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THE CONTRIBUTION OF CONTINGENCY FACTORS TO THE DEVELOPMENT OF RURAL FAMILY AGRO- INDUSTRIES IN THE CITY OF GUARANIAÇU - PR

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Abstract: Rural family agribusinesses play a vital role in both the economy and rural development, and this study aimed to analyze the contribution of contingency factors in the management practices of rural family agribusinesses. To this end, a descriptive study was carried out, designed as a multi-case study with a qualitative approach. The study was applied to three rural family agribusinesses located in the municipality of Guaraniaçu - PR, selected based on the criteria of diversity of segments, production structure and accessibility to information. The agribusinesses were classified as “developed”, “developing” and “stagnant”. The research was carried out through interviews, document analysis, direct observation of activities and comparison between the three agro-industries. The results show that contingency factors have a significant impact on the management practices of rural family agribusinesses, requiring different levels of control and strategies depending on the specific contingencies of each one. It can therefore be concluded that contingency factors have a different influence on each agribusiness, highlighting the lack of uniformity. The study highlighted the opportunity for accounting professionals to provide advice to managers of rural family agribusinesses on the use of management tools.

Keywords: Rural Family Agribusinesses. Contingency factors. Contingency Theory. Management practices.

INTRODUCTION

One of humanity's greatest and most important innovations is agriculture. The development of human beings and the significant increase in population was mainly due to cultivation and animal husbandry techniques (IIDA, 2005).

Agriculture, especially family farming, plays an important role in society. Finatto, Salamoni (2008) and Vargas (2010) point out

that family farming is linked to issues such as environmental preservation, job and income generation and food security.

According to the Ministry of Agriculture, Livestock and Supply (2022), family farming is responsible for producing the food available for consumption by the Brazilian population. It is made up of small rural producers, traditional peoples and communities, foresters, aquaculturists, extractivists and fishermen. It is a form of production in which the interaction between management and work predominates, i.e. it is the family farmers themselves who carry out the production process, highlighting the diversification and use of family labor.

According to Mior (2005), the family agro-industry is a form of organization in which the rural family produces, processes and/or transforms part of its agricultural and/or livestock production with a view, above all, to the production of exchange value which takes place in the market. The author Abramovay (1997) also points out that “family farming is one in which management, ownership and most of the work come from individuals who maintain ties of blood or marriage”.

From the point of view of Kruger *et al.* (2009), accounting is of great importance in the country's agricultural, social and economic sectors. However, the vast majority of farmers who decide to invest in these sectors end up not knowing how to account for their property, and consequently have difficulties managing the business. Given that the management of agro-industries falls to the farmers themselves, who sometimes have little knowledge of management, there is a need to provide a basis for those responsible for running the business.

Accounting plays a fundamental role in the development of organizations, because its essence is to provide information to meet the demands of control, decision-making and management. In this respect, Crepaldi and Crepaldi (2017) state that management accounting pro-

vides its administrators with information that makes it possible to assess the performance of activities, projects and products, as well as the economic and financial situation of the entity, according to the needs of each user.

Having said that, rural accounting is a tool that can help to understand and obtain information on various aspects of a property. It is appropriate to cite Crepaldi and Crepaldi (2017), who state that managers need information on the costs and profitability of their products, market segments, customers and production processes, since using this information allows the company to perform better.

According to Kruger, Mazzioni and Boetcher (2009), rural accounting is the science that serves as an instrument for planning, control and decision making on a rural property. When applied, it is a differentiator and benefits the farmer, as it generates information about the costs, expenses and income of the agricultural activities carried out.

As pointed out by Clemente, Souza, Taffarel and Gerigk (2010), various technologies have emerged to improve management systems. However, rural companies, especially small ones, have not had such an impact, due to the owners' lack of knowledge about rural accounting and management control systems. Management in these companies is characterized by a lack of formal reports and financial decisions are based mainly on experience and intuition.

Consistent with the above, the studies by Do Vale and Silva (2019), carried out in small rural companies; Azevedo, Colognese and Shikida (2000), applied to family agribusinesses in the west of Paraná; and Kruger *et al.* (2013), in rural properties, observe the lack of use of accounting tools to support management and decision-making in rural areas.

It is worth recognizing that in the rural environment, there are difficulties in applying management and control tools, as highlighted by Küntzer and Pieniz (2019). The rural sec-

tor is subject to many variables, which makes drawing up and implementing planning a major challenge due to the existence of greater complexity, which occurs as a result of the particularities of the activity

In this sense, contingency theory is applicable to rural family agribusinesses, as these companies face specific challenges related to the external environment and in which they operate. According to Lacombe and Heilborn (2003), Contingency Theory is based on the assumption that environmental conditions cause changes within organizations.

Contingency theory highlights the importance of adapting management practices to the peculiarities of the organization's external and internal environment, including its culture and objectives. According to Dalcin *et al.* (2010), rural organizations should link the concepts of contingency theory to their administration, in order to promote a systemic vision of their properties and as a more efficient management tool.

In this way, the contingency approach is dynamic, since there is no single way to optimize the organization of companies. Otley (1994) points out that in the context of organizations it is important to be flexible, adaptable and constantly learning. Management control systems need to keep up with this dynamism, being able to adjust to the changes and demands of the external environment, so that companies can remain competitive and guarantee their long-term success.

It can be said that the study is justified by filling a gap in the literature, helping rural family agro-industries to improve their results and competitiveness when they identify the contingency factors that limit their production processes, thus benefiting socially, economically and environmentally not only the agro-industry, but the entire society in which it operates.

As a result of the need for management in small family agribusinesses, the research problem arises: how do contingency factors contribute to the management practices of rural family agribusinesses in the city of Guaraniaçu-PR?

The aim of the research is to present the theoretical and practical objectives that the study is intended to achieve. According to Silva (2003), research objectives are divided into two sub-themes: general and specific. The general objective seeks to present a universal view of the subject, where the researcher intends to go with the investigation and defines where they want to end up. The specific objectives, on the other hand, are a breakdown of the general objective into more specific questions, which help in the development of the research.

The general aim of this research, through the application of a multi-case study, was to analyze the contribution of contingency factors in the management practices of rural family agribusinesses in the city of Guaraniaçu-PR.

In order to achieve this, four specific objectives are highlighted, which were applied during the course of the study:

- a) To survey the management practices adopted in the selected cases of rural family agro-industries in Guaraniaçu-PR;
- b) To identify the difficulties faced by rural family agribusinesses in applying contingency and management practices;
- c) To analyze how contingency factors affect the adoption and application of management practices in rural family agribusinesses in the city of Guaraniaçu/PR.
- d) To describe the comparison of the contingency factors of the management practices of rural family agro-industries in the city of this research.

The subject of this study is three rural family agro-industries located in the municipality of Guaraniaçu, in the state of Paraná. The municipality was chosen for the research because it is a promising region for the development of agro-industries. According to data from the health surveillance department, in 2024 Guaraniaçu had 36 rural family agro-industries and two in the study phase. The agro-industries were selected based on the criteria of diversity of segments, production structure and accessibility to information.

Therefore, this study does not intend to investigate the impact of contingency factors from other agro-industries, other segments or from other regions of the state or country, due to the characteristics of each sector, which require targeted studies.

The study is organized into five sections: introduction; literature review; methodology; presentation and analysis of the results; and finally, conclusions. Section 1 presents the introduction with the contextualization and justification, the problem, the objectives (general and specific) and the delimitation of the research. Section 2 then covers the literature review, dealing with the concepts and theories that guide the study. Later, in section 3, the methodology explains the typology and procedures used in the research, as well as the types of data collection and processing. Section 4 deals with the discussion and analysis of the results. Finally, section 5 deals with the conclusion of the study and recommendations for agribusinesses.

LITERATURE REVIEW

In this chapter, theoretical concepts from various authors related to the themes of Contingency Theory, management tools in rural properties, rural family agro-industries and previous studies were discussed. These concepts make it possible to theoretical basis of the research.

CONTINGENCY THEORY

Contingency” is defined as “event, circumstance, chance” (BUENO, 2014). In simple terms, a contingency is an event or condition that can occur unpredictably and can directly or indirectly affect business activities. For the authors Donaldson (2001), Camacho (2010) and Goto (2013), Contingency Theory expresses that there is no single structure that can be used equally in all organizations, as they are open systems whose management needs to be adjusted to meet the needs of the organization and balance internal needs.

The Contingency Theory seeks to explain the process of internal and external organizational change and its interdependence with environmental factors (GUERREIRO; PEREIRA; REZENDE, 2006). The authors also state that this theory provides consistent arguments that enable a better understanding of the contingency factors that led a particular company to react to the environment, implement a certain management system or tool, or even abandon it.

Beuren and Fiorentin (2014) point out that Contingency Theory seeks to understand the dynamics of companies in different conditions and their insertion in the environment in which they are located. These conditions are influenced by external factors that can represent opportunities or threats, impacting on the organization’s structure and internal processes. Agribusinesses are constantly subject to changes in their environment, which can significantly affect their operations and results. Climate change, new competitors entering the market and consumer demand are examples of external factors that can affect the strategic decisions of rural agribusinesses. Internal factors, such as the adoption of technologies, diversification of production and training of the workforce, can also modify business performance. According to Marion (2012), rural activities are specific to the pro-

duction system due to the rural sector’s vulnerability to natural weather conditions, production seasonality, the operating cycle and market fluctuations.

