

RESEARCH ARTICLE

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SOCIOECONOMIC PROFILE, OPERATION, COMMERCIALIZATION AND INCOME: A CASE STUDY OF THE PAA IN THE CITY OF CAXIAS-MARANHÃO

*¹Joabe Alves Carneiro and ²Adriana Estela Sanjuan Montebello

¹Technologist in Logistics, Master in Agroecology and Rural Development, Federal University of São Carlos, São Paulo, Brazil

²Economist, Professor Doctor of the Department of Agroindustrial Technology and Rural Socioeconomy – DTAiSER of UFSCar, Center of Agrarian Sciences, Araras/SP

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ABSTRACT

The work had as a main goal approaching the economic and social aspects of the *Programa Aquisição de Alimentos – PAA* (Food Acquisition Program) in the “Cocais” region in the State of Maranhão with emphasis in the city of Caxias. As specific objectives, an analysis of the socioeconomic profile of the families benefited with the PAA was done, then identifying who are the supplier beneficiaries of the program; the operation of the purchase process and the commercialization channels have also been verified. The research tool used was a case study. The data collection method was a form with open and closed questions, which were answered by the researcher. From the researched benefited, 70% are from the female gender and 30% of the male gender, 50% have age between 36-49 years old, people with ages between 18-35 representing 25% and people above 50 years old also representing 25% of the researched sample. Of the 44 individuals that participated in this study, 43% were self-declared brown, 25% Afro-Brazilian and 28% self declared as of a “brunette color”. It was observed that 61% of the beneficiaries did not complete the Elementary School. Those who received the social benefit called “*Bolsa Família*” are 54% being 75% of the female gender. The medium value received was of R\$ 182.33, the minimum was of R\$ 77.00 and the maximum was of R\$ 436.00. Lastly, 14.4% of the commercialization have been done in free fairs and simultaneous direct selling, 14% done the commercialization through intermediaries, 35% by direct selling and 36.6% by free fairs.

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INTRODUCTION

Grisaand Schneider (2015) believe that the ideas that culminated in the creation of the PAA unleashed an effervescence around the institutional markets from the point of view of food food and nutrition security, being the school feeding a central element. Still, the authors affirm that the PAA opened a “window of opportunities” and generated learnings for the construction of new actions. Carneiro and Montebello (2018) affirm that the PAA contributed for the rural development of the country, applying more than R\$ 3.9 billions from 2003 to 2017, and that this resource resulted in the enlargement of the number of familiar farmers that participate as supply beneficiaries of the Program.

*Corresponding author: Alves Carneiro,

Technologist in Logistics, Master in Agroecology and Rural Development, Federal University of São Carlos, São Paulo, Brazil

In this way this politic has been highlighted as one of the income alternatives for familiar farmers due to the planning possibilities and the production scale during the year. For the development of this study, the city of Caxias in the State of Maranhão was chosen. The city is among the biggest economic centers in the State, beyond that, it is an important political, cultural and populational center. Caxias has an important ally for the development of the city, the River Itapecuru that had an important part in the beginning of the settlement of the city because it facilitated the penetration in the interior of the State. It was still in its shores that the first sugar Mills and cotton fields that supplied the manufactures of Caxias/MA were operated, besides this, the River worked as an access for the development of the commerce in the State. (SILVA AND CONCEIÇÃO, 2011). The predominant soils in the city are plane with sandy texture or of moderate relief from wavy to wavy, this indicates the high potential for the development of

productive and sustainable agriculture, as long as it employ the adequate technologies (VALLADARES ET. AL. 2007). One of the great is thmus for the development of the familiar agriculture of Caxias is in the land concentration. The data from the *Censo Agropecuário* (2017) revealed that the city disposes of an área of approximately 135,289 hectares, that are distributed in 3,836 rural establishments, with 94% having area smaller than 100 hectares, those with area superior to 100 hectares represent about 5%, however 22,771 hectares are distributed between the farmers with rural property up to 100 hectares that correspond to 16.8%. The main explanatory factor for this result resides probably because of the cotton farming economy of Maranhão in the 19th Century. The expansion of this culture is associated to the enlargement of the large estates, originated from the historical process of the donation of *sesmarias* (the sixth part) and from slave work, both elements that were propelled from the accumulation of commercial capital (TEIXERA, 2003). In this context the present study has as a general objective approaching the economic and social aspects of the *Programa Aquisição de Alimentos* (Food Acquisition program) in the “Cocais” region in the State of Maranhão with emphasis in the city of Caxias. The specific objectives are realizing an analysis of the socioeconomic profile of the beneficiated families with the PAA program, identifying who are the supply beneficiaries of the program; verify the operation of the purchasing process and the commercialization channels of the families that participate in the program. As a hypothesis it is believed that the effects that are generated for the familiar farmers in the city of Caxias, with the implantation of the PAA facilitate the commercialization of the production, income generation in the rural midst, improvement in life quality, as well as the local development of agriculture and encouragement to the permanence in the countryside. Beyond this introduction, the work is being organized in other four sections. In section two the utilized methodological procedures are presented. In section three the results of the research are discussed. In section four the main final considerations of the work are commented.

MATERIALS AND METHODS

The study is going to use the tools of the qualitative and quantitative research by mean of a case study. The case study is an empirical investigation that investigates a contemporaneous phenomenon in its real life context (YIN 2005).

Sample: The sample of the study refers to the supply beneficiaries of the *Programa de Aquisição de Alimentos* (PAA) of the city of Caxias in the State of Maranhão. According to Agrononik and Hirakata (2011), the size of the sample depends on many factors such as: the variable that interests the study, the kind of variable (quantitative or qualitative), the existence or not of comparison among groups (objective of study), the quantity of groups involved, the power of the test, the level of significance and the size of the effect. In the case of the existence of more than one interesting outcome, the size of the sample must be calculated for each outcome. To get the quantity of forms to be applied the expression. From (Figure 1) was used. To get to the finite population size of 82 farmers a search on the PAA platform was done. Data that is connected to the *Secretaria de Informação e Gestão da Informação* - SAGI (Secretary of Information and Information Management) of the MDS. A

margin of error of 10%, a 90% level of trust and the expected proportion (p) of 50% were considered, being that the final number that was found, adjusted for finite populations, was of 38 farmers according to the methodology of Agrononik and Hirakata (2011).

$$n = \frac{p(1-p)Z^2N}{e^2(N-1) + Z^2p(1-p)}$$

In which:
n= size of the sample
p: expected proportion (When there is no information about the proportion of interest, one of the ways of solving this problem is supposing that it is of 0.50).
Z: Value of the normal distribution for a determined level of trust (90% that is 1.645);
N: size of the population (82 farmers);
e: size of the confidence interval (margin of error 10% that is 0.01).

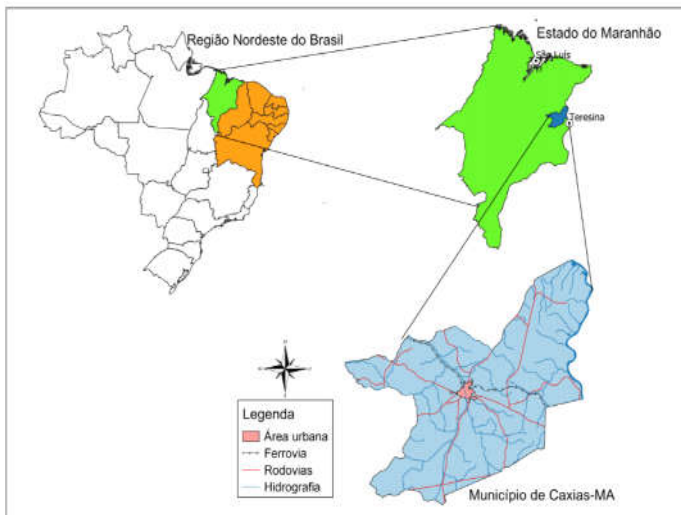
Figure 1. Formula of the sample calculation

In total 44 forms were applied to the farmers, being 38 the minimum level to be applied. In this way, the 6 (six) extra forms, in face of a finite population it increased the precision degree about the data that was researched. In relation to the interval of trust, it was used a level of significance of 10%, that is a level of significance with a good acceptability in scientific researches (Levy and Lemeshow 1980 Apud, Marotti et al. 2008) All of the procedures that preceded the research were done respecting the substantiated decision of the Council of Ethics in Research (CEP). At the moment of the research, the participants signed the Free and Enlightened Term of Consent. For the approach, initially, there were set contacts with the City Office of Agriculture, Rural Labor Syndicates and Community Leaders of each District and the objectives of the research were explained as well as the verification of their agreement to take part. In the next stage the communities took knowledge of the study through their community leaders, syndicate representatives and the City Hall, where they discussed about the subject to be approached and the formalization of the data collection. The data collection must be performed directly in the source of information, that is, directly with the individual who the sample fell over being a residence, a factory, a company, agriculture, etc (FACHIN, 2001). In this way, the form was applied only to the individuals of the research attending the recommendations by Fachin (2001). The talking occurred personally and in an individual way, with duration from 30 to 60 minutes, in their homes or rural establishments. Pictures were also taken and short statements were recorded if allowed. After doing all those stages of the research, the informations about this work are represented in form of texts and in charts, graphics and maps.

