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MANAGEMENT IN FAMILY FARMING: EVIDENCES FROM SETTLEMENTS

Gestão na agricultura familiar: evidências de assentamentos

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ABSTRACT

Purpose - This paper addressed the management in families farming and investigated if the values in functional management are appropriate to assess their practices. The study aimed to analyze how family farmers conduct their management process based on values that guide their actions in farm management.
Design/methodology/approach – This qualitative research had followed a semi-structured script with 124 farmers surveyed from the State of Rio Grande do Norte, Brazil. The data were analyzed using an interpretative approach, which helped the operationalization of these qualitative analyzes.
Findings – Results have evidenced that climate factors have influenced decisions on the type of crop to grow and period of cultivation. The incomes related to the commercialization of the products, are not enough to support the families, but they contribute to their food security.
Originality/value - The types of management and production are guided by traditional values. The farmers' perspective is to guarantee the survival of the family and the maintenance of the farm. Farmers do not understand that family farming is a business such as employer agriculture and use hybrid forms of management between the functionalist and emancipatory perspectives.

Keywords - family farming; traditional values; social management.

RESUMO

Proposta - Este artigo aborda o gerenciamento na agricultura familiar e investiga se os valores no gerenciamento funcional são adequados para avaliar suas práticas. O estudo tem como objetivo analisar como os agricultores familiares conduzem seu processo de manejo com base em valores que orientam suas ações no manejo agrícola.
Design/metodologia/abordagem - Esta pesquisa qualitativa seguiu um roteiro semiestruturado com 124 agricultores do Estado do Rio Grande do Norte, Brasil. Os dados foram analisados por meio de uma abordagem interpretativa, que auxiliou na operacionalização dessas análises qualitativas.
Resultados - Os resultados evidenciaram que os fatores climáticos influenciaram as decisões sobre o tipo de cultura a crescer e o período de cultivo. As rendas relacionadas à comercialização dos produtos não são suficientes para sustentar as famílias, mas contribuem para sua segurança alimentar.
Originalidade - Os tipos de gerenciamento e produção são guiados por valores tradicionais. A perspectiva dos agricultores é garantir a sobrevivência da família e a manutenção da fazenda. Os agricultores não entendem que a agricultura familiar se assemelha a negócio como a agricultura empregadora e usam formas híbridas de gerenciamento entre as perspectivas funcionalista e emancipatória.

Palavras chave - agricultura familiar; valores tradicionais; gestão social.

1 INTRODUCTION

It has been widely discussed that public administration should simultaneously provide better services and optimize costs, in order to fulfill its role without increasing tax burden, thus enabling nations' social and economic development (Cavalcante, 2017; Ansell & Torfing, 2014; Torfing, Ferlie, Jukić & Ongaro, 2021). Public sector innovation is an alternative for dealing with this challenge, as new answers are necessary Knowledge management that guides the family in farm production generally ignores local experiences and customs (Karnopp & Oliveira, 2012; Sepulcri & Trento, 2010). Family farming is a productive organization within a small farm and subject to capitalist production structures. However, it has its specifics. The farmer is at the same time a farm worker and manager of production. Production gains are used to support the family and maintain the small farm (Batalha & Buainain, 2005). These small farmers are guided by a different type of management than those that focus on productivity and profit. Such logic often seems "wrong" from the traditional perspective of administration and management (Dos Santos, et al. 2012).

Some authors discuss the specificity of the management forms in family farming. Neves (2007) recovers the conceptual framework that gave rise to the concept of social management and emphasizes the institutional framework that gives of the term a political meaning, addresses the management specificities guided by democratic values. Siqueira and Araujo (2018) organized a collection of papers highlighting the links between social management and family farming, recovering the concepts of social management, the experiences of organizations linked to this production mode, the social technologies used and the substantive management logic. However, there is a tendency to resemble the management of family farming to that carried out by the company (Silva, 2017; Zachow & Plein, 2018, Uecker et al. 2005). Understanding this dubiousness of the logic of family farming management being closer to strategic management or social management. This study focused on analyzing the particularities of the management logic of family farmers, in order to understand their guiding values.

The capitalist logic of asset remuneration, division of labor and market conception must be questioned when used to understand the logic of small farm management. Therefore, the research problem that guided this paper refers to the capacity of administrative theories to understand the logic that conducts the management processes of family farms. This study aimed to analyze how

family farmers conduct their management process based on values that guide their actions in farm management.

Family farming has been the basis for economic and social development in several Brazilian places. Therefore, to keep these small farms productive, proper management is essential.

Small Farms Perspective

Small farms or family farms represent a majority social group of productive units in some Brazilian states, mainly in the Northeast region. According to Abramovay (2007) family farming is one where management, ownership and the most of the work come from individuals who maintain blood or marriage ties.

In Brazil, the landmark for understanding family farming was the enactment of Law n. 11.326 (2006), which establishes guidelines for the formulation of the National Policy for Family Farming and Rural Family Companies. According to this law, the establishment must comply with the following items:

a) the area must be equal to or less than four fiscal modules;

b) predominance of family labor;

c) minimum percentage of family income must come from activities of the family establishment;

d) the establishment or enterprise must be managed with the family (Brasil, 2006).

