Difficulties Facing Family Agriculture in Cacoal City, Rondônia/Brazil

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Abstract—The present research aimed to investigate the difficulties faced by family farming in an area of Brazil. To this end bibliographic research was conducted and also field research using the data collection technique of interviewing family farmers of the Astra Association of Line 09 in Cacoal City, Rondônia/Brazil. The results of this work reveal that, despite the significant advances that family farming has made in recent years in the country and the state of Rondônia, it still faces certain difficulties; those identified in the research were the accessibility of credit, prices set by middlemen, poor quality roads for transporting production and the lack of specialized technicians when help is needed. Such problems require public policies to enrich farming enterprises, valuing farmers, promoting the stability of their conditions, and providing means of increased production, besides better structure and consequently a better quality of life.

Keywords—Family farming, Difficulties, Rural production.

I. INTRODUCTION

Brazilian agriculture figures are among the highest in the world; it is characterized as a source of food and raw materials for many countries. Among its diverse practices, family farming production is a social form of production, well known for its material and immaterial contributions (DELGADO; BERGAMASCO, 2017).

In recent years, Brazil has significantly improved its ways of defining and understanding the characteristics and meaning of this social form of production. Its main source of leverage, among others, refers to the recognition of its enormous economic and social diversity, based on small landowners living in small communities whose families work with them on the land to produce goods for their own consumption and for sale (SCHNEIDER; CASSOL, 2017).

According to the Ministry of Agrarian Development (MDA) (2018), family farming in Brazil is the eighth largest food producer in the world, with annual revenues of US $55.2 billion.

According to the Ministry of Agriculture, Livestock and Supply (MAPA) (2018), the national agribusiness as a whole is responsible for 23.5% of the Gross Domestic Product (GDP), since 35% of this percentage, refers to the family segment, showing the importance of family farming in the country's wealth generation. Despite its salience, family farming faces four main difficulties: access to credit, the disadvantageous pricing of agricultural products, production outlets, and technical assistance. The absence of these factors, which may be essential for the economic and social growth of family farming, are a disincentive to
production and marketing (ROCHA; SANTIAGO, 2013; NASCIMENTO et al., 2016).

With this in mind, the research sought to answer the following question: What are the main difficulties faced by family farming in the municipality of Cacoal, Rondônia? The objective in addressing this question was to identify the challenges faced by family farming in a rural association of this municipality, specifically, the four listed above. For this, the following specific research objectives were defined: (1) Learning about the forms of access to subsidized credit lines for family farming; (2) Identifying the difficulties encountered by rural farmers as regards the pricing of their products; (3) Discovering the strategies for transporting production; (4) Highlighting the forms of technical assistance used by farmers.

This study is intended to present insights into family farming and the difficulties that farmers face every day. It uses descriptive research drawn from bibliographic data and field data, collected through semi-structured interviews with thirty members of the Astra Association of Cacoal/RO, held on March 2019.

When the data were analysed, the profile of family farmers in the above association emerged, as did the characteristics of the properties they live in, together with the difficulties that family producers face with regard to access to credit, the pricing of products, the outflow of agricultural products and technical assistance.

II. FAMILY AGRICULTURE

Agriculture arose around 10,000 years before Christ, when the first species were domesticated, making food more easily available. Agriculture has evolved considerably since the appearance of the first villages and the nomadic reapers who became fixed-dwelling peasants. The green revolution in the nineteenth century was also a milestone for the progress of agriculture, bringing many benefits, such as machines, genetic improvements and chemical treatments which improved farmers’ production and became part of their daily lives (COSTA, 2009; EDUCATOR’S MANUAL, 2014).

Lately, the production of agriculture in Brazilian has grown immensely. Family farming is a segment of it that has become prominent there and everywhere else. It is a form of production that where management and workers interact, is outstandingly diversified, preserves natural resources and the quality of life, uses complementary wage labor and requires immediate decisions that comply with the high-level demands of the production process and market variations. It is necessarily based on family work and cooperation (COSTA, 2009).

Several countries operate family farms, and of the 570 million farms in the world, 500 million are family farms. These are responsible for 70% of the world’s agricultural production, making family farming fundamental for food security and rural development, and is an essential agent in the fight against hunger (LUCAS, 2014).