Research Tools

As a data collection method, for the effects of this study some “Forms” were prepared, which have a script of questions answered by the researcher, then, besides the face-to-face contact it is possible to obtain more complex and utile information (MARCONI; LAKATOS, 2003). One of the advantages of the form is the possibility of using almost the entire population segment: alphabetized, an alphabet, heterogeneous populations, etc (LAKATOS, 2003). The Form is fundamented in a series of ordained questions, successive and connected with the object of study. Thus, it can be considered as a formal list, catalogue or inventory, destined to data collection, resulting from observation or interrogatory. The filling is done by the investigator in measurement that he does the observations or receive the answers; it is his function to question and answer the Form while the information is obtained. (FACHIN, 2001). In the elaboration of the Form,

open and closed questions were used. The open questions are those that allow the researched to discurr spontaneously about what is being questioned and the answers can be with their own language. The closed questions are those in which the researched choses his answer in a group of cathegories that were elaborated with the question (FACHIN, 2001). In this way, it was possible to collect wide information, with plenty of diverse opinions, also direct and objective.



Source: Elaborated by the authors (2019).

Figure 2. Map highlighting Caxias from the Northeast region and from the State of Maranhão

Characterization of the field of study

The city of Caxias was primitively anagregate of big tribes of the native indigenous peoples of Timbiras and Gamelas that lived preacefully with the French, but with the expulsion of the French from Maranhão in 1615, the Portuguese reduced those tribes to the subdued condition and sold their populations as slaves to the people of São Luis. The city is situated in the mesoregion of the Eastern Maranhão and in the micro-region of Itapecuru, and belongs to the *Território de Desenvolvimento dos Cocais* (Cocals development territory). The territorial extension is of an area of 5,313.10 Km², with a population of 155,130 thousand inhabitants and is 365km away from the capital of Maranhão, São Luis. It presents a high demographic density of 30.95 inhabitants/km² and an urbanization rate of 76.27%, being the fifth most populated city. The urban population is of 118,534 and rural of 36,596 inhabitants. Figure 2 illustrates the location of the city (IBGE, 2019). The urban zone of the city is divided in: Central Zone, North Zone, South Zone, East Zone and West Zone, composed of 35 (thirty five) neighborhoods, according to the City Law Number 1838/2009, and its rural zone divided in 3 (three) districts: 1st district, 2nd district and 3rd district.

Caxias is among the biggest economic centers in the State of Maranhão thanks to its great development in the sectores of the industry and an importante political, cultural and populational center of the State. The city is strategically located interconnected by the federal roads BR 135 and BR 316, connecting Caxias to the Northeast and North of the country, rail roads that interconnect the productive centrst of the State with the resto f the fcountry. It is part of an intermodal logistic group with connections among railroads, airports, ports and waterways (Figure 3).



Source: Elaborated by the authors (2019).

Figure 3. Map of the district division of Caxias

The equatorial weather is characterized by two seasons, one rainy and other dry. In 2018 it was registered a minimum temperature of 20°C and the maximal of 40°C, with annual precipitations between 1.200 to 1.300 mm. The rainy season normally initiates in December and goes on until April or May, and concentrates above all from January to April. The dry season starts in May or June and gos on until November (September to November) and is characterized as being the hottest (IMETRO – station 82467- CAXIAS 2018). According to the IBGE, Maranhão presented in 2017 a household income of R\$ 597, and in 2018 of R\$ 605, registering a variation of 0.4%. In the last two years, it presented the smallest household income of Brazil. The per capita income is calculated as the reason between the total household incomes (in national terms) and the total os inhabitants (BRASIL 2019). The PNUD (2013) highlights that the *Índice de Desenvolvimento Humano Municipal*–IDHM (Index of Human Development of the cities) of Caxias passed from 0.469 in 2000 to 0.624 in 2010. The city is in the rate of *Desenvolvimento Humano Médio* (IDHM between 0.600 and 0.699). The dimension that contributes the most fot the IDHM was the longevity, with index of 0,753, followed by incom, with index of 0.595, and of education with index of 0.543 (PNUD, 2013).

According to the Farming Census of 2017, Caxias has a total land área of approximately 135,289,442 hectares, that are distributed in 3,836 rural establishments, in which 80% belong to individual producers, 23.38% of the establishments have from 0.5 to 1ha, and 25.94% from 1 ha to less than 2 h and 1.69% have from 200 to less than 500 ha (Chart 1). The land concentration in the city of Caxias is a historical question. Prado JR (2011) also affirms that in the region of Caxias practiced the monoculture of cotton that was responsible for more than half of the production of Maranhão in the second half of the 18th century. Because cotton was an activity of great economic expression at that time, it used pleny of slave labor and there ate not records about the quantity of slaves that worked in the monoculture. According to Lima (2006), the total population in the State of Maranhão in 1822 was of 152,893 inhabitants, being 77,915 slaves, that is, 51%. Great transformations happens in the productive systems in Caxias in the last two decades, to the point of promoting deep alterations in the economy as well as in the urban and social organizations themselves.

Chart 1. Rural establishments from the city of Caxias – Maranhão

Size of the Establishment	Number of Establishments	%	Area of the Establishment	%
Total (tab)				
More than 0 to less than 0,1 ha	44	1,15	2	0,0015
From 0,1 to less than 0,2 ha	27	0,70	4	0,0030
From 0,2 to less than 0,5 ha	378	9,85	130	0,0961
From 0,5 to less than 1 ha	897	23,38	655	0,4841
From 1 to less than 2 ha	995	25,94	1288	0,9520
From 2 to less than 3 ha	373	9,72	793	0,5862
From 3 to less than 4 há	134	3,49	424	0,3134
From 4 to less than 5 ha	63	1,64	265	0,1959
From 5 to less than 10há	180	4,69	1105	0,8168
From 10 to less than 20há	176	4,59	2378	1,7577
From 20 to less than 50 ha	229	5,97	6715	4,9634
From 50 to less than 100há	145	3,78	9012	6,6613
From 100 to less than 200 ha	94	2,45	12359	9,1353
From 200 to less than 500 ha	65	1,69	18024	13,3226
From 500 to less than 1.000 ha	14	0,36	9197	6,7980
From 1.000 to less than 2.500 ha	13	0,34	19305	14,2695
From 2.500 to less than 10.000 ha	8	0,21	X	x
From 10.000 ha to more	1	0,03	X	x
Producer without area	-	-	-	-

Source: IBGE (2018).

For example the extrativism, an economic activity of the city that concentrated in the exploration of the babaçu coconut, it lost strength in the last decades. Dourado and Boclin (2008) affirm that the economic loss of babaçu is related to the extinction of the forests and occupation of the spaces by pasture or agricultural projects, by the difficulties not yet overcome from the babaçu exploration in a way to make it a competitive product. In this way, the agriculture and livestock, slowly leave the characteristics of extensive and survival activities and acquire a gait and quality of agrobusiness. Other cycle of monoculture that started to dawn, starting in the decade of 1980 in many cities, among them Caxias, that is located in the Eastern mesoregion of Maranhão. National companies turned to the cultivation of eucalyptus focused in the production of cellulose and wood extraction of the native wood for the production of vegetable coal were installed (PAULA ANDRADE, 1995 and GASPARG, 2010). To Botelho, Almeida; Ferreira (2012), some problems were provoked by the introduction of the agrobusiness in the East of Maranhão, such as:

“The Strong clue of land grabbing. In this way the resulting consequence of this territorial expansion was given due to the change in the daily life activities of the rural workers that before this took from the field the sustaining of their families and produced food, now they see themselves forced to work in the big companies” (BOTELHO, ALMEIDA; FERREIRA 2012).

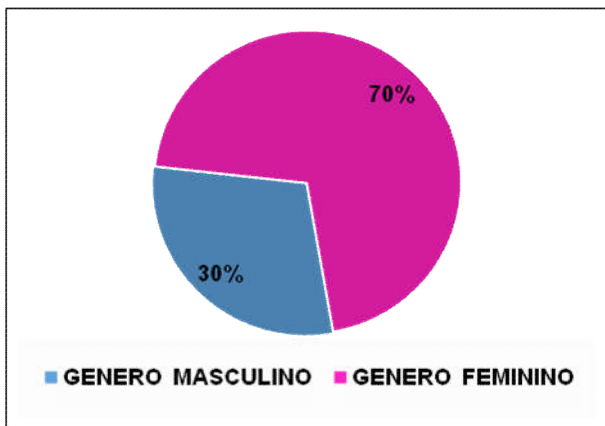
Even in face of these historical facts that have been muffling the development of the small rural producer, 24% of the population of Caxias live in the rural zone and has potential to promote the familiar agriculture (AF), whereas it is present in the three administrative districts of the city. The IBGE Agropecuary Census (*O Censo Agropecuário do IBGE*) of 2017 learned that in the city, the number of establishments with areas up to 4 tax modules represent more than 95%. This fact, according to the Law Number 11.326/2006, has characteristics where the familiar agriculture can be practiced, taking into consideration the pre-requirements of the size of the area, that establishes that the AF practice to areas with the maximum size of 4 tax modules. According to the chart of basic indexes of the *Sistema Nacional de Cadastro Rural* (National System of Rural Register), the tax module in Caxias is fixed in 55 hectares (BRASIL/INCRA, 2010).