The small farm consists in a social category characterized by different sizes and social conditions. Its existence is related to the way to choose and manage the various agricultural production strategies to remain active in the market. Although its existence is directly related to internal factors, the way the farmer and his family manage resources. The farmer is also affected by the social and economic context (Zachow & Plein 2018). The management logic that envisions productivity and profit does not always come into conflict with the value perspective of farmers who have the family and the community as the focus and not exclusively the market (Baiardi, 2014).

According to Plein (2012, 92), "[...] there have always been many doubts about the socioeconomic attributes of family farming as a model of development", because there is no certainty about the prospects for family farming with the consolidation of the capitalist mode of production. Abramovay (1992) suggests that family farming has historically been directed towards the market through commodification. However, this approach occurs differently from the capitalist enterprise (Van der Ploeg, 2006).

In previous study, Schneider (2003) presented three elements that synthesize the permanence of family farming in capitalism.

1 - relationship of farmers with the social and economic environment: the environment has a set of institutions that can encourage or limit, influencing individual and family decisions;

2 - the use of labor: in general, family farms use family labor, but sometimes they can hire other temporary workers;

3 - nature's obstacles: they restrain an effective equalization between agricultural and industrial activity.

Abramovay (2007) makes a synthesis of three thoughts that could explain the conditions of existence of family farming. The first thought treats the family farmer as a profit-maximizing agent, analyzing some of his attitudes. The small farmer correctly allocates his inputs to increase productivity, obtain a good price and profit on the product and decrease production costs. These actions show economic rationality. In the second, what motivates the producer is risk aversion. In this line, the producer is an opportunity-maximizing agent, making decisions to ensure the basic needs of his family instead of prioritizing profit. In the third, there is a combination of two concepts studied in

the previous two: production and consumption. The relationship between the family's consumption needs and the work needed to meet them is the basis of the microeconomic balance around which the peasantry. According Abramovay (2007) the third thought concerns the management logic that would be predominant in this mode of production. The family farmer always has the decision power, despite describing three opposing lines of thought. The family farmer decides about farm management what to plant, what resources to allocate, what risks taking and what to sell (Abramovay, 2007).

It is important to realize that cannot compare family farming with industry or other similar enterprise. Family farming has particularities and limits that cannot be exceeded. The limits imposed on the areas make it difficult to use machines to plant and raise animals (Zachow & Plein 2018).

Plein (2010) considers that family farming, even inserted in a commodification process, has particularities that distinguish it from capitalist companies. The author highlights their historical particularity, interaction with the capitalist context, the resistance strategies produced in the family context face of what they deny in relation to commodification. The strengthening of family farming in its insertion into the market can generate a context of dependency, which, given the geographic and cultural diversity of family farming in Brazil, its levels of commodification are not homogeneous. The author considers relevant to understand the forms of social reproduction of this productive structure based on its cultural and economic singularities. In this sense, it is questioned to what extent it would be possible to manage family farming in line with the principles of social management rather than strategic management.

Small Farm Management

In family farming, decision-making is made by the farmer himself or another member of his family, that is, the farm manager (Abramovay, 2007). The farm manager must decide what, how much and how to produce. In addition, he must assess whether appropriate practices are being applied and results are being achieved (Cabral, Favareto, Mukwereza & Amanon. 2016).

Farm management has several practices that make it complex. Farm needs to adapt to the requirements of the entire value chain. However, few farms have management practices and small farmers receive little accounting assistance and earnings management (Cabral et al., 2016).

To analyze the complexity of farm management, the first step is to understand the particularities of the various activities carried out in the farm. Planning is done months or years before the product is delivered, although planning ahead decreases the accuracy of the decision.

The type of crop to grow is an important decision factor. When the product is very perishable, the farmer is likely to have problems with marketing. In addition, farms are set with other farms, suppliers, buyers and institutions that also influence the farmer's decisions (Zachow & Plein 2018). According this study, the Table 1 presents some management practices applied to family farming:

Table 1 - Management Practices in Family Farming

MANAGEMENT PRACTICES	MEANING
Commercialization	It is the farmer's need for understanding how to manage purchases and make sales. The farmer needs to know which channels exist for resale, as well as the demands of each one.
Costs management	Elaborating ways to collect, control and analyze costs in a way that meets the specificities of agricultural activity.
Financial resources	Checking ways of fundraising and how to manage the funds obtained.
Quality management	Assisting the farmer with the quality demand factors, such as legislation and customer needs. With this tool, the farmer can avoid losses and rework.
Production Planning	Helping the farmer to make decisions to plan the agricultural activity. In this planning, it is necessary to control internal factors, such as the crop to be cultivated, and to know the external ones, such as climate and consumer demand.

Source: Elaborated by authors (2020) from Zachow and Plein (2018).

Other management tools can be used in farm management. One point that cannot be overlooked when planning is the farm's aptitude. The concept of freedom and quality of life cannot be separated from decision. Therefore, decision requires not only management knowledge linked to planning, costs and marketing, but also compatibility with land use aptitude and the farmer's purpose (Medina, Almeida, Novaes, Godar & Pokorny, 2015). It is also important to pay attention to the following available resources:

a) Cultivated areas, with their physical characteristics and occupation situation (leased land, own farm, land ownership);

b) Quantity and type of available labor, as well as whether that labor is family or hired;

c) Other physical resources and their state of conservation, such as facilities, animals and machines (Medina et al., 2015).

