

## FAMILY AGRICULTURE AND PRONAF COSTING: (UN) EQUAL DISTRIBUTION IN THE BRAZILIAN RURAL AREA

**Melaine Roberta Camarotto**

*UTFPR - Universidade Tecnológica Federal do Paraná e IFPR – Instituto Federal do Paraná*  
*PGDR - Programa de Mestrado em Gestão e Desenvolvimento Regional /Unioeste/Fco. Beltrão/Brasil.*  
*NUPEA- Núcleo de Pesquisa e Estudos Avançados em Administração/UTPFR/Pato Branco/Brasil.*  
E-mail: [mcamarotto@utfpr.edu.br](mailto:mcamarotto@utfpr.edu.br)

**Edison Luis Leismann**

*UNIOESTE - Universidade Estadual do Paraná*  
*PGDR - Programa de Mestrado em Gestão e Desenvolvimento Regional /Unioeste/Fco. Beltrão/Brasil.*  
E-mail: [elleismann@gmail.com](mailto:elleismann@gmail.com)

**Carmem Ozana de Melo**

*UNIOESTE - Universidade Estadual do Paraná*  
*PGDR - Programa de Mestrado em Gestão e Desenvolvimento Regional /Unioeste/Fco. Beltrão/Brasil.*  
E-mail: [carmem.melo@unioeste.br](mailto:carmem.melo@unioeste.br)

**Claudio Mioranza**

*UNIOESTE - Universidade Estadual do Paraná*  
*PGDR - Programa de Mestrado em Gestão e Desenvolvimento Regional /Unioeste/Fco. Beltrão/Brasil.*  
E-mail: [cmioranza@terra.com.br](mailto:cmioranza@terra.com.br)

**Elizangela Mara Carvalheiro**

*UTFPR - Universidade Tecnológica Federal do Paraná*  
*NUPEA- Núcleo de Pesquisa e Estudos Avançados em Administração/UTPFR/Pato Branco/Brasil.*  
E-mail: [elizangelam@utfpr.edu.br](mailto:elizangelam@utfpr.edu.br)

**Guilherme Wittmann**

*UTFPR - Universidade Tecnológica Federal do Paraná*  
E-mail: [Guilhermewittmann@gmail.com](mailto:Guilhermewittmann@gmail.com)

### SUMMARY

*In 1996, PRONAF was created, which aimed to strengthen family farming as a social category, by providing financial support (financing for costing and investment in agricultural activities), training and support for the social and economic infrastructure of rural areas that are strongly characterized by family agriculture. Despite it being a universal program, there was a strong concentration of credit in certain regions. Thus, the scope of this work is to analyze the allocation of Pronaf-costing resources from 2000 to 2012, based on the spatial distribution and area occupied by family farming establishments in the regions/states. Therefore, we used the quantitative analysis of secondary data by MDA and Central Bank of Brazil. Through the results we can say that there is no proportionality between area (ha) occupied by family farming establishments by state/region and the total of funds transferred by the program to fund the agricultural and livestock activities in the studied period.*

**Keywords:** Rural credit, PRONAF, Occupation, countryside.

### 1. INTRODUCTION

The historical transformations of agriculture have undergone a modest evolution until the 1960s, a period in which began the process of agricultural modernization. Despite having a technological backwardness, the Brazilian countryside had a direct State interference in the figure of a high volume of agricultural credit, rural extension services, promotion for the development of agricultural research and the strengthening of agricultural insurance. Given the effort to recover from the historical delay, the changes did not occur uniformly across the countryside, much less was it accessible to all producers and did not attend the regional diversity of Brazil (SILVA, 1981; CARVALHEIRO, 2010).

In this tangle of agricultural structures and policies, the presence of family farming was felt in food production, that is, for having limited productive and financial resources, they were relegated to the margin of the modernization process and scale production.

The new situation that farmers were experiencing placed them in various challenges, particularly on the need to enter the free market/trade, imposing unequal competition and a demand for high scale productivity. Due to the "Green Revolution" process, farmers adopted the belief that the model of agricultural modernization was the salvation; this, in turn, was based on grain production and use of machinery and high technology level implements, which would bring returns and development for the properties. The main problem of this model was that it generated dependency for supplier companies (multi/transnational) of inputs and raw materials for production.

In this line, the protectionism generated by the State, which was concerned with the scale production to feed the Brazilian export process intensified in the 1980s the implementation of public policies for the development of agriculture, which reached in a large scale the most capitalized sectors in the production of "commodities" and gave no allowance for small farmers, because of the very limitation of guarantees required by the National Financial System (SFN), in exchange for resources in order to finance their activities.