Contingency factors

According to Guerra (2007), in the contingency approach there are contingencies. These contingencies are fundamental to the study of organizations, covering both external or environmental elements and internal or organizational ones. These contingencies are grouped into five factors: environment; technology; strategy; structure and size.

The environment factor, as defined by Chenhall (2007), refers to specific attributes, such as intense price competition or the likelihood of a change in the availability of materials. Morgan (1996) states that organizations are open systems that require constant adaptation to the environment in order to maintain or improve their performance, so there is no single ideal approach to organizing; everything depends on the tasks and the environmental context in which they operate. In this way, the environment is the set of external factors that affect organizations, such as the macroeconomic, institutional, political, social, cultural, ecological context, etc. The environment can be more or less stable, complex, dynamic and uncertain, requiring different forms of adaptation and response from organizations.

According to Woods (2009), technology influences organizational structure because it determines the degree of specialization, formalization, centralization and coordination of activities. “Specific information technology innovations are used in various ways in different organizations, representing the use of information technology innovations in general” (HYVONEN, 2007, p. 353). Technology is the set of knowledge, techniques, equipment, processes and systems that organizations use to transform inputs into products or services.

Technology can be sophisticated, standardized, integrated and automated, affecting the efficiency, quality, flexibility and innovation of organizations.

Beuren and Fiorentin (2014) point out that strategy influences organizational structure, as it determines the degree of differentiation, integration, diversification and internationalization of organizations. Strategy is the set of objectives, goals, plans and actions that organizations define to achieve competitive and sustainable advantage in the market. This influence can be more or less clear, coherent, consistent and aligned with the organization's mission, vision and values.

In this context, Chenhall (2003) points out that organizations can position themselves differently in certain environments. In other words, he highlights the need for flexibility and adaptability on the part of companies, which can adopt different strategies, structures, processes and management practices based on the specific demands and conditions of the environment in which they operate.

The organizational structure is the formal specification of different roles for the organization, or tasks for groups, to ensure that the organization's activities are carried out (CHENHALL, 2007). It can be understood as the set of elements that make up the organization, such as hierarchical levels, functional units, roles, rules, procedures, communication, control and reward systems, among others. The structure can be simple, bureaucratic, organic, matrix and networked, among other forms, affecting the effectiveness, adaptability, learning and culture of organizations. According to Oliveira and Callado (2018), organizational structure is affected by contingency factors, but it can also be a source of contingency for organizations.

According to Lacombe and Heilborn (2003), size is a contingent factor that affects the optimization of the structure of organi-

zations, as it determines the degree of complexity, formalization, decentralization and diversification of organizations. According to Chenhall (2007), ways of estimating company size can be related to: profits, sales volume, assets, stock valuation and number of workers, among others. Size is the physical or economic dimension of organizations and a fundamental parameter that affects management structure and practices, since organizations of different sizes may need to adopt different approaches and structures to suit their specific context.

MANAGEMENT TOOLS FOR RURAL PROPERTIES

Franco (2010) states that management accounting provides information resulting from financial, economic and productivity analysis. Its importance is justified by the fact that it uses elements that cover all environments, external and internal, and in different aspects.

From the perspective of Küntzer and Pieniez (2018), management accounting is the set of procedures that involves identifying, analyzing and communicating financial information, and is used by management to plan and control a company's activities, while also ensuring the appropriate use of its resources.

According to Costa, Silva, Oliveira, Almeida and Silva (2020), management accounting is the instrument that offers a wide range of useful information for decision-making, showing that this tool helps management to promote organizational growth.

According to César (2013, p. 12), management tools do not only seek to analyze data, but also to specify the problem to be solved, such as present alternatives for resolving, planning and controlling activities in order to improve them. Therefore, in addition to generating information about the organization, the tools also help to identify problems and how to solve them.

As mentioned by Kuntzer *et al.* (2018), the development and application of management tools is fundamental to finding and maintaining competitiveness on farms. These tools must be backed up by clear and effective communication between managers, along with the commitment and participation of everyone involved in the process.

In this line of thought, Zuin and Queiroz (2006) state that among the various factors responsible for the success of a rural enterprise, the owner's own managerial competence stands out, which includes dedication to routine activities, relationships with employees and a systemic view of the entire production process.

Godinho (2015) points out that rural property management is not just restricted to the production phase, but covers all of the producer's activities, from planning to the post-production stage. This means that the producer needs to make decisions about what to grow, in what quantity and in what way, in order to carry out an accurate assessment of the results obtained.

Marion and Segatti (2006) state that management tools that integrate management with technical controls are relevant to business competitiveness, provide performance indicators and thus promote the success and sustainability of rural enterprises. According to the perspectives mentioned above, management tools such as planning, stock control and finance are relevant to the development of rural producers.

According to Oliveira (2007), planning represents an administrative process that provides a methodological framework and guides the company in choosing the best direction to follow, aiming to maximize external factors and seeking an innovative and distinctive approach.

According to Tavares (2010), in the planning process, activities aimed at achieving desired future goals include not only the participation of people, but also the allocation of resources and the definition of procedures for carrying out actions, along with the establishment of control and evaluation mechanisms to estimate their effectiveness in relation to the established objectives.

In line with the concepts mentioned above, Kuntzer and Pienez (2018) highlight the importance of planning in the context of rural business management and emphasize the challenge posed by drawing up and implementing a plan in this context sector, due to the multiplicity of variables involved, which leads to greater complexity in management.

In line with the idea that management tools contribute to the profitability of companies, Silva *et al.* (2015) emphasize that the importance of stock control is closely linked to reducing costs throughout the production chain. It is understood that precise, real-time control of input stocks can be of great importance to small farmers.

One of the main tools of financial management is cash flow, which is an important financial control instrument where managers keep a record of all the information on funds coming in and going out in a given period, as well as making it possible to record all financial transactions, helping with decisions, especially with regard to economic viability (ALMEIDA; MARTINS; DE NARDI JUNIOR, 2018).

However, according to Bampi and Silva (2018), management tools do not solve problems in isolation; they require technical knowledge and specific skills to be applied effectively. Each company has its own particularities, making it crucial to select the right tools for each situation. In some cases, it is necessary to have basic or advanced accounting knowledge in order to use these tools properly.

RURAL FAMILY AGROINDUSTRIES

According to Ruiz *et al* (2002), the family agro-industry arises from a market opportunity found by the producer, intuitively without preliminary assessments. It is made up of small rural producers who offer products with low technological sophistication, but which are linked to the local culture. In general, these products are processed in an informal and artisanal way, with the capacity to add value. The products offered by this segment serve consumers from all walks of life in local or regional markets.

According to Gazolla (2013), family agro-industries are characterized by five elements that define them as a new rural development practice: the family form of production; management and work, linked to the farmers' capacity for agency; small and medium-scale production of food with specific qualities; the existence of a material resource base that is strategically controlled by the families; the aggregation of the value of the raw materials produced by the family groups themselves; and the sale of food in local and regional markets through agri-food chains.

As for the economic influence of the agro-industry on sustainable development, Lauschner (1995) highlights the potential of the agro-industry to support an increase in the farmer's income, seen as an agent for modernizing the rural environment, due to its characteristic of directing and maximizing the efficiency of the use of inputs and investments related to the product developed, as well as adding value to its raw material by diversifying into by-products and markets.

As we have seen, the sector is of great importance and presents potential and opportunities for economic growth in the regions where they are located, so they need management practices to help them make decisions and manage their properties.

PREVIOUS STUDIES

In view of the themes presented above, a review was conducted of previous studies related to management practices in family agribusinesses. However, there was a gap in specific research aimed at this segment. For this reason, we also turned to studies carried out on companies and rural properties that share similarities with family agribusinesses.

The study by Azevedo, Colognese and Shikida (2000), which sought to provide a preliminary overview of family-run agro-industries in the west of Paraná, showed that of the 28 agro-industries interviewed, 72.22% said they did not have such a service, stating that they needed it for marketing, production techniques and technology, legislation, accounting, among other demands.

According to the results presented by the research carried out by Kruger *et al.* (2013), in general, there is a lack of use of accounting in rural areas as an instrument to support the management and decision-making process, as well as recognizing the entity's objectives

As can be seen in the results presented in the research by Do Vale and Silva (2019), on the use of accounting tools as management support in small rural companies, 77.65% of the interviewees do not separate their private assets from the assets of the rural company, according to the entity principle, the lack of asset autonomy generates a weakness in the management process by not segregating the assets 76.6% of the rural companies surveyed don't keep track of expenses and costs; 45.74% of producers don't keep track of their financial activities; and 57.44% of managers admit that they don't know the monthly net profit of their activities. This shows that rural accounting is not used as a support and control tool in the management process for the majority of small rural companies.

In the research carried out by Küntzer and Pienez (2018) with 10 rural producers in the municipality of Ibirubá/RS, which aimed to identify small and medium-sized rural properties in terms of their use of accounting advice for management and financial control purposes, they found that, even with the evolution of technology and the ease of access to information, there is still a lot of precariousness in the way some of these properties are managed. The administration that takes place on the properties, focused on the financial control of activities, is essentially carried out by the producers themselves together with their families, and there is no regular accounting control. The study also pointed out that one of the main problems faced by farming activities is the lack of basic management knowledge on the part of the rural manager. Another factor is the lack of accounting services to help plan and control the activities carried out on rural properties.

