

Entrepreneurial Characteristics of Rural Women in the Ceará Hinterland

Entrepreneurial Characteristics of Rural Women in the Sertão Cearense

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Abstract

Rural women are seen in the environment where they work as helpers, which reinforces the invisibility of their workforce and gender inequality, especially in the Northeast. To reverse this problem, entrepreneurial characteristics facilitate the process of self-knowledge and empowerment of these rural women. These characteristics, acquired through empirical experience or the exchange of knowledge in groups, facilitate the management of rural properties. The aim is to map the profile and correlate the entrepreneurial characteristics of rural women in the Sertão dos Inhamuns. A survey was carried out in which 131 questionnaires were administered to rural women in the Sertão dos Inhamuns region, located in the state of Ceará, between December 2021 and February 2022. It was concluded that although they have entrepreneurial characteristics, such as Competence, Risk Sharing, Planning, among others, there is a need to enhance them and disseminate management techniques.

Keywords: rural women; entrepreneurial characteristics; northeast region.

Resumo

A mulher rural é vista no ambiente onde ela trabalha como ajudante, o que reforça a invisibilidade da sua força de trabalho e a desigualdade de gênero, sobretudo na região Nordeste. Para reverter esse problema, as características empreendedoras facilitam o processo de autoconhecimento e empoderamento dessas mulheres rurais. Essas características adquiridas por meio da experiência empírica ou troca de saberes em grupo facilita a gestão da propriedade rural. Objetiva-se mapear o perfil e correlacionar as características empreendedoras da mulher rural do Sertão dos Inhamuns. Foi realizada uma pesquisa do tipo *survey*, em que foram aplicados 131 questionários para as mulheres rurais na região Sertão dos Inhamuns, situada no Estado do Ceará, entre dezembro de 2021 a fevereiro de 2022. Concluiu-se que embora elas apresentam as características empreendedoras, como Competência, Compartilhamento de risco, Planejamento, dentre outras, existe a necessidade de potencializá-las e disseminar técnicas de gestão.

Palavras-chave: mulher rural; características empreendedoras; região nordeste.

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1 Introduction

Day after day, women face battles to find their place in society. If in large urban centers this battle is constantly present, then in rural areas gender inequality, patriarchy and the sexual



division of labor cause even more devaluation of rural women's work (Silva, 2019). Pittalis and Dias (2019) reveal that rural women recognize the prejudice, lack of recognition and struggle they face on a daily basis.

According to the Food and Agriculture Organization [FAO] - in Brazil, women are responsible for more than half of the world's food production, which comes from family farming. These women play an important role in biodiversity and promote food sovereignty and security by dedicating themselves to producing healthy food. However, only 30% own their own formal land, 10% have access to rural credit and 5% to agricultural technical assistance (FAO, 2017). According to the latest Agricultural Census (2017), only 947,000 rural properties are managed by women, i.e. only 8.5% of the total area occupied by rural properties in the country. Furthermore, 31% of women do not acquire information and of those who do, 9.6% seek it through technical meetings and seminars and 8.8% through the internet, while 14.3% of men have access to information through meetings and seminars and 13% through the internet (Agricultural Census, 2017).

The lack of technical information and professional qualifications reinforces gender inequality in rural areas. Lima (2017) states that these conditions only corroborate the financial dependence and devaluation of rural women's work. Women entrepreneurs still face a number of barriers, such as concerns about the lack of capital, the inappropriate use of money to set up a business, the fear of failure (Lockyer & George, 2012), as well as domestic chores. In addition, there are institutional barriers such as the requirement for guarantees from financial institutions that provide credit, and the fact that women who are dependent on their husbands are unable to meet the requirements for releasing credit from the bank (Barbosa et al., 2011), causing embarrassment. On the other hand, when spaces, listening and opportunities are offered to these women, they tend to facilitate the process of self-awareness and empowerment (Pittalis & Dias, 2019). Teamwork and unity among these women gain strength to face challenges and promote gender equality. Authors Moraes and Nascimento (2021) and Campos (2014) point out that the empowerment of rural women often arises from living together in rural groups or communities. Female representation in business has seen an increase in innovation in terms of ways of working, i.e. female entrepreneurship has had the skills to drive relevant changes in society and the economy (Silva et al., 2022). And entrepreneurial characteristics can sometimes be developed when these women are included in their representative groups. In rural areas, Cella and Peres (2002) identified some entrepreneurial characteristics in their studies, such as: competence, risk sharing, planning, family involvement, the environment, financial factors, personal management, organizing production, taking advantage of opportunities and commercial experience.