It was only from 1996 that the eyes of the federal government turned to family farmers, with the creation of the National Family Agriculture Strengthening Program (PRONAF). The program is a public policy for strengthening family units of production through technical and financial support in order to promote sustainable rural development. Its overall objective is to stimulate income generation and better use of family labor by financing activities and rural services (agricultural and non-agricultural), developed in the farm or in nearby community areas (Guidance brochure by PRONAF, 2013).

Analyzing the operational context, PRONAF is aimed at four main lines of action: 1) Funding loan and investment intended for agricultural activities and processing or manufacture and marketing of own production or of third parties farmers; 2) Infrastructure financing and services to municipalities in all regions of the country, whose economy depends mainly on family farmers; 3) Training and professionalization of family farmers through courses and training to farmers, municipal councilors and technical staff responsible for implementing rural development policies; 4) Research financing and rural extension aimed at the generation and transfer of technology to the farmers (SCHNEIDER, MATTEI and CAZELLA, 2004).

The modality of credit for costing is the most representative in the total volume of funds invested in recent years in PRONAF, which in the last 15 years (2000-2015) recorded an increase of one million additional farmers in the program and an increase of resources from R\$ 2.3 billion to R\$ 24.1 billion. In absolute terms of producers who have access to the Program, we have 5,462 municipalities, of the 5,570 which are part of the national territory (MDA, 2015)

The major concern of the analysis lies in the fact of understanding if PRONAF is being distributed fairly among the various Brazilian regions, since the steady increase in the volume of financial resource for it is visible. Thus, this work has the objective of analyzing the allocation of Pronaf-costing resources from 2000 to 2012, based on the spatial distribution and area occupied by family farming establishments in the Brazilian regions/states.

Therefore, we used a quantitative methodological approach (use of quantification in the collection and processing of data) of a descriptive character. The focus of the research are the 27 States that make up the country, that is, the 26 states and the Federal District. The data used were secondary and the collection of nominal data was carried out in electronic form on the official websites of the Central Bank of Brazil (BCB) and the Brazilian Institute of Geography and Statistics (IBGE).

The study of the allocation of Pronaf-Costing resources between the years 2000 to 2012, was made through the analysis of tables in the BCB database. The definition of the period is tied to the fact that the Statistical Yearbook of the Rural Credit only provides data from 1999 to 2012 and, by the criterion of temporal equity, the 6-year period preceding and following the last agricultural census (2006) was elected as the time series, a database of the number of family properties and occupied area. Once the information was collected, we proceeded to the processing of data using the Microsoft Excel program, giving rise to the comparative tables.

## **2. FAMILY FARMS: PUBLIC POLICIES**

Despite being part of the Brazilian colonization process, family farming gains visibility and relevancy in public policies linked to rural areas only in the mid 90s in Brazil. Through studies conducted by the Food and Agriculture Organization (FAO) in partnership with the National Institute of Colonization and Agrarian Reform (INCRA), it was possible to collect information and establish a pattern of productive behavior of farmers and the results generated a report published in 1994, establishing the "Agrarian policy guidelines and sustainable development" for the country (AZEVEDO; PESSOA, 2011).

From this moment, the attention turns to family farming, which has become an institutionalized activity by public policies for rural development, led by MDA. The regulation was only possible through the creation of legislation that defines and governs the activities of family farming.

Thus, Law No. 4504 from November 30, 1964 in its Art. 4 §2 defines as family property, "the property directly and personally explored by the farmer and his family, which absorbs their entire workforce, ensuring their livelihoods and social and economic progress, with maximum area fixed for each region and type of operation, and eventually worked with the help of a third party."

Complementing on June 24, 2006, Law 11.326, in its Art. 3 considers family farmers and rural family entrepreneurs those who practice activities in rural areas, serving simultaneously the following requirements:

- I - does not hold, for any reason, an area greater than 4 (four) fiscal modules;
- II - uses mostly hand labor from his own family in the economic activities of his establishment or undertaking;
- III - has a minimum percentage of family income arising from economic activities by its establishment or enterprise, as defined by the Executive;
- IV - manages his establishment or enterprise with his family

The compelling fact in the legislation, is explored by Carneiro (1999); Nazzari; Brandalise and Bertolini (2007), Wanderley (2009), who portray in their studies the fact that the main feature of family farming is the merger that exists between the farm and the family. These visions extend the perception of family farms dotting the importance of thinking about the feasibility and the development of not only the productive economic point of view, but globally, that is, the set of needs that the family and the production system have for maintaining quality of life for local people.

