

Original article

Comprehensive management of risk and insurance: distinctive features in agricultural cooperatives



La gestión integral de riesgos y seguros: rasgos distintivos en las cooperativas agropecuarias

Gestão integrada de riscos e seguros: características distintivas das cooperativas agrícolas

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ABSTRACT

In the current Cuban context, based on the demands of endogenous local development and the natural, environmental, technological, socioeconomic and legal environment in which agricultural cooperatives develop their activities, the improvement of comprehensive management of risk and insurance systems is an unavoidable need, as an essential component of their management, since it allows these organizations to face more effectively the events to which they are exposed. In the specific case of the municipality of Consolación del Sur, there are 50 structures of this type, which are key to the development of the municipality's productive center and, therefore, to local sustainable development. In recent years, these organizations have had important losses due to different events, especially natural and technological, which have affected their economic and financial stability. The research presented here is aimed at analyzing the particularities of the process of comprehensive management of risk and insurance in the agricultural cooperatives of the municipality of Consolación

del Sur. For its development, theoretical and empirical methods were used, as well as techniques for the collection and processing of information, making it possible to carry out a diagnosis of the current state of the process under study in the agricultural cooperatives of the municipality, which allowed determining the management that these organizations make of uncertainty, risks and insurance, the development of appropriate tools for the identification, evaluation, reduction, mitigation and control of the risks that affect the normal development of these companies, as key actors for the development of the municipality.

Keywords: comprehensive risk management; insurance; agricultural cooperatives.

RESUMEN

En el contexto cubano actual, a partir de las exigencias del desarrollo local endógeno y del entorno natural, ambiental, tecnológico, socioeconómico y legal, en el cual desarrollan su actividad las cooperativas agropecuarias, constituye una necesidad insoslayable el perfeccionamiento de los sistemas de gestión integral de riesgos y seguros, como componente imprescindible de su gestión, al permitir a estas organizaciones enfrentar con mayor efectividad los eventos a los que se exponen. En el caso concreto del municipio Consolación del Sur existen 50 estructuras de este tipo, que son clave en el desarrollo del polo productivo del municipio, por ende, en el desarrollo local sostenible. En los últimos años, estas organizaciones han tenido importantes pérdidas por diferentes sucesos, especialmente naturales y tecnológicos, que han afectado su estabilidad económico- financiera. La investigación que se presenta está dirigida a analizar las particularidades del proceso de gestión integral de riesgos y seguros en las cooperativas agropecuarias del municipio de Consolación del Sur. Para su desarrollo se emplearon métodos teóricos y empíricos, así como, técnicas para la recolección y procesamiento de la información, posibilitando la realización de un diagnóstico del estado actual del proceso objeto de estudio en las cooperativas agropecuarias del referido municipio, lo que permitió determinar el manejo que estas organizaciones hacen de la incertidumbre, los riesgos y el seguro, el desarrollo de herramientas apropiadas para la identificación, evaluación, reducción, mitigación y control de los riesgos que afectan el normal desarrollo de estas empresas, como actores claves para el desarrollo del municipio.

Palabras clave: gestión integral de riesgos; seguros; cooperativas agropecuarias.

RESUMO

No atual contexto cubano, com base nas exigências do desenvolvimento local endógeno e no ambiente natural, ambiental, tecnológico, socioeconômico e legal em que as cooperativas agrícolas realizam suas atividades, a melhoria dos sistemas integrados de gestão de riscos e seguros é uma necessidade inevitável como componente essencial de sua gestão, pois permite que essas organizações lidem de forma mais eficaz com os eventos aos quais estão expostas. No caso específico do município de Consolación del Sur, existem 50 estruturas desse tipo, que são fundamentais para o desenvolvimento do polo produtivo do município e, portanto, para o desenvolvimento local sustentável. Nos últimos anos, essas organizações sofreram perdas significativas devido a diferentes eventos, especialmente os naturais e tecnológicos, que afetaram sua estabilidade econômica e financeira. A pesquisa aqui apresentada tem como objetivo analisar as particularidades do processo de gestão integrada de riscos e seguros em cooperativas agrícolas no município de Consolación del Sur. Para o seu desenvolvimento, foram utilizados métodos teóricos e empíricos, bem como técnicas de coleta e processamento de informações, que permitiram realizar um diagnóstico do estado atual do processo em estudo nas cooperativas agrícolas do referido município, o que possibilitou determinar como essas organizações gerenciam a incerteza, os riscos e os seguros, o desenvolvimento de ferramentas adequadas para a identificação, avaliação, redução, mitigação e controle dos riscos que afetam o desenvolvimento normal dessas empresas, como atores-chave para o desenvolvimento do município.

Palavras-chave: gerenciamento integrado de riscos; seguros; cooperativas agrícolas.