However, studies focused on entrepreneurship in rural areas are incipient (Ferreira et al., 2017), especially in the northeastern regions, such as the Sertão dos Inhamuns, which is made up of five municipalities: Aiuaba, Arneiroz, Quiterianópolis, Parambu and Tauá in the state of Ceará. This region is mostly made up of family farming, where livestock has a strong role in income and food security (Silva et al., 2018). In the five municipalities, farming is the second most profitable economic activity, according to the Gross Municipal Domestic Product, considering Aiuaba with a 15% share, Arneiroz with 13.5%, Quiterianópolis with 11.7%, Parambu with approximately 13% and Tauá with over 10% (IPECE, 2017). However, Pittalis and Dias (2019) reveal in their study carried out in the Inhamuns Territory, more specifically in Crateús in the state of Ceará, that women's work in agriculture is still seen as help, which is conditioned to invisibility and vulnerability.

The representation and recognition of rural women's work in their community through their entrepreneurial characteristics, cited by Cella and Peres (2002), promotes formal



alternatives, through projects, groups and associations, with the aim of improving their skills and professional training. In her study, Campos (2014) concluded that valuing rural women's work allows them financial autonomy and gives them the chance to have a say in their rural property. Melo, Alves and Paashaus Junior (2016) corroborate that the union of rural women in search of autonomy in their spaces helps with integration with society and sustainable development. Characterizing the profile of rural women in the Sertão dos Inhamuns based on their entrepreneurial characteristics aims to solve the problems they face on a daily basis in society, such as devaluation and lack of recognition in their spaces as a social right. The authors Melo, Alves and Paashaus Junior (2016) emphasize that tackling these and other problems only contributes to improving the entrepreneurship, quality of life, social well-being and social inclusion of these rural women. Given these arguments, the following research question was posed: What are the entrepreneurial characteristics of rural women in the Sertão dos Inhamuns? In order to answer it, a number of objectives were set, including: identifying the profile of this rural woman; mapping and correlating the entrepreneurial characteristics of rural women in the Sertão dos Inhamuns. In addition to the Introduction, the article has the following sections: the Theoretical Framework that supports all the scientific research; the Methodology used to answer the research problem; the Presentation of Results and Discussions and, finally, the Conclusions about the findings.

2 Theoretical foundation

If gender inequality has become more evident with the Covid-19 pandemic in urban areas (SEBRAE, 2021), then for rural women the search for appreciation and recognition of their work has been weakened. According to the FAO (2017), rural women are victims of prejudice in the rural labor market and are responsible for more than half of unpaid work. They also have to take care of their children, the house and household chores.

On the other hand, it is rural women who are responsible for half of the world's food production (FAO, 2017); it is the fisherwomen of the Territory of Inhamuns/Crateús-CE who carry out the processing and sale of fish, as well as caring for the environment and natural resources (Pittalis & Dias, 2019); northeastern women workers who are called "deviants" who change their path and create a life project in search of freedom, because they have already had heteronormative and abusive affective-sexual relationships (Moraes & Nascimento, 2021); and women's groups, research groups and rural unions that offer alternatives, disseminating knowledge and promoting rural development (Campos, 2014).

The discussion of gender in the Brazilian countryside has still been incipient in scientific literature over the years. Saffioti and Ferrante (1987) make it clear in the introduction to their study that there is little or no research on rural women in Brazil. When this issue of gender inequality is addressed, it can be seen that, for example, the notion of violence or the undermining of women was not always understood as something negative in society. Violence was a way of "educating" women who disrespected the male hierarchy (Vigano & Laffin, 2020). Bourdieu (2007) shows that the social context still institutionalizes that it is the man's role to provide for the family.