In the last decade (early twenty-first century), family farming is envisioned by the state as a major instrument to fight hunger, by its vocation of being intended for food production. The numbers point to the fact that approximately 70% of the food consumed in the country comes from family agriculture. In this perspective, in 2009 was enacted Law No. 11,947 which ensures use of "at least 30.0% of the amount allocated through the National School Feeding Programme, by the National Fund for Education Development from the Ministry of Education" to acquire the family farm production (BRAZIL, 2009, p.1).

Data from the IBGE Agricultural Census (2006), in Brazil, point out there are approximately 4.4 million establishments characterized as family economy, which amount to 5.5 million. These family farms represent 84.4% of total establishments, occupy 24% of the total area devoted to agricultural activities in the country, employing 74.4% of occupations in the national agricultural sector and account for a third of revenues linked to production.

The need to foster and develop family farming in the national context, particularly to overcome the challenges generated from the 1990s, gave grants for the creation and implementation of public policies aimed at this niche, in particular arises the Family Agriculture Strengthening Program (PRONAF) created in 1996.

## 2.1 CHARACTERISTICS OF THE NATIONAL FAMILY AGRICULTURE STRENGTHENING PROGRAM (PRONAF)

In the mid-twentieth century Brazilian agriculture was in a scenario in which the government sought to develop the sector through modernization policies, mainly through the supply of credit (loans) and for research in the area. But the scenario changed in the late twentieth century, when Brazil went through the opening of trade borders and in this period there was an increase in the number of products entering the country. In addition, the Brazilian agricultural sector was undergoing a period of economic instability, there was little availability of credit, inflation and also the dismantling of EMBRATER (Brazilian Enterprise for Technical Assistance and Rural Extension). In this scenario, family farmers were forced to finance their productions through private companies.

In addition to the high interest rates that were charged by lenders, inflation discouraged family production (NUNES, 1997).

In this experienced context classes of entities, specifically DNTR/CUT and CONTAG, pleaded for a specific credit line for family farms. Pronaf was consolidated as a result of these claims. So Pronaf aims at strengthening family farming, through financing, training and other types of aid (NUNES, 1997).

PRONAF was created in 1996, it was the first Brazilian public policy whose focus was on family farming and has as its main objective the strengthening of the sector through projects that would generate income for family farmers. The main tool for this development was based on the supply of credit, that is, financing at lower interest rates charged by the private market. In addition, the purpose of Pronaf is also to empower, promote support for social and economic infrastructure of family farmers (NUNES, 1997). In the marketing area the Brazilian government began to guarantee minimum stocks, minimum prices and purchases (BRAZIL, 2014).

Among the many authors who have studied the PRONAF in its funding modality, we emphasize some works that are considered important and that formed the theoretical basis of this study, among which stand out: Pereira and Nascimento (2014), Souza et al. (2013), Gazolla and Schneider (2013), Azevedo and Pessoa (2011) and Damasceno et al. (2011).

When it comes to PRONAF, the MDA official documents and PRONAF Guidance brochure (2014, p. 5), report that the program's target population is specifically family farmers that have the following characteristics:

- a) at least 50% of the family's gross income is obtained from the farming and non agricultural operation of the property;
- b) own or operate facilities with an area of up to four fiscal modules, or up to six modules in the case of cattle ranching;
- c) explore the land on condition of owner, sharecropper, partner or lessee;
- d) use predominantly familiar hand labor;
- e) reside in the property or in a nearby rural or urban agglomerate;
- f) have gross family income of up to R\$ 360 thousand per year;
- g) artisanal fishermen, small extractivists and small farmers fall within the Pronaf target population.

In order to meet various demands, the program is organized in lines of development and interest groups. Where the gathered resource may be allocated to three specific fronts: Costing (intended for financing agricultural and non-agricultural activities, beneficiation or industrialization of own production or of third parties participating in Pronaf, in accordance with specific projects or funding proposals) ; investment (intended for financing agricultural or non-agricultural activities, for implementation, expansion or modernization of the structure of production, processing, industrialization and services in rural establishment or in nearby rural community areas, according to specific projects) and the payment of quota-shares by beneficiaries in production cooperatives (are intended for financing the capitalization of agricultural production cooperatives formed by PRONAF beneficiaries) (BCB, 2015; PRONAF Guidance brochure, 2014).

The concession of credit is under continuous reformulation since this policy was created, mainly in the financing amounts for costing and for investment as well as with regard to interest charges on the resources allocated in the program (SCHNEIDER, MATTEI and Cazella, 2004). However, BCB data (2015) show that the lines of credit for costing (the focus of this research), are linked to the following conditions: effective interest rate of 1.5% per year for one or more funding operations that together reach up to R\$ 10,000.00 per farmer each harvest; effective interest rate of 3% per year for one or more funding operations that together achieve a value above R\$ 10,000.00 to R\$ 30,000.00 per farmer each harvest; and effective interest rate of 3.5% per year for one or more funding operations that together achieve a value above R\$ 30,000.00 to R\$ 100,000.00 per harvest.