INTRODUCTION

Risk is the degree of uncertainty that an entrepreneur has regarding the losses or profits generated by an investment. Thus, there are entrepreneurs who are riskier and others who are risk averse, which means that this attitude has a significant impact on the decision-making process.

It refers to the effect of uncertainty on objectives, so that, its management describes those coordinated activities that relate to risk, allowing to direct and control an organization (ISO, 2018).

It must be analyzed as a multidimensional concept, among other reasons, because it encompasses a wide range of hazards: human, technological, natural, environmental, occupational and

psychosocial, which must be assessed from all aspects of life. In the business context, it is essential, in order to make the company's strategy and its objectives be achieved, with an adequate risk-benefit ratio (Coso, 2017).

Risks are present in any type of activity, no matter how simple it may be. To this end, control mechanisms must be established for their proper management (Guerrero Aguiar et al., 2020). It would therefore be important to incorporate risk management into the strategic planning process, not only at the initial stage, when risks must be identified, but it should become a transversal axis of the entire planning and strategic management process, since failure to recognize and evaluate risks can lead to failure or non-fulfillment of objectives, especially strategic ones.

Enterprise risk management plays a very important role in the adaptation of new organizational management policies. Thus, today's executives are increasingly demanding when it comes to using information as a management tool in the different aspects that make up today's organizations. Within the framework of these demands, organizations in their different stages require executives who are increasingly prepared and adaptable to the environment that surrounds them, in order to make available to them different methodologies, procedures and other instruments that allow them to play a leading role in the risk management process, in the mitigation and control of risks in the business environment. (Varela Ledesma et al., 2019).

It constitutes the set of systematic efforts aimed at the analysis and mitigation of the causal factors of disasters, which includes the reduction of the degree of exposure to hazards, the reduction of the vulnerability of the population and property, an adequate use of the environment and a better economic and technical-material preparedness of the community to adverse events, reducing their impact on socioeconomic development (Reynaldo Argüelles et al., 2019).

Thus, risk management requires the establishment of actions connected in a structural, integral and permanent way to identify, analyze, measure, qualify, evaluate and monitor all types of risks that may affect the fulfillment of the organizations' objectives, with the purpose of responding with effective measures for their management and control through action plans.

Risk and its management are not something external to business development, but an intimate and intrinsic component of it. This means that risk management in its most advanced meaning should be transformative of realities, seeking to be coupled to become part of the new and more sustainable development processes (Milanés Batista et al., 2017).

Hence, it is considered as a systematic and systemic process in decision making, so it becomes a transversal axis of the process of management and strategic planning and management control, to effectively manage the risks that may affect the normal development of the organization; therefore, it is a strategic challenge if it is wanted to achieve better performance, grow and compete within each sector, becoming a basic component of business management that must be managed in an integral manner. (Vallejo Ilijama et al., 2019).

Risk comprehensive management basically consists of timely detecting the various risks that may affect the company in order to generate strategies that anticipate them, with the aim of turning them into profitable opportunities for the company. (ISO, 2015).

It implies a holistic, global management of risks at all levels of the organization, in order to facilitate the achievement of strategic direction and decision making, taking into account the interaction of the company with its environment, the relationship with stakeholders, the interrelation between processes, as well as the implementation of mechanisms that ensure business continuity and the protection of resources and interests. (Guerra Parada, 2019).

For comprehensive management of risk to be effective, it must be aligned with the organization's key functions; it is the responsibility of senior management to define the policies, strategic objectives and guidelines for risk management, and at the same time to continuously review the process. Additionally, organizations have the obligation to design adequate performance indicators, which must be permanently monitored and managers must assume responsibility before the risk committees for their compliance and feedback. (Guerra Parada, 2021).

Secondly, and in relation to the previous idea, risk comprehensive management makes it possible to recognize emerging risks and minimize threats, which, together with strategic planning, makes it easier to obtain an integral vision of the company, which can be reflected in an improvement of its image, an aspect that helps to promote its growth, since by carrying out work in an environment where risks are controlled, financial and operating resources can be used more efficiently.

Insurance management is one of the most important aspects of the policies used as part of risk comprehensive management, since it is based on the design of response strategies to extreme events and emergencies. Although insurance is a financial instrument that helps to mitigate the adverse impacts of extreme weather events, accidents, technological disasters and health events, the supply currently available does not cover all events nor, of course, the production and services that may be

affected by the absence of financial support to cover problems of productive infrastructure or inputs, thus helping to recover lost productive capacities. Insurance management makes it possible to manage losses, design policies and contingency plans, among other situations.