The AF in Caxias has an important relevance in the economy, because besides generating occupation in the field, it is also responsible for guaranteeing good part of the food that get to the Free Fairs. Therefore, the AF is a segment of extreme importance for the income to the people of Caxias, being the strength of this segment, the key to reduce hunger and poverty, because it allows that the small producer gave access to land, water, markets, technology and credits. (*Organização das Nações Unidas para a Alimentação e Agricultura* - FAO, 2012). The representative of FAO in Brazil affirms that the “familiar agriculture is an influent tool to guarantee the food safety of the population worldwide and of the future generations” (FAO, 2012). In 2010, 16.2 millions of Brazilians lived in extreme poverty and 46.7% lived in rural areas, the higher quantitative of Brazilians in the extreme poverty situation in the Northeast region: 9.61 millions of people (59.1% of the extremely poor of the country). Of the total of the extremely poor in the Northeast, more than the half (52.5%) were in the rural areas (Falcão and Costa, 2014). The extreme poverty grew in the entire country during the crisis from 2014 to 2017 with more intensity in the Northeast region. Facing these facts, the importance of the AF deserves special attention for the treatment of this public above-mentioned with public politics that generate positive results. It is highlighted that the AF is a generator of richness and food. There are thousands of families that depend on and live of the familiar agriculture (Zyger, 2017).

RESULTS

This item of results presents the socioeconomic profile of the beneficiaries of the PAA by mean of the following variables: gender and age, characteristics of the beneficiary about their color/ethnicity; local of the household; experience as familiar farmer; schooling level; land condition; social benefits; family labor that is employed in the rural establishment; current occupation; and familiar income per person in the house.

Gender and Age of the PAA-Caxias beneficiaries: Of the beneficiaries that were researched, 70% are female. The operations in which the direct beneficiarie were men accounts for 30% of the operations (Figure 4). The big percentual of women participating in the PAA can be explained by the creation of diverse politics turned to their empowerment.



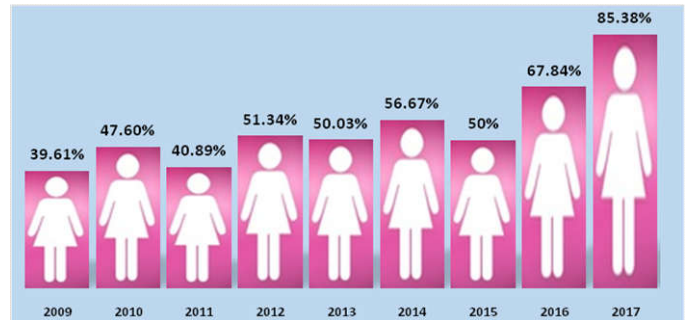
Source: Field research (2019).

Figure 4. Gender of the beneficiaries (%) of the PAA in the city of Caxias/MA between the months of November of 2018 and January 2019

As an example of this, there is the *Programa Nacional de Reforma Agrária –PNRA* (National Program of Land Reform) by Incra that since 2003, expanded the rights of women to the land. Since then, the index of women who are titulars of the lands increased from 24.1% in 2003 to 55.8% in 2007. The total of women that are heads of families in relation to the total of beneficiaries passed from 13.6% to 23% in the same period. In the year of 2008, through the Interministerial Ordinance Number 2, it was created the Programa de Organização Produtiva de Mulheres Rurais (Rural Women’s Productive Organization Program). Among the objectives were the viabilization of the women’s access to public politics and of support to the production and commercialization in order to promote the economic autonomy of the women and ensure their protagonism in the rural economy (MDA/BRASIL, 2018). With the acknowledgement by the MDA of the importance of women’s contribution in the field, for the production of healthy food, for the food security and sovereignty and for the rural sustainable and solidary development of the country. In the year of 2011, it was launched the Resolution Number 44 that ensured the quotas for women’s attendance, being 40% in the modality Purchase with Simultaneous Donation and Local Direct Purchase and 30% in the modality CPR – Stock. Therefore, this action results in the increase of the number of women in the condition of responsible for the rural establishment. According to the *Censo Agropecuário* of 2006, they represented 12.6%, in the Census of 2017; the women represented 18.64% being the increase probable propelled by public politics turned to the women (IBGE/BRASIL, 2019).

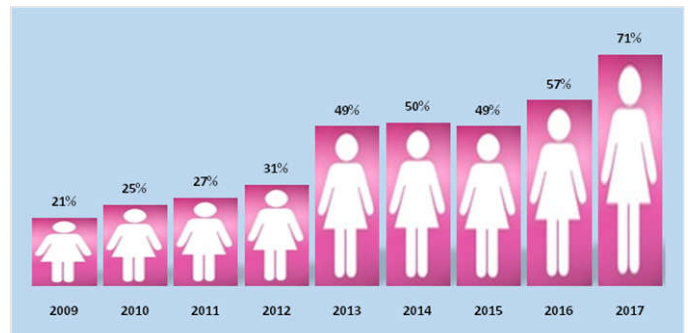
The women in the field assume an important role, which is not only in the act of doing domestic tasks, but also in the strengthening of the labor and of the family income in measure that they do both rural and domestic tasks. The action of women in the areas of small animals breeding, vegetable planting, production and benification of fruits, milk, fish and handicraft products, etc, in the so called productive backyards, generate income and self sustaining for the families (Filipak, 2017). The Strong actuation of the women resulted in the participation of public politics, as an example of this, the PAA. As shown to Figures 5 and 6, the consolidation and valorization of the female labor have been ensuring their socioeconomic inclusion, decreasing in that way the invisibility of the women’s role in the rural midst. The data from Figure 5 demonstrate the development of Maranhão in

relation to the total of contracts with women. Previously to 2011, even with the absence of the Resolution Number 44, of August the 16th of 2011 that promotes the access of women to the *Programa de Aquisição de Alimentos*, once it already presented a good performance, initiating with 39.61% of their participation (in 2009) and reaching 85.38% in 2017. In relation to Brazil, in the Figure 6, it is observed a shy participation of the women until 2011. With respect relationship to Brazil, in Figure 6, there is shy participation of women until 2011. From 2012, the evolution is constant, reaching 71% in 2017.



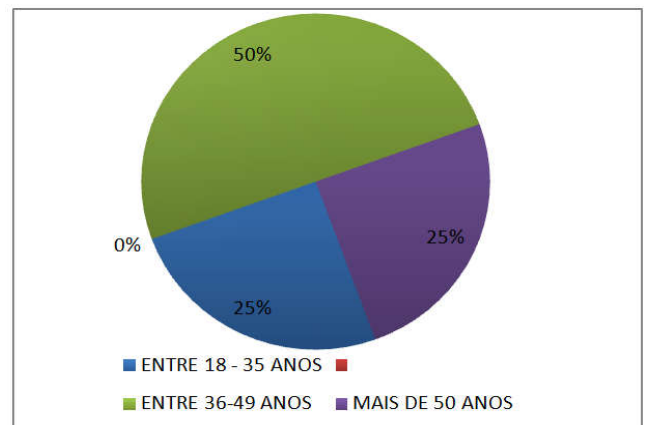
Source: Data from Conab (2018).

Figure 5. Percentual of contracts with women in the PAA in relation to the total of contracts in Maranhão between 2009 and 2017



Source: Data from Conab (2018).

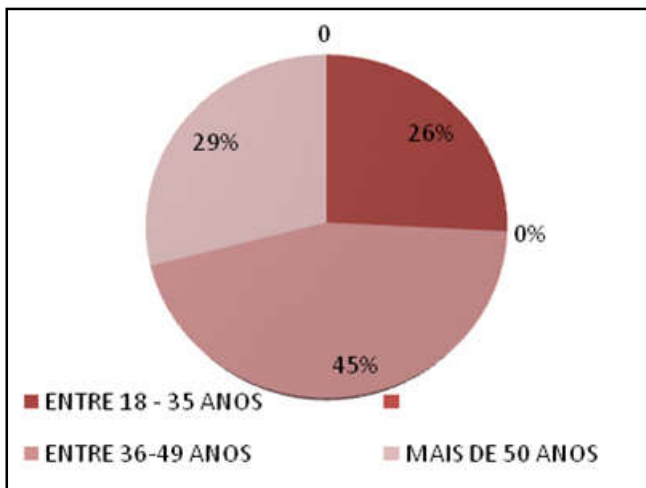
Figure 6. Percentual of contracts with women in the PAA in relation to the total of contracts (Brazil)



Source: Field Research (2019).