However, with the mobilization of rural women in the March of the Daisies in the 2000s, they began to promote the recognition and creation of public policies aimed at rural women (Zumak, 2019). Public policies aimed at rural women, such as Pronaf Mulher, implement actions based on recognizing female entrepreneurship in rural areas (Zumak, 2019). Female entrepreneurship is arousing interest among public bodies and academics in order to promote public policies and understand this phenomenon in the social context (Noguera et al., 2013).

It is worth noting that the recognition of rural women's work generally does not go hand in hand with their effective participation in agricultural production units. To change this scenario, there are two ways to recognize them: the state must implement public policies; and educational institutions must map the entrepreneurial characteristics of women farmers (Zumak, 2019; Ferreira et al., 2017). Silva et al. (2019) reveal that 83% of women are resilient in the sense of motivation to face obstacles in entrepreneurship.

McClelland (1961) points out that there are three motives responsible for human behavior in the business environment: achievement, power and affiliation (planning). Achievement is related to exceeding standards of excellence; power is associated with the desire to be strong and to influence people around you; and affiliation, also known as planning, is linked to the presence and appreciation of healthy relationships that generate cooperation between them (Ferreira et al., 2006). Teixeira et al. (2021) state that some women naturally possess the spirit of leadership and management. Running her own business induces women entrepreneurs to produce potential, autonomy, self-esteem and financial independence, among other benefits that can be observed (Rodrigues et al., 2011).

Entrepreneurial characteristics help women to excel in relation to the various challenges faced in rural areas. Having the following entrepreneurial characteristics - identified by McClelland as: Opportunity-seeking and Initiative; Goal-setting; Systematic Planning and Monitoring; Information-seeking; Taking Calculated Risks; Demanding Quality and Efficiency; Commitment; Persistence; Persuasion and Networking; and Independence and SelfConfidence (Greatti & Senhorini, 2000) - makes women thrive and enhances their role in the market. When these entrepreneurial characteristics are developed in rural areas, entrepreneurship itself becomes the main "weapon" for developing and attracting new rural women (Ferreira et al., 2017; Akgün et al., 2011), generating an environment with a social, economic, technological and environmental impact. Authors Moraes and Nascimento (2021) and Campos (2014) point out that the empowerment of rural women often comes from living in rural groups or communities. Rural women gain their space and appreciation as rural workers by joining associations, cooperatives or informal groups that have a common goal. According to Melo, Alves and Paashaus Junior (2016), the exchange of empirical knowledge between the members of a given association contributes to improving rural businesses.

In this sense, empowerment is linked to the entrepreneurial characteristics that rural women themselves possess or that they somehow develop when they are included in local groups. Cella and Peres (2002) point out that some of the entrepreneurial characteristics considered in the rural context can be listed: competence, risk sharing, planning, family involvement, the environment, financial factors, personal management, production organization, taking advantage of opportunities and commercial experience. Table 1 shows the entrepreneurial characteristics of rural women and the definition of each one.

Chart 1- Entrepreneurial characteristics of rural women

Entrepreneurial characteristics	Definition
Competence	Technical and productive knowledge, skills, abilities and attitudes that guide the rural entrepreneur in her decision-making.
Risk sharing	Partnerships; farming associations.
Planning	Dissemination of routine activities to all those involved; clarification of the future direction of the property.
Family involvement	Capable of absorbing or involving the family workforce in



Entrepreneurial characteristics	Definition
	productive activity or involving them in aspects related to the planning and management of businesses outside the property.
Environment	Preserving the environment is one of the essential elements for a successful rural producer.
Financial factor	The analysis of financial conditions provides an understanding of the rural enterprise; it summarizes the financial consequences of choosing a particular strategy
Personal management	The producer's ability to obtain skilled workers, making tasks as efficient as possible.
Organization of production	It identifies production capacity given the resources available and leverages its resources through partnerships.
Seizing opportunities	It determines and re-evaluates the sequence of operations essential to production, adding new information to planning.
Commercial experience	The entrepreneur's knowledge of commercial matters in view of his personal experience and previous results; he has the ability to determine the best buying and selling strategy.