In the agricultural sector, comprehensive management of risk and insurance is based on the analysis of risk as the interaction between hazards and vulnerabilities, with the use of financing mechanisms that can counteract the situations that produce them. The origin of hazards is exogenous to the intervention and control capacity of producers and related public institutions. Vulnerabilities are the result of historical processes that shape the type of economic and social relations in the agricultural sector and are subject to the intervention of producers and government agencies. The interaction between hazards and vulnerabilities can be evaluated qualitatively and quantitatively to generate a high, medium or low risk rating for agricultural activity and the treatment to be given to these situations. (Central American Agricultural Council, 2013).

Agricultural cooperatives play an essential role in the agricultural sector, due to their characteristics and their social purpose. These entities are not unaffected by the threats and vulnerabilities inherent to the environment in which they are located, hence, adequate management of risk and insurance is essential for their development and, at the same time, for local endogenous development and the natural, environmental, technological, socioeconomic and legal environment in which they operate. In this sense, as part of the study presented, the comprehensive management of risks and insurance in a Cuban municipality is approached, that is why, this article aims to analyze the particularities of the process of comprehensive management of risks and insurance in the agricultural cooperatives of the municipality of Consolación del Sur.

MATERIALS AND METHODS

In the research, the dialectical-materialist method is assumed as the general method, which allowed determining the components of the object of study and the main dialectical relationships among them and their contradictions, as well as the foundation and integration of the theoretical and empirical methods used to deepen the essence of the comprehensive management process of risk and insurance in the agricultural cooperative sector. Among the theoretical methods, the historical-logical method was used to analyze the functioning, development and main trends of the process of comprehensive management of risk and insurance in its theoretical conception at the international and national levels, as well as its characteristics in a municipality.

The procedures used were: analysis and synthesis to determine the essential aspects of the process under study, breaking it down into its parts and qualities for the theoretical analysis, which were unified taking into account those common elements, which made it possible to understand it. The procedure of induction and deduction was also used, which made it possible to reason about the particularities of the process of integral risk and insurance management in the agricultural cooperative sector in a local context.

The empirical methods used were measurement and observation, in order to study the nature of the research object qualitatively and quantitatively.

In addition, the following research techniques were used: documentary analysis, interviews and surveys. The programs used to process the information were: Microsoft Excel, the SAMPLE estimation program and the Zotero reference manager.

RESULTS AND DISCUSSION

In the agricultural sector, threats are associated with internal and external factors, but external factors are the main causes that endanger the stability and functionality of enterprises and grassroots productive organizations. Among the threats affecting the agricultural sector, natural and climatological hazards are the most important.

Vulnerability is related to the capacity of a company or a community to face hazards and risks and is expressed in terms of physical, environmental, economic, social, political, educational, ideological and cultural, institutional and organizational conditions, among others. This capacity will be greater or lesser to the extent that these risks and threats are managed in a comprehensive manner, including the participation of insurance as one of the most important ways to share and/or transfer risks. (Cruz Bravo & Alfonso Morejón, 2019).

Effective risk management in the agricultural sector implies reducing the undesirable effects of extreme events, without worsening productivity and yields. Preventive and corrective strategies include mechanisms that are endogenous to the production units and exogenous to other actors in the context, including insurance systems, which exist throughout the world. Within risk management, an important place is occupied by the agricultural insurance mechanism, as an alternative source of financing, especially for the most catastrophic and serious risks.

Agricultural insurance, as a risk management tool, is fundamental for countries, especially those in which agriculture is an important sector, to achieve their leadership as agricultural powers and is of vital importance for extending protection to more agricultural producers, both private and state-owned.

Risk comprehensive management, especially in agricultural enterprises, should consider access to insurance as one of the most important risk transfer mechanisms for their development, in the face of the threats and vulnerabilities faced by this sector.

The following figure shows how the Economic Commission for the Americas and the Caribbean conceives the process of integrated risk management in the agricultural sector, as well as the role and place of agricultural insurance within this process.