In the annual turnover from food production worldwide, China ranks first with $958.2 billion; next comes India with $353.6 billion; third, Indonesia with $125.4 billion; fourth, Nigeria with $84.9 billion; Brazil fifth, with US $84.6 billion, considering total agricultural production; sixth, Pakistan, with $64.7 billion; seventh, Japan with $56.9 billion; eighth, Brazil, including only family farming, followed by the US with $55.2 billion. Then comes Russia with $54.8 billion and finally Turkey in tenth place with $53.4 billion. This brings home how important family farming is worldwide (MDA, 2018).

The origin of the concept of family farming in Brazil is contemporary and fell into three major phases. The first concerned the acknowledgement of family farming marked by trade union movements and mainly due to the scholars who discussed the theme in the early 1990s, where it was the initially found in books which reported studies of the economic status of family farming. The second phase began in 1996 with the creation of the National Program for the Strengthening of Family Farming (PRONAF). This was extended to 2006, and referred to the institutionalization of family farming through Law 11.326 of 24 July 2006. This law characterized the family farmer and rural family entrepreneur as one who practises activities in rural areas which he does not own. The areas are larger than four fiscal modules; their families work with them; a minimum percentage of family income is earned from the farmer’s establishment or enterprise and the establishment or enterprise s set up with the help of the family (SCHNEIDER; CASSOL, 2013).

The publication of data on the main source of agricultural information, the 2006 process data, is a recognition of the location and role of family farming in Brazilian rural development (SCHNEIDER; CASSOL, 2013).

Family farming is not predominant in livestock production, where 38% of the value of production and 34% of total revenues from Brazilian agribusiness (SCHNEIDER; CASSOL, 2013), but small farmers have
been gaining ground in agribusiness and playing an important role in the country's economy, producing food and generating job opportunities, as well as the society around them (ORGANICS NEWS BRASIL, 2017).

The family farming and its place in Brazil today are represented in a way that considers the effectiveness of its struggles to affirm itself as a class, not only to have the work of the family acknowledged but also to confirm its loyalty to the internal market, consequently providing farmers with a high quality of life and increasing the adherence of rural producers to their land (PICOLOTTO; MEDEIROS, 2017).

III. FAMILY AGRICULTURE IN RONDÔNIA

The colonization of the present state of Rondônia has had three migratory phases. The first and the second began with the process of extracting rubber, primarily, as well as gold and drugs from remote parts of the territory. Rubber extraction predominated after World War II, when elastic gum was needed; this motivated Brazilian state to form policies for the migration of men to the region, not only for the Rondonian rubber plantations but also to collect Amazonian rubber (CUNHA, 2015).

The third phase was initiated by the opening of BR-364, a highway that allowed access to the state of Rondônia. Between 1970 and 1980 began the process of colonization with the arrival of migrants, mainly from the south, Paraná in particular, together with people from other Brazilian states, such as Mato Grosso, Mato Grosso do Sul, Espírito Santo and Minas Gerais; evidently, Rondônia was populated by several Brazilian regions. These migrants had the objective of acquiring a piece of land, where they would settle and intended to plant and cultivate (CUNHA, 2015; SILVA; BURGEILE, 2014).

Along with the opening of BR-364, new settlements were formed, leading to what is known as land grabbing: the accelerated and disorganized occupation of Union and private lands, without any legalization (CUNHA; MOSER, 2010).

Faced with this situation, the Federal Government took the initiative through the National Institute of Colonization and Agrarian Reform (INCRA) of creating by Decree-Law No 1,110 of July 9, 1970 an autarchy linked to the Ministry of Agriculture which distributed plots of land to farmers, thereby regularizing land tenure, provided the plots were occupied and remained in production (CUNHA, 2015; CUNHA; MOSER, 2010).

The migration of peoples to Rondônia and the opening of BR-364 enabled the state to develop agriculture, livestock, and industry.

Agriculture was considered the main impetus for the Brazilian migrants, most of whom were farmers. Therefore, agriculture in Rondônia has always been conspicuous: the main agricultural products of the state are rice, corn, beans, cassava, bananas, cocoa, coffee and soy (CUNHA; MOSER, 2010).