Source: Adapted from Cella and Peres (2002).

It should be noted that these characteristics are related to the entrepreneurial characteristics mentioned by McClelland in his studies. Rural women entrepreneurs seek to increase their political, economic and social power (Silva, 2010), since for them, according to Simon (2020), the struggle that takes place on various scales changes the social, economic and political life of working class rural women in Latin America and the world.

It should also be noted that although entrepreneurship in rural areas tends not to occur for reasons, according to Ribeiro and Almeida (2009), such as: aging of the rural population; lack of investment and opportunities; absence of young rural entrepreneurs; and the training given is scarce, with the aim of promoting knowledge and training these young rural women. Rural entrepreneurship gains prominence when it develops the economy, stimulating a competitive market and the emergence of new opportunities (Ferreira et al., 2017).

3 Methodology

In order to obtain the answer to the research question, some methodological procedures were described, considering the method and type of research, the type and definition of the sample, the formulation and application of the data collection instruments and, finally, the tabulation, analysis and interpretation of the data.

With regard to the method and type of research, a quantitative approach was taken, since the opinion of a given individual can be translated into numbers. In terms of its nature, the research was applied in order to generate knowledge by solving specific problems and because it involved local truths and interests. In addition, the objective was descriptive research because it described a certain population that relates to the research variables, as well as involving standardized techniques such as questionnaires (Moresi, 2003).

As for the type and definition of the sample, a survey was used because information was collected from a certain significant group of people. Based on this hypothesis, the sample was



defined as non-probabilistic by quotas, since the object of the research was rural women from the Sertão dos Inhamuns, whose characteristics were taken into account (Kauark et al., 2010; Moresi, 2003). As described in the Introduction, the Sertão dos Inhamuns is made up of five municipalities in the state of Ceará: Aiuaba, Arneiroz, Quiterianópolis, Parambu and Tauá. All of them have farming as their second largest economic activity and are mostly made up of family farming. A total of 131 questionnaires were obtained from rural women living in one of the five municipalities in the region. The initial sources that facilitated sending the questionnaire to rural women were the public bodies in the geographical area (Sertão dos Inhamuns), such as Ematerce and the Federal Institute of Ceará - Tauá campus. The questionnaire was sent out between December 2021 and February 2022, totaling three months of data collection.

Regarding the formulation and application of the data collection instrument, a questionnaire was built using Google Forms containing 35 variables based on closed questions and a Likert scale, ranging from 1 to 5 points. It is worth noting that the questionnaire was structured according to the studies by Cella and Peres (2002); Ferreira, Lasso and Mainardes (2017) and Pittalis and Dias (2019), containing 3 main parts: 1- Initial Questions; 2- Entrepreneurial Characteristics; and 3- Socioeconomic Characteristics, as shown in Table 2 below.

Chart 2 - Variables in the data collection instrument

Main parts	Entrepreneurial characteristics	Variables
Initial questions with closed variables		1. Do you work in rural areas?
		2. Which municipality do you live in?
Entrepreneurial characteristics with Likert Scale variables	Competence	3. I know how to work in rural areas, with livestock and agriculture. For example, I know how to milk a cow and plant lettuce.
		4. I have the ability to work in rural areas.
		5. With what I know, I can make better decisions in farming. E.g. dealing with the cow at the right time for milking.
	Risk sharing	6. I create partnerships with neighbors who help me with agricultural production.
		7. Institutional bodies (e.g. Ematerce, Rural Unions, Cooperatives, etc.) have helped me with agricultural production.
	Planning	8. I meet with my family to decide what is best for farming activities.
		9. I plan the routine of the farm.
	Family involvement	10. All members are involved in agricultural activities.
		11. Each member is responsible for a specific agricultural activity.
	Environment	12. I believe that preserving the environment has a positive impact on farming activities.