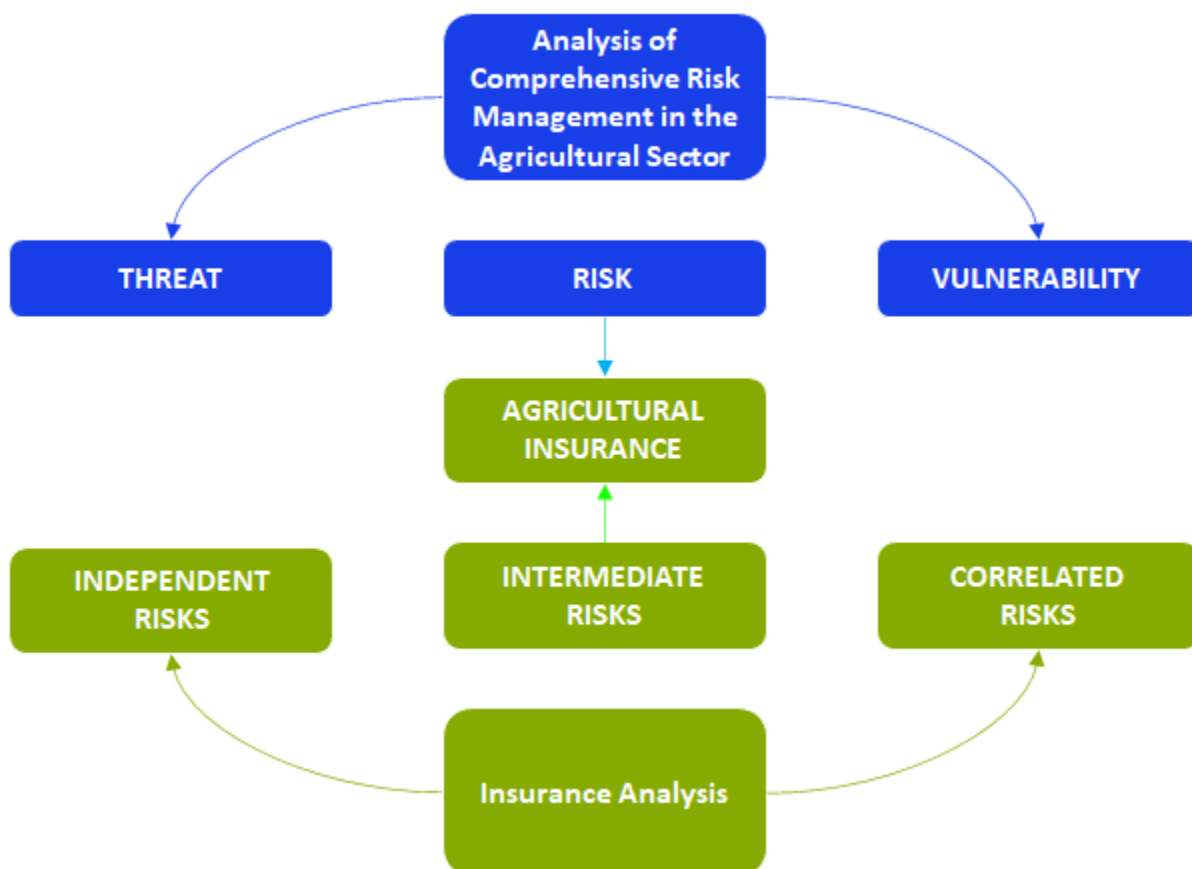


Figure 1. Comprehensive analysis of risk in the agricultural sector

Source: Central American Agricultural Council (2013)

In Cuba, various regulatory bodies act precisely on disasters: The National Civil Defense General Staff, the Environment Agency, the National Insurance Company (Esen), the Office of the Comptroller General of the Republic of Cuba, the Ministry of Agriculture (Minag), among others. Although treatment is provided from different perspectives, neither the coherent management of the risks associated with agricultural productions nor the increase in the necessary production levels has been achieved (Rodríguez Perea et al., 2019).

Within this context, the growth and development of the agricultural sector in Latin America and specifically in Cuba, agricultural cooperatives play an important role. In order to meet the demands of their comprehensive management, they need to use tools that allow them to manage all risks in a systemic way in all their dimensions: prevention, protection, mitigation, control and follow-up, but with the participation of all key local stakeholders, especially the local government.

The agricultural cooperative sector is one of the driving forces of the Cuban economy due to the levels of production it contributes to industry, tourism and social sectors. 70% of the land is managed by agricultural cooperatives and they generate more than 80% of vegetable production, 40% of meat production and 70% of dairy production, according to statistics at the country level.

On the other hand, this sector employs a considerable portion of the economically active population and is an important source of income for rural households. It produces basic foodstuffs for the population's food security, including corn, beans and rice. But it is also a sector of high socioeconomic and cultural heterogeneity, production methods and dynamism, and exerts strong pressure on the environment through deforestation, water consumption, soil degradation and pollution.

In this sense, it is necessary to train and develop capacities in the productive base on how to manage the wide range of current and potential risks they face, in a timely and effective manner, to ensure the normal development of all processes, especially the key processes, which guarantee the integral management of the cooperative. Being able to count on insurance is a fundamental part of the response, feasibility and sustainability of these companies, since it allows them to face the events to which they are exposed with greater resilience and financial capacity.

These companies are key to the development of the productive pole of the municipalities and, therefore, to local sustainable development. In recent years they have suffered important losses due to different types of events, especially natural and technological, which have affected their productive, economic-financial, social and environmental stability.