The farm management is something complex and that probably the family farmer does not have technical and scientific knowledge (Zachow & Plein 2018). However, there is an increasing need to use these tools, as these small farms are inserted in an increasingly globalized and competitive market (Eastwood, Klerkx, Aire, & Rue, 2019).

Employer and family farming: approaches and contradictions in management methods

Giles and Stansfield (1990) pointed out that management can be considered as the act of deciding what to do and then doing it. However, the authors suggested that this activity is more complex, as it combines the coordination of human, physical and financial resources to produce a commodity or service to be sold at a payable price, in a pleasant and acceptable work environment for those involved.

The reality of a large group of small family farmers has changed with the industrialization of agriculture. The products have become diverse by a few private and highly technified companies. These businesses threaten small traditional farmers with their competitive advantages, as their markets dictate the rules of production and quality of the final product (Waner, 2000).

Schultz (1965) stated that the man who performs agricultural activity in the same way as his ancestors could not produce much food, despite the wealth of the land or the intensity of his work. The farmer accesses science knows about soils, plants, animals and machines, and knows how to use this knowledge, can produce food in abundance, even if the land is poor, he will not have to work hard. The knowledge that enables this transformation is a form of capital, whenever it is an

integral part of the material inputs used by farmers and whenever it is a constituent part of their skills and knowledge.

At this point, the management of a large or small agribusiness company and that of other business lines do not differ significantly, as in all of them; there is a need to apply management principles. However, the administrative logic of small family farmers is very different from that of larger farmers. In small family farming, the notion of surplus, work organization and power are different from the larger famly farming, where the market is the definer of administrative strategies. In the case of small family farms, family and subsistence are core factors defining the organizational culture.

Carmo (2000) summarizes the differences between this two farming models in Table 2.

Table 2 – Comparison of management in families farming

Larger Family Farming	Small Family Farming
Complete separation between management and work	Work and management are closely related
Centralized organization	Direction of the production process assured directly by the owners
Emphasis on specialization	Emphasis on diversification
Emphasis on standardized agricultural practices	Emphasis on the durability of natural resources and quality of life
Predominantly salaried work	Co-supplementary salaried work
Technologies aimed at eliminating decisions "on the ground" and "at the moment"	Immediate decisions, proper to the high degree of unpredictability of the production process
Technologies mainly aimed at reducing the need for labor	Decision making "*in loco*", conditioned by the specialty of the production process
Great dependence on purchased inputs	Emphasis on the use of internal inputs

Source: Carmo (2000)

Netto (2010) highlighted some points indicated by Carmo (2000) about their own means of production and the centrality of the family in the production processes. The author added other important points, such as the heterogeneity of organized systems (countries and regions), demonstrating the lack of standards and the resilience of local characteristics. The priority is to meet the demands of the family with the production gains (subsistence) and then sell the surplus. Tradition is a strong driver of management logic.

Considering the different characteristics of both production systems, employer and family farming, it is observed that some productivity criteria based on functionalism[1] is predominant in employer farming management and divergent from the management logic of family farming. Cançado, Tenório and Pereira (2011) mentions that organizations of a social and inclusive character, which go beyond functional management, are more aligned with the perspective of social management and oriented towards collective decision, democratic participation and transparency. Table 3 summarizes the distinctions between strategic and social management.

1 According to Santos (2017) the functionalism referring to Émile Durkheim Bronisław Malinowski and Philip Selznick, is guided by an idea of function, with social structures understood as functional structures, organization by objectives, cult of function and functional man.

Table 3: Comparative analysis between strategic management and social management

Dimension	Strategic Management	Social Management
Starting point	Performance Improvement	Participation / Welfare
Rationality	Utilitarian / Formal / Instrumental / Monological	Communicative / Dialogic
Decision-making	Based on planning and an organizational alignment system based on the organization's objectives	Collective decision-making, guided by well-understood / common good
Transparency	Information contained in technical reports and systematic assessments with limited access	Available information based on intersubjectivity, making dialogue possible
Space	Private sphere	Public sphere
Purpose of Management	Minimizing costs and maximizing results (Minimax)	Well-understood interest / common good
Method	Logical positivism	Critical theory
Conception of Organizational structure	Hierarchy / Hetero-management	Heterarchy
Theoretical premises	Methodological individualism	Socialization
Modus Operandi	Competitiveness	Cooperation
Benefits	Business profits and results	Improvement in quality of life
Time dimension	Preferably short term; medium and long-term planning	Sustainability - long term
Range of Action	Focus only on what concerns you	General concern with the context
View	Linear / Objective	Complexity / intersubjectivity
Focus	Market centric	Sociocentric
Consequences	Reification	Emancipation
Relationship	Universe of work	Universe of life

Source: Cançado et al. (2016, 70)

A management model appropriate to family farming is still in construction. It is necessary to preserve particularities related to emancipation, environment and social inclusion. According Souza (2017) there is need for building a management science not restricted to the business world and considers other dimensions as State and society and their organizations, for a management model with differentiate principles.