Main parts	Entrepreneurial characteristics	Variables
		13. Burning is often used in rural activities. For example, burning before planting a particular crop.
		14. Pesticide containers (e.g. pesticides or fungicides) are collected by the City Hall.
	Financial factor	15. I do my research before signing a line of agricultural financing.
		16. My family and I write down all the costs/expenses involved in agricultural production.
		17. I know how much profit we make from each agricultural activity.
	Personal management	18. I get in touch with the neighbors to find labor, if necessary.
		19. If I need to, I'm looking for agricultural technicians or veterinarians to work in farming.
	Organization of production	20. I make the most of the natural resources in the countryside.
		21. I only produce something on my rural property because the soil is fertile and the number of hectares is sufficient.
	Seizing opportunities	22. I always look for the best opportunity to improve the rural environment.
		23. I apply the information obtained in online courses or lectures in rural areas.
	Commercial experience	24. I know how to sell a certain agricultural product to a customer.
		25. I do marketing, thinking about the product, the price, the advertising and the point of sale.
		26. If I'm not selling much, I try to improve sales opportunities.
	Socio-economic characteristics with closed variables	
28. What is the most common agricultural activity on your farm?		
29. How long have you been in rural areas?		
30. Do you participate in any women's groups on social media (Facebook, WhatsApp or Instagram)?		
31. What level of education have you completed?		
32. What further training courses do you usually take? (Check more than one option if necessary):		
33. Approximately what is your total gross family income (current minimum wage R\$1,100.00):		



Main parts	Entrepreneurial characteristics	Variables
		34. How many family members live on the farm?
		35. What is your marital status?

Source: Prepared by the authors (2022).

4 Research results

This section presents the results and discussions of the research into the socio-economic profile and entrepreneurial characteristics of rural women in the Sertão dos Inhamuns.

In terms of socio-economic profile, rural women in the Sertão dos Inhamuns range in age from 41 to 50, work in agriculture and livestock farming, have been in rural areas for more than 20 years, only have primary education, have a gross income of less than 2 minimum wages, are married, have 4 to 5 members living on the rural property, the majority do not take part in social media groups and when they do look for some kind of training course, it is usually on social media, such as Facebook, Instagram, etc. According to Rocha and Carvalho (2022), rural women generally have this type of demographic profile, aged over 45, married and with a low level of education. Although low schooling is an intervening factor for them to progress in the countryside, age and time working in the field also help rural women to make the best decisions based on life experience.

Next, the ten entrepreneurial characteristics of rural women identified by Cella and Peres (2002) were listed, based on the entrepreneurial characteristics researched by McClelland (1961). Table 3 shows the entrepreneurial characteristics, their variables, the absolute frequency and relative frequency of the answers on a Likert scale.

Chart 3 - Entrepreneurial characteristics of rural women in the Sertão dos Inhamuns

Entrepreneurial characteristics	Variables	Average Likert scale	Relative frequency	Absolute frequency
Competence	3. I know how to work in rural areas, with livestock and agriculture. For example, I know how to milk a cow and plant lettuce.	4	50%	66
	4. I have the ability to work in rural areas.	4	54%	71
	5. With what I know, I can make better decisions in farming. E.g. dealing with the cow at the right time for milking.	4	43%	56
Risk sharing	6. I create partnerships with neighbors who help me with agricultural production.	3	32%	42
	7. Institutional bodies (e.g. Ematerce, Rural Unions, Cooperatives, etc.) have helped me with agricultural production.	3	26%	34
Planning	8. I meet with my family to decide what is best for farming activities.	4	40%	53
	9. I plan the routine of the farm.	4	49%	64
Family involvement	10. All members are involved in agricultural activities.	4	27%	36