Characterization of the agricultural cooperative sector in the municipality of Consolación del Sur

The municipality of Consolación del Sur is located on the southern plain of the central-eastern part of the province, bordering to the north with the municipalities of Viñales, La Palma and Los Palacios, to the south with the Gulf of Batabanó, to the east with the municipality of Los Palacios and to the west with the municipality of Pinar del Río.

It has a territorial extension of 1 111.90 km² and a population of 88 055 inhabitants, according to the 2012 population census, for a population density of 79.2 inhabitants/km² which makes it the second largest municipality in the province, meaning that 51% of the total is represented by the male sex. It also has 59 settlements, of which 53 are rural and 6 are urban, with 30,890 and 58,060 inhabitants respectively.

In the territory there is an administrative structure of 12 popular councils; the most important sector of the economy is agriculture, which is a great source of employment for the residents. Among its fundamental branches is the production and commercialization of tobacco, for which there are two factories specialized in this indicator. Other sectors that stand out for their production volumes are rice, various crops (mainly viands and vegetables) and livestock (milk and meat), represented by the Genetic Livestock Company "Camilo Cienfuegos".

One of the strategic objectives to achieve true endogenous local development and the effective implementation of the Food Security and Sovereignty Plan at the local level is to execute and enforce the policy for the process of promotion, development and consolidation of cooperatives in the agricultural sector.

To achieve this objective, the municipality of Consolación del Sur has a total of 50 agricultural cooperatives: 5 Basic Units of Cooperative Production (UBPC), 10 Agricultural Production Cooperatives (CPA) and 35 Credit and Service Cooperatives (CCS), which are dedicated to the following processes: production and commercialization, purely of various crops (9), production of honey, wax and propolis (1 CCS), production and promotion of cattle (1 CCS), swine production (2 UBPC), tobacco production as a fundamental activity (37), which are also engaged in the production of various crops, fruit trees, cattle, goats, rabbits, among others.

The territory's agricultural cooperatives carry out integrated cooperative management based on the provisions of Decree Law 76/2023 "On Agricultural Cooperatives", which constitutes the legal framework that regulates internal actions (among and towards members) and external actions (towards other local stakeholders: government, Minag, Esen, National Tax Administration Office (Onat), among others) in the current context, both at the national and territorial levels.

One of the aspects regulated in this decree law is the relationship between the cooperatives and the state sector and local government. In the last five years there has been no positive impact on the participation and effective response of state agencies (Banco de Crédito y Comercio (Bandec), Onat, Municipal Finance Directorate, Esen), as technical and financial advisors to strengthen and develop these enterprises.

Although joint meetings between the National Association of Small Farmers (Anap), Minag and Esen, as well as meetings of cooperative presidents and pre-conciliation meetings for non-payments are held with the indicated frequency, the main problems of the cooperatives in their integral management are not analyzed in depth in these spaces, and there has not been a greater link between the specialists of these organizations and the boards of directors, assemblies and state controls.

One of the transversal axes within the comprehensive cooperative management is the management and prevention of risks and the relations with Esen to insure production, goods, crops, animals, among other issues.

The agricultural cooperative sector in the municipality of Consolación del Sur is not characterized by an insurance culture; it has 33 lines of insurance, all of which are voluntary, except for civil liability insurance for motor vehicles. Approximately 90.9% of tobacco crops are insured, but only about 15% of miscellaneous crops are insured.

In the case of tobacco and other productions, Bandec requires that, in order to grant loans, if the cooperative or the producers do not have collateral (cars, pledges, personal bank accounts), they must be insured, which makes this type of insurance almost mandatory.

Most tobacco houses are not insured (agricultural property insurance) because there is no correspondence between the insured value and the payments that producers must make for the construction and/or repair of these buildings, which are currently very expensive, which discourages

the contracting of this type of insurance, especially under the current conditions, since the monetary reordering.

Between Esen and the cooperatives there is a figure, the Insurance Representative, who acts as an intermediary in the management of insurance and whose salary depends on the amount of insurance, he/she manages, which is paid in the form of commissions by the agricultural cooperatives.

The Representative is seen as an independent entity that has no sense of belonging, neither to Esen nor to the cooperatives, so insurance is seen as a means to obtain commissions, without any financial analysis.

The above elements are the most significant to characterize the agricultural cooperative sector of the territory, and constitute the starting point for the diagnosis of the current situation of comprehensive management of risk and insurance in the agricultural cooperatives of the municipality of Consolación del Sur.

Diagnosis of the current situation of the integral risk management and insurance process in the agricultural cooperatives of the municipality of Consolación del Sur

The diagnosis was oriented in two directions, the first one aimed at analyzing the current state of the management process of risk and insurance of the actors involved in the agricultural cooperative sector (Boards of Directors, members, family members and other actors), in order to identify the perception about the process and its management. The second direction was the analysis of the tools currently used by agricultural cooperatives to manage current risks, as well as the level of implementation of Resolution 60/2011 on Internal Control and the role of the Audit and Control Committee, created at the level of agricultural cooperatives, according to Decree-Law No. 76/2023: "On Agricultural Cooperatives".