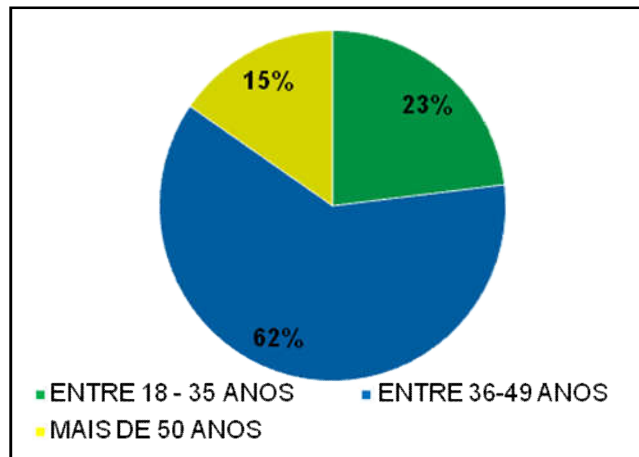
Figure 7. Representation by age range among the researched beneficiaries from the PAA in Caxias/MA between the months of November of 2018 and January of 2019

In relation with the age of the PAA beneficiaries in the city of Caxias, the Figure 7 shows that 50% of the researched are between 36-49 years old, those whose ages are between 18-35 years old represent 25% and the people over 50 years old also represent 25%.



Source: Field research (2019).

Figure 8. Age range among the female gender from the city of Caxias/MA between the months of November of 2018 and January of 2019

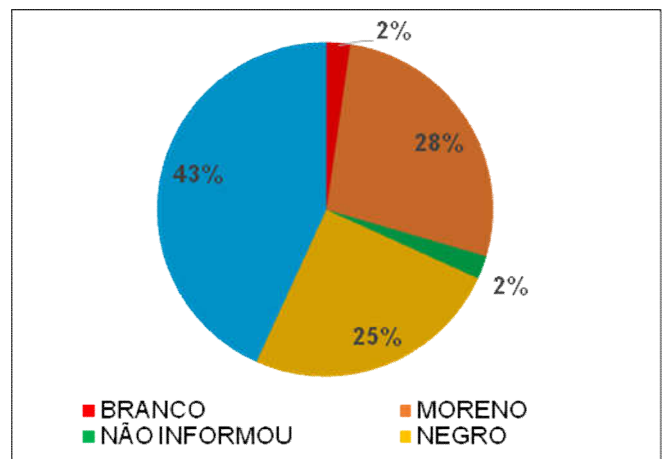


Source: Field research (2019).

Figure 9. Age range among the male gender in the city of Caxias/MA between the months of November of 2018 and January of 2019

In the Figure 8, it is shown the age range of the female gender or the researched, being 45% with ages between 36-49 years old. In Figure 9, it is presented the male age range of the researched, being 62% with ages between 36-49 years old. In this way, the low participation of the genders with ages between 18-35 years old can indicate, in a subjective way, the absence of public politics turned to insert these individuals in the agriculture. To do so, the question of gender and their age ranges were not deepened in this item, because they are not part of the central objective of the research.

Characteristics of the beneficiary about their color/ethnicity: The racial classification, currently employed by the IBGE, distinguishes the varieties through the characteristic of the “skin color”, that can be white, black, yellow and brown (OSORIO, 2003). There are basically three methods of racial identification that can be applied: self-attribution, hetero-attribution and genetic analysis. In the classificatory system from IBGE, the methods of self and hetero-attribution are simultaneously applied. (Petruccelli, Saboia 2013). To better understand the origin of the analyzed data, the question made to the farmers in the part of Socioeconomic Profile in relation to the color was the following: “How do you consider yourself?”.



Source: Field research (2019).

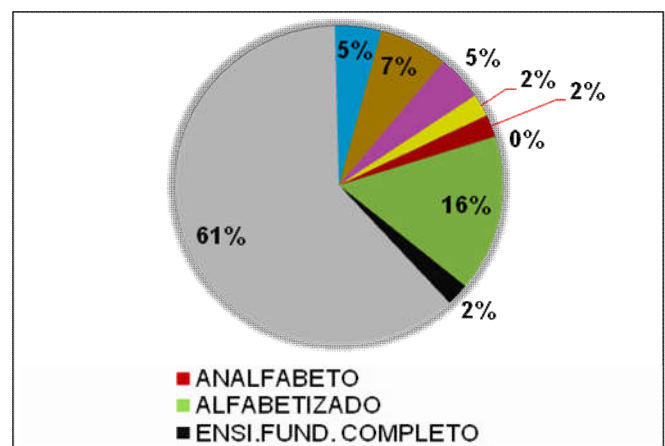
Figure 10. Characteristics of the beneficiary about color/ethnicity in the city of Caxias/MA between the months of November of 2018 and January of 2019

The answer had the following alternatives: white, black, indigenous, others. According to the Figure 10, the researched self attributed a color to himself or herself. Of the 44 individuals participating in the study, it was verified that 43% self declared brown, 25% black and 28% self declared themselves as of “a brunette color”.

The place of inhabitation and the experience as a farmer

In the research, it was verified that 90% of the researched live in the same rural zone of the city and 10% in the urban zone. However, with the farming and livestocking activities happening in an establishment in the rural zone. About the experiences as familiar farmers, 100% of the male gender declared always have been working in farming. In the female gender, all of the women researched self-declared always working in farming and as housewives, in their domestic duties and taking care of the children.

Schooling of the PAA Caxias beneficiaries

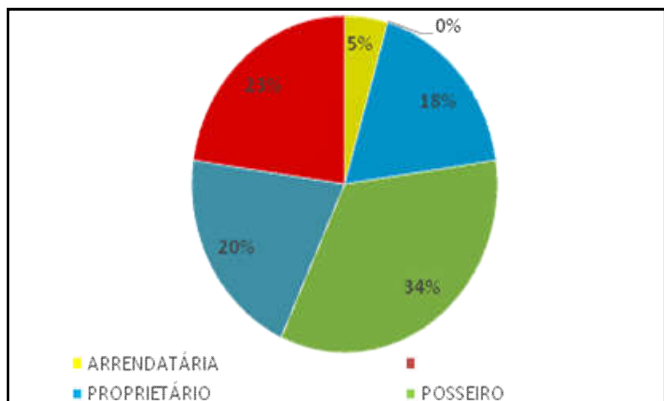


Source: Field research (2019).

Figure 11. Schooling of the beneficiaries of the PAA in Caxias/MA

The schooling levels are too low among the PAA beneficiaries, more than a half of its beneficiaries (61%) did not complete elementary school. It is observed in Figure 11 that 5% of the beneficiaries have technical education in the farming area and 2% have higher education in other areas.

Land condition in Caxias



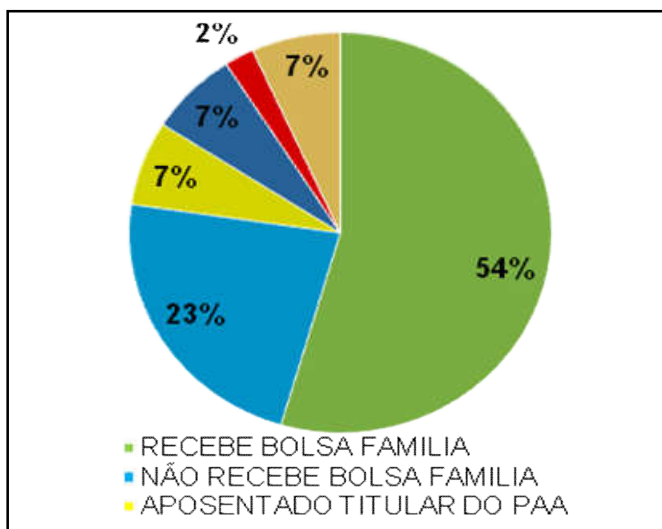
Source: Field research (2019).

Figure 12. Land condition of the PAA beneficiaries Caxias/MA

Among the PA beneficiaries in the city of Caxias, it was verified that 34% of the researched were fit was squatters. It also brings the attention the the expressivity of those that their land condition were other 23%. Besides that 20% belong to rural settlements, according to Figure 12. According to the data gathered by INCRA, Caxias counts with 16 rural settlements, in which 2,233 families of farmers are settled (BRASIL/INCRA, 2019). According to reports of the beneficiaries that participate in the PAA, it was perceived the inexistence of a certain place to develop rural activities, they utilize land borrowed from owners and squatters, which in some cases are relatives, or farmers, and live the insecurity of cannot plan their production and organize their planting area with infrastructure: irrigation, fences and implementation of permanent cultures, being restricted to short cycles.