Entrepreneurial characteristics	Variables	Average Likert scale	Relative frequency	Absolute frequency
	11. Each member is responsible for a specific agricultural activity.	3	33%	43
Environment	12. I believe that preserving the environment has a positive impact on farming activities.	4	48%	63
	13. Burning is often used in rural activities. For example, burning before planting a certain crop.	4	43%	56
	14. Pesticide containers (e.g. pesticides or fungicides) are collected by the City Hall.	2	41%	54
Financial factor	15. I do my research before signing a line of agricultural financing.	4	39%	51
	16. My family and I write down all the costs/expenses involved in agricultural production.	4	45%	59
	17. I know how much profit we make from each agricultural activity.	4	42%	55
Personal management	18. I contact the neighbors to get labor if necessary.	4	46%	60
	19. If I need to, I'm looking for agricultural technicians or veterinarians to work in farming.	4	40%	52
Organization of production	20. I make the most of the natural resources in the countryside.	4	48%	63
	21. I only produce something on my rural property because the soil is fertile and the number of hectares is sufficient.	4	50%	66
Seizing opportunities	22. I always look for the best opportunity to improve the rural environment.	4	60%	79
	23. I apply the information obtained in online courses or lectures in rural areas.	2	28%	37
Commercial experience	24. I know how to sell a certain agricultural product to a customer.	4	53%	69
	25. I do marketing, thinking about the product, the price, the advertising and the point of sale.	3	32%	42
	26. If I'm not selling much, I try to improve sales opportunities.	4	50%	65

Source: Prepared by the authors (2022).

According to Chart 3, the first entrepreneurial characteristic observed in rural women in the Sertão dos Inhamuns was "**Competence**", in which 50% agree that they know how to work in rural areas, such as livestock and agriculture; 54% said they have the ability to work in rural areas; and 43% agree that based on what they know, they are able to make better decisions in farming. According to Rosa et al. (2022), female characteristics such as competence and commitment are relevant to decision-making in female entrepreneurship, especially in rural

areas. Teixeira et al. (2021) corroborate that the spirit of leadership and management is reflected in the businesses run by women.

Another entrepreneurial characteristic observed was "**risk sharing**", in which they don't share the risk with their rural neighbors (32%), but seek this support from institutional bodies such as Ematerce and Rural Unions (26%). Medeiros (2011) points out that the social context in which rural women find themselves is defined by cultural and religious aspects, influencing the way they share the risk of rural activities. Furthermore, it is through these institutional bodies that public policies are disseminated in the countryside (Zumak, 2019). Also, the average of the answers according to the Likert scale was 3, showing that rural women find it difficult to share risk and at the same time look for other ways to mitigate it.

The entrepreneurial characteristic "**Planning**" stood out for rural women in the Sertão dos Inhamuns, because not only do a large proportion (40%) meet with their family members to decide what is best for farming activities, but 49% also say that they plan the routine of the rural property. This information is related to the entrepreneurial characteristic "**Involvement in the family**", in which 27% of family members are involved in farming activities and 33% say that each family member is responsible for a particular farming activity. Therefore, planning with the involvement of family members is essential for designing the path that the farm should follow in the coming years, according to the objectives set by the farm family (SENAR, 2012). These two characteristics can be observed in the three motives that shape human behavior, according to McClelland (1961), which are achievement, power and affiliation, also known as planning.

The entrepreneurial characteristic "**Environment**", which is strongly related to the peculiarities of agriculture, such as climate change, shows that 48% believe that preserving the environment has a positive impact on farming activities. On the other hand, 43% say that they burn to produce a certain crop, and 41% say that the local town hall does not collect pesticide or fungicide packaging. The use of agricultural techniques or pesticides that in some way degrade the environment is widespread in Brazil's regions. The majority of Brazilian farmers do not know what is written on the package leaflet of a pesticide or what the correct disposal would be after use (Bohner et al., 2013). On the other hand, it can be seen that rural women are concerned about the environment from the start of the agricultural production process right through to the marketing process (Pittalis & Dias, 2019).

In relation to the entrepreneurial characteristic "**Financial factor**", 39% say that they research a line of agricultural financing before signing; 45% say that they write down the costs/expenses involved in agricultural production; 42% say that rural women know the profit they make from each agricultural activity. The fact that rural women are attentive and write down their costs and revenues does not mean that they have technical knowledge, but rather empirical knowledge on the subject over time (Melo et al., 2016). Systematic Planning and Monitoring means that rural women plan, check and keep financial records in order to make decisions about their rural business later on (Greatti & Senhorini, 2000).