For the development of the diagnosis, the methodology developed by de la Nuez (2005) was applied. (2005) which consists of seven stages, as shown in figure 2.

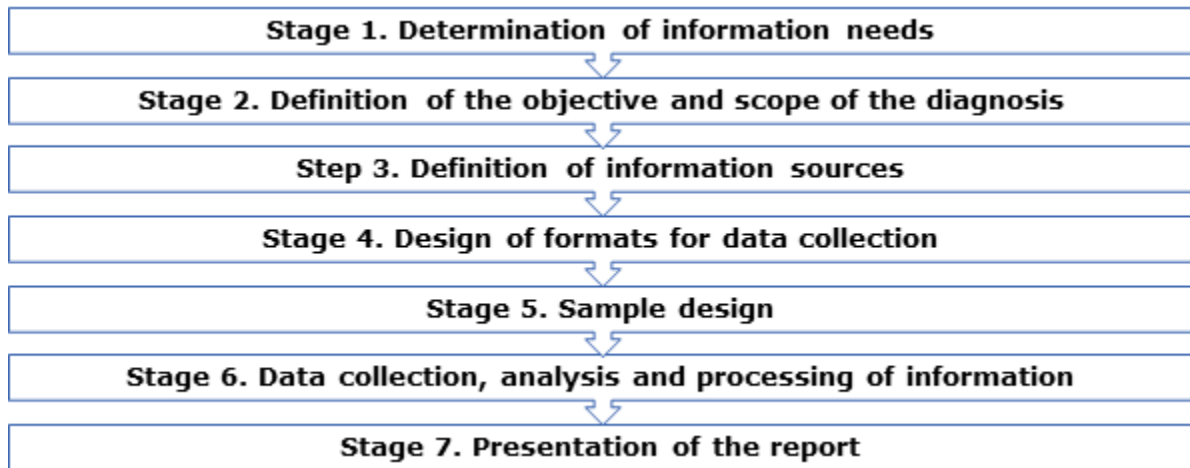


Figure 2. Stages of the diagnostic methodology

Source: Prepared by de la Nuez (2005)

The stages of the methodology were developed taking into account the following elements:

Stage 1. Determination of information needs

The information needs were oriented under the criterion of identifying the most representative agricultural cooperatives in the municipality in terms of: profitability and representativeness levels, mainly related to integral cooperative management, determining the role and place of integral risk management and the use of insurance as tools for minimizing losses in these entities.

Information requirements were also identified regarding the characteristics of the area, type of crop and soils, among others, taking into account that insurance should be focused on the specific risks that occur in each of them.

This stage was carried out through an analysis of documents showing statistical information from the databases of the Anap of the territory, the Provincial Directorate of the Esen, as well as the Municipal Delegation of the Minag, related to the process management of risk and insurance of the actors involved in the agricultural cooperative sector and the tools used to carry out such management.

Stage 2. Definition of the objective and scope of the diagnosis

The objective of the diagnosis was to evaluate the current status of the comprehensive management of risk and insurance process in the agricultural cooperatives of the municipality of Consolación del

Sur. For this purpose, among other aspects, the level of knowledge of the managers, members and actors involved in the 50 agricultural cooperatives of the municipality was evaluated, in relation to the use of tools to manage risks and the role of agricultural insurance as a means of financial transfer of risks and its impact on the decision-making process.

Stage 3. Definition of information sources

For the development of the diagnosis, two sources of information were used, complemented with methods and techniques of scientific research, which made it possible to diagnose the current state of the object of study.

It was worked with secondary sources of information through a documentary review that included: statistical reports provided by the Provincial Directorate of the National Insurance Company, minutes of the general assemblies of the agricultural cooperatives, their economic-financial balance sheets, minutes of meetings of the Municipal Directorate of Agriculture and the rest of the companies, the Program for Integral Development until 2030, Decree-Law No. 76/2023: "On Agricultural Cooperatives", the document that includes the 63 measures to increase food production, Resolution 60/2011 on Internal Control of the Comptroller General of the Republic, among other documents, the document that includes the 63 measures to increase food production, Resolution 60/2011 on Internal Control, among others. 76/2023: "On Agricultural Cooperatives", the document comprising the 63 measures to increase food production, Resolution 60/2011 on Internal Control of the Comptroller General of the Republic, among other normative documents.

It was also necessary to resort to primary sources of information, conducting interviews and surveys with managers and specialists linked to the operation of the agricultural cooperative sector in the municipality.