Overall, the studies that analyzed the Pronaf, in most cases, were based on analysis of the following variables: Number of contracts signed and the amount of funds transferred. The variables were associated with issues of time and/or location. This methodology provides information to the researcher about the analyzed variables, but is inefficient when it comes to the analysis and distribution of resources in the country. Thus, this research is innovative while aiming to analyze the allocation of resources between Pronaf-costing 2000-2012 based on the area occupied by family farms.

### **3. ANALYSIS OF THE ALLOCATION OF FAMILIAR AGRICULTURE AND PRONAF**

For better viewing the allocation context of family farming in Brazil and promotion of Pronaf-costing, it was divided into parts, among which we mention: space allocation, contract and resources, land occupation and transfers to the South, Southeast, North, Northeast and Center-west regions.

#### **3.1 SPACE ALLOCATION IN THE BRAZILIAN AGRICULTURE**

The development process of the State's agriculture is Brazilian, it is born with the stigma of the productive base modernization, which generates a process of concentration in some regions, generating differences in the internal and external context in productive, cultural and environmental issues.

These regional characteristics may represent an important potential for local competitiveness, which if incorporated into the products (goods and services) and placed on the market may leverage the development process of family farming in a region. A larger viewing of the current context of the Brazilian States may be seen in Table 1, which represents the number of establishments and area (ha) occupied by family farmers according to the Agricultural Census 2006.

Table 1. Number of establishments and area occupied by family farmers in 2006, by State

Major Regions and Federative Units	Family agriculture - Law 11.326		Total Brazilian Agriculture (familiar and not familiar agriculture)		Family agriculture - Law 11.326 (In %)	
	Establishments	Area (ha)	Establishments	Area (ha)	Establishments	Area (ha)
<b>Brazil</b>	<b>4 366 267</b>	<b>80 102 694</b>	<b>5 175 636</b>	<b>333 680 037</b>	<b>84,4%</b>	<b>24,0%</b>
<b>North</b>	<b>412 666</b>	<b>16 611 277</b>	<b>475 778</b>	<b>55 535 764</b>	<b>86,7%</b>	<b>29,9%</b>
Rondônia	75 165	3 292 577	87 078	8 433 868	86,3%	39,0%
Acre	25 114	1 508 357	29 483	3 528 543	85,2%	42,7%
Amazonas	61 830	1 475 558	66 784	3 668 753	92,6%	40,2%
Roraima	8 898	637 898	10 310	1 717 532	86,3%	37,1%
Pará	195 985	6 877 384	222 029	22 925 331	88,3%	30,0%
Amapá	2 865	131 205	3 527	873 789	81,2%	15,0%
Tocantins	42 809	2 688 297	56 567	14 387 949	75,7%	18,7%
<b>Northeast</b>	<b>2 187 131</b>	<b>28 315 052</b>	<b>2 454 060</b>	<b>76 074 411</b>	<b>89,1%</b>	<b>37,2%</b>
Maranhão	262 042	4 514 639	287 039	13 033 568	91,3%	34,6%
Piauí	220 735	3 759 492	245 378	9 506 597	90,0%	39,5%
Ceará	341 509	3 492 419	381 017	7 948 067	89,6%	43,9%
Rio G. do Norte	71 210	1 046 070	83 053	3 187 928	85,7%	32,8%
Paraíba	148 069	1 596 656	167 286	3 787 404	88,5%	42,2%
Pernambuco	275 720	2 566 324	304 790	5 434 076	90,5%	47,2%
Alagoas	111 750	682 405	123 332	2 112 574	90,6%	32,3%
Sergipe	90 329	710 891	100 607	1 482 437	89,8%	48,0%
Bahia	665 767	9 946 156	761 558	29 581 760	87,4%	33,6%
<b>Southeast</b>	<b>699 755</b>	<b>12 771 299</b>	<b>922 097</b>	<b>54 937 773</b>	<b>75,9%</b>	<b>23,2%</b>
Minas Gerais	437 320	8 835 622	551 621	33 083 509	79,3%	26,7%
Espírito Santo	67 414	966 613	84 361	2 839 854	79,9%	34,0%
Rio de Janeiro	44 121	468 797	58 493	2 059 462	75,4%	22,8%
São Paulo	150 900	2 500 267	227 622	16 954 949	66,3%	14,7%
<b>South</b>	<b>849 693</b>	<b>13 054 511</b>	<b>1 006 203</b>	<b>41 781 003</b>	<b>84,4%</b>	<b>31,2%</b>
Paraná	302 828	4 252 659	371 063	15 391 782	81,6%	27,6%
Santa Catarina	168 512	2 643 241	193 668	6 062 506	87,0%	43,6%
Rio G. do Sul	378 353	6 158 610	441 472	20 326 715	85,7%	30,3%
<b>Midwest</b>	<b>217 022</b>	<b>9 350 556</b>	<b>317 498</b>	<b>105 351 087</b>	<b>68,4%</b>	<b>8,9%</b>
Mato G. do Sul	41 057	1 184 217	64 864	30 274 975	63,3%	3,9%
Mato Grosso	85 815	4 837 564	112 987	48 688 711	76,0%	9,9%
Goiás	88 326	3 317 908	135 692	26 136 081	65,1%	12,7%
Distrito Federal	1 824	10 867	3 955	251 320	46,1%	4,3%