The entrepreneurial characteristic "**Personal management**" was important because 46% of the women contact nearby neighbors if they need labor for agricultural activities. In addition, 40% say that if the need arises, they look for agricultural technicians or veterinarians to work on the farming activity. At the same time, with regard to the entrepreneurial characteristic "**Organization of production**", 48% make maximum use of the natural resources found on the rural property; and 50% say that they only produce something on the rural property because the soil is fertile and the number of hectares is sufficient. These two characteristics are associated with the administrative process, which involves planning, organizing, directing and controlling the resources available on the farm to meet a certain

objective (SENAR, 2012; Oliveira, 2009). These characteristics are associated with those listed by McClelland (1961), such as Independence and Self-confidence; and Demand for quality and efficiency, where they seek autonomy in various groups, being a leader in some contexts; and perform quickly at the lowest cost, taking responsibility for meeting deadlines (Greatti & Senhorini, 2000).

A outra característica empreendedora "**Aproveitamento de oportunidades**" teve relevância nas seguintes afirmações: 60% afirmam que sempre buscam a melhor oportunidade para otimizar o meio rural; só que, por outro lado, 28% revelam que não aplicam as informações obtidas em cursos online ou palestras no meio rural. Nota-se que há uma busca por oportunidade e iniciativa com o objetivo de diversificar os produtos agrícolas (Greatti & Senhorini, 2000), conquistando novos espaços, como as feiras locais. Contudo, não aplicar os conhecimentos adquiridos numa palestra ou curso, parte do pressuposto de que a mulher rural empreendedora passa por barreiras que geram medo, frustração, estresse e raiva impedindo-a de crescer no seu negócio rural (Rodrigues *et al.*, 2022), além da dificuldade de compreender determinados termos técnicos em consequência do seu nível de escolaridade, conforme observado em seu perfil socioeconômico.

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The other entrepreneurial characteristic "**Taking advantage of opportunities**" was relevant in the following statements: 60% say they always look for the best opportunity to optimize the rural environment; but, on the other hand, 28% say they don't apply the information obtained from online courses or lectures in the rural environment. It can be seen that there is a search for opportunity and initiative with the aim of diversifying agricultural products (Greatti & Senhorini, 2000), conquering new spaces, such as local fairs. However, not applying the knowledge acquired in a lecture or course is based on the assumption that rural women entrepreneurs go through barriers that generate fear, frustration, stress and anger, preventing them from growing their rural businesses (Rodrigues *et al.*, 2022), as well as the difficulty of understanding certain technical terms as a result of their level of education, as observed in their socioeconomic profile. And the entrepreneurial characteristic "**Commercial experience**" was highlighted in the following statements: 53% of rural women know how to sell a particular agricultural product; and 50% seek to improve the opportunities linked to sales. However, 32% admit that they don't do marketing, thinking about the product, the price, advertising and the point of sale. Although there is a commitment to sales, there is a lack of technical knowledge in the lives of these rural women. Persuasion and networking are essential for establishing strategies and fulfilling commercial relationships (Cella & Peres, 2002). In addition, one of the

strategies to increase sales is to be open to innovations through social media, by placing your product in e-commerce or a marketplace.

Pearson's correlation was then carried out to identify the main entrepreneurial characteristics that correlate with rural women in the Sertão dos Inhamuns. Table 4 below shows these results.

Table 4 - Pearson Correlation of Entrepreneurial Characteristics

Pearson's correlation	Entrepreneurial characteristic	Correlation interpretation
0,503	Planning x Family involvement	Each member of the family has their own role, because the rural woman holds meetings with them, defining the best strategy for each farming activity.
0,504	Planning x Commercial experience	A planned routine helps you sell your agricultural products at the point of sale.
0,481	Competence vs. seizing opportunities	When rural women have the ability to work in the countryside, they also seek to take advantage of the best opportunities in the countryside.
0,478	Financial factor x Commercial experience	There is a relationship between understanding the lines of financing and marketing, considering price, product, place and promotion, as both characteristics are related to financial resources.
0,475	Commercial experience x Seizing the opportunity	With commercial experience over time, rural women know how to sell their agricultural products in the best possible way, even during periods of low seasonality.