In Rondônia, most of the temporary crops such as rice, beans, and corn are produced by family farmers. Its permanent crops such as coffee and cocoa are very important in the regional economy, since most farmers are coffee producers; for many they are the primary or exclusive source of income (COSTA, 2009).

According to the State Secretariat of Agriculture of the State of Rondônia – SEAGRI (2018) – of the 120,000 rural establishments in Rondônia with areas of up to 100 hectares, 85% are family-based. Approximately 90,000 families are responsible for 70-hectare plots producing food that reaches the tables of the population of Rondônia.

IV. RURAL CREDIT

According to Law No. 4,829/65, rural credit is defined as the provision of financial resources by public entities and private credit establishments to agricultural producers or their cooperatives aimed at stimulating the orderly growth of rural investments to meet the timely and adequate costs of producing and marketing of goods; strengthen the economic activity of agricultural producers; and encourage the introduction of rational production methods (BRASIL, 2019).

Rural credit falls into three types: costing credits, intended to cover the usual expenses of the cycles of production and the purchase of inputs at harvest time; investment credits, invested in durable goods or services, the benefits of which are reflected for many years; and commercialization credits, which guarantee the rural producer and his cooperatives enough resources to supply and store crops when prices fall (MAPA, 2018).

4.1 CREDIT LINES FOR FAMILY AGRICULTURE

Until the beginning of the 1990s, there was no national public policy in Brazil that took account of the peculiarities of the family farmers’ segment. The National Program for Strengthening Family Farming (PRONAF), institutionalized by Decree No. 1.946/1996, has become the preamble and the most important public policy in Brazil for family farmers.
Access to credit is crucial for driving the growth of agriculture, which depends mainly on small farms. However, farmers sometimes find it hard to access information on ways to acquire credit, or even to know its impact on the rural environment, where the risks are perceived to be higher. This compounds the problem of granting credit to a significant portion of agricultural producers (ROCHA; SANTIAGO, 2013).

In order to lend money, financial institutions rely on the information presented by Law No. 4,829 of November 5, 1965, which states that credit operations have some essential requirements such as the suitability of the person applying for credit and presentation of the budget/project to be carried out, which will be monitored by the funder (ROCHA; SANTIAGO, 2013).

The rural credit financing institutions which are responsible for transferring credit to agricultural and agro-industrial producers are Banco do Brasil, the National Bank for Economic and Social Development (BNDES), credit unions and private banks (OLIVEIRA; ARAÚJO; QUEIROZ, 2017).

Even when they can access credit, life is not easy for farmers. They face such difficulties as their own vulnerability to financial institutions, the problem of obtaining the required documentation, the lack of certainty that they can repay a loan, etc. These features cause many family farmers to stop resorting to credit operations to finance their production, which makes it challenging to stay competitive (BELIK, 2017; OLIVEIRA; ARAÚJO; QUEIROZ, 2017).

V. PRICING OF PRODUCTS IN FAMILY AGRICULTURE

For the farmer to earn anything, he needs to market his produce at a price capable of meeting his need to cover input costs and satisfactorily repay him for his work. It can be said that commercialization is the first face of family farming activity; however, it is also one of the main obstacles to its development (BELIK, 2017).

One of the challenges faced is the oversupply of many products in the harvest season, where there are many suppliers. The price drops gradually, only to appreciate again in the inter-harvest period, causing farmers to sell their products cheaply, because they need resources to live and their products are often perishable (REDIN, 2013).

It is also noted that agricultural products are not always marketed directly to the consumer because sales are made through someone who buys to resell and sets his own
price, leaving producers susceptible to his demands. This situation means that a product is not always sold at a satisfactory rate, capable of covering the inputs and the labour involved in its production. Another negative factor for the commercialization of products is the lack of official confirmation for many prices in the local market (NASCIMENTO et al., 2016).

One point to consider is the way in which the price of rural products is set, involving cost accounting, because many small producers do not use any mechanism to aggregate the sale price to the product they grow. Family farming is an example; farmers do not record production costs and expenses, and thus have no basis for setting a price where they can see what profit or loss might be entailed (SILVA, 2017).