Source: Prepared with data from the Agricultural Census, IBGE (2006)

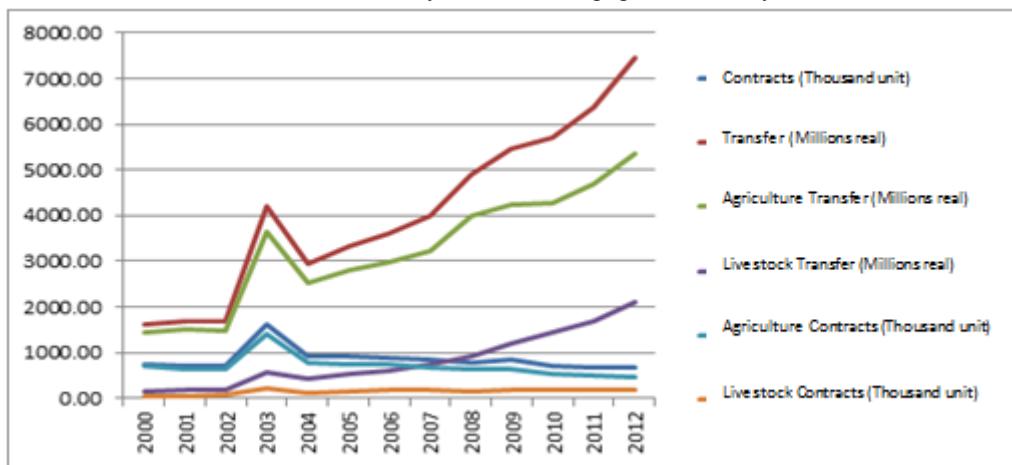
Through the data, one can see the discrepancy between the number of establishments and the area occupied by the segments (family agriculture and agribusiness) farming in Brazil. This means that in 2006, 84.4% of agricultural establishments in the country were familiar production. In contrast, 76% of the national agricultural area were in possession of the agribusiness, which in terms of number of establishments represented only 15.6%. This is a fact that depicts the reality of the Brazilian countryside, and its high level of concentration in the hands of a few large producers. This is a counterpoint, that the incentive policies to family farming try to minimize, because these small areas (in some cases without any high level of technology) are responsible for the diversification of food production in Brazil.

Analyzing the data on the number of family farming establishments by region, there is in the Northeast (89.1%), North (86.7%) and South (84.4%) a predominance of family farms that is consistent with the average national (84.4%). On the other hand, regarding land tenure, there is the Center-west region with the lowest level of family farming establishments, 8.9% of the available area. The Northeast region has a higher rate of family properties, 37.2%.

### 3.2 ALLOCATION OF CONTRACTS AND RESOURCES FROM PRONAF-COSTING

One of the criteria for the exploratory analysis of the allocation of Pronaf-costing resources refers to the total number of contracts, livestock and agriculture and overall total resources, livestock and agriculture passed over from 2000 to 2012, as can be seen in Graph 1.

Graph 1. Total contracts and funds transferred by Pronaf-costing, general and by line of credit, 2000-2012



Source: Prepared with data from BCB (2014) and MDA (2014)

Over the time series one can see a growing constant in almost all periods, in the indicator "transfer", be it in the line representing the total, or in the specific lending to agriculture and livestock. The same behavior was followed by the indicator "contracts" until 2003, however, as of 2006, there was a reduction in the total number of contracts due to a retraction of the access by family farms to the program.

The increase in the number of contracts with the livestock sector of family farming after 2008, was not enough to fill the gap left by the reduction in the number of contracts with farms, thus keeping the decline in the indicator. The sharp decline in the number of Pronaf-costing contracts recorded after 2006 did not significantly affect the total value of the transferred credit, because the contracts had an even higher aggregate value.