In view of the lack of management in family-run agribusinesses, it is worth pointing out that choosing the right and most effective management tools can help managers better manage their businesses and help them make decisions. Contingency theory can be used to explain the use of these tools.

METHODOLOGY

The methodology represents the way in which the research is conducted and constructed, in other words, the procedures that enable the researcher to achieve the study's objectives. Lakatos and Marconi (2022) reinforce that the method is the set of systematic and rational activities that allows valid and true knowledge to be achieved, helping the researcher in their decisions regarding the research and in detecting errors.

This chapter presents the types of research in terms of objectives, procedures and approach; the definition of the propositions; the col-

lection procedures; and data analysis and limitations. This study is descriptive, qualitative in nature and uses the multi-case study method.

This research focuses on three rural family agro-industries located in the municipality of Guaraniaçu/PR, a region with 36 catalogued rural family agro-industries. Three criteria were considered when selecting the agribusinesses to be studied: segmentation, structure and accessibility. With regard to segmentation, the agro-industries were chosen based on their performance in different segments: in the manufacture and marketing of specific products using a variety of raw materials. With regard to structure, the aspects of production, marketing and organization were analysed, categorizing the agro-industries into three levels: A - developed; B - developing; and C - stagnant. Finally, accessibility was assessed, taking into account the willingness of the agro-industries to provide relevant information and contribute to the research, prioritizing those that demonstrated the greatest openness and willingness to collaborate.

The study took place between January and April 2024, and analyzed the contribution of contingency factors to the development of these agribusinesses. However, it does not intend to generalize the results to other agribusinesses, segments or regions.

The descriptive method was used to achieve the study's objectives. According to Andrade (2002), this method is concerned with observing, analyzing, recording, interpreting and classifying facts without interference from the researcher. The research sought to describe how contingency factors contribute to management practices in rural family agribusinesses in Guaraniaçu-PR. In addition, it sought to understand which management practices are adopted, identify the difficulties faced in their application and analyze how contingency factors affect their adoption and application. In doing so, the research aimed to

deepen knowledge about the reality of rural family agribusinesses and provide options on how to improve their management practices.

In terms of research procedures, it is classified as a multi-case study which, according to Yin (2005), is one in which information from different organizations is analyzed and not just one, as is the case with a case study. The research is classified as a multi-case study due to the diversity of rural family agro-industries in Guaraniáçu, PR.

Furthermore, by conducting a multi-case study, the research will be able to capture the complexity of these differences, providing a deeper understanding of how contingency factors contribute to management practices in rural family agribusinesses. This, in turn, could lead to better recommendations for improving these management practices.

As for the approach to the problem, the study is characterized as a survey qualitative, since the aim is not to quantify or measure information, but rather to get to know a group of rural family agribusinesses through investigation. Beuren (2004) points out that qualitative research allows for more in-depth analysis of the object studied, and is a very suitable way of getting to know the nature of a social phenomenon.

Considering the study by Penha (2022), which found that contingency factors interfere with farms, and that depending on the contingency, some farmers need more controls and others less. Based on this contextualization, the research proposition is defined: contingency factors have a significant impact on the management practices of the rural family agribusinesses studied in Guaraniáçu-PR, requiring varying levels of control and management strategies depending on their specific contingencies.

With regard to data collection procedures, three different methods were used: semi-structured interviews; direct observation of the activities carried out in the agro-indus-

tries; and document analysis. In addition, the results obtained in the different cases studied were compared.

According to Laville and Dionne (1999), the semi-structured interview provides flexibility in data collection, as well as greater openness to the interviewee, which makes the answers more reliable. The researcher draws up a script of questions, but allows the interviewee to express their ideas freely, without limiting their answers to predetermined alternatives. According to Marconi and Lakatos (2011), the interview offers advantages such as: flexibility in formulating and explaining questions in order to make them more comprehensible, and obtaining important information that would be difficult to find in documents. In this research, the semi-structured interview script was adapted from previous studies and is available in APPENDIX A.

Direct observation, as defined by Paterson, Botorff and Hewat (2003), provides an insight into the procedures adopted by the organization and involves the areas of service, organization, structure and relationships between employees. This technique allows observers to clearly and impartially interpret the procedures adopted by the organization.

Documentary research, according to Sá Silva, Almeida and Guindani (2009), is a procedure in which methods and techniques are used to understand and analyze documents in a wide variety of forms. Documentary research therefore makes it possible to verify the information obtained through other methods.

As for the data analysis procedures, comparative analysis was used qualitative. The comparative method investigates individuals, classes, phenomena or facts in order to highlight their differences and similarities. It is widely used in the social sciences, as it allows the comparative study of large social groups, separated in space and time. This makes it possible to carry out studies comparing different cultures or political systems (GIL, 2019).

This method makes comparisons to identify similarities and explain differences. It is used to compare groups in the present, the past, or between existing groups and those of the past, as well as between societies at the same or different stages of development (MARCONI; LAKATOS, 2022).

In this study, applied to rural family agribusinesses, the comparative method was used to analyze and understand the similarities and differences in their practices, strategies and results, aligned with the analysis of how the contingent factors - environment, technology, strategy, structure and size - are perceived in theory and how they manifest themselves in practice within the agribusinesses.

Author Yin (2005) highlights the need to use a case study protocol in projects involving multiple cases. The protocol is not only an instrument, but also encompasses general procedures and rules that guide the researcher in collecting data from a case study. It functions as a standardized agenda for the researcher's investigation and is one of the main strategies for increasing the reliability of case study research.

In the context of this work, which has the characteristics of a multi-case study, research was carried out in rural family agribusinesses located in Guaraniáçu-PR, each with its own particularities. To ensure greater credibility for the research, the study adopted the protocol structure proposed by Yin (2005). According to the author, the overview of the case study project should include prior information about the research, the substantive issues being investigated and relevant readings related to these issues.

The aim of this research was to identify the management practices adopted by agribusinesses and the difficulties faced in applying these practices. It also analyzed how contingency factors affect the adoption and application of management practices. In order to

analyze the contribution of these factors to the management practices of rural family agribusinesses in the city of Guaraniáçu-PR.

Through semi-structured interviews, the research seeks to answer questions such as: what management practices are used in agro-industries? What are the challenges of implementing these practices? How are management practices adapted to the particularities of agribusiness of each family agro-industry?

For Yin (2005), it is necessary to properly design the field procedures for collecting data in case studies involving people and institutions in their everyday situations. In this way, the researcher acts as an observer in the interviewee's environment, adapting to the availability and particularities of the real context.

In this context, the researcher must:

- a) Gain access to the organization and/or key informants;
- b) Have sufficient resources to optimize data collection during fieldwork;
- c) Develop procedures for requesting help and guidance;
- d) Establish a detailed schedule of activities, with specific deadlines for completion;
- e) Be prepared for unforeseen events, such as changes in the interviewee's schedule or mood, and even changes in the researcher's own motivation.

Based on the topics mentioned above, the field procedures for collecting the data required in this research included:

- a) In the field, the researcher was provided with a vehicle, a *notebook* with a text editor, a *notebook*, a pen, a pencil, an eraser, a *smartphone* with a recorder function, photographs, a diary, *internet* access, etc;

b) The visits and interviews were scheduled in advance, respecting the availability and schedule established by the managers of the agro-industries;

c) the interviews were carried out in quiet places, so that the line of reasoning would not be interrupted;

d) interviews were conducted with managers and key people in the agro-industries;

e) data was collected and clarified by telephone, *e-mail* or social networks;

f) The orientation and clarification procedures were carried out by appointment with the advisor.

Through the data collected using the field procedures mentioned above, the aim is to obtain relevant information to solve the research problem.

According to Yin (2005), case study questions are essential to guide the researcher during data collection. They serve as reminders to collect relevant information and indicate the reason for collecting it. According to the author, of the five levels of questions mentioned, only levels one and two are relevant to data collection. The first level involves verbal questions put to the interviewee, while the second level consists of mental questions that the researcher asks himself. In the context of the case study protocol, articulating the level two questions is more important than identifying the level one questions. Level three questions are not part of the protocol for data collection in single cases; they are only applicable in multiple case studies, after all the data from the individual cases that make up the multiple case has been analyzed. Level four and five questions also apply exclusively to multiple cases.

Based on the above, three level two questions were defined to guide the researcher during data collection (TABLE 1).

With these questions in mind, the aim is to analyze how contingency factors contribute to the management practices of rural family agribusinesses in the city of Guaraniáçu-PR.

With regard to the limitations of this research, it should be borne in mind that it was carried out with rural family agribusinesses in the city of Guaraniáçu-PR and the results may not be generalized to the entire population of family agribusinesses in the region or in other areas. It is important to mention the time limitations, as there is the possibility of changes in economic, social and political conditions, and these contribute to the management practices of family agribusinesses. In addition to the selection factor, referring to choice of agribusinesses, affected by biases such as willingness to collaborate, which can distort the results.