Beneficiaries of the Programa Bolsa Família in Caxias

The Programa Bolsa Família is the transference of income for the vulnerable population in the Federal Scope, which implementation articulates health, educational and social assistance politics and conjugates efforts of states and cities.



Source: Field research (2019).

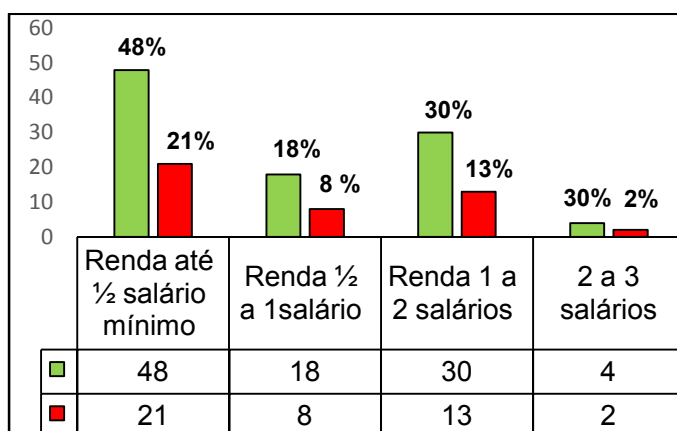
Figure 13. Social benefit (Programa Bolsa Família) in Caxias/MA

According to the field research, 54% receive the *Bolsa Família*. Of this group, the female gender predominates (75% of the *Bolsa Família* beneficiaries) according to Figure 13. The

medium value received by each beneficiarie was of R\$ 182.33, the minimum was of R\$ 77.00 and the maximum was of R\$ 436.00. The beneficiaries affirmed that they used the received resources to acquire medication, food, school supplies, paying the electric energy bills and others.

The average familiar income in Caxias

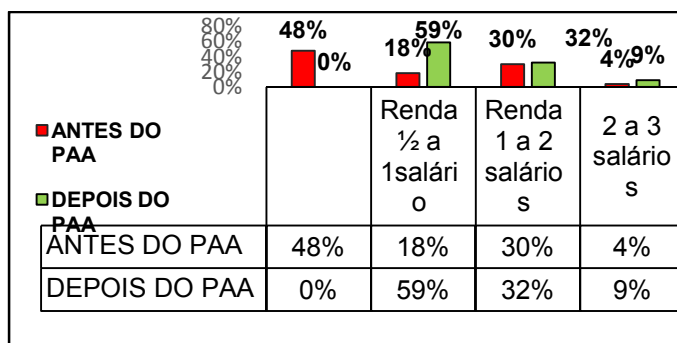
According to the IBGE Census (2010), about 67% of the population in Caxias has the nominal income bellow a minimum salary. The State of Maranhão, according to IBGE (2017), presented in the year of 2017 a familiar income of R\$597, and in 2018, of R\$605. Therefore, the low income of the city puts it in a vulnerability situation, with elevated indexes of people in extreme poverty or poor. According to the data made available by the *Programa das Nações Unidas para o Desenvolvimento - Brazil and Internacional (PNUD, 2010)* the data showed that the per capita income in the city of Caxias was of R\$ 324.90 in 2010.



Source: Field research (2019).

Figure 14. Familiar income of the research beneficiaries before the PAA

The Figures 14 and 15 present the income of the studied families. It was perceived that 48% of the group of individuals that participated in the research had incomes up to half a minimum salary before becoming participants of the PAA. While the percentual of those who received a minimum salary and half than two minimum salaries were 46%. However, it can be affirmed that according to the field research, the per capita income, before the PAA, fit 52% of the interviewd with half salary to three minimum salaries. After the PAA, 100% of the researched fit with the incomes from half a salary to three minimum salaries.



Source: Field research (2019).

Figure 15. Familiar income of the researched beneficiaries of PAA in Caxias after the PAA

Purchase operation and income inside the PAA in the city of Caxias

Since the launching of the PAA in 2003, the first signed contracts with the program in the city of Caxias happened in the year of 2011. In this occasion, three projects were approved with resources from the *Ministério de Desenvolvimento Social* (Ministry of Social Development). The modality was *Compras com Doação Simultânea* –CDS (Purchase with Simultaneous Donation), serving in this occasion to three Rural Producers Associations and the released amount was of R\$ 160,760.80 and 43 supplying beneficiaries were attended. The Chart 2 presents the participation time of the PAA beneficiaries and the frequency of signed contracts.

Chart 2. Time participating in the PAA and frequency of contracted

Total number of benefited	Participation time in the PAA	Frequency of contracted	Percentual (%)
15	1 to 2 years	Every year	34,09
13	2 to 3 years	Every year	29,55
16	3 to 4 years	Every year	36,36

Source: Field research, (2019)

Chart 3. Punctuality of payments of PAA reported by the researched farmers

Number of farmers	Sometimes late	Recurrently late	On time
44	18,18 %	27,27%	54,55%

Source: Field research (2019).

It is highlighted that between the interviewed producers, the signed contracts are individual and not by means of connections with entities. Therefore, it is noted that 34.09% of the farmers are recent to the program. They had their contracts signed to provide to the PAA in 2016-2017, putting in discussion the lack of mechanism of the local public powers in searching public policies that generate income and occupation in the rural midst. Considering that the PAA was launched in 2003 and the first hirings in Caxias happened in 2011, that is, after 8 years.

The research found that 61% of the farmers took knowledge of the PAA through the Secretary of Agriculture of the city, 15% by the neighbors, 10% by the *Programa Brasil Sem Miséria* (Program Brazil Without Misery), 11% by associations and 3% through the technical assistance service. Of the total of researched, all affirm participating in the meetings promoted by the City Hall explaining how is the purchase process through the PAA. Among the difficulties pointed in relation to the processing of the program, 10% pointed to difficulties with the documents to legalize the participation in the program, that is, faced a discomfort to acquire the Aptitude Declaration to the PRONAF.

To receive the payment of the products, the researched farmers affirmed that it was individual, by mean of a bankcard proper to receive the PAA resources. The farmer himself exclusively does the food transport in the rural communities to the headquarters of the Secretary of Agriculture in which is the food bank, in 100% of the cases. But, the farmers have organized in groups so the transportation cost becomes smaller. It has also been observed that the farmers need to pass through a long distance to make their deliveries, considering that the city has many problems with infrastructure, such as the condition of the rural roads and bridges in precarious condition.

The PAA in the city, although presents an evolution in the participation of the supplying beneficiaries, still can be perfected. One of the problems that was observed in the field research corresponds to delays in the receiving of the payment after the delivery of the products as seen in Chart 3.

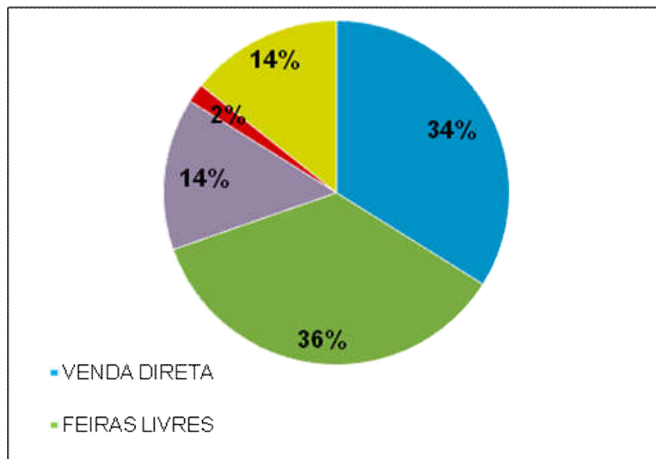
It has been perceived as well the lack of knowledge of the operation of the program by the part of the producers, and the absence of capacitation referring to the bureaucratic process of the program and the continuous rural technical assistance. For the improvement of the program, the path would be capacitation of the titular beneficiaries, besides this, looking forward to capacitate other members of the familiar nucleus, as an example, the sons and daughters of the farmers, considering that the research data showed that 61% of the beneficiaries have incomplete Elementary School. Entertaining the capacitation in workshops about the program, it could aid in the clarification and proportionate a better understanding. Beyond this, the knowledge by the farmers and members of the familiar nucleus would allow a more efficient planning in the execution of the production and commercialization activities. The research found a lack of involvement of the Syndicate of Rural Workers of the city. About 81% of the interviewed affirmed to be necessary more actions by the Syndicate that could improve or ease the access to the PAA.