However, social management could offer alternatives for family farming, as it is guided by critical theory[2], which is centrally based on the emancipatory perspective. On the other hand, family farmers have already dealt with structures of employer farming that dictate the rules for agricultural management. Despite avoiding functionalism in management, family farmers are pressured to use strategies to meet the demands imposed by the capitalist market. Then, knowing how farmers face the double challenge of social and strategic management can contribute to the understanding of a management model that deals with this duality.

2 "Critical theory is thus dedicated to examining the market and its relations in the light of emancipation, which means the search for the concrete realization of freedom and equality. The concept of emancipation is at the heart of what would be critical, attributing unity to it" (VIEIRA & CALDAS, 2006, 62).

2 METHODOLOGICAL PROCEDURES

The study is theoretical-empirical, and the method is qualitative and descriptive. Field research was carried out with family farmers in state of Rio Grande do Norte – RN, Brazil, it is Northeast region. The research took place in: Mossoró, Apodi, Janduís, Assú and Serra do Mel. This location were chosen due to the researchers' access.

Family farmers researched from the state of RN, as shown in Table 4:

Table 4– Locations and Interviewees

LOCATIONS	INTERVIEWEES
Janduis/RN	10
Córrego Farm – Apodi/RN	18
Boa Fé Settlement – Mossoró/RN	07
Jurema Settlement - Mossoró/RN	56
Novo Pingos Settlement – Assú/RN	10
Serra do Mel- RN	23
Total	124

Rio Grande do Norte are located in the semi-arid region of the Northeast, characterized by hunger, poverty and drought and considered a problematic and unpleasant place. Victim of political actions that only aimed at combating drought, in most cases ineffective, the semiarid suffered from the neglect of the public power, which sought only to solve a specific problem, not paying attention to its real needs, potential and beauty (Silva, 2007).

For data collection, observation and semi-structured interviews were carried out, using 30 questions script. The script addressed issues that identified valuational aspects in relation to farm management, identifying historical, cultural and economic aspects in order to understand whether these dimensions reveal an approximation with the values proposed by social management. The questions were addressed by: local history and socioeconomic characterization; expectations regarding the farm; expectations regarding the family's future; perspectives for the development of the farm; motivation to invest in the farm and develop it; types of formal and informal training to develop the activity; cooperative and associative experiences of the farmer (cultural, social, economic) and willingness to participate; farm profile - type of crop, quantity produced, seasonality; farm income and number of employees; family members - how many are engaged in agricultural activity; production commercialization; funding; technological level of the farm. The answers were recorded and transcribed.

The interpretation of the answers according to the concepts and keywords adopted in the research. Thus, relevant information was extracted, transcribed and the interviewees' statements were related with the literature. NVivo® Software was used to make qualitative analyzes operational. Responses were encoded in "nodes" generating a word cloud, which identifies the most frequent words around the nodes.

RESULTS AND DISCUSSION

Córrego Farm – Apodi/RN

The region has the potential to produce fruit, cashew nuts, beekeeping, subsistence agriculture and organic products. However, agricultural production is not enough to support the families of these farmers. Therefore, all respondents stated that they have other activities to supplement family income. Aires and Salamoni (2013) was addressed this issue by the conditions of agricultural production are not always sufficient to support the family, demanding that farmers adopt pluriactivity as an alternative.

When they were sked whether the development of their activities had any level of dependence on the public sector or other private agents, the farmers stated no dependence. However, any relationship with public officials is always mediated by the local association and cooperative. These small farmers prefer to commercialize production through the cooperative or within their farms. They believe that selling through middlemen devalues the work invested in the production process. They also stated that they do not establish a direct relationship or negotiation with agribusiness agents. They understand agribusiness as a large farmer or company in this sector.

According to Zachow and Plein (2018), marketing consists of the need for farmers to understand how to manage their purchases and how to make sales. It is important farmer to know which channels exist for resale, as well as the requirements of each one. The option of selling products through cooperatives and associations reflects a way of choosing and managing the various agricultural production strategies to remain active in the market. Although family farming is directly linked to internal factors, that is, the way farmers and their families manage resources in general, it is also affected by the social and economic context. When small farmers unite in associations and cooperatives, it is easier and fairer to compete with large agribusiness organizations.

Cançado et al. (2011) mentions that organizations of a social and inclusive character, which go beyond functional management are more aligned with the perspective of social management and oriented towards collective decision, democratic participation and transparency. As for the way to manage the farm, farmers replied that they practice agricultural management according to tradition. As farmers' children and grandchildren, they practice what they have learned since childhood. According to Abramovay (2007), family farming is characterized by management. The farm and the work result from individuals who maintain blood or marriage ties and the teaching of production, management and other practices are passed on from father to son.

In family farming, decision-making is made by the farmer himself or another member of his family, the farm manager (Abramovay, 2007). The farm manager must decide what, how much and how to produce and assess whether appropriate practices are being applied and results are being achieved (Cabral et al., 2016).

When we asked about participation in some type of training aimed at entrepreneurship, farmers responded that the association always promotes this type of training. However, most farmers consider themselves too old to participate and to learn something new in these training courses.

Janduís/RN

The main activities are rice, beans, corn and vegetables production. Livestock is also part of the activity of families in this community. Regarding the profile of the interviewees, 80% of them were born in the same rural communities in which live. Agricultural production is part of their life, as

they mainly produce for the family's subsistence and the rest is traded in the community. According to Ploeg (2006) when analyzing the commercialization types called Small Production of Merchandise, since the result of the production is mainly survival and not just self-consumption or the focus on income or surplus value.