With these facts, it can be said that fewer farms in family farming are having access to the public policy for promoting family farming in the Costing line. Souza et al. (2013) in his study on "The Distribution of Pronaf Credit Contracts among the Federative Units in the 1999-2010 Period", found that by the year 2004, the distribution of resources tended to be decentralized because of improved distribution of contracts for agricultural costs; whereas in the following years, a reconcentration movement was predominant, grounded on the distribution of agricultural funding (flagship of the Program). After 2006 the expansion of the program is due exclusively to the increase in the average size of contracts and the increasing participation of states in the South and Southeast with more capitalized farming, associated to changes in the rules of the Program, in particular an increase in the annual gross income, used as a threshold for classification of farmers in the program.

In this context, Table 2 shows the reality experienced by the segment of family farming in Brazil, between 2000-2012 through indicators that reflect the spatial allocation of family property and the transfer of Pronaf-costing.

Table 2: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), by region

Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
<b>Brazil</b>	18,35	R\$ 50,84	19%
<b>North</b>	40,25	R\$ 8,12	7%
<b>Northeast</b>	12,95	R\$ 11,13	7%
<b>Southeast</b>	18,25	R\$ 69,28	19%
<b>Sout</b>	15,36	R\$ 179,90	53%
<b>Center-West</b>	43,09	R\$ 24,82	14%

Source: Prepared with data from BCB (2014) and MDA (2014)

The interesting thing to consider is that each region considers a different tax module. Of course, the definition is based on Art. 50 of Law 4,504/64, this is an area measurement unit (in hectares) set differently for each municipality, since it takes into account local conditions such as: the predominant type of operation in the municipality (hortifruti-poultry, permanent crops, temporary crop, livestock and forestry); the proceeds from this prevailing operation; other operations in the municipality which, although not prevalent, are significant in terms of income or the used area; and the concept of family property (Article 4, II, Law 4,504/64).

This fiscal module comprises the minimum area that a farm should have to be economically viable. In the North region, the family farming establishments have an average area (40.25 ha) higher than the national context (18.35 ha), while the northern region is the one with the smaller area 8.12 ha. Following this reasoning, the same potential is not perceived in the receiving of Pronaf-costing resources (2000-2012), since it was the South which obtained a higher level of contracts (53%), and the North was left with only 7% of contracts.

The Northeast presents three indicators below the national average, and this draws attention when analyzed in conjunction with Table 1 (Number of establishments and area occupied by family farmers in 2006 by state) that focuses on the region as the most percentage within the national context in number of establishments (89.1%) and occupied ground (37.2%) by family farms, thus indicating the existence of a weakened region under the optics of the market, due to its large number of establishments with resource constraints (land factor, credit).

A portrait of family farming in Brazil, the Southeast region has its indicators near the national average. In this same context, even if the southern region consists of properties with lower area than the national average, 53% of these properties had access to credit in the 2000-2012 period with the use of transfer per hectare that was 253.86% higher than the national average.

On the other hand, the Center-west region stands out for the discrepancy presented in the category land tenure. In the national context, whereas the region has the lowest concentration of family farming establishments (68.4%) and the lowest proportion of area occupied by state by family agriculture (8.9%), the area occupied by each establishment in the state is approximately 140% higher than the national average, that is, if the land factor is considered as a competitive advantage, coupled with access to the public policy for promoting family farming, the establishments with greater productive potential are in this region.

Indicators presented by the South region (15.36 ha per property, average value of Pronaf-costing transfer per ha R\$ 179.90 and 53% of state property under a Pronaf-costing contract) and Center-west (43, 9 ha per property, average value of Pronaf-costing transfer per ha R\$ 24.82 and 14% of state property under Pronaf-costing contract) disqualify the existence of proportionality between farm size and access to public policy, punctuating the existence of other variables that influence this relationship, not observed in this study.

### 3.3 ALLOCATION BY REGION OF CONTRACTS AND PRONAF-FUNDING RESOURCES

In order to further the study, for examining the allocation of Pronaf-costing resources between 2000-2012 based on the area occupied by family farms, we approach below, at the regional level, the reality of the Brazilian states.