PRESENTATION AND ANALYSIS OF RESULTS

In order to analyze the contribution of contingency factors to the management practices of rural family agribusinesses, three agribusinesses located in the municipality of Guaraniáçu, in the state of Paraná, were selected for a multi-case study. The agribusinesses were identified as: "Agroindustry A", "Agroindustry B" and "Agroindustry C", ensuring the confidentiality of the data obtained.

This chapter presents a characterization of the agribusinesses, their management practices and an analysis of the individual contingency factors.

CHARACTERIZATION OF AGRO-INDUSTRIES

The aim of this session is to present historical data on the agro-industry, from its formation to the present day, and the experience and training of managers, broken down by agro-industry.

Specific objectives	Related questions	Actions to answer them
Survey the management practices adopted in the selected cases of rural family agribusinesses of Guaraniáçu-PR.	What management practices are used in agro-industries?	Semi-structured semi-structured interviews with the managers of the agro-industries.
To identify the difficulties faced by rural family agro-industries in applying contingency factors and management.	What are the challenges of implementing these practices?	Semi-structured semi-structured interviews with the managers of the agro-industries.
To analyze how contingency factors affect the adoption and application of management practices in rural family agro-industries in Brazil. city of Guaraniáçu.	How are management practices adapted to the particularities of each family-run agro-industry?	We interpreted and compared the results obtained in each agro-industry.
To describe the comparison of contingency factors in the management practices of rural family agro-industries in the region. city of Guaraniáçu-PR.	What are the differences and similarities observed in relation to management practices, considering the factors contingencies in each agro-industry?	We interpreted and compared the results obtained in each agribusiness.

Chart 1 - Questions to guide the researcher in the data collection process

Source: Adapted from YIN, (2005).

Agroindustry A

Agroindustry A, categorized as “developed”, produces and sells cheese and cheese products. It has a structure, technology and an authentic approach, centered on the agroindustry itself, which makes it stand out from its competitors. These factors, coupled with a commitment to product quality, enable this rural family-run agro-industry to remain competitive in the market.

In this agro-industry, the manager plays a key role in running the enterprise. At the age of 43, she brings with her a wealth of experience, even with an incomplete high school education and no training in business management. Her trajectory is marked by a significant change: from urban to rural areas, which took place in 2009, after her marriage.

Initially, the family’s source of income was milk production. However, the manager faced considerable challenges, such as seasonality, low prices and high production costs. Faced with these circumstances, in 2014 she made a strategic decision: to stop selling milk to dairies and founding their own cheese factory.

The agro-industry began by producing just two or three pieces of cheese a day. However, as demand grew, the need arose to expand the production space and utensils. Today, the agro-industry makes around 130 pieces of cheese a day and has 12 employees who help with the whole process.

After seven years dedicated to the production of traditional cheeses, the manager saw opportunities for expansion. In 2021, she built a commercial room on her property, located on the banks of the BR-277 highway, with the aim of expanding sales.

During this same period, the agro-industry diversified its product range. In addition to colonial cheese, it started producing vinaigrette cheese, enriched with fine herbs and matured in wine. It also included products such as dulce de leche, ricotta and butter, making the most of the raw materials used.

In 2023, taking advantage of its strategic location, Agroindustry A expanded its space once again, founding a grocery store that not only sells its own products, but also establishes partnerships with other agroindustries. In addition, the grocery store offers colonial coffee and lunch, making it a tourist attraction in the region.

Agroindustry B

Agroindustry B, categorized as “developing”, specializes in dehydrating food to make spices. It differentiates itself from its competitors by offering natural products. The development of its structure and the adoption of new technologies are contributing to the growth of the business.

This agro-industry is led by a 47-year-old manager with a high school education. Previously, she worked as a maid and cook on a farm. During this time, she noticed that there was a lack of truly natural spices on the market, which were not industrialized and did not contain added preservatives.

In 2018, the manager had the idea of dehydrating some saffron she found in her garden. The experiment was successful, so she started using the spice produced to prepare meals at home. With the aim of improving her family's diet and ridding them of processed foods, she bought her own machine to dehydrate other products. Initially, the machine was bought to produce seasonings, with no commercial intentions.

However, in 2019, the manager moved to a farm and started dehydrating new products to sell to friends and neighbors. The business began to grow and, over time, it was necessary to build a dedicated space to cover all stages of the dehydration process. In addition, new machines were purchased to facilitate and increase manufacturing capacity.

Production in the agro-industry is handmade, free of stabilizers, flavourings, preservatives and colourings, and includes the following products: saffron powder; dehydrated garlic; cinnamon powder and sprigs; paprika; ora-pro-nobis flour; yam flour; bay leaf; Calabrian pepper; dehydrated spice mix; seasoned salt and tomato sauce.

Currently, everyone in the family is involved in the operation of Agroindustry B. Some of the inputs needed to produce the spices are grown directly on the family farm. This ensures that the products are fresh and of high quality. The manager of Agroindustry B is responsible for the process of sanitizing and preparing the products for dehydration. This is an important step that guarantees the safety and quality of the final products. In addition, the manager is also responsible for selling

the products, receiving purchases and paying expenses, so that Agroindustry B continues to operate efficiently, providing natural and healthy products.

Agroindustry C

Agroindustry C, categorized as "stagnant", specializes in the production of canned vegetables, including cucumbers, green beans, pickles and zucchini. The best-selling product is canned cucumber. The raw material used is grown on the property itself. This is a small enterprise which, even without the presence of advanced technology and structure or strict management control, demonstrates dedication, product knowledge and a commitment to quality.

Agroindustry C is run by a 51-year-old female manager with a complete elementary school education. Since 2000, she and her husband have been involved in family farming, producing and selling a variety of vegetables.

In 2009, the manager had the opportunity to take part in an artisan food production course, which included: vegetable preserves, jams, candied fruit and dehydrated foods. This training represented an additional source of income for the family. The venture was successful and, in just over a year, it was necessary to build a space dedicated to the production processes.

The manager and her husband are solely responsible for the entire process, from planting to harvesting and sanitizing the vegetables that will be used to make the preserves. The manager is responsible for the production of the preserves and for management, including receiving and paying for inputs. Her husband is responsible for controlling the stock of inputs, fertilizers, compost and seeds.

The manager has a degree in artisan unit management, which she completed in 2008. Even before owning the agro-industry, she was already applying the knowledge she had

acquired to manage the income from family farming. Currently, the preserves produced are sold in producer's granaries, markets and restaurants.

MANAGEMENT PRACTICES USED IN AGRO-INDUSTRIES

As the first specific objective of this study, we sought to identify the management practices adopted in the selected cases of rural family agribusinesses, by means of interview responses, document analysis and direct observation. In addition, this session also deals with identifying the difficulties faced by these agribusinesses in implementing practices related to contingency and management factors, as proposed by the second specific objective.

Agroindustry A

At Agroindustry A, all family members are involved in the activities. The husband is in charge of the dairy and the production of raw materials, while the daughters contribute to organization, marketing and customer service. The manager, for her part, although no longer so involved in production, is dedicated to finance, purchasing, people management and business organization. The process of family succession has also been adopted, with the eldest daughter gradually learning and taking over management of the enterprise.

As far as planning is concerned, the agro-industry focuses especially on raw material management. Given the seasonality of milk production, strategies such as scheduling insemination times are implemented. The aim is to maintain constant production throughout the year, even in the face of seasonal challenges. However, it is important to note that there is no monitoring of performance indicators or established production targets. The agro-industry relies on experience and accumulated knowledge to cope with the ups and downs of the sector while remaining resilient and adaptable.

Agroindustry A is implementing tools to improve financial planning and cost control. Although there is still no effective control of product costs, the manager adopts a strategic approach to managing expenses. Establishing a standard, she calculates the cost per liter of milk, taking into account the quantity used. This measure serves as a reference for assessing the economic viability of the products.

The products are sold mainly at fixed points, such as granaries and local markets. Prices are set based on production costs, ensuring an adequate profit margin. Stock control is concentrated on raw materials, while other inputs are purchased on a larger scale each month to reduce operating costs.

In order to maintain efficient and transparent management of finances, the manager adopts organizational practices. As noted in the document analysis, notes, receipts and annotations are separated into folders, making access and control easier. In addition, Excel spreadsheets are used to record and monitor expenses and income. Recently, a daily control of incoming and outgoing funds was implemented, categorizing them by form of receipt, such as card, PIX and cash.

Agroindustry B

At Agroindustry B, the manager interviewed plays a central role in the administration, while her husband and son contribute to the production of raw materials, but are not involved in the rest of the process. It's important to note that the manager's son has shown no interest in taking on the family succession of the business.

As far as planning is concerned, the manager mentioned that it takes place on the basis of customer orders and demands. Despite her efforts to draw up a production schedule, unforeseen events often arise in relation to the planned time. This is due to the fact that she is responsible for all the labor in the agroindus-

try. Some of the products manufactured by Agroindustry B consist of mixtures of dehydrated ingredients. The absence of a single ingredient can delay the entire process, especially considering that the dehydration procedure can take hours, depending on the raw material used. As a result, the manager started to organize herself better in order to optimize time.