According to Silva (2017), too, accounting applied to a small, medium or large rural property has the advantage of recording the costs of preparing the soil, planting, fertilizing, harvesting, and processing, giving the producer subsidies related to its production, and generating information for decision making and control.

VI. METHODOLOGY

To carry out the research, and fulfil the proposed objectives, analysis was applied with a qualitative approach, guided by the deductive method, as described by Prodanov and Freitas (2013) and Lira (2014).

Data were collected from semi-structured on-site interviews asking open and closed questions, as recommended by Ruiz (2011). The research subjects were chosen by simple random sampling. Thirty active family farmers were interviewed from a total of sixty-five members of the Astra Association of Rural Producers of Line 09 in the municipality of Cacoal, Rondônia State.

The collected data were grouped according to their similarity, and were later analysed, interpreted and discussed on the basis of reference to the theme; the results are presented through graphic figures. Content analysis technique was used to analyse the data with the help of electronic tools, such as Word and Excel. These were able to show the results of this analysis clearly and precisely.

VII. PRESENTATION OF RESULTS

Initially, we wanted to learn about the profile of family farmers and asked about the data relevant to the research, such as gender, age, marital status, whether they had children, education level, income, etc. Thirty family farmers participated in the survey, of whom 96.7% were male and 3.3% female. While men predominated in the total, it will not be forgotten that their wives and children also helped in the process of production. As regards age groups, 36.7% were over 51 years old, 53.3% were between 31 and 50 years old and 10.0% of them were younger than 30.

These results, when compared to studies done in rural communities in southern Amazonas, such as those by Alves and Rocha (2010) and Gomes, Nogueira and Costa (2018), demonstrate the predominance of males in rural areas, where it was verified that 75.5% of the farmers are male, 24.5% female and 66% have an average age of above 40 years, 22.6% are between 30 and 40 years old and 11.3% between 18 and 30 years old. Data on age range indicate that younger farmers are in short supply, making it difficult for many of them to work and be productive.

This scenario demonstrates the urgency of developing policies for encouraging young people to return to the countryside. These studies also show that smaller numbers of young people remain in rural areas; many have migrated to the city in search of employment.

Among the farmers, 93.3% stated that they were married, as reflected in the number of children, and only 6.7% declared themselves single. Roughly the same proportion is verified by Oliveira (2016) among family farmers in the municipality of Cacoal-RO: 88% were married and only 8% single. Regarding the number of children, 6.7% of the respondents had 4 (four) children, 10% had 3 (three) children, 50% had 2 (two), 26.7% had 1 (one) child and 6.7% did not have children. As regards the number of members per family, 13.3% of families had 5 or more members, 46.7% had four members, 23.3% had three members, and 16.7% had two members.

The data collected in the interview reveal that most rural farmers had not completed high school. When asked about this point, they argued that it had been tough for them to study when they were young people and work took priority, given their family’s economic difficulties. These data are similar to what Oliveira found (2016):66% of family farmers reported having attended primary school, 17% reported having attended elementary school, 13% had completed high school and (2%) were illiterate.

Regarding income, it was found that 66.7% had a total monthly income of 1 to 2 minimum wages from family farming, 26.7% had from 2 to 3 minimum wages, 3.3% had a profit equalling 3 to 4 minimum wages and 3.3% enjoyed 4 to 5 minimum wages, as shown in the following Figures 1 and 2. These data confirm that the average income of the families approached by the survey was approximately two
minimum wages. Regarding the number of people who depend on a family income, it was observed that 40% of the properties with 2 to 3 people did, 47% of the properties with 4 people and 13% of the properties with 5 or more depended on it. Regarding the financial condition of farmers, 66.7% of the respondents answered that the income from family farming was enough to keep a family in the countryside, while for 33.3% the pay was not enough.

The respondents claimed that they could afford only production and housing expenses. The low prices of rural commodities prevent them from earning a better income or even from having a financially quiet life.

By analysing the data, one can also identify the main difficulties, such as access to credit, the pricing of products, production flow, and technical assistance. Among the survey participants, 56.7% were using or had already used rural credit through PRONAF, and of this percentage, about 35.3% used the investment type of credit at least once per year, 52, 9% used the investment mode at least twice a year and 11.8% used it once a year for costing operations.