Stage 4. Design of formats for data collection

To collect the information, 10 structured group interviews were conducted with 10 people in each group, which led to a group discussion about the object of the study with producers from the municipality's agricultural cooperatives. The design and structure of the group interview was based on a script consisting of the following parts: opening and presentation, introductory question, content and closing of the interview.

In addition, two unstructured individual interviews were carried out, one with the directors of the Municipal Directorate of Esen in the municipality and the other with the directors of the Anap directorate of the municipality.

A survey was applied to the members of the 50 boards of directors of the municipality's agricultural cooperatives to evaluate the way in which the management process of risk and insurance is developed by the directors of these entities, as well as the use of tools for comprehensive management of risk and the use of insurance, as a function of decision making.

In designing the survey, standardized questions were developed and applied to the municipality's CPAs, CCSs and UBPCs. This process was carried out following two steps:

1. Initial analysis of surveys and other instruments related to the object of study in other branches and sectors, which were the starting points for the development of the instrument to be applied.
2. Preparation of the instrument to be applied, which was prepared by the authors based on the instruments previously analyzed and contextualized to the particularities of the agricultural cooperatives in the territory and to the characteristics of the territory itself. Two fundamental elements were taken into account for its implementation:
 - a. Multi-stakeholder approach to comprehensive management of risk and insurance at the local level.
 - b. Comprehensive vision of risk prevention, mitigation and transfer aimed at making agriculture more resilient, mainly in the cooperative sector and family farming.
 - c. Relationship between comprehensive management of risk and insurance and access to financing for credit unions, especially credit.

Stage 5. Sample design

It was decided to use simple random sampling to carry out the structured group interview with producers of the agricultural cooperatives of the municipality, determining an optimal sample size of 100 producers, for a confidence level of 95% and a sampling error of 9.7%; which made up the 10 groups mentioned above, which make up the group interviews.

In the case of the surveys, 100% of the directors of the boards of directors of the municipality's agricultural cooperatives were surveyed, 50 directors corresponding to the 50 agricultural cooperatives in the municipality.

Stage 6. Data collection, analysis and processing of information

The process of collecting, analyzing and processing the information was carried out through a combination of tools and the cooperation of specialists from the Municipal Delegation of the Minag, the Anap and the Municipal and Provincial Directorates of the Esen. The processing was carried out using Microsoft Excel, which allowed the processing of the surveys, and tape recorders to listen to the criteria in the case of the structured group interviews and the unstructured individual interviews.

Step 7. Presentation of the report

In the presentation of the final diagnostic report, only the aspects considered relevant were presented, in this case the main regularities derived from the triangulation of the results obtained from the application of the instruments.

Main regularities identified in the diagnosis carried out

The process of comprehensive management of risk and insurance in agricultural cooperatives should be considered an issue that should be approached from a multi-stakeholder vision composed of the Government, Minag, Anap and Esen. For this reason, the regularities were identified from two perspectives: from the perspective of the Boards of Directors and producers, as well as from the institutions that provide financial services (Esen) and those that should promote the necessary public policies to manage risks that threaten agricultural production and food security in the municipality (local government, Minag, Anap).

The main effect was the identification that the comprehensive management process of risk and insurance in agricultural cooperatives is not in line with the achievement of greater economic and financial stability of these entities. The most significant causes that affect the development of this process are as follows:

- Inadequacies in the generation of policies, strategies and instruments for management of risk and insurance in the agricultural cooperative sector.
- Lack of preparation in the agricultural cooperative sector in relation to management of risk and insurance.

- It does not focus on management of risk and insurance with an integral and multi-stakeholder vision, in order to generate risk prevention, mitigation and transfer instruments.
- Management of risk and insurance is not conceived as a process to mitigate productive and economic losses, managing risks through the use of insurance.
- Not all agricultural cooperatives draw up a prevention plan, nor is it used as a risk management and decision-making tool.
- Agricultural insurance systems are not focused within the integral vision of risk management.
- The particularities of agricultural cooperatives are not taken into consideration when contracting insurance.
- No relevance is given to the initiation of new projects and strategic development initiatives based on management of risk and insurance in agricultural cooperatives.

With this information, the Cause-Effect Diagram shown in figure 3 was prepared.