This profile always described by Abramovay (2007), the relationship between the family's consumption needs and the work needed to meet them is the basis of the microeconomic balance around which the peasantry is defined.

The study did not identify public-private partnerships with community agents. There is no purchase from third parties and sales are made to customers at agroecological fairs. Farm and resource management varies depending on climatic factors. In times of drought, agricultural income is not enough to support families. As a supplementary income to production, the Federal Government provides aid programs such as the Plano Safra (credit from bank to produce), seed distribution and Bolsa Família (support form Brazilian government for poor people) and all farmers are the owners of their farms. There are some Public policies for small family farming, such as: the Programa de Apoio ao Pequeno Produtor Rural (Support Program for Small Rural Producers - PAPP); Programa Nacional de Fortalecimento da Agricultura Familiar (National Program for Strengthening Family Farming - PRONAF); e Programa de Aquisição de Alimentos (Food Acquisition Program - PAA). They are an important instrument for advancement and consolidation of these production forms (GRISA, 2010). However, management is limited to production, without professional assistance. Thus, small farmers find it difficult to price their products considering production costs.

Farm management is complex because evolve several practices and needs to adapt to the entire value chain requirements. Few farms have management practices and small farmers receive little accounting assistance and earnings management (Cabral et al., 2016). There is a great need to use these management practices, because as these small farms are in an increasingly globalized and competitive market (Eastwood et al., 2019).

The reality of a large group of small family farmers has changed with the industrialization of agriculture. The products have become diverse by a few private and highly technified companies. These businesses threaten small traditional farmers with their competitive advantages, as their markets dictate the rules of production and quality of the final product (Waner, 2000).

According to the entrepreneurial profile and the associative capacity of farmers, it was identified that the cultivation of vegetables, the production of eggs and the manufacture of sweets, cakes and cheeses are predominant in the communities. From the perspective of qualifications and training aimed at entrepreneurship, 30% of respondents have already taken courses. The remaining 70% did not have access to this type of training. In the context of associative experiences in family farming, the interviewees unanimously replied that in the communities there are community associations linked to the union in the city of Janduís. Observing how farmers select organizational values experienced in the context of agribusiness or the productive chain to which they are involved, and they sell their products autonomously at the weekly agroecological fair in the city of Janduís.

Jurema Settlement – Mossoró/RN

According to the local rural settlement community, no farmer received benefits from PRONAF or Seguro Safra (a king of guarantee to small farm survive economically). Even so, farmers maintain their livelihoods by growing beans, corn and cassava. Traditionally, they also grow watermelon and cashew and raise animals such as sheep, goats and pigs.

Abramovay (2007) considers that the family farmer always has the power of decision. The family farmer decides what to plant, what resources to allocate, what risks taking and what to sell,

decisions are related to farm management.

The performance of family farmers does not depend on the action of cooperatives, since in the rural settlement there is no cooperative. Analyzing the associative experience of the rural settlement, the study found only one association of residents with at least 50 members. However, this association does not interfere with farmers' agricultural activity.

Most of the interviewed farmers manage their farms following the tradition passed on by their parents and grandparents. However, small farmers are open to technologies for soil and crop management. Some of them have already sought help from public agencies to buy equipment to optimize production.

The marketing of production is challenging for small farmers. Their products are not valued by the end consumer, who wants to pay cheaper for products without brands, logos and customized packaging. Thus, sales made at the side of the road (RN 013) and at the municipal fairs in Tibau and Mossoró do not exceed around US$ 40 per month. Farmers complained about the lack of public policies to support them. There was no affordable financing program for investments in their farms. If there is really an assistance program for small farmers, the Jurema settlement has not been included.

Boa Fé Settlement – Mossoró/RN

The cultivation of subsistence crops, such as beans and corn, the cultivation of cashew trees and beekeeping move the settlement's economy. Small farmers in the community raised animals such as sheep, goats and pigs. In the Boa Fé settlement, few farmers took a training course to improve production. Most of the learning came from his parents who already worked in crops and livestock before living in the settlement. Most of them already worked on farms. Farmers showed interest in becoming professional to improve production, but mentioned that they did not have access to professional training. The 40 families that tried to benefit from PRONAF, only two got the benefit due to bureaucracy, according them.

However, farmers report that commercial production is satisfactory and helps to supplement family income only when the climate favors a good harvest. When there is no "winter in the Northeast", that is, the rains from February to May, commercial production is not viable. In this case, the little that is produced is intended for the subsistence of the farmers' families.

According to Plein (2012), there have always been many doubts about the socioeconomic attributes of family farming as a model of development, because there is no certainty about the prospects for family farming with the consolidation of the capitalist mode of production.

In addition, for the family farmer, entrepreneurial production is difficult and demotivating because resources are scarce, and the climate is unfavorable. Uncertainty and instability hinder the practice of entrepreneurial actions that could positively change the farmer's life.

