entities are called to undertake a necessary path towards the adoption of quality as a function to be performed by all cooperative members and, in particular, by those members elected to occupy managerial positions, such as the president of the Board of Directors, economist and other cooperative members, as opposed to the conception of quality as a mere attribute of the agro livestock product.

In analyzing the significance of the Basic Units of Cooperative Production (UBPC in Spanish) as a cooperative form of development of Cuban agriculture, Piñeiro Harnecker (2011) states that "the figure of the UBPC constitutes a dialectical synthesis of the development achieved by all Cuban agriculture". Undoubtedly, the UBPCs constitute,

since their emergence, an instrument of reorganization of the productive forces and activation of the role of man inside them to achieve more stimulating production relations.

The "Julián Alemán" UBPC represents one of the three types of agro livestock cooperatives reaffirmed in Decree-Law No. 365 /2019. Created in 1993, it does not escape the imperative of improving its management in order to achieve high quality standards in its productions, particularly in Virginia blond tobacco, its fundamental line. The starting point of this research points to the finding of a management approach that privileges the inspection function to the detriment of a more comprehensive philosophy towards quality as a subsystem of general management, hence the objective of the research was to expose the results of the diagnosis of quality as a subsystem of management, which is the first step on the way to improving this process in the cooperative in order to design and implement a QMS based on the Cuban Standards ISO 9001.

## **MATERIALS AND METHODS**

For the solution of the problems identified during the research, methods were used, including theoretical methods, among which the historical-logical method was used to analyze the evolution and development of quality over time and to identify regularities in the process of its management as an enterprise subsystem, the analysis-synthesis method, which revealed the essential relationships and more general characteristics of quality and cooperative enterprises. The empirical procedures used included measurement to carry out the qualitative diagnosis of the situation to be researched, based on techniques that include documentary analysis, interviews, surveys, among others.

The methodology used in the empirical diagnosis included the following stages (de la Nuez Hernández, 2005):

- 1<sup>st</sup>. Determination of information needs
- 2<sup>nd</sup>. Definition of the objective and scope of the diagnosis
- 3<sup>rd</sup>. Definition of information sources



- 4<sup>th</sup>. Design of formats for data collection
- 5<sup>th</sup>. Sample design
- 6<sup>th</sup>. Data collection, analysis and processing of information
- 7<sup>th</sup>. Presentation of the report

The content of each of these stages is described below:

1<sup>st</sup>. The information needs include the analysis of the predominance of the different management approaches to quality management at UBPC, namely: the predominant orientation or philosophy (inspection, control, assurance, management or total quality management), as well as evidence of compliance with the quality management principles of the ISO 9000 series (Customer focus, Leadership, Commitment of people, Process approach, etc.).

2<sup>nd</sup>. The objective of the diagnosis was to identify the limitations in the quality management process at the UBPC level (scope).

3<sup>rd</sup>. Secondary sources of information include available documents such as minutes of the general assembly, UBPC's balance sheets, development program, regulatory documents and others related to the cooperative's agricultural production. As for primary sources of information, they include subjects such as clients, managers and cooperative members in general.

4<sup>th</sup>. The design of formats for the collection of information includes a self-diagnostic questionnaire, a survey to measure the satisfaction of current UBPC clients, and a questionnaire in the form of an interview with members of the UBPC Board of Directors.

In order to know the perception of the cooperative members regarding the performance of the "Julián Alemán" UBPC, in the areas (Criteria) of Leadership, Planning and Strategy, Personnel Management, Resource Management, Process Management and the impact on the satisfaction of the cooperative members, the customer, the society and the results of the organization in general, the self-diagnosis questionnaire was applied. The following moments were taken into account in its elaboration:

1. Analysis of instruments (questionnaires) available in the literature related to quality diagnosis as a management tool. Nineteen questionnaire guides were analyzed, among the main ones, taken as reference, are:
  - Questionnaire to evaluate the company's situation with respect to the ISO 9001:2015 QMS. <http://www.infocalidad.net/cad/index.php3>
  - Self-diagnosis <<CDE Consultants>>. Consulting services in advanced management systems. <http://www.cde.es>
  - Profile for the integral self-assessment of organizations according to the EFQM model. <http://www.cig-calidad.com>
  - Self-diagnostic questionnaire in option to the National Quality Award of the Republic of Cuba. <http://www.onn.cu>
2. Selection of the questionnaire that served as the basis for delving deeper into the causes that affect the problem under study. As a result of this analysis, a 64-question questionnaire was designed (de la Nuez Hernández, 2005), which is an adaptation of the one used by the European Foundation for Quality Management (EFQM). Its development is based on an in-depth study of the same and, in the opinion of the authors, offers the following advantages:
  - It helps the organization determine its current position, as well as future directions and priorities
  - Allows comparisons with the results of other organizations
  - Stimulates in the organization the culture of continuous improvement through periodic self-evaluation, measurement of progress and consequent corrections
  - It includes the variables that, in the authors' opinion, make it possible to determine the causes that have a considerable impact on the problem posed
3. Determination of the sample size. The questionnaire was applied to the 52 cooperative members that make up the UBPC, thus covering 100 % of the population studied
4. Validation of the questionnaire. In the process of its preparation, the opinion of 7 specialists was taken into account, who, together with their previous experience in carrying out diagnoses on quality as a management tool, have knowledge of the agricultural sector and contributed with their opinions and criteria to its improvement

5. Questionnaire processing. To answer the questions in the questionnaire, four response possibilities are defined, which are assigned a value in ascending order of 0, 33, 67 and 100 percent respectively, according to the degree of progress assigned by the respondent. From the answers that are consolidated in the evaluation form, which are included in the questionnaire, the value obtained in each criterion is calculated (9)

Thus, the maximum (ideal) score assigned to the criterion is obtained by multiplying the number of respondents by the number of sub-criteria.

According to the importance of the criterion, the European EFQM experts assign it the corresponding % (ideal); therefore, the sum of these is 100 %: Leadership (10 %), Personnel management (9 %), Planning and strategy (8 %), Resources (9 %), Processes (14 %), Staff satisfaction (9 %), Customer satisfaction (20 %), Impact on society (6 %) and Organizational results (15 %).

The respondent has four possibilities to choose from, according to the degree of progress he/she appreciates: no progress (0%), some progress (33%), significant progress (67%) and objective achieved (100%).

The score given (actual) by the evaluators to the criterion is obtained as follows: marks in column 1 x 0 + marks in column 2 x 33 + marks in column 3 x 67 + marks in column 4 x 100.

In such conditions, the achieved (actual) percentage of any of the sections of the questionnaire is obtained by determining what decimal fraction represents the score given in relation to the maximum possible (ideal) score, defined by the model, which is multiplied by the maximum (ideal) percentage of each criterion, also established by the model.

In a formula, it is represented as follows:

$$\% \text{ logrado por cada criterio} = \frac{\text{Puntuación otorgada}}{\text{Puntuación máxima posible}} \times \% \text{ asignado en el modelo}$$

At the risk of considering that the application of the self-diagnostic questionnaire might be insufficient to obtain information on the levels of effectiveness related to external customer satisfaction, an interview (adapted from the original by De la Nuez, 2005) was conducted with the members of the Board of Directors. To facilitate the analysis of the results of the interviews conducted, four response categories were defined associated with:

1. Attention to complaints received
2. Customer information
3. Staff empathy (cooperative members)
4. Responsiveness

In order to measure customer satisfaction, it is used a methodology adapted from the original one proposed by D'Elia (1999). Starting with the definition of the cooperative's customers, it was proceeded to segment them by different variables (by type: buyer, by payment capacity, by invoicing, etc.) Then, the attributes of the product or the offer (Virginia blond tobacco) to be measured were defined through a market study in which the attributes of the product were established and validated; they were weighted with them to be subsequently evaluated according to their perception, through a scale by which a numerical value was assigned for each degree or level of satisfaction, with the objective of computing in a single indicator (at most, 2 or three indicators should be considered) the degree of satisfaction perceived by the customer. To capture the information on the degree of satisfaction, a survey is used, the format of which appears in the reference methodology.

5<sup>th</sup>. Sample design. In the case of the self-diagnostic questionnaire and the interview, we worked with 100% of the population to be studied, so it was not considered pertinent to calculate a sample size to measure customer satisfaction; however, it was decided to survey the main customer of the cooperative, the Empresa Integral y de Tabaco (EIT) Consolación del Sur, whose purchases represent more than 80% of the cooperative's income.

6<sup>th</sup>. Automated procedures and the expertise of specialists in research techniques are combined in the processing of the data.

7<sup>th</sup>. In the following sections, a synthesis of the results obtained by each instrument used in the empirical diagnosis is described.