As far as production costs are concerned, the manager has an idea of the costs, although it does not carry out a detailed apportionment control or actual calculation. In addition to raw material costs, it also takes into account electricity and labor costs. At certain times of the year, it becomes unfeasible to manufacture some products due to the high cost of raw materials. Therefore, the definition of production processes is based on costs, and some products have higher profit margins than others.

As for marketing its products, Agroindustry B uses e-commerce channels such as *WhatsApp* and *Instagram* to advertise and serve its customers. The products are also sold in granaries, markets and grocery stores in Guaraniaçu/PR.

As can be seen from the interviews and document analysis, Agroindustry B has no effective control over the daily inflow and outflow of funds. The only control is through notes in notebooks, with the names of customers, products purchased and amounts paid or receivable. This practice makes it difficult to see the agribusiness's income and expenditure more accurately.

Agroindustry C

One of the tools that Agroindustry C uses to ensure the efficiency of its operations is strategic planning, which involves growing the vegetables needed to produce its preserves. This includes soil preparation, planting, maintenance, harvesting and, finally, sanitizing the vegetables. This knowledge allows them to

optimize the use of resources, reduce waste and increase production. In addition, strategic planning ensures that Agroindustry C doesn't run out of raw materials for long periods.

Agroindustry C also forecasts the costs and expenses associated with production. However, it does not have exact control over the cost of making each can and does not apportion production costs. The agro-industry sells its products according to the market price, without having a clear understanding of the profit margin used.

Controlling input stocks at Agroindustry C is a task that falls to the manager's husband. He adopts a practical and intuitive approach to this task, relying on his experience and judgment rather than keeping formal records. This approach, often referred to as "eyeballing", involves estimating quantities and needs based on direct observation and personal experience.

Scheduling payments and receipts is another management tool adopted by Agroindustry C. This schedule is controlled through notes in a notebook. It's a simple approach in which the manager can visualize the financial cycle in general, but without too much detail.

CONTINGENCY FACTORS

The third specific objective of this study was to analyze how contingency factors affect the adoption and application of management practices in rural family agribusinesses in the city of Guaraniaçu. Questions were asked about the five contingency factors analyzed in the research: environment; technology; structure; size/size; and strategy. In this session, each factor was addressed individually, in addition to comparing these factors with management practices in each rural family agribusiness, in line with the fourth specific objective of the research.

Environment contingency factor

In the contingency factor environment, in addition to addressing issues such as competitor strategies and their influence on management decisions, the differences between competitors and the external environment are also considered, since changes in the market directly affect agribusinesses. Price fluctuations and consumer demand are aspects that need to be constantly monitored and analyzed by managers. In addition, it is necessary to consider other factors such as: climatic conditions, which have an impact on availability; the cost of inputs; and consumption trends, which reflect changes in consumer preferences and behavior (TABLE 2).

CONTINGENCY FACTOR ENVIRONMENT	
AUTHOR'S VIEW	For Chenhall (2007), the environmental factor refers to specific attributes, such as intense price competition or the likelihood of a change in the availability of materials.
AGROINDUSTRY A	<ul style="list-style-type: none"> • Unique and authentic approach; • Product quality; • Internal innovation; • Product pricing; • Balanced and strategic business vision; • External market environment; • Internal business needs.
AGROINDUSTRY B	<ul style="list-style-type: none"> • No direct competition; • Indirect competition from industrialized products; • Weather conditions; • Production to order; • Freshness and quality of products; • Analysis of the cost of each product; • Required profit margin.
AGROINDUSTRY C	<ul style="list-style-type: none"> • Influence of competitors' actions and strategies; • Market prices; • Adapting to market trends; • Impact of climatic conditions on production; • Raw materials grown on the property; • The manager's planning of soil preparation until harvest time.

Table 2 - Comparative analysis of the contingency factor environment
Source: The authors, (2024).

The manager of Agroindustry A adopts a unique and authentic approach to business management. She believes in the uniqueness of

her agribusiness and the quality of the cheeses produced. Instead of “copying” the ideas of her competitors, she focuses on improving and innovating within her own business. The manager mentions that:

[...] over time I came to understand how the business worked. As I hadn't attended any management courses, I had to learn how to make decisions in practice. I also had new ideas for products to sell and we experimented and tested, always with the aim of maintaining quality and customer satisfaction.

This authentic approach extends to the way Agroindustry A handles the pricing of its products. The management of this rural family-run agro-industry demonstrates a balanced and strategic business vision, which takes into account both the external market environment and the internal needs of the business.

With regard to climatic conditions, these affect the production of milk, an essential raw material for the manufacture of this agro-industry's products. Climatic variations can affect the quality and quantity of the milk produced, which in turn has a direct link to the production of cheese and its derivatives. Therefore, the management of the agro-industry is aware of these variations and is prepared to take appropriate measures. For example, investments in infrastructure to promote comfort for the animals and attention to the nutritional quality of the diet, which is one of the main factors competing for milk production in terms of quantity and quality.

Agroindustry B stands out in the market for its specialization in food dehydration for the production of spices. This allows the agro-industry to operate without direct competition, as no other company in the region offers the same type of product. However, this agro-industry faces indirect competition from companies selling industrialized products. These products are easily accessible to consumers, but they don't offer the same healthy

and natural quality as those produced in the agroindustry, which is a point of differentiation maintained over its competitors.

Climatic conditions also affect the agro-industry. As the inputs used in the production of spices come from agriculture, production can be affected by excessive rainfall, drought and seasonality, leading to changes in product prices.

The manager of Agroindustry B has taken the decision not to keep products in stock. Instead, it produces to order for its customers and to orders from granaries and grocery stores. This allows the company to maintain the freshness and quality of its products. In addition, the manager seeks to maintain the price of the product and only makes changes when there are major changes in production costs, in order to remain competitive in the market. However, the manager needs to analyze the cost of each product and the required profit margin. This allows them to identify any products that are making a loss and which may be offset by the profit of another.

At Agroindustry C, the actions and strategies of competitors influence the prices charged on the market and the types of packaging used. In order to remain competitive, the agro-industry needs to be aware of these market trends and adapt as necessary.

In addition, the external environment, such as weather conditions, has a direct impact on the agro-industry's production, since the raw material is grown on the property itself. The manager corroborated this by saying that:

[...] the main difficulty we have to deal with is diseases, pests, weeds, droughts and excessive rainfall. This affects the quantity and quality of the raw material. For example, a disease can destroy the entire crop if it is not controlled in time. Even so, we prefer to grow everything we're going to use to make the preserves on our own property, because this gives us greater control over the quality of our products.

These factors affect the manager's planning, which has to be reorganized from soil preparation to harvest time, since a wrong planting decision can result in a compromised harvest.

Through data collection carried out using different methods, it was identified that, despite the particularities of each agro-industry, the contingency factor environment, exerts a standardized influence. Regardless of the sector in which they operate, climatic conditions emerge as the main element that impacts agro-industries. They therefore have to adapt in their own way to each climatic situation, as well as to price fluctuations and consumer demand.

Contingency factor technology

The technology contingency factor covers the adoption and integration of technology into the agribusiness production process, involving not only the implementation of advanced and modern resources, but also overcoming the challenges inherent in this integration. Technology brings benefits, such as improving production efficiency and quality, saving time and effort, as well as animal comfort. In addition, the use of e-commerce and interaction with customers offers opportunities to expand market reach and facilitate sales growth (TABLE 3).

TECHNOLOGY CONTINGENCY FACTOR	
AUTHOR'S VIEW	According to Woods (2009), technology influences organizational structure, as it determines the degree of specialization, formalization, centralization and coordination of activities.
AGROINDUSTRY A	<ul style="list-style-type: none"> • Advanced, modern technology; • State-of-the-art equipment; • Production efficiency and quality; • Milking systems and coolers; • Reduced time and labor; • Animal comfort; • E-commerce and the use of social networks; • Business expansion; • Sales growth.

AGROINDUSTRY B	<ul style="list-style-type: none"> • Integrating technology into the production process; • Dehydration machines; • Efficient production of dehydrated spices; • Initial adaptation to the machines; • E-commerce and sales through digital channels; • Adapting to market trends; • Expansion of market reach.
AGROINDUSTRY C	<ul style="list-style-type: none"> • Manual labor; • Non-adoption of e-commerce; • Preference for traditional sales methods.

Table 3 - Comparative analysis of the technology contingency factor

Source: The authors, (2024).

Technology allows Agroindústria A to stand out in its sector. The company has invested in advanced, modern technology, equipping its structure with state-of-the-art equipment that improves the efficiency and quality of its production. Agroindústria A's equipment, such as milking systems and coolers, has evolved over time to meet growing production demands. This technological evolution was not only a response to the need to increase production, but also a strategy to improve product quality and operational efficiency.

The adoption of new technologies has brought benefits to Agroindustry A. Firstly, it has resulted in a significant reduction in the time and labor required for production. The technology has also provided greater comfort for the animals.

With regard to e-commerce, the manager of Agroindustry A realizes the importance that social networks play in expanding the business. An online presence not only allows the agribusiness to reach a wider audience, but also facilitates sales growth. Social networks, in particular, offer an effective platform for Agroindustry A to promote its products and connect with customers.