In this sense, it is worth mentioning that Rocha and Santiago (2013) state that rural credit is of great importance for strengthening the economic transactions of small and medium-sized agricultural producers, stimulating their investments, leveraging income generation and influencing the improvement of their quality of life.

Thus, we sought to identify the reasons that had led the farmers in the survey to acquire rural credit. It was verified that the purposes of credit gave family farmers enough confidence to seek it, as follows: to invest in agriculture (58.8%), to invest in livestock (29.4%) and to invest in other enterprises (11.8%). Farmers’ opinions and their evaluation of the government’s applied agricultural credit policies were also taken into account: 82.4% rated the credit policies as good because they met all their needs and 17.6% appreciated their regularity.

Although rural producers think that the credit policies of rural credit are excellent, they claimed to have faced some difficulties in accessing it. The main challenges identified in acquiring an agricultural loan were the interest rates (5.9%) and the lack of accessibility (23.5%), while the remaining 70.6% had no problem in accessing credit, as can be seen in the Figures 3 and 4.
According to respondent R24 “This situation is dismal for the farmer, because it increases the price of everything, such as energy, gasoline, inputs to production, etc. while the prices of rural products only fall”.

When asked how the sales price of a product is defined, 14 (fourteen) farmers, corresponding to 46.6% of the total, answered that it depended on the number of competitors and the demand for the product. More than half the respondents, 53.4%, said that they did not have a system for calculating prices and it was found that farmers had no control or accounting records, not even in note form.

A study of family farmers in the city of Captain Poço, in the state of Pará, conducted by Silva (2017), found similar results. It demonstrated that farmers often do not write down their costs, expenses, or profit, showing a complete lack of control over the value of what they produce. They consequently fail to price products systematically and therefore cannot correctly account for profit or loss.

Silva (2017) states that farmers’ fear is still one of the major impediments to the use of accounting in rural affairs, causing losses to production and a failure to benefit from accounting tools for better management and control.

Finally, the research participants were asked what could increase their productivity. The most representative items were: a) Financial resources for family farming; b) Government support and encouragement in agriculture; c) Appreciation of the countryman; d) Price guarantees for rural products; e) Assistance from a government agency focused on agriculture; f) More agricultural equipment; g) Technical assistance on the property; h) Improvement of rural roads, among other things. This makes it clear that family farming has many problems and is an altogether challenging way of life.

**VIII. CONCLUSION**

Through the research, it was identified that most of the producers approached were male and had had too little education. It has also been identified that Cacoal family farmers face a number of difficulties.

Regarding access to rural credit 23.5% of farmers in the survey said that the main difficulty related to agricultural credit was the accessibility of credit. This damages the sector, for confidence is essential if investment is to stimulate production. However, a decisive factor is that 70.6% had no difficulty in acquiring credit, so it was not an obstacle for many more than half of the family farmers under study.
About the pricing of products, 50% face difficulties from the middlemen, who set low prices, which consequently do not generate enough revenue to cover their expenses.

It can also be seen that family farming is of great importance to the economy of the municipality, state and country. However, according to the survey, the family farmers interviewed do not receive sufficient support and encouragement to make progress; their need for more attention from the public sector is becoming a negative factor for family farming. It is also noted that rural mendo not properly appreciate their own products; but it is through these farmers that the food reaches the family table.

It may be concluded that many leave, without trying to improve production due to the poor better working conditions, lack of structure, and lack of hope for the future, consequently undermining production capacity. Another factor is that the areas that are neglected are not designed to best advantage; since they are not mandatory for a farmer, but how are rural workers to get more prosperous farmhouses and the technical assistance they need for their property.

From the results presented in this research, it can be stated that the research aims were attained. In general the study contributed by providing more information about rural areas, where the work done is fundamental to local economic development and growth.

Future researchers are recommended to examine the difficulties faced by family farmers in another location, mapping their costs and expenses. According to this study, the biggest challenge is pricing; therefore, listing the actual costs and the producer's profit margin would be of great value to the people being studied, since the family farmers who responded to our questions had no record or control of their expenses.

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