Novo Pingos Settlement – Assú/RN

Most families arrived at the settlement after know that the businessperson who owned the land would make the donation. The interviewees' said that small farmers arrived at the settlement with the expectation of a good family income, mainly due to the production of sorghum and beans. Many of them also raise animals for subsistence, mainly chickens. Unanimously, the income from the harvest and livestock of the small farm producers is insufficient to support the family. For this reason, families supplement their income with jobs that are generally informal in the private sector of the municipalities of Assú/RN and Mossoró/ RN.

The interviewed farmers have never participated in training focused on entrepreneurship,

only in training related to farming practices. The study did not identify specific and in-depth knowledge of product pricing and financial management of farms. Currently and in general, agricultural production is reducing. In the winter, most farmers sell their products either autonomously or through Coopingos, a local cooperative. According to the interviewees, there are no intermediaries in the local production chain. Thus, the cultural profile of the settlement management is typically family subsistence, with sales mainly of surplus sorghum and beans.

Serra do Mel/RN

The place is traditionally known to produce cashew nuts and their products (pulp, jam, honey, jelly) and for subsistence agriculture. The interviewed farmers are proud of their work and are determined to improve their lives and develop the local community. They can identify opportunities for socioeconomic development through their agricultural production. It is also clear that these farmers are optimistic about their work. They do not give up on their routines and do not want to change their activities, despite the inconsistencies they face with their productions.

Even dealing with difficulties and insecurities, mainly due to the strong drought and the low income of recent times, farmers are satisfied with the sales of their products and report the support received from local associations and cooperatives. Historically, these farmers settled on their land, developed agriculture and fought for the livelihood of their families. Today, they are happy with their business, despite the obstacles. In their routines, they are determined to improve their homes, their activities and, especially, the quality of life of their families.

Local cashew production started as an opportunity recognition. According to data from Instituto Brasileiro de Geografia e Estatítica - IBGE (2013), there was a project to produce cashew for farm occupation of the lands of Serra do Mel. Thus, many farmers started to occupy the land to produce, undertake business and enter the market. Many of them have already worked for other farmers or large groups in agribusiness. Despite the risk of not achieving the desired goals, they believe in the project. The pests do not discourage them and the lack of technical knowledge, which, according to them, are currently the biggest obstacles faced in the cultivation of cashew in Serra do Mel.

Analyzing their behavior, the profile of these farmers agrees with that described by Abramovay (2007), who treats the family farmer as a profit-maximizing agent. These small farmers correctly allocate their inputs to increase productivity, obtain a good price and profit on the product and decrease production costs. These actions show economic rationality.

Farmers need immediate ideas to maintain their trade and at the same time deal with the challenges of drought and pests. These farm entrepreneurs do not receive assistance from the government to face their obstacles or seek other alternatives to develop their agriculture.

DISCUSSION

To understand the central axes the Figure 1 presented some elements related family farmers. The generated word cloud suggests that cooperatives and associations are or should be the greatest contribution to the good management of farms managed by small family farmers. Figure 1 shows the cloud of main words mentioned by the respondents.

Figure 1 - Cloud of main words spoken by family farmers

The highlighted words show that cooperatives and associations should be more participatory in family farming and suggest that their absence makes it difficult to manage small farm. Especially because small farmers manage, their production based on traditions, instead of valuing specialized technical assistance, professional training to produce other crops and agroecological management. Cooperatives play an important role in the commercialization process of family farming. According to Da Silva and Schultz (2017) in addition to the symbolic dimension related to the dimension of collective action, these organizations contribute to the economic dimension, as they constitute a form of interaction with the markets, to being links between the farmer and the production chain.

When cooperatives and associations operate in the surveyed places, trade improves for small farmers, who have access to important information about the local market. The training courses promoted by these organizations improve management capacity and regional entrepreneurship, valuing and facilitating negotiations on family farming products.

The profile of the farms analyzed is in line with the concepts of family farming suggested by Abramovay (2007), because the families is carried out for the farm management and activities on the farm. The production is mainly for family subsistence, characterizing itself as what Ploeg (2006) called Small Commodity Production that aims at survival. This focus on survival and low commercialization, that is, a production logic that is not focused only on the market, address in a reduced interest in the professionalization of management, as mentioned by Baiardi (2014).

The market interaction is not focused on productivity and profit, due to low productivity,

from production for survival and the income from agriculture is not the only form of sustenance for the family. This demonstrate that there is a mismatch between the logic of production of these agents in relation to strategic management as stated by Plein (2012). This perspective is according to Abramovay (2007) considers the microeconomic balance of family farming by reconciling family consumption and marketing for income generation.

The interviewed do not reveal a structured management process as proposed by Zachow and Plein (2018) farmers prioritize the traditional crops of each region and their consumption demands and deliver the surplus to cooperatives and associations or even in agroecological fairs, evidencing an intuitive management process. This issue is also noticeable when considering that the interviewees showed little adherence to qualification and training processes.

The management models of the interviewees are similar to the proposition of Carmo (2000) and Netto (2010) about the centrality of the family and the heterogeneity of organizational forms and the strong appeal of tradition as a conditioning factor for the management logic.

Although the family farming management forms brought by the interviewees, they do not have the characteristics of large farm management. There is no evidence that can affirm a trend towards social management, as proposed by Cançado et al. (2016) which has the dimension emancipation as a focus, as the farmer engaged by the need for survival, establishes a daily struggle in the search for income that limits a reflective process of his practices.