At Agroindustry B, technology has been integrated into the production process by means of dehydration machines, which have been improved over time. The machines have

brought benefits to the agro-industry, allowing for the efficient production of dehydrated spices. However, the manager mentioned that the initial adaptation to these machines was a challenge, as there was no familiarity with how they worked.

Agroindustry B has also adopted e-commerce as a strategy to facilitate and expand the sale of its products. The manager contributed by saying that:

[...] nowadays most sales are made via social media, especially *Instagram* and *WhatsApp*. We are able to interact with customers, understand their needs better and this allows us to adjust our products accordingly.

This demonstrates the importance of adapting to market trends and using technology to reach a wider audience. Therefore, this resource is an important contingency factor in Agroindustry B, influencing both the production process and the sales strategy. By continuously adopting and adapting to technology, this agribusiness has been able to improve its operations and expand its reach in the market.

At Agroindustry C, the canning process has remained relatively stable unchanged since the beginning of its operations. No advanced technological processes or automated machines have been incorporated; all the work is done manually. However, the agro-industry has invested in the acquisition of a tractor to help with planting. This has benefited the agro-industry in terms of saving time and effort, allowing more land to be cultivated in less time.

Despite these advances, Agroindustry C has not yet adopted the use of e-commerce to sell its products. Although social networks can offer opportunities to increase visibility and sales, the agribusiness has chosen not to use digital media at the moment, due to a lack of familiarity with the platforms and a preference for traditional sales methods.

Through data collection and direct observation, it was found that the contingency factor technology has a significant impact, especially in the developed and developing agribusinesses, which have invested in automated machinery and adopted e-commerce. On the other hand, the agro-industry that is in a state of stagnation has not adopted e-commerce and maintains predominantly manual production.

Contingency factor structure

The contingency factor structure encompasses the importance of an adaptive and flexible approach to managing the organizational structure of agribusinesses, in order to understand how they adapt to needs, opportunities, challenges and decision-making. To this end, issues related to the development of new products and the main difficulties identified in each sector were addressed. The aim was to identify how agribusinesses position themselves when it comes to making decisions regarding investments in their structure, such as machinery, expanding their physical space, packaging and other relevant aspects (TABLE 4).

AGROINDUSTRY C	<ul style="list-style-type: none"> • Conservative attitude to the introduction of new products; • Lack of expansion plans; • Production challenges related to climatic conditions, diseases, weeds and pests; • Adaptive approach to structural investments; • Careful evaluation of the cost-benefit ratio before making investments; • Investment in low-cost packaging.
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Table 4 - Comparative analysis of the contingency factor structure

Source: The authors, (2024).

CONTINGENCY FACTOR STRUCTURE	
AUTHOR'S VIEW	The organizational structure is the formal specification of different roles for members of the organization, or tasks for groups, to ensure that the organization's activities are (CHENHALL, 2007).
AGROINDUSTRY A	<ul style="list-style-type: none"> • New product development; • Product quality, resistance and durability tests; • Market acceptance; • Investments in structure; • Quality of raw materials, especially milk; • Manual manufacturing process; • Purchase of machinery and instruments; • Packaging adaptations.
AGROINDUSTRY B	<ul style="list-style-type: none"> • Challenges for developing new products: space and manpower; • Structural investments; • Need to expand the available space; • Manual production process; • Low-cost packaging solutions; • Marketing to other states.

At Agroindustry A, the development of new products has some challenges and goes through several stages, such as the preparation of recipes, the production process, quality tests, product resistance and durability, and market acceptance. Not all the products created remain in the catalog. Some are discontinued for practical reasons, such as the difficulty of preserving them, which can make it impossible to sell them. Another challenge is the quality of the other ingredients used, which require careful selection to guarantee the standard of their products.

The decision to invest in structure is based on a careful analysis of need and cost-benefit. The manager understands that the quality of the products is directly linked to the quality of the raw material, especially milk. With the continuous growth of the agro-industry and the significant increase in demand, there was a need to expand milk production. This challenge required significant investment in structure, as mentioned in the contingency factor technology.

The investment in the dairy was important for increasing both the quantity and quality of the milk. The manager recognized that, although the cheese-making process is still manual, it was essential to acquire machines and instruments to raise the standard and quality of the cheese product consistency.

As far as packaging is concerned, the agro-industry has undergone various adaptations over the years. Some changes were necessary

to comply with food labeling standards. In addition, investments have been made to expand its reach and profitability. The company is currently investing in vacuum packaging machines for its cheeses, with a view to selling them in other cities and states.

As for Agroindustry B, among the various challenges in developing new products, according to the manager, the ones that most affect it are issues of space and manpower. Currently, the entire production process is the sole responsibility of the manager, which limits production capacity due to the lack of time to meet all the demands. The possibility of expanding the team of employees was considered, but the manager was unsure. She fears that this could affect the quality of the products. Therefore, although it is an option to expand the business, it is not considered viable at the moment.

Investments related to structure are made based on specific needs. Although the agro-industry is organized, the space available needs to be expanded to accommodate the finished stock and the raw materials used, guaranteeing quality and conservation.

With regard to machinery, the approach was gradual and adapted to the increase in demand. Investments have been made in suitable machines to optimize operability and reduce maintenance costs. However, it is important to note that a significant part of the process is still carried out manually. The manager mentioned that some machines require high investments, but the return on them is limited.

As for the packaging, the manager opted for low-cost solutions that would preserve the quality of the products and appeal to consumers. She is currently selling her products in other states. In the future, considering hygiene and safety issues, the agro-industry plans to invest in vacuum packaging. This measure aims to maintain the integrity of the food during transportation and storage.

At Agroindustry C, the managers are conservative when it comes to introducing new products. Manual labor is carried out exclusively by the two managers, and due to their advanced age, there are no plans for imminent expansion. The main challenges faced in production are related to factors such as weather conditions, diseases, weeds and pests, which directly affect productivity. The agro-industry has to deal with these variables in order to maintain quality and efficiency.

With regard to investments in structure, Agroindustry C adopts the following approach adaptive. As needs arise, specific investments are made. Some examples include the purchase of machinery to facilitate planting and improve production, as well as the construction of sheds to store seeds, inputs, sanitize and package the vegetables and canned goods.

With regard to packaging, the managers noticed that packaged products were better marketed than those sold in bulk. As a result, they invested in low-cost, practical packaging, which was accepted by consumers.

It is worth pointing out that, based on the data observed through the methods of interviews, document analysis and direct observation, it was identified that despite the differences in each agro-industry, the contingency factor structure interferes in a standard way. This is because decision-making on investments and packaging is directly related to cost-benefit and increased profitability, adapting to each reality.

Size/contingency factor

The contingency factor size highlights the importance of considering the size of the organization when making strategic and operational decisions, recognizing that agribusinesses of different sizes have different needs and characteristics. In order to verify how this factor interferes in the agribusinesses studied, we addressed issues related to annual gross sales,

including positioning in relation to competitors, analysis of revenue growth and the factors that interfere with growth. In this sense, the size factor also interferes with external relations, such as suppliers, as well as management issues, such as the need to implement forms of management control (TABLE 5).

SIZE/PORION CONTINGENCY FACTOR	
AUTHOR'S VIEW	According to Lacombe and Heilborn (2003), size is a contingent factor that affects the optimization of the structure of organizations, as it determines the degree of complexity, formalization, decentralization and diversification of organizations.
AGROINDUSTRY A	<ul style="list-style-type: none"> • Few competitors of the same size; • Better negotiating conditions with suppliers; • Satisfactory gross annual turnover; • Cost reduction strategies; • Buying products in quantities bigger; • Reuse of waste; • Implementation of management tools.
AGROINDUSTRY B	<ul style="list-style-type: none"> • No direct competitors in the sector; • Satisfactory gross annual turnover; • Brand and product promotion; • Winning awards; • Purchase of raw materials in pre-established quantities; • Lack of effective control of resources; • Need to change the way orders and receipts are controlled.
AGROINDUSTRY C	<ul style="list-style-type: none"> • Level annual turnover; • Product prices determined by the market, supply and demand; • Strategy to avoid large-scale production; • Lack of access to better price offers or discounts; • Control of resources and demands through notes in notebooks.

Table 5 - Comparative analysis of the size/size contingency factor

Source: The authors, (2024).

As far as the size of Agroindustry A is concerned, it is one of the most developed and structured in the market, with few competitors of the same size. The manager realizes that she currently has better conditions for negotiating with suppliers and marketing her products, compared to a few years ago when she started her business. According to her, the size of the agribusiness interferes with these factors and allows her to increase her profitability.

In terms of annual gross revenue, he says that he doesn't compare himself with other agro-industries in the sector, but rather seeks to increase his revenue through cost-cutting strategies, buying products in larger quantities, and reusing waste to make new products and even for other activities on the property, such as manure used as fertilizer on crops.

Through the interview and direct observation, it was possible to see that, in conjunction with the expansion of the agro-industry, there was a need to implement management tools that would allow for more effective control of resources. The manager reports that:

[...] as we had other activities on the property and didn't separate the money, it wasn't possible to identify what was making a profit or a loss, and there was always a lack of resources, I felt the need to make a proper control separating agribusiness, store, farming and personal expenses... through the spreadsheets, today I can visualize the functioning of each activity, carry out planning and control of resources, as well as identify the net profit obtained in each sector of the property.