Table 3: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), at the North region

Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
<b>North</b>	40,25	R\$ 8,12	7%
Rondônia	43,80	R\$ 19,04	18%
Acre	60,06	R\$ 5,63	11%
Amazonas	23,86	R\$ 3,81	1%
Roraima	71,69	R\$ 1,70	3%
Pará	35,09	R\$ 5,76	4%
Amapá	45,80	R\$ 5,88	9%
Tocantins	62,80	R\$ 6,20	7%

Source: Prepared with data from BCB (2014) and MDA (2014)

In the North region, the family farming establishments have an average size 120% higher than the national average; in this regard, all municipalities stand out at a greater or lesser extent when compared to the national average. Despite the vast existing territorial occupation, agriculture in the region, in general, has low access to Pronaf-costing. Except the state of Rondônia that stands out in the region for possessing a contract percentage (18%) near the national average (19%), but with a lending of resources 167% lower.

About the North, Buainain (2012) reports that it is a region with a strong presence of the Amazonian environment, because of the distance from the central axis of Brazil, a certain level of isolation, poor access to markets and an incipient degree of support from the public sector. These characteristics corroborate the fact that the allocation of PRONAF resources occur unevenly, requiring public policies directed to the reality of family farming in the North.

Table 4: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), at the Northeast region

Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
<b>Northeast</b>	12,95	R\$ 11,13	7%
Maranhão	17,23	R\$ 12,46	9%
Piauí	17,03	R\$ 7,09	9%
Ceará	10,23	R\$ 9,07	4%
Rio G. do Norte	14,69	R\$ 24,81	30%
Paraíba	10,78	R\$ 6,28	2%
Pernambuco	9,31	R\$ 9,44	2%
Alagoas	6,11	R\$ 28,32	6%
Sergipe	7,87	R\$ 40,05	15%
Bahia	14,94	R\$ 9,30	5%

Source: Prepared with data from BCB (2014) and MDA (2014)

Family farming in the Northeast is weakened within the national context. Approximately 90% of the state's agricultural establishments are seen as familiar, allocated in areas ranging from 6.11 to 17.23 hectares. As well as territorial occupation, access to Pronaf-costing has a high degree of allocation between the states. The establishment percentage of family farms under contract in the region varies in the states of Pernambuco (2%) and Rio Grande do Norte (30%), reflecting on a regional average (7%) below the national (19%). Nevertheless, the average value of the Pronaf-costing transfer is 356.8% below the national average.

Described by Evangelista (2000), the fragility of the region is associated with low earned income in family farming, and the high population group linked to it, reinforce the theoretical concept of support for agriculture as a way of fighting poverty.



Over the period 2000-2012, one can observe an increase of 163% in the amount of funds transferred by the Program for funding of family farming agricultural activities in the region. This evolution in the indicator was not able to reduce inequality in the allocation of program resources, reaffirming, as well as in the North, the lack of equitable distribution of regional and national resources.

Table 5: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), Southeast region

Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
<b>Southeast</b>	18,25	R\$ 69,28	19%
Minas Gerais	20,20	R\$ 59,87	20%
Espírito Santo	14,34	R\$ 128,01	34%
Rio de Janeiro	10,63	R\$ 91,63	15%
São Paulo	16,57	R\$ 75,61	14%

**Source:** Prepared with data from BCB (2014) and MDA (2014)

The Southeast stands out as the "portrait" region of family farming and its access to the public policy for promoting family farming (Pronaf). The data presented by this region are equitable to the national average. In the region, the results obtained by the state of Espírito Santo are highlighted. Even with an area (14.24 ha) lower than the national average (19 ha) per family farming establishment in the state, it obtained the highest percentage of family farming establishments with contract (34%) and the highest average value of transfer of Pronaf-costing per hectare (R\$ 128.01) between 2000-2012.

To the detriment of the state of Espírito Santo, Minas Gerais has the highest average occupied area (20.20 ha) per family farming establishment in the region with the lowest average value (R\$ 59.76) for transfer of Pronaf-costing resources. Within the Southwest region, the extremes, Espírito Santo and Minas Gerais, confirm the absence of an equitable distribution of resources from the Family Agriculture Development Program when associated with occupied area.

Despite the discrepancies presented herein, the data indicate the existence of a more structured family farming in the Southeast compared to data obtained by the North and Northeast where the amount transferred per hectare in the period 2000-2012 did not exceed R\$ 11.13 with a contract volume 63.15% lower than the national average and the Southeast.

Table 6: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), South region

Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
<b>South</b>	15,36	R\$ 179,90	53%
Paraná	14,04	R\$ 153,52	36%
Santa Catarina	15,69	R\$ 212,63	55%
Rio G. do Sul	16,28	R\$ 184,06	65%

**Source:** Prepared with data from BCB (2014) and MDA (2014)

In the South region, the states have an average area occupied by family farm establishments in hectares, which is less than the national average. However, this is the region with the largest transfer values per hectare in the amount of family farming establishments with access to the Program.