In this sense, cooperatives and associations have a fundamental role in contributing to the construction of a management logic more suited to the specificities of family farming as proposed by Souza (2017), who considers that the need for an administrative science that is not restricted to the world of business.

The data collected do not show evidence that there is a differentiated management logic, in the sense of greater emancipation, on the other hand, they also do not reveal farmers' adherence to the strategic management logic. Authors such as Silva (2017) and Uecker et al. (2005) consider management deficiencies can be forms of resistance to adhering to a system that focuses only on profit and competitiveness, as argued by Plein (2010).

FINAL CONSIDERATIONS

The data indicated that family farmers in RN organize their activities based on water availability. Changes in water availability forces them to find alternative sources of income. Smallholder farmers in RN supplement their income with pensions, urban jobs and government assistance, such as Bolsa Família or Plano Safra. Family farmers have local associations as their main partners and have little connection with public bodies. Only in one place, production is sufficient to support the family. In the others, there is subsistence cultivation with the sale of surpluses, but only when the rains favor greater production. This marketing is done autonomously at fairs.

Farm management is performed intuitively. Farmers do not have professional training and report that the training offered does not correspond to the local reality. Production and management knowledge is passed on from parents to children. Prices are set based on what the consumer is willing to pay and the average price of supermarkets. Therefore, there is no business analysis focused on pricing. Farmers do not know whether the price paid for their product justifies production efforts. Often, they use the resources of Bolsa Família and pensions to produce their crops.

All respondents are members of an association. However, only a part of the interviewees mentioned the importance of the association in the marketing of their products. Family farmers are not integrated with the agribusiness chain, their production is marginal, and they do not recognize

that they are affected by this chain. Despite all the difficulties mentioned, most say they intend to continue in rural areas. Farmers do not see their farms as a business, but as an income supplement. Most do not see themselves as entrepreneurs or businessmen.

Public policies that support farm production such as PRONAF, Plano Safra and others are important to maintain farms and families that subsist on agriculture. In the state, water availability is crucial for planning agricultural production. In times of drought, programs that guarantee water supply would be of great importance so that farmers could invest in infrastructure to better develop family farming. Currently, they do not invest in their farms due to uncertainties about the availability of water for production. Family income assistance policies, such as Bolsa Família and pensions, are essential to keep these small farms operating. Family farmers report that they often use these resources to produce their crops. Professional training aimed at management needs to be adapted to the reality of family farming. The logic of entrepreneurship, profit and "the farm as a business" are not well understood by the interviewees, who plan their activities to guarantee housing and subsistence. The lack of specific technical support for agricultural production is a reality.

Family tradition guided farmers; efficiency, emancipation and democracy are secondary values in their management processes. The central values are survival and permanence in rural areas. They combine resources from government plans and social subsidies that complement their earnings and manage to keep their agricultural production active. Mixed management perspectives guide some family farmers since they combine principles of functionalism and emancipation to guarantee the family's survival and the functioning of the farm.

The difficulty of small farmers in understanding questions about farm management aspects was a limitation of this study. The suggestion for new studies is to embrace other forms of research such as quasi-experiments using these groups, with courses and analysis of data.

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REFERENCES

ABRAMOVAY, R. (2007). *Paradigmas do capitalismo agrário em questão.* (3. ed.) São Paulo: Edusp.

AIRES, C. H. L., & SALAMONI, G. (2013). Agricultura familiar e as relações sociais de trabalho: um estudo sobre a pluriatividade na Vila Freire–Cerrito–RS. *Geografia Ensino & Pesquisa,* 17(1), 41-54.

BAIARDI, A., & ALENCAR, C. M. M. De. (2014). Agricultura familiar, seu interesse acadêmico, sua lógica constitutiva e sua resiliência no Brasil. *Revista de Economia e Sociologia Rural.* 52, Supl. 1, 45-62.

BATALHA, M. O., BUAINAIN, A. M., & SOUZA FILHO, H.M De. (2005). Tecnologia de gestão e agricultura familiar. Gestão Integrada da Agricultura Familiar. São Carlos (Brasil): *EDUFSCAR***,** 43-66.

Brasil. Lei 11.326 de 24 de julho de 2006. *Estabelece as diretrizes para a formulação da Política Nacional da Agricultura Familiar e Empreendimentos Familiares Rurais.* Available at: http:// www.planalto.gov.br/ccivil_03/_ato2004-2006/2006/lei/l11326.htm

CABRAL, L., FAVARETO, A.,MUKWEREZA, L., & AMANOR, K. (2016). Brazil's Agricultural Politics in Africa: More Food International and the Disputed Meanings of ''Family Farming". *World Development.* 81, 47–60.

CANÇADO A. C., TENORIO, F. G., & PEREIRA, J. R. (2011). *Gestão social: reflexões teóricas e conceituais.* Cad. EBAPE.BR, Rio de Janeiro , 9 (3), 681-703.

CARMO, R. B. A (2000). A questão agrária e o perfil da agricultura familiar brasileira. *Bahia Agrícola* (Brasil). 4 (1), 27-32.

DA SILVA, C. M. V., & SCHULTZ, G. (2017). Acesso a mercados e gestão de cooperativas da agricultura familiar no Brasil. *Revista Espacios.* 38 (44), 23-40.