It was also observed that 52% of the beneficiaries reported that the Syndicate should act with more frequency with the communities to identify the families that actually are rural producers that fit the Law Number 11.326 of July 24th of 2006 that establishes the guidelines to the National Politics of Familiar Agriculture and Rural Familiar Entrepreneurships. For the PAA beneficiaries a more effective action of the Syndicates in the rural communities would ease the identification of the farmers that are the public of the PAA, according to what the producers said:

“When the people that are not farmers have the DAP in their hands, they can have access to the PAA and to the PRONAF. About the PAA, they take the opportunity out of us, who work sunrise-to-sunrise to produce something to sell to the PAA and sustain our families. Usually, as I hear about, they buy products in the fair or at Ceasa in Teresina and sell as if they had produced it. That is bad for us, producers. The presence of the Syndicate in the communities is important to avoid this problem, because it is the organ that represents us and we pay monthly the tuition” (Rural producer Beneficiary of the PAA, city of Caxias, 2018). “The Syndicate of Rural Workers has the role of representing and defending our rights and not only distributing the DAP to everyone. It is necessary to act more frequently in the field for the strengthening of familiar agriculture. It is necessary to oversee the DAPs that they issue to verify if the person lives where he says he lives and produces what he says he produces.” (Rural producer Beneficiary of the PAA, city of Caxias, 2018).

While the commercialization of the production has always been a neck to the farmers, in the case of Caxias, the difficulty is since the bad roads, what makes difficult the access of the farmers to the headquarters of the city in which the fairs happen, until the low prices paid for the product, even smaller than in the local market. The study also highlights two moments of the researched group of individuals, the first is the form of commercialization of the products before the PAA that

is, how the farmers used to sell their products, and the second, would be after the researched group of farmers passed to participate in the PAA.



Source: Field research (2019).

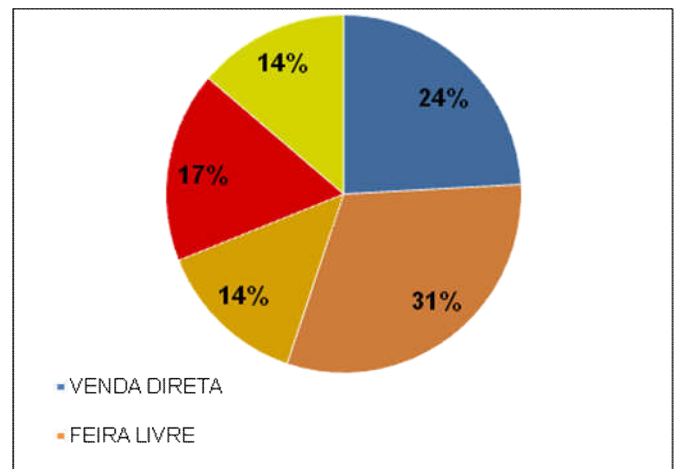
Figure 16. Forms of commercialization by the producers before the participation in PAA, Caxias/ MA

The Figure 16 points that 2% of the supplying farmers of the PAA already accessed institutional markets before taking part of the PAA, in this case, they sold to the *Programa Nacional de Alimentação Escolar* (PNAE). Furthermore, it is noted that before the PAA, 14% of the production were commercialized by free fair and simultaneous direct sell, 14% by intermediaries, 34% by direct sale and 36% by free fairs. In the case of the PNAE, this commercialization channel is not much used by the universe of the researched. The *Programa Nacional de Alimentação Escolar* (PNAE) offers school feeding and food and nutrition actions to students of every stage of public elementary school, remembering that at least 30% of the total of these resources must be spent in the purchase of products coming from familiar agriculture and/or a familiar rural entrepreneur (FNDE, 2019).

It was also found by the current study that 36% used to commercialize the agriculture and livestock products in free fairs in the city of Caxias. The free fairs are economic activities that occupy public spaces constituted of activities that generate income, that provide numerous families and are capable of promoting the proliferation of other commerces (SILVA *et al.* 2014). In the city of Caxias, the fair is one of the most solid organizations. The operation happens every day of the week since 5 a.m. until 1 p.m. It is rooted in the culture and the economy of the city. The farmers commercialize in the fair: piglets, chicken, ducks, vegetables and fruits, a diversity of flours, gums (or tapioca flour), foliage, fruits coming from extractivism (as vinegar tree, pequi and bacuri), rapadura and other products. The population participates actively in the purchase of products from the fair. Thus, in a way, the farmers already acted in the commercialization of some of their products by means of other channels, being by means of sellings to the PNAE, or direct sale (door-to-door and in their own residences), free fairs or intermediaries.

In the case of the direct sale it occurred in two ways: in the first the consumers come to the residence of the farmers to effect the purchase, in the other the producer organizes the production in transport boxes and visits possible buyers in his own community or in neighborhood communities and even in the

town. In this case, the sell happens door-to-door. The researched producers report that the disadvantages of selling in the neighborhood communities and in the town is by the fact that many times they could not sell all of the product, having some losses like wasting time, the value of transportation and misplaced products. The forms of transportation are cars (stockings), motorcycles and bicycles. A really common action that also happens in the rural zone of Caxias, in which the middlemen (in the case of the intermediaries) buy the agriculture and livestock products from the producers and sell them back to the retail business or straight to the consumer with a margin of profit. According to the reports from the farmers, the prices are low, but usually they pay at sight and also, if they do not sell they lose the production of the land, this when they cannot sell the product by other channels of commercialization.



Source: Field research (2019).

Figure 17. Forms of commercialization by the producers after the participation in PAA, Caxias/ MA

After entering the PAA, as shown in Figure 17, the sales at the free fairs lost strength, with the participation of 31% (before, as shown in Figure 16 it was 36%), the direct sale also retreats from 35% (before the PAA) to 24% (Figure 16). However, the sales to intermediaries remained the same in 14%. A significant rise is observed in the case of PNAE that raised from 2% (before the PAA) to 17%. The figure 15 also highlights that, after the PAA, 14% of the farmers practice 3 selling channels (direct sale, free fairs and PAA).

Difficulties found to commercialize the products through the PAA

They were identified through the commercialization, mainly relative to the Sanitary Adequation, the Food Receiving and Distribution Central and the Transport.

- Sanitary adequation:** The producers faced considerable obstacles about fulfilling the sanitary regulation, because the sanitary regulations instituted by the *Agência Nacional de Vigilância Sanitária* (Anvisa) are not easy of access for the small rural producers. It was perceived that 100% of the farmers that are benefited by the PAA did not get the necessary requirements to provide meat from chicken, free-range chickens, or eggs, sweets or jams, cheese, manioc flour, cassava gum, cakes, native and exotic fruit pulps, among others.

- Food Receiving and Distribution Central:** other great neck observed in the city. It was noticed the absence of a Food Receiving and Distribution Central of the PAA. According to the researched, the delivery worked in an improvised shed without the minimum packaging structure for the perishable products. This situation is contrary to the demands of the MDS, that defines the characteristic Food Receiving and Distribution Central: The local of delivering food must have the necessary structure for the reception and packaging of the food. The environment must be clean and the structure compatible with the kinds of food that are being received, it may be necessary to dispose of cooling and freezing equipments (MDS/MANUAL OPERATIVO DO PAA, 2014).
- Transport:** In relation to the transport, 100% of the farmers need logistic support of the City Hall to transport the food to the Food Receiving and Distribution Central of the PAA. The supplying farmers may count on the logistic support of the City Hall for the transport of the food to the Food Receiving and Distribution Central of the PAA, in the case that they do not dispose of their own conditions for the displacement of the production (MDS/MANUAL OPERATIVO DO PAA, 2014)

Thus, 22.7% of the beneficiaries affirmed that they had difficulties in the commercialization through the PAA. The main discomfort that was informed was related to the means of transportation used to deliver the production in the Secretary of Agriculture.

“We take our productions to Caxias in stocking cars, it is really bad because sometimes the producers get hurt. And when we get there the receiving fiscal does not want to receive, then we lose everything. Other bad thing is that we lose an entire day of work, because we leave home early to get to the stocking car and it only comes back in the afternoon, then we have to stay there waiting for the time to come back... ..” (Rural producer Beneficiated of the PAA, city of Caxias, 2018). “The City Hall could provide transport to pick up our products here at the farm. Then the people will eat our production. They would eat a fresh product... Here in Caxias we have many bad roads, even when we want to hire a car we cannot find one, because the owner does not want to come and when he comes it is too expensive, because we sell too little.” (Rural producer Beneficiated of the PAA, city of Caxias, 2018).

Incomes

According to Valnier (2011) in the study about income improvement of the farmers that are beneficiaries of the PAA, the author highlighted the life improvement, not only of the familiar farmers that participate in the program, but also of all those from the place and region in which they are inserted. In the same way, such scenario happened in the city of Caxias in Maranhão. The PAA showed itself as important for the improvement of the life quality of familiar farmers, because it values the agriculture products, motivates the production with fair payments and the enlargement of the participation of familiar agriculture in the market, mainly for those farmers that cannot sell their products in supermarkets, fairs,

restaurants and others. It is observed the constant effort of the supplying farmers of the PAA, in a way of searching alternatives to guarantee a higher productivity and a better quality to overcome the obstacles that are imposed to their activity, such as weather variations, problems with infrastructure, commercialization and others.