## RESULTS AND DISCUSSION

The analysis of the documents considered as secondary sources of information makes it possible to establish a kind of profile of the organization under study, in which the following can be highlighted.

The "Julián Alemán" Basic Unit of Cooperative Production of blond tobacco, located in the municipality of Consolación del Sur, province of Pinar del Río, was constituted on December 23, 1993, it groups 52 cooperative members; its fundamental production includes *Virginia* blond tobacco and other crops, among which vegetables, fruit trees and forestry stand out. To carry out its productive activity, it has an extension of 120 hectares, 105 of which are cultivable.

UBPC's organizational structure includes the General Assembly (GA) as the highest management body, composed of the 52 cooperative members; it is subordinated to the Board of Directors composed of 7 members (president, economist, head of production and four other members elected by the GA). This Board of Directors periodically renders accounts of its actions and decisions to the GA and constitutes the cooperative's management and administration body between general assemblies, as established in Decree-Law No. 365 (2019).

The UBPC also created a Control and Auditing Commission that periodically reports to the General Assembly and is made up of 4 cooperative members, who are not part of the Board of Directors. This committee is responsible for monitoring compliance with legal provisions, the use of financial and material resources, as well as other elements of the cooperative's internal control.

The president of the cooperative heads the General Assembly of cooperative members and the meetings of the Board of Directors; in both cases, he/she is responsible for the fulfillment of the agreements adopted, represents the cooperative and periodically reports on his/her management to the body that elected him/her, as established in the aforementioned Decree-Law. In the UBPC under study, according to the cooperative's

records, its president is considered an example among the cooperative members and has obtained different innovation awards related to the transformations successfully developed in the cooperative, mainly associated with tobacco cultivation, among which the tunnels for the cultivation of postures and the machine for pruning them, which have been generalized throughout the country, stand out.

As stated in Article 26 of the Regulations of the Decree-Law "On Agro livestock Cooperatives", Chapter I (Common Provisions) (page 575), the members of the Board of Directors are not assigned functions related to quality as a management function, thus corroborating the technical approach to quality, i.e., it is not assumed as a general function of the members of the Board of Directors in the first place and of all cooperative members in a general sense.

Similarly, when allusion is made to relations with the state-owned enterprise to which the UBPC is linked, which in this case is Empresa Integral y de Tabaco Consolación del Sur, specifically in the content of the annual production plans, no activities related to quality are conceived as a function of guaranteeing its management.

The fundamental client of the cooperative is Empresa Integral y de Tabaco Consolación del Sur; once the tobacco season is over, this company buys all the tobacco production from the cooperative, the rest of the production (sweet potato, bean, lettuce, eggplant, mango, corn, bean and bell pepper), once the contracts with the state (represented basically by EIT and Empresa Provincial de Acopio) are fulfilled, is sold to natural or legal persons as established in Decree Law No. 365 (2019) on Agro livestock Cooperatives.

The cooperative's main supplier is the Unidad Empresarial de Base (UEB) of services, which also belongs to the EIT Consolación del Sur. For the purchase of raw materials and materials needed during the production process from the Empresa de Suministros Agropecuarios<sup>1</sup>, the cooperative depends on the capacity assigned to it by the EIT, which, in most cases, affects the degree of autonomy and, consequently, the performance of the cooperative.

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<sup>1</sup> Integrated to the Logistics Business Group of the Ministry of Agriculture (GELMA)

With respect to the economic-financial results achieved by this unit in recent years, it is possible to appreciate a stable behavior with respect specifically to the obtaining of profits for a period of eleven consecutive years. Although these results vary from year to year due to changes in the prices of inputs, new resolutions regulating agricultural activity and taxes that did not exist before, as well as the instability of the climate with periods of prolonged drought, the results continue to be favorable, and there are no incidents of theft, which demonstrates the effectiveness of the prevention plan that has been developed.

On the other hand, the documentary analysis also shows that the decision to design and implement a Quality Management System as a way to guarantee quality standards throughout the organization, adjusted to the needs of the clients, is not perceived among the perspectives of the Board of Directors of UBPC.

The above allows to affirm, moreover, that an adequate diagnosis of the organization has not been made according to current concepts, in which approaches and trends associated with customer orientation prevail, towards processes and, therefore, the procedures used suffer from the limited strategic nature of quality management at the UBPC.