DOS SANTOS, C. F., SIQUEIRA, E. S. OLIVEIRA, I. J. C. DE., DANTAS, M. E. C., & MAIA, Z. M. G. (2012). Agricultura Familiar e Convívio Sustentável numa Perspectiva Interdisciplinar. *Revista de Políticas Públicas,* 16 (1), 25-35.

EASTWOOD, C., KLERKX, L., AYRE, M., & RUE, B. D. (2019). Managing Socio-Ethical Challenges in the Development of Smart Farming: From a Fragmented to a Comprehensive Approach for Responsible Research and Innovation**.** *J Agric Environ Ethics 32,* 741–768.

GILES, A. K., & STANSFIELD, M. (1990). *The Farmer as Manager.* Wallingford: C.A.B. International.

GRISA, C. (2010). As políticas públicas para a agricultura familiar no Brasil: um ensaio a partir da abordagem cognitiva. *Desenvolvimento em Debate,* 1(2), 83-109. Available at: http://www.bahia.ba.gov.br/seagri/revbagr/rer_112000/questaoagraria.htm.

KARNOPP, E, & OLIVEIRA, V. S. (2012). Agronegócio e agricultura familiar: reflexões sobre sistemas produtivos do espaço agrário brasileiro. Redes. *Revista do Desenvolvimento Regional,* 17 (2), 215-228.

MEDINA, G., ALMEIDA, C., NOVAES, E., GODAR, J., & POKORNY, G. (2015). Development Conditions for Family Farming: Lessons From Brazil. *World Development.* 74, 386–396.

NETTO, M. M. (2010). A agricultura familiar e sua organização. *Acta Geográfica,* 2 (4), 17-30.

NEVES, D. P. (2007). Agricultura familiar: quantos ancoradouros. *Geografia Agrária: teoria e poder.* 1, 211-270.

PLEIN, C (2012). *Os mercados da pobreza ou a pobreza dos mercados? As instituições no processo de mercantilização da agricultura familiar na Microrregião de Pitanga.* Doutorado, Programa de Pós-graduação em Desenvolvimento Rural, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brasil. Available at: https://lume.ufrgs.br/bitstream/handle/10183/72254/000883191.pdf?sequence=1&isAllowed=

PLEIN, C. (2010). Capitalismo, agricultura familiar e mercantilização. *Informe Gepec*, 14 (2), 96-111.

SANTOS, E. L. (2017). O campo científico da administração: uma análise a partir do círculo das matrizes teóricas. *Cadernos EBAPE.* BR, 15 (2), 209-228. https://doi.org/10.1590/1679-395152841

SCHNEIDER, S. (2003). *A pluriatividade na agricultura familiar.* Porto Alegre: Editora da UFRGS.

SCHULTZ, T. W. (1965). *A Transformação da Agricultura Tradicional.* Rio de Janeiro: Zahar Editores.

SEPULCRI, O., & TRENTO, E. J. (2010). O mercado e a comercialização de produtos agrícolas. Curitiba: Instituto Emater.

SILVA, R. M. A. (2007). Entre o Combate à Seca e a Convivência com o Semi-Árido: políticas públicas e transição paradigmática. *Revista Econômica do Nordeste,* Fortaleza, 38 (3), 466-485. Available at: https://ren.emnuvens.com.br/ren/article/view/539

SILVA, S. A. D. (2017). A importância da gestão nas pequenas propriedades rurais. *Revista Acadêmica Conecta FASF,* 2 (1), 272-285.

SIQUEIRA, E. S., & ARAUJO, I. T. (2018). *Gestão Social e Agricultura Familiar: a construção e a materialidade de novas formas de administrar.* EdUFERSA: Mossoró, RN.

SOUZA, C. (2017). Modernização do Estado e construção de capacidade burocrática para a implementação de políticas federalizadas. *Revista de Administração Pública.* FGV -EBAPE. Rio de Janeiro 51(l):27-45.

UECKER, G. L., UECKER, A. D., BRAUN, M. B. S., ECONOMISTA, P., & EM HISTÓRIA, T. D. (2005). A gestão dos pequenos empreendimentos rurais num ambiente competitivo global e de grandes estratégias. In XLIII Congresso Brasileiro de Economia e Sociologia Rural–*Anais... SOBER.*

VAN DER PLOEG, J. D. (2006). O modo de produção camponês revisitado. *A diversidade da agricultura familiar,* 2, 13-54.

VIEIRA, M. M. F., & CALDAS, M. P. (2006). Teoria crítica e pós-modernismo: principais alternativas à hegemonia funcionalista. *Revista administração de empresas,* 46 (1), 59-70.

WANER, J. (2000). *New Generation Cooperatives: Case Study.* Illinois Institute for Rural Affairs. Available at: http://value-added.org/wp-content/uploads/2014/04/New-Generation-Cooperatives-and-The-Future-of-Agriculture-An-Introduction.pdf

ZACHOW, M., & PLEIN, C. (2018). A gestão como característica da agricultura familiar. *Brazilian Journal of Developement,* 4 (6), 3318-3334.

ZACHOW, M., PLEIN, C. (2018). A gestão como característica da agricultura familiar. *Brazilian Journal of Development,* 4 (6), 3318-3334.

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The authors have stated that there is no conflict of interest.

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