The study by Gazolla and Schneider (2013), considers the importance of family farms in the South. Since the program's emergence in 1996, the Southern region of the country (RS, SC, and PR) receive most of the resources allocated to the policy public, and in 1996, the region accessed 78.6% of program resources. In 2000, it was 50.7% of the resources. Whereas, in 2012 the region accessed 64.67% of the total available resources.

This region went from the level of 492.915 thousand contracts in 2000 to 409.692 thousand in 2012. Also the applied values are representative, increasing from R\$ 1,055.57 million to R\$ 4,812.06 million in the same period.

The data demonstrate a previously pointed trend, the reduction in the number of contracts to the detriment of the increase in the transfer, fostered according to Souza et al. (2013) and Gazolla and Schneider (2013) by changes in the rules of the program, and among them are quoted: the increase in the value of annual gross family income to R\$ 360 thousand reais, enabling access by capitalized sectors of production of "commodities" in scale has marginalized small farmers given the limitation of guarantees from the financial system; in addition to the presence in certain areas (especially the South region) of civil society organizations (unions, cooperatives) and the State (rural extension and technical assistance) that facilitate access through orientation of small family farmers to the National Family Farming Strengthening Program.

Table 7: Average indicators of land occupation and Pronaf-costing lendings, (2000-2012), Center-West region

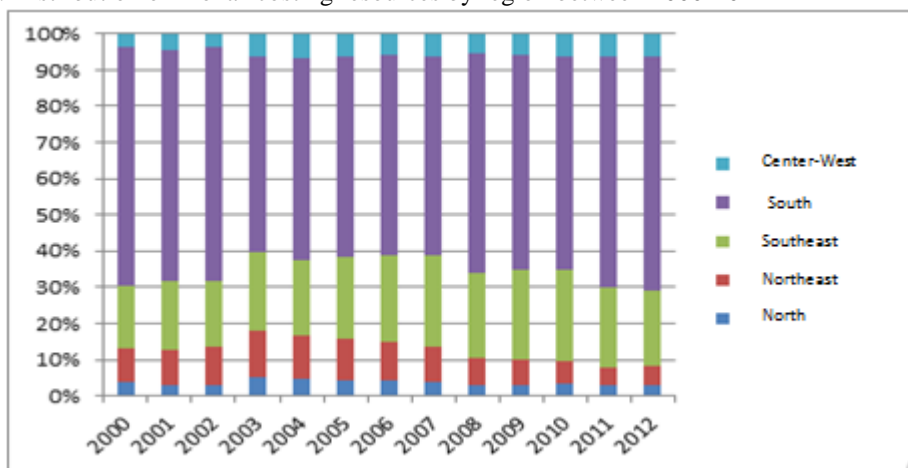
Unit	Average area of each Establishment of Family Farms (ha)	Average value of transfer Pronaf costing-per ha (2000-2012)	Establishment of Family Farms under contract (%)
Center-West	43,09	R\$ 24,82	14%
Mato G. do Sul	28,84	R\$ 24,86	10%
Mato Grosso	56,37	R\$ 12,18	9%
Goiás	37,56	R\$ 42,81	21%
Distrito Federal	5,96	R\$ 150,00	12%

Source: Prepared with data from BCB (2014) and MDA (2014)

Looking at the averages for the entire Center-west region and the states that comprise it, the field of family farming can be observed in general regarding the land factor to the detriment of the other regions. As for territorial distribution and development of public policy for family farming, two questions draw our attention and show the uneven distribution of resources: in the Federal District, each hectare of family farming receives R\$ 150,00 for development, in contrast, in same region, the family farming establishments located in Mato Grosso receive only R\$ 12.18 of funding per hectare, a variation of 91.88%.

At various times, both in regional and state analysis, the indicators showed uneven distribution of PRONAF costing resources because of the occupied area in hectares for the establishment of family farming. Seeking greater understanding, Figure 2 summarizes the regional allocation paths between 2000-2012.

Figure 2. Distribution of Pronaf-costing resources by region between 2000-2012



Source: Prepared with data from BCB (2014) and MDA (2014)

During the period of analysis proposed in this study, the unequal allocation maintained a regular behavior in all regions. Such disparity is proven when land ownership by family farms is analyzed by region and average percentage of transfer in the period. The Northeast region has 35.35% of the land devoted to family farming in the country, but only received 8.1% of the resources allocated by the Pronaf-Costing Program. In contrast, the South region has the second lowest percentage of land in this segment (15.95%), collecting on average 60% of public policy transfers.

## FINAL THOUGHTS

The inequality in the distribution of Pronaf-costing resources was measured in this study on the perspective of data from the Family Agriculture Strengthening Program (PRONAF) and Agricultural Census (2