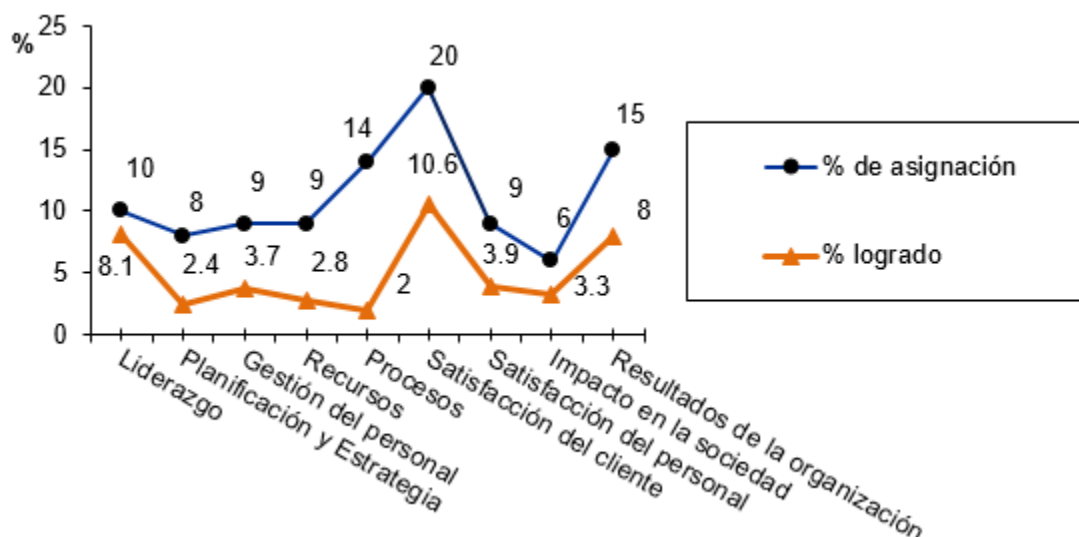
The reference to the "development program" as a synonym of strategy or strategic plan is also noted, which shows a distortion of both concepts; the development program must be preceded by a strategic plan or strategy, since, according to Guerras Martín and Navas López (2015) "Development programs must be part of a broader planning process, constituting only instruments for its materialization, regardless of whether they acquire their own life after being elaborated". From the above, it is derived that the cooperative erroneously assumes the development program as a strategy or strategic plan.

At the risk of considering the analysis of secondary sources of information as insufficient, several instruments were applied to capture information from primary sources.

In the following sections, a summary of the results obtained by applying the aforementioned empirical diagnostic techniques is presented.

## Results of the self-diagnostic questionnaire

Fifty-two cases were processed for 100% of the estimated population. The profile defined by the UBPC is represented below (Fig. 2).



**Fig. 2** - Graph showing the profile of the UBPC "Julián Alemán"

Source: Authors' elaboration with the help of Microsoft Excel

As can be seen in the graph in Figure 2, in the "Julián Alemán" UBPC the most critical values are located in 5-Process management (2.0 %), 2-Planning and Strategy (2.4 %) and 4-Resource management (2.8 %) when evaluating how work is done internally and when evaluating how management is perceived, the areas with the greatest problems are focused on the impact on personnel (3.9 %) and on the results of the organization (3.3 %). It is significant to appreciate in this result that, although the evaluators perceive that the entity's management tends to act to improve the conditions of the personnel (cooperative members) and is working towards their training and the improvement of the cooperative in general, it does not manage to translate this into perceived results; this aspect is assigned 9 % in the reference model.

Upon analyzing the results of the self-diagnostic questionnaire in greater depth, we conclude that the main findings include the following:



- The exercise of leadership in the management of the cooperative is recognized to some extent, the respondents assign to this criterion values that are significantly high (8.1 %) with respect to the maximum value attributed to it, according to the reference model (10 %). This suggests that the members of the Board of Directors in general are adequately committed to developing and implementing a culture of excellence and the values necessary to achieve the continuous improvement of the organization
- Since there is no clear distinction between the terms organizational strategy (of the cooperative) and development program, the necessary focus on the different stakeholders is lacking, which affects the fulfillment of policies, objectives and plans to make them a reality; this is reflected in the score obtained by the entity (2.4%) out of a maximum of 8% assigned to this criterion by the experts
- The full potential of the personnel is not used to continuously improve; the evaluators give 3.7% to this criterion out of a maximum of 9% assigned. Such a score evidences problems in communication, recognition and motivation towards people on the part of the organization's management
- Deficient management, use and conservation of resources to be taken into account for planning and strategy; this criterion has a remarkably low score (2.8%) compared to a maximum of 9% assigned, according to the model used for the diagnosis; among the factors that most affect this result are relations with suppliers, information and knowledge management and technology management
- Predominance of the functional approach over the process approach in the management of the cooperative. According to the diagnosis carried out, this criterion receives a score of 2.0 % vs. 14 % maximum to be granted, according to the model used; in this sense, it is detected that the processes that take place in the cooperative are not clearly identified and the adequate feedback with the environment is not established
- The criterion referring to customer satisfaction receives a moderate score of 10%, compared to a maximum of 20% assigned in the reference model; the aspects that most influence this result are those referring to the periodic measurement of customer perception, customer information on the aspects that affect their satisfaction and the degree to which the organization responds to the opportunities offered by the evaluations it carries out on customer satisfaction