Source: Prepared by the authors (2022).

According to Chart 4, there are 6 entrepreneurial characteristics that are related to each other. **Planning** and **commercial experience** stand out because they are characteristics that rural women entrepreneurs in the Sertão dos Inhamuns have exercised throughout their career in the countryside. In other words, there is planning and commercial experience because they have been working in rural areas for over 20 years. Although planning can sometimes occur intuitively in rural areas, commercial experience leads rural women to take advantage of opportunities and correlate financial resources between sales and access to credit. Rocha and Carvalho (2022) reinforce that rural women have the will, synergy and entrepreneurial characteristics, however, there is often a lack of planning tools, management techniques and guidance from the bodies responsible in rural areas, so that they can develop and enhance the characteristics most present in their profile.

Finally, the entrepreneurial characteristic **Taking advantage of opportunities** is related to the entrepreneurial characteristics **Competence** and **Commercial experience**. In other words, when an opportunity arises in the rural environment, rural women unite their commitment and persistence, as well as placing demands on the quality and efficiency of the farming activities on their property. For example, in Israel, rural women seek to generate income and develop professionally based on the opportunities they see in their daily surroundings (Sofer & Saada, 2016). In Brazil, open-air markets are a stimulating factor for generating income for rural women in family farming (Rocha & Carvalho, 2022). Therefore, rural women in the Sertão dos Inhamuns can engage and earn income from the potential of their



entrepreneurial characteristics. In addition, the union between these women farmers from the municipalities belonging to this region of the state of Ceará can promote the formation of formal and/or informal groups and open-air fairs for female entrepreneurship in family farming.

5 Final considerations

The main objectives of the research were to identify the profile of this rural woman; to map and correlate the entrepreneurial characteristics of rural women in the Sertão dos Inhamuns. The objectives were achieved as expected based on the methodological procedures used.

In terms of profile, it can be seen that rural women in the Sertão dos Inhamuns range in age from 41 to 50, are married and have been in rural areas for more than 20 years, the majority work in agriculture and livestock farming, and only have primary education. Despite their vast empirical knowledge acquired over 20 years, in which they gain a competitive advantage by learning from mistakes and successes, it is clear that rural women in the Sertão dos Inhamuns must be open to new possibilities that add value to what they do as rural workers. One of the challenges of entrepreneurship in the rural areas of the Sertão dos Inhamuns is the ageing of the rural population and, consequently, the lack of young rural entrepreneurs.

It can be seen that rural women in the Sertão dos Inhamuns have entrepreneurial characteristics, such as: Competence, Risk sharing, Planning, Organization of production, Personal management, among others. Based on the article's theoretical foundation, the results reflect what Cela and Peres (2002) and McClelland (1961) say about entrepreneurial characteristics and motivations for starting a business, respectively. It is understood that, in both rural and urban areas, it is necessary to identify entrepreneurial characteristics in order to undertake, because these can also signal the success of a business.

In rural areas, women from the semi-arid region persist through resilience, where agriculture and the climate teach them these characteristics present in their entrepreneurial behavior. The sharing of risk is still unknown to these women, but the spirit of working as a team, providing labor to their neighbors, is an act of engagement and collaboration, as the scientific literature states. This action through groups provides a place for rural women in the semi-arid region to speak and be heard, as argued by Moraes and Nascimento (2021) and Campos (2014).

For better instruction on how to manage a rural property and make a profit, planning and organizational tools can be introduced to these women through courses or lectures by bodies directly linked to the rural environment, such as Ematerce, the Rural Union, City Hall and the region's educational institutions. Through this, there is the possibility of developing and enhancing the characteristics most present in their profile, with an impact on their farming activities. It is worth noting that this type of action strengthens the recognition of rural women as workers in their agricultural activities and leaders of their farms, empowering them and mitigating the idea that rural women are just helpers on the farm.

As future studies, it is suggested that courses on entrepreneurial education be applied to enhance the characteristics observed in these rural women. These courses could be provided through extension projects at educational institutions. The formulation of local public policies aimed at this public could also strengthen the presence of women in the countryside and recognize them as rural workers.

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