Source: Field research (2019).

Figure 18. Soil preparation for the planting of watermelon and beans



Source: Field research (2019).

Figure 19. Planting of watermelon in the blooming phase (prevision on commercialization by the PAA)



Source: Field research (2019).

Figure 20. Planting of manioc in which the producer is expecting the 2019 budget to comercialize to the PAA



Source: Field research (2019).

Figura 21. Okra planting close to harvest

The Figures 18 to 21 show images of the soil preparation and the assembling of the economic irrigation kit, watermelon, okra and manioc tree planting, being all of the products provided by the PAA. In the city of Caxias, despite the importance, the PAA presents a small coverage. Even so, the program has been reaching its goals, promoting the income generation and the price support to the familiar farmers. Considering this, in analysis of the PAA in Brazil, Souza-Esquerdo and Bergamasco (2015) affirm that:

Despite the small coverage of the PAA front to the universe of Brazilian familiar farmers, the PAA have been reaching its objectives every year, promoting income generation, price support to the familiar farmers and contributing for the food and nutritional safety to the urban and rural populations. In this way, the PAA consolidates itself as a program of public politics turned to the family farmer, guaranteeing at the same time, access to quality food for a population in a food insecurity situation (SOUZA-ESQUERDO; BERGAMASCO, 2015).

According to the farmers of the research sample, 100% of them affirm that they had improvements in their familiar income with the selling of the production to the PAA, 82% evaluated that the prices received by the PAA are above the prices practiced by the local market, only 7% considered that the prices are equal to the prices practiced in the market and 1% affirm that some product are better paid in the local market. Besides that, about the prices that are paid for the products, 95.5% of the answers affirmed that they received fair prices for the products and 4.5% think that the prices should be better, because the investment for the production is expensive. With the inclusion of the income originated from the PAA, 77% applied part of the resource in the improvement of the housing conditions as: simple reforms, construction of new houses, construction of bathrooms, kitchens, among other improvements. According to the beneficiaries, the program provoked a positive change about the income generation and woke the beneficiaries for other markets, being one of them the *Programa Nacional de Alimentação Escolar*–PNAE (National Program of School Feeding). Besides that, the farmers punctuated some gains with the implementation of the PAA in the city. Such declarations reinforce the importance of the program in the income generation and development of the local rural. In this way, the beneficiaries affirm that:

“With the selling of my production I could build a masonry house, because they lived in a house of mud, I also bought a motorcycle that facilitates to take my products to the *Secretaria de Agricultura* (Agriculture Secretary), this program helped a lot, I hope it does not end” (Rural Producer Beneficiated of the PAA, city of Caxias, 2018). “The few I got to sell to the PAA was enough to pay the bills, it improved a lot. We have more pleasure working by knowing that we will have return later, sometimes we plant the things just to eat, and the rest that remains we give to the animals, and then we give to the people that do not have [what to eat]” (Rural producer Beneficiated of the PAA, city of Caxias, 2018)“

With the encouragement of producing to sell to the PAA it improved a lot the life here at the farm, besides producing to sell and having some return to pay the bills, we take part of the production to eat, before we did not have the custom of eating vegetables, now we produce to sell and to eat.” (Rural producer Beneficiated of the PAA, city of Caxias, 2018). “The best thing in this program is that we produce already knowing to whom we are going to sell, then this encourages us to work. Before we produced and took a part to eat and the rest was rotting in the farm. It was not even worth to harvest and take to the fairs, because there the price of our products is worthless. The people prefer buying products that came from outside and full of poison. Other good thing of the program is the price that is paid that is fair for our work, this gives us value. We feel important by knowing that our products also reach the schools and other entities that receive the products of the PAA” (Rural producer Beneficiated of the PAA, city of Caxias, 2018). “Com a renda da venda de meus produtos, eu comprei um kit de irrigação, com ele eu posso produzir o ano todo, ou seja, tanto no período das chuvas, sem necessidade de usar o kit de irrigação, como no período seco que não chove. Então assim todo tempo tenho produto para vender tanto para o PAA como nas feiras e para comunidade” (Rural producer Beneficiated of the PAA, city of Caxias, 2018). “With the PAA I started to pay my bills on schedule, the feeding improved a lot, because there were some things that I did not produce, but now I do, like lettuce, okra and other things. Also, I don’t purchase many things outside; we feed from what we produce for the PAA” (Rural producer Beneficiated of the PAA, city of Caxias, 2018).

The main change that occurred after the participation in the program was the increase of the income, reported by 100% of the researched. A similar result was observed by Schmitt et al. (2014) by analysing the implantation process of the PAA in the context of rural settlements in many Brazilian states, where they found that the monetary gains originated from the commercialization of agriculture and livestock products were superior in the cases of the families that accessed the program. In Itapetininga-SP, Camargo et al. (2013) in what relates to the family incomes, found a sensitive improvement with the participation in the PAA, highlighting that in many cases, the resources from the PAA are the main source of rural income of the families. In Figure 22 are measured the agricultural activities, highlighting the cultures that generated most financial gains for the researched inside the PAA. Through the field research was possible to analyse that the small farmers supplied beans in greater quantities (25%). They appeared satisfied, because before the program a great part of the product was lost in the field because it presented low prices. With the selling to the PAA, the beans were valued. In every

establishment that was visited it was observed that the farmers themselves decided to cultivate beans by tradition, besides the work being done by the members of the family. The other two highlighted cultures are corn (16%) and manioc tree (11%). Corn became an option of great economic value to the producers thanks to a good price and also by the significant demand for the product *in natura* through the PAA.

Both the beans, corn and manioc tree are products traditionally cultivated in the region. According to the beneficiaries they do not present many plagues and illnesses, they are easy to cultivate and do not require too much technique, and it rains enough in the region to develop the production. Researches have been showing that the PAA has been impacting the reality of the farmers with the application of the resources that are received, then, the researched were questioned about the income that was obtained with the program and invested in the property.

Chart 4. Quantity of beneficiaries by kind of investment with the income from the PAA

Income obtained with PAA invested in the property	Total Quant. of Benef.	Benefits by kind of investment	%
Infrastructure of the house/comfort	44	34	77,27
Productive infrastructure (buildings);	44	12	27,27
Acquisition of machinery and equipments	44	1	2,27
Acquisition of automobiles	44	1	2,27
Animal acquisition	44	3	6,82
Graduation course	44	0	-
Investment in agriculture	44	29	65,91
Family expenses	44	44	100,00
Acquisition of household goods (durable)	44	3	6,82

Chart 4 presents the main occurrences in which finds that 77.27% decided to invest in the comfort of the household and 65.91% in the agricultural investment.

Considerations

The present work demonstrated the depiction of the PAA in the city of Caxias, Maranhão. This research is important because it was possible to verify that Caxias is one of the cities of the Northeast, which have been accessing the PAA the most, and that it showed itself to the State as a great income receptor and life improvement agente in the lives of the small farmers. In addition, the city of Caxias fits as one of the main cities to access the Program. Between the research results, it can be identified that the researched participants of the program are 70% of the female gender and 30% male. The age range of the PAA beneficiaries in the city of Caxias between 36-49 years old is 50%, those which ages are between 18-35 represent 25% and people above 50 years old also represent 25%. The age range of the female gender between 36-49 concentrates 45% of the researched women, while in the male gender, 62% present ages between 36-49 years old. In addition, the biggest part self-declared as of brown ethnicity (43% of the participants of the research). Of the 44 participants of the study, 90% live in the rural zone, 10% in the urban zone and 100% of the researched have experience as farmers and have always been farmers. The level of schooling is distributed in the following way: 61% do not have completed Elementary School, 16% are alphabetized, 5% have technic education, 2%

have University education, 2% have completed the Elementary school, 5 % have incomplete High school, 2% were alphabetized and 7% declared they have completed the High school. The predominant land condition are the squatters with 34%. The beneficiaries that receive *Bolsa Família* are 54%, being of the female gender 75%. The medium value is of R\$ 182.33, the minimum of R\$ 77.00, and the maximum of R\$ 436.00. In relation to the participation time of the farmers in PAA that was verified that it is concentrated between 1 to 4 years. Besides that, it refers to the punctuality of the payment, in which 54% of the researched reported to always pay in time. The commercialization channels of the producers were the PNAE, the direct sale (door-to-door and in the own residence), free fairs or the intermediaries before the PAA.