- The results of the surveys show a dispersion in the values assigned to the criterion related to staff satisfaction (cooperative members), according to the perceptions of the participating evaluators, which reveals certain differences in the behavior of each one. However, in general, there are similarities in the overall evaluation assigned to the UBPC
- Criterion number eight (impact on society) has a low score (3.3%), compared to the maximum score given by the experts (6%). However, in the opinion of the authors, this is the perception of the cooperative members, which does not necessarily coincide with that of other stakeholders. However, recognizing that the entity does not systematically measure the perception of society on the image of the cooperative and that there are problems of communication with the community, this does not mean that the impact programs are scarce in terms of the results obtained
- In relation to the criterion that evaluates the results of the organization, a low score is obtained with respect to the maximum value assigned in the model; this is reflected in the number of marks registered in the aspects related to the evaluation and assessment of the performance of the organization, which refer to economic-financial and non-financial results and other activities related to the social responsibility of the cooperative in its environment

### **Results of the interview with the members of the Board of Directors**

When reconciling the opinions of the interviewees by category of analysis, we find elements that coincide, among which the following stand out:

- The number of complaints is relatively high compared to previous years
- There are deficiencies in the cooperative's communication with the client, particularly related to channels and media. These findings may be influenced by a weak contractual relationship, with excessive supervision by EIT Consolación del Sur still prevailing
- There is no evidence of follow-up on complaints and claims, which reveals problems with the customer focus, one of the quality management principles of the Cuban ISO 9000 standards

- The quality of customer service is not systematically measured, affecting the cooperative's responsiveness

### **Customer survey results**

Tabulating the results of the aforementioned survey of the cooperative's main customer (EIT Consolación del Sur), we obtain values that reflect a deterioration of the satisfaction index as follows: 0.35; the product quality attributes (Virginia blond tobacco) that most influence this result are:

- Class authenticity (refers to the classes established in the quality specification standards and the official harvesting plan)
- Leaf quality (in terms of size, color and texture)

However, in the authors' opinion, these requirements only refer to tangible aspects of the product and do not include other factors related to the quality of the service in general, present at the moment of sale, for example, such as: reliability, professionalism, safety, friendliness or empathy of the personnel receiving the buyer, as well as the responsiveness of the UEB in the sale and after-sale of the product.

### **Summary of the diagnosis**

In attention to the results of the diagnosis carried out, it can be concluded that by the end of 2019, in the "Julián Alemán" UBPC:

- The result of its production process represents a tangible good (the agro livestock product), however, the service component of this offer is neglected, which has an impact on sales results
- Its main labor force is generally qualified to perform the required activity
- A functional approach to management prevails, resulting in inadequate resource management and lack of integration between functional areas (production, economy) and business areas (production sales)
- The members of the Board of Directors are not assigned quality management functions

- An inspection approach with a tendency towards quality control prevails as a philosophy towards this management subsystem
- The design of the quality management system is not yet perceived as a necessity on the way to improving its performance as a non-state form of management, all of which has a negative impact on the effectiveness and efficiency of cooperative management in general

The diagnostic report presented is the starting point for the proposed solution (procedure for quality management) to the problem identified, which is related to the predominance of an approach that privileges the inspection function with a tendency to quality control. Together with the systematization of theoretical and methodological references associated with the quality management process in agro livestock cooperative enterprises, it will contribute, to a considerable extent, to improving this subsystem of enterprise management in the organization under study, so the authors intend to expand the analysis of this object of research in future publications.

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#### **Conflict of interest:**

Authors declare not to have any conflict of interest.

#### **Authors' contribution:**

All authors reviewed the writing of the manuscript and approve the version finally submitted.



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