The documentary analysis made it possible to confirm this information, and the manager currently separates all the documentation into folders for each activity, as well as using Excel spreadsheets, which are fed daily and allow a better view of the inflow and outflow of funds.

Agroindustry B stands out for producing flours, spices and other condiments based on dehydrated products, with the notable characteristic of not using starches. Because of this differentiated approach, it has no direct competitors in the sector, only large companies that sell industrialized products.

Although it is not possible to make a direct comparison of its annual turnover with other companies in the same sector, the manager of Agroindustry B reports that its performance is satisfactory when compared to other small and medium-sized agroindustries. Considering

that the agro-industry is relatively new to the market, its annual turnover has grown steadily.

Several factors contributed to this progress. Firstly, the promotion of the brand and products has been fundamental. In addition, winning awards has reinforced the agro-industry's credibility. However, the main driver was consumer awareness of the importance of healthy eating and the search for natural, preservative-free products.

With regard to relations with suppliers, the manager notes that the size of the agro-industry influences negotiations. Although buying raw materials on a large scale can generate savings, the agro-industry faces space constraints for conservation and storage. Therefore, the manager adopts a cautious approach, purchasing only what is necessary to avoid waste.

Through documentary analysis and direct observation, it can be seen that there is no effective control over the management of the agro-industry, which is currently carried out through notes in notebooks, which makes it difficult to observe and calculate profits. The manager states that: "with the increase in demand it will be necessary to change the way we control orders and receipts", but she is postponing the change due to the fact that she doesn't have the knowledge and ability to use spreadsheets and other tools.

At Agroindustry C, the manager takes a cautious approach to size and notes that annual turnover is level when compared to similar agroindustries in the same segment. This is because there is a large group of producers working in the same activity, and product prices are determined by the market, supply and demand.

The evolution of turnover over the years is considered satisfactory by the manager. This improvement is associated with accumulated experience, careful analysis of market demand and the strategy of avoiding large-scale production in order to minimize waste. In ad-

dition, the modernization of production practices has optimized time, reduced input costs and mitigated losses related to planting risks.

As for suppliers, the size of Agroindustry C has an impact on negotiations. As they don't make large-scale purchases, the company doesn't have access to better price offers or discounts, which directly affects profitability.

As far as management is concerned, given that it is a small agro-industry, the manager does not feel the need to change the way she controls resources and demands, which currently takes place through notes in notebooks, as observed in the documentary analysis. When asked about management, he said

[...] experience in the business is the main factor considered in management, we've always used notes in notebooks as a form of control and it's been working to this day... I don't see the need to change, because it would require some kind of specialization to use other more advanced methods.

The data survey revealed that the contingency factor size differs greatly in relation to the size and stage of development of each agro-industry, affecting relations with suppliers and forms of management.

Strategy contingency factor

The contingency factor strategy deals with a set of objectives, goals, plans and actions defined by agribusinesses in order to achieve sustainable growth and increased profitability. In this sense, issues related to product quality, opportunities and challenges related to investments and expansion of the structure, marketing strategies to win new customers and increase demand were addressed. In addition, strategies for the growth and expansion of agribusinesses were discussed, identifying market opportunities and internal improvements (TABLE 6).

CONTINGENT FACTOR STRATEGY	
AUTHORS' VIEW	According to Beuren and Fiorentin (2014), the strategy influences the organizational structure, as it determines the degree of differentiation and integration, diversification and internationalization of organizations.
AGROINDUSTRY A	<ul style="list-style-type: none"> • Product quality; • Investment in modernizing processes and structure; • Investment in marketing; • Brand expansion; • Obtaining the SIF and SUSAF seal; • Marketing products in other states; • Strengthening local presence; • Separation of costs and revenues; • Investment in management systems and accounting consultancy.
AGROINDUSTRY B	<ul style="list-style-type: none"> • Preservation of product quality; • Partnerships with health surveillance and the IDR; • Using social networks for marketing; • Investment in publicizing the benefits of the products; • Loyalty and winning new customers; • Expansion of the product portfolio.
AGROINDUSTRY C	<ul style="list-style-type: none"> • Careful practices to maintain high product standards; • Searching for ways to improve and mitigate production risks; • Greenhouse construction strategy; • No use of social networks or advertising; • Consolidated customers and fixed points of sale; • Opportunity in digital media.

Table 6 - Comparative analysis of the contingent factor strategy
Source: The authors, (2024).

The manager of Agroindustry A recognizes that product quality is one of the factors that deserves constant attention. To maintain this quality, the company invests in modernizing its processes and structure. These investments are made strategically, allowing the agro-industry to keep up with growing demand without compromising the excellence of its products.

Recently, Agroindústria A began investing in marketing. With the help of its daughters, the company promoted its brand through advertisements on local radio stations and social media pages. In addition, the winning of awards for its products and the positive development of the agro-industry attracted the at-

tention of news sites, which began to publish stories about the company. This recognition contributed significantly to the brand's expansion.

Despite being considered a benchmark in the region's agro-industry sector, it has ongoing expansion strategies. These include obtaining the Federal Inspection Service (SIF) seal, in order to market its products at the federal level, and the Unified State System for Family, Artisanal and Small Agroindustrial Health (SUSAF), for marketing among the municipalities of Paraná. These seals, as the manager explained, will allow her agro-industry's products to be marketed throughout Brazil, extending the reach of her brand and strengthening her local presence.

Another strategy that has been implemented is related to the management of the business. As the business grew and expanded, financial management challenges arose. The manager realized the need to separate costs and income, not only from the agro-industry, but also from personal expenses and other activities on the property. Through the interview and direct analysis, it was possible to identify that the manager is willing to invest in management systems and accounting consultancy.

At Agroindustry B, preserving product quality is a priority. According to the manager:

[...] the main objective of our agro-industry is to offer consumers natural products, contributing to healthy eating... of course, the use of starches and other preservatives would increase production and profitability, but this is not, and never will be, our purpose.

Therefore, measures have been adopted to guarantee this integrity, with frequent tests, including evaluating taste, texture, aroma and visual appearance, the condition of the raw materials, correct dehydration, as well as appropriate practices to ensure that the inputs are dehydrated effectively, maintaining their nutritional properties and taste.

Through direct analysis, it was possible to verify that the agro-industry maintains strict hygiene standards at all stages of the process. In addition, the manager has established partnerships with health surveillance and the Paraná Rural Development Institute (IDR). These collaborations are necessary to ensure that the products are 100% natural and free from contamination, meeting consumer expectations and maintaining confidence in the business.

In terms of marketing, Agroindústria B identified opportunities on social networks, which, as well as being free, have increased the visibility and expansion of the brand. Currently, most orders are placed via *WhatsApp*, *Instagram* and *Facebook*, including with customers from other states. The positive repercussions of an interview, presenting the manufacturing process of some products and their benefits, has resulted in an increase in demand. Based on this, future expansion strategies include investing in publicizing the benefits of the products.

To build loyalty and win new customers, the manager emphasizes three points: customer service, product quality and promoting the benefits of each product. She recognizes that some products are still unknown to consumers and plans to expand the portfolio by producing soups and dehydrated fruit.

With regard to annual turnover, the manager is considering strategies such as investing in the production of the raw materials used to reduce costs (currently a large part is bought in), expanding the variety of products to attract more customers and investing in advertising to increase demand.

At Agroindustry C, product quality is directly linked to profitability. For the manager, this is the main factor driving increased demand. Therefore, the agro-industry adopts careful practices to maintain the high standard of the products it sells.

As the direct analysis showed, the selection of products for sale is a meticulous process. The agro-industry chooses products with uniform sizes, discarding those that do not meet the standards required by the market. In addition, the company takes care to ensure hygiene and adequate packaging, with a view to preserving quality.

However, maintaining this quality faces challenges. Factors such as the weather, diseases and specific pests can affect production. For this reason, it is necessary to monitor the gardens on a daily basis and constantly look for ways to improve and minimize the risks associated with the activity. Although the damage can be reduced, exposure to the weather means that it cannot be completely avoided. One of the improvement strategies considered by the manager is the construction of a greenhouse.

As far as marketing is concerned, the agro-industry does not use social networks or advertising. As they already have consolidated clients and fixed points of sale, increasing their clientele usually happens through traditional advertising. Although they recognize that digital media is an interesting opportunity, the management faces difficulties in using it effectively. The implementation of this strategy comes up against a lack of ability to exploit online platforms, even though they don't involve investment costs.

As observed through the data survey using different methods, it is possible to highlight that the contingency factor strategy is more prominent in agribusinesses developed and developing, which have plans to expand and gain a foothold in the market by observing opportunities. In the case of stagnant agro-industries, the main concern is to maintain the quality of their products without strategies for growth.

CONCLUSIONS

Agroindustry A, classified as “developed”, produces and sells cheeses and their derivatives. Agroindustry B, categorized as “developing”, focuses on dehydrating food for the production of spices. Meanwhile, Agroindustry C, classified as “stagnant”, specializes in the production of canned vegetables, including cucumbers, green beans, pickles and zucchini.