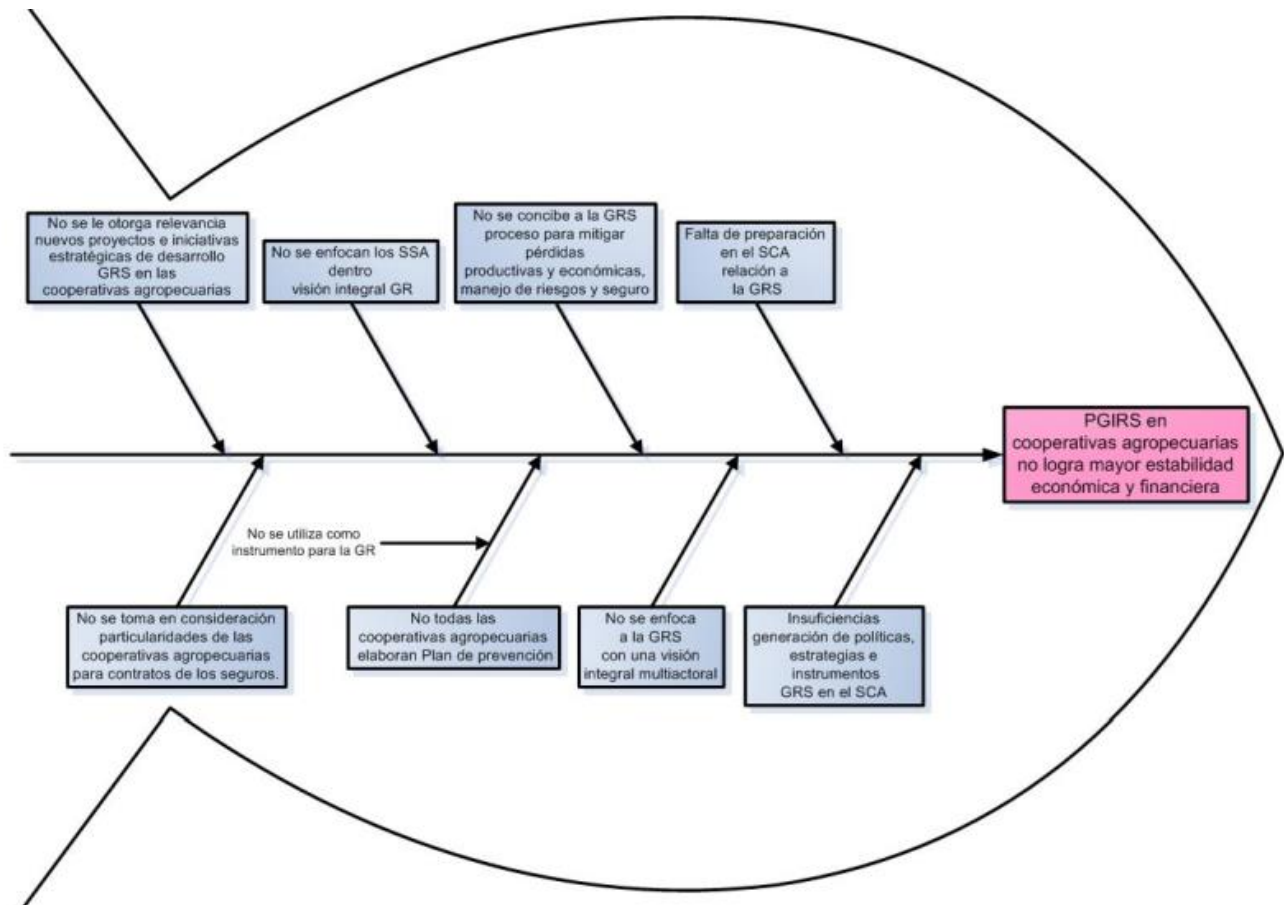


Figure 3. Cause-Effect Diagram

Source: Own elaboration

The study made it possible to understand that comprehensive management of risk and insurance constitutes the set of policies, procedures, measures and practices adopted for the treatment of risks, that is, to establish the context, identify, analyze, estimate, evaluate, control, monitor and communicate risks, which requires sufficient budgetary, human, technical and training resources for the areas responsible for their compliance and management, so that prevention, detection, mitigation and control measures and actions are effective and achieve a reduction in the level of risk that is perceived internally.

For the agricultural sector in general and agricultural cooperatives in particular, due to the important role played by these companies within this sector, comprehensive management of risk and insurance should be aimed at the systematic analysis of events that have a negative impact on their socio-economic development, with the use of insurance mechanisms as an alternative source of financing, especially for the most catastrophic and serious events.

The analysis of the comprehensive management process of risk and insurance in agricultural cooperatives and its particularities in the municipality of Consolación del Sur, corroborated the importance of the study of risk and insurance management, as well as the need to develop this process with an integral, multi-actor, process and systemic vision, in order to achieve greater economic and financial stability of these companies.

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Conflict of interest

Authors declare that they have no conflicts of interest.

Authors' contribution

María del Carmen Meralla Cruz prepared the draft (first version) and carried out the data collection, analysis and interpretation.

Yenileidys Lorenzo Cabezas carried out the theoretical-methodological conception of the management process of risks and insurance and made the final revision of the article.

Marta María Cruz Bravo worked on the theoretical-methodological conception and carried out the data collection, analysis and interpretation.

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



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