With the entry of the farmers in the PAA, the sales in free fairs lost the strength, from 36% to 31%, the direct sale from 35% to 24%, the sale to the intermediaries remained stable with 14%, the PNAE raised from 2% to 17% and 14% of the farmers that practice the 3 channels of selling (direct sale, free fairs and PAA). It also has been concluded that the barriers in the commercialization involve the question of sanitary adequation, the question of distribution and receiving the food as well as the question of the production transport of the small producer. The city of Caxias still represents a small coverage given to the great search for it. Besides that, the program generated income and sustainability of prices to the familiar farmers. From the researched sample, 100% affirm that had improvements in their incomes with the sales to the PAA, 82% think that the prices are above the values practiced in the local market, 7% think that they are the same as those practiced in the market and 1% affirm that in some products the local market pays better. While the prices paid, 95.5% consider as fair, 4.5% think that the prices should improve. The activities with more financial income inside the PAA were beans (25%), corn (16% and manioc tree (11%). Therefore, it is concluded that the PAA was directed to comply exclusively with the Family agriculture, and the program has shown positive results about fomenting the rural development, the social and productive inclusion, and the valorization of work and the acknowledgement of the importance of the familiar farmers. However, it is necessary to work in the continuous improvement of the operational processes, avoiding then the discomfort to the farmers that are related to the commercialization, transport, punctualities in payment, documents, technical assistance, and capacitation among others. For further studies are suggested deeper analysis in the importance of the women in the practice of rural activities, this is due to the importance of them in the fortification of the familiar agriculture. Beyond this, they assume an important role in the contribution to the family income. As shown in figures 17 and 18, the female labor have been guaranteeing socioeconomic inclusion, decreasing then the invisibility of the role of women in the rural midst. Other study should be verifying how the farmers can attract other forms of socioeconomic sustainability that ensure and complemente the activities done through public politics. Besides that, other studies about the discussion of the future of politics and programs for familiar agriculture are important and complemente the presente work.

REFERENCES

_____. MDA. Ministério do Desenvolvimento Agrário. (2017). Secretaria Especial de Agricultura Familiar e do

- Desenvolvimento Agrário. Disponível em: <www.mda.gov.br/sitemda/noticias/o-que-e-agricultura-familiar>, acesso em: mar. 2019.
- ATLAS DO DESENVOLVIMENTO HUMANO DO BRASIL (2013), O Índice De Desenvolvimento Humano Municipal Brasileiro. Brasília: PNUD, Ipea, FJP, 2013. DISPONIVEL EM <<http://www.br.undp.org/content/brazil/pt/home/library/idh/o-idhm-do-brasil.html>> Acesso em: mar. 2019.
- ATLAS DO DESENVOLVIMENTO HUMANO DO BRASIL (2013), O Índice De Desenvolvimento Humano Municipal Brasileiro. Brasília: PNUD, Ipea, FJP, 2013. DISPONIVEL EM <<http://www.br.undp.org/content/brazil/pt/home/library/idh/o-idhm-do-brasil.html>> Acesso em: mar. 2019.
- BOTELHO, A. C.; ALMEIDA, J. G.; FERREIRA, M. da G. R. O avanço dos eucaliptais: análise dos impactos socioambientais em territórios camponeses do Leste Maranhense. *Percurso*, Maringá, v. 4, n. 2, p. 79-94, 2012.
- BRAISL. MDA Ministério do Desenvolvimento Agrário. Secretaria Especial de Agricultura Familiar e do Desenvolvimento Agrário. Disponível em: <http://www.mda.gov.br/sitemda/sites/sitemda/files/user_arquivos_64/CARTILHA_PAA_FINAL.pdf>, acesso em: 20 fevereiro. 2019.
- BRASIL. MDA. Ministério do Desenvolvimento Agrário. (2017). Secretaria Especial de Agricultura Familiar e do Desenvolvimento Agrário. Disponível em: <www.mda.gov.br/sitemda/noticias/o-que-e-agricultura-familiar>, Acesso em: mar. 2019.de 18.
- CAMARGO, E. A. O. M.; GOMES, R. R. O.; MEIRA, B. C.; BORSATTO, R. S. Programa de Aquisição de Alimentos (PAA) como instrumento de fortalecimento de assentamentos rurais: o caso do assentamento 23 de maio, Itapetininga, Estado de São Paulo. *Informações Econômicas*, v.43, n.1, 2013. p. 18-28. Disponível em: <https://www.researchgate.net/profile/Ricardo_Borsatto/publication/318913326>
- CARNEIRO, J. A; MONTEBELLO A. E. S. Políticas Públicas, Compras Sustentáveis e Agricultura Familiar no Brasil. IN CONGRESSO BRASILEIRO DE POLITAS E SOCIOLOGIA RURAL, 56°, Campinas, 2018
- FACHIN, Odília. Fundamentos de metodologia. São Paulo: saraiva. 2001.
- FACHIN, Odília. Fundamentos de metodologia. São Paulo: saraiva. 2001.
- FILIPANK, Alexandra. Políticas públicas para mulheres rurais no Brasil (2003- 2015): análise a partir da percepção de mulheres rurais e de movimentos sociais. 2017. Tese (Doutorado) - Programa de Pós-Graduação em Ciências Sociais da Faculdade de Filosofia e Ciências, Universidade Estadual Paulista UNESP, Marília, SP 2017.
- FUNDO NACIONAL DE DESENVOLVIMENTO EDUCACIONAL - FNDE. O Programa Nacional de Alimentação Escolar PNAE. 2018. Disponível em <<http://www.fnde.gov.br/programas/pnae>> Acesso em: 25 fev. 2018.
- GRISA, C. e SCHNEIDER, S. 2015, “Três gerações de políticas públicas para a agricultura familiar e formas de interação entre sociedade e Estado no Brasil”. In GRISA, C. e SCHNEIDER, S. (orgs.) Políticas públicas de desenvolvimento rural no Brasil. Porto Alegre, Editora da UFRGS.
- GRISA, C. e SCHNEIDER, S. 2015, “Três gerações de políticas públicas para a agricultura familiar e formas de interação entre sociedade e Estado no Brasil”. In GRISA, C. e SCHNEIDER, S. (orgs.) Políticas públicas de desenvolvimento rural no Brasil. Porto Alegre, Editora da UFRGS.
- HERCULANO, S. C. A qualidade de vida e seus indicadores. *Ambiente e Sociedade*, Campinas, v. 1, n. 2, p. 77-99, 1998. Disponível em <Error! Hyperlink reference not valid.> Acesso em: mar. 2019.
- Instituto Brasileiro de Geografia e estatística-. Censo Agropecuário 2017. *Resultados preliminares*. Disponível em: <<https://censos.ibge.gov.br/demografico/2010>>, acesso em: 7 de março de 2019.
- Instituto Brasileiro de Geografia e Estatística-. Censo Demográfico 2010. *Resultados preliminares*. Disponível em: <<https://sidra.ibge.gov.br/pesquisa/censo-demografico/demografico-2010/amostra-resultados-gerais>>, acesso em: mar. 2019.
- Lakatos, Eva Maria. Fundamentos de metodologia científica. 5 ed. São Paulo: Atlas 2003.
- Ministério Do Desenvolvimento Social - MDS. (2016). Ministério do Desenvolvimento Social. Compra da Agricultura Familiar. Disponível em <<http://mds.gov.br/compra-da-agricultura-familiar/perguntas-frequentes>> Acesso em: 10 jan. 2018.
- OSORIO, R. G. O sistema classificatório de “cor ou raça” do IBGE. Brasília, DF: IPEA, 2003. 50 p. (Texto para discussão, n. 996). Disponível em: <<https://biblioteca.ibge.gov.br/visualizacao/livros/liv63405.pdf>> Acesso em: mar. 2019.
- PROGRAMA_DE_AQUISICAO_DE_ALIMENTOS_PAA_COMO_INSTRUMENTO_DE_FORTALECIMENTO_DE_ASSENTAMENTOS_RURAIS_o_caso_do_assentamento_o_23_de_Maio_Itapetininga_Estado_de_Sao_Paulo/links/5984e32e0f7e9b6c852f501d/PROGRAMA-DE-AQUISICAO-DE-ALIMENTOS-PAA-COMO-INSTRUMENTO-DE-FORTALECIMENTO-DE-ASSENTAMENTOS-RURAIS-o-caso-do-assentamento-23-de-Maio-Itapetininga-Estado-de-Sao-Paulo.pdf>. Acesso em: mar. 2019.
- SILVA, D. de O.; CASTRO, J. R. B. de; LOPES, K. P. S. Caracterização e análise da feira livre de Cruz das Almas-BA sob a ótica do planejamento e gestão municipal. *Caminhos de Geografia, Uberlândia*, v. 15, n. 49, 2014.
- VALNIER, A. Programa de Aquisição de Alimentos (PAA): uma análise comparativa nos estados de Rondônia e Acre. 2011. 127 f. Dissertação (Mestrado em Gestão e Desenvolvimento Regional) – Departamento de Economia, Contabilidade e Administração, Universidade de Taubaté, Taubaté.
- YIN, R. K. Estudo de caso: planejamento e métodos. 3. ed. Porto Alegre: Bookman, 2005