The data analysis showed that all the agribusinesses use management practices in their operations, albeit partially. At Agroindustry A, although there is no precise control of product costs, the management adopts a strategic approach to managing expenses, establishing a standard that serves as a reference for assessing the economic viability of the products. In addition, given the expansion of the business, the manager recognized the need to separate costs and revenues not only from the agroindustry, but also from personal expenses and other activities on the property.

As far as Agroindustry B is concerned, the manager is aware of production costs, although she does not carry out detailed control of apportionment or actual calculation. In addition, there is no control over the inflows and outflows of funds on a daily basis, and the only notes are made in notebooks, which makes it difficult to accurately analyze the agroindustry's finances.

As for Agroindustry C, it also estimates the costs and expenses associated with production, but it does not have precise control over the cost of making each can, nor does it apportion production resources. Products are sold according to market prices, with no clear understanding of the profit margin. The scheduling of payments and receipts is another management tool adopted. It is controlled by means of notes in a notebook, offering an overview of the financial cycle, but without specific details.

The proposition put forward to answer the study's objective is that contingency factors have a significant impact on the management

practices of rural family agribusinesses in Guaraniáçu-PR, requiring different levels of control and strategies depending on the specific contingencies of each one. Data analysis, direct observation of the activities carried out and interviews with agribusiness managers confirm this proposition.

Faced with the problem question: “How do contingency factors contribute to the management practices of rural family agribusinesses in the city of Guaraniáçu-PR?”, it was identified that these factors influence each agribusiness differently, endorsing the concept of Contingency Theory, which recognizes the particularities of each property in the management of its business. Even among the three agro-industries analyzed in the same location, significant differences were observed, showing a lack of uniformity.

The contingency factor environment contributes to management practices, since it exerts a standardized influence on the three agribusinesses studied, with climatic conditions emerging as the main element that impacts their operations. Therefore, agribusinesses need to adapt to each climatic situation, as well as to fluctuations in prices and consumer demand.

Technology is another contingency factor that has a significant impact, especially in the developed and developing agribusinesses, which have invested in automated machinery and adopted e-commerce. On the other hand, stagnant agro-industries have not adopted e-commerce and maintain predominantly manual production.

Despite the differences between the agribusinesses, the contingency factor structure also contributes to management practices, influencing, for example, decisions on investments and packaging according to cost-benefit and increased profitability. Size is a contingency factor that differs according to the size and stage of development of each agribusiness, affecting its relations with suppliers and management methods.

Strategy is the contingency factor that is most prominent in developed and developing agribusinesses, which have plans to expand and conquer the market. In stagnant agribusinesses, the main concern is maintaining product quality, without clear growth strategies.

Ultimately, the proposed objectives were achieved in relation to the contributions of contingency factors to the development of rural family agribusinesses in Guaraniaçu-PR, highlighting the importance of management practices in these agribusinesses and the difficulties faced when there is a lack of control.

The research contributes theoretically by linking contingency theory to the use of management practices by rural family agribusinesses. In practice, it helps to identify how contingency factors affect the adoption of certain management control practices and the

difficulties encountered, allowing for a comparison between agribusinesses.

The research also contributed to rural family agribusinesses, as it demonstrated the importance of tools for managing properties. In addition to demonstrating a gap for accounting professionals, as there is a perceived need to provide clarification and advice for these businesses, it also showed, in particular, how to apply management practices in agribusinesses.

For future work, it is suggested that the number of respondents to the questionnaire be expanded to include a larger number of rural family agribusinesses, in order to provide a more accurate analysis. Research could also be carried out in other cases and in other municipalities, in order to verify the results in other locations with different characteristics.

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APÊNDICES

APÊNDICE A – ROTEIRO DE ENTREVISTA

BASE PARA REALIZAÇÃO DAS ENTREVISTAS SEMIESTRUTURADAS COM OS GESTORES DAS AGROINDÚSTRAS FAMILIARES RURAIS.

ANTES DA ENTREVISTA

- Agradecer a disponibilidade em auxiliar na pesquisa.
- Esta pesquisa, além de preencher um requisito para a titulação de Bacharel em Ciências Contábeis das pesquisadoras, tem como objetivo analisar a contribuição dos fatores contingenciais para a gestão das agroindústrias familiares rurais.
- A entrevista pretende levantar dados sobre como os fatores contingenciais contribuem nas práticas de gestão das agroindústrias familiares rurais.
- Caso o (a) entrevistado optar por não responder a algumas perguntas, as pesquisadoras respeitarão essa decisão.
- As pesquisadoras têm interesse em examinar documentos e informações adicionais sobre a implementação de práticas de gestão, bem como observar procedimentos (reuniões, softwares, planilhas, elaboração de controles e outros) relacionados a essas práticas.
- A entrevista deverá durar aproximadamente uma hora.
- Para reduzir o tempo da entrevista e evitar interrupções para anotações, pedir permissão para gravar a entrevista. Os dados da entrevista serão utilizados exclusivamente pelas pesquisadoras ou pela orientadora.
- Solicitar o consentimento do (a) entrevistado (a) para iniciar a gravação.

ENTREVISTA

A. PERFIL DO ENTREVISTADO

- 1) Nome e idade.
- 2) Grau de escolaridade.
- 3) Fale um pouco sobre sua carreira profissional e seu envolvimento com a agroindústria familiar rural; há quantos anos você está envolvido com a agroindústria? Qual é o seu papel atual na agroindústria?

B. CARACTERÍSTICA E CONTEXTO DAS PROPRIEDADES RURAIS

- 4) Quando e como começou a agroindústria familiar rural? Quais foram os principais desafios enfrentados no início?
- 5) Quem são os gestores atuais da agroindústria? Eles têm algum treinamento formal em gestão ou agroindústria?
- 6) Todos os gestores são da mesma família? Como as responsabilidades são divididas entre eles?
- 7) Quais são os principais produtos produzidos pela agroindústria? Há algum produto que se destaca em termos de demanda ou lucratividade?
- 8) Houve alguma mudança nos produtos produzidos ao longo do tempo? Se sim, quais foram os motivos para essas mudanças?
- 9) Quais são os planos para o futuro da agroindústria? Existe alguma estratégia para se adaptar às mudanças no mercado?

C. FERRAMENTAS GERENCIAIS E PRÁTICAS ADOTADAS PELOS PRODUTORES RURAIS

- 10) Todos os membros da família têm a oportunidade de contribuir para as decisões de gestão?
- 11) Você elabora um planejamento? Possui metas de trabalho, de produção?
- 12) Tem uma previsão dos custos e receitas de sua produção? Define estratégias para reduzir gastos e aumentar a lucratividade? Quais?
- 13) Como define quando e onde vender a produção? Busca melhor preço ou vende de acordo com a necessidade de ter um montante em dinheiro?
- 14) Como realiza o controle de estoque de sua produção? De insumos ou de outro produto utilizado no seu processo produtivo?
- 15) Possui uma programação de recebimentos e pagamentos da atividade de sua agroindústria?

D. FATOR CONTINGENCIAL AMBIENTE

- 16) Como as ações e estratégias de seus concorrentes influenciam as decisões de gestão de sua agroindústria familiar rural?

- 17) Quais são as principais diferenças entre sua agroindústria e a de seus concorrentes?
- 18) Como o ambiente externo (como condições climáticas, políticas agrícolas, etc.) influencia as práticas de gestão em sua agroindústria familiar rural?
- 19) Como sua agroindústria familiar rural se adapta às mudanças no mercado, como flutuações de preços ou demanda do consumidor?

E. FATOR CONTINGENCIAL TECNOLOGIA

- 20) Como a tecnologia é integrada ao processo produtivo de sua agroindústria?
- 21) Quais são os desafios e benefícios da adoção de novas tecnologias em sua agroindústria?
- 22) Como o comércio eletrônico tem impactado a forma como sua agroindústria alcança e interage com seus clientes?
- 23) Quais são os principais desafios e oportunidades que sua agroindústria enfrenta ao implementar a tecnologia no processo de comercialização?

F. FATOR CONTINGENCIAL ESTRUTURA

- 24) Quais são os principais desafios que sua agroindústria enfrenta no desenvolvimento de novos produtos?
- 25) Como sua agroindústria decide quais investimentos (máquinas/ampliar espaço/embalagens) são relevantes e valem a pena?
- 26) Quais fatores sua agroindústria considera ao tomar decisões de preços?

G. FATOR CONTINGENCIAL ESTRATÉGIA

- 27) Como sua agroindústria garante a qualidade de seus produtos/serviços?
- 28) Quais são os principais desafios que sua agroindústria enfrenta para manter a qualidade dos produtos/serviços?
- 29) Quais formas de marketing a agroindústria utiliza para conquistar os clientes?
- 30) Quais as estratégias para fidelizar os clientes e captar novos clientes?

H. FATOR CONTINGENCIAL TAMANHO OU PORTE

- 31) Você considera que o faturamento bruto anual de sua agroindústria se compara ao de agroindústrias similares no mesmo setor?
- 32) Quais estratégias sua agroindústria implementou para aumentar o faturamento bruto anual?
- 33) Como o faturamento bruto anual tem evoluído ao longo dos anos? Quais fatores contribuíram para essa evolução?
- 34) O tamanho/porte da sua agroindústria afeta suas relações com fornecedores e clientes? Por exemplo, uma agroindústria maior pode ter mais poder de negociação com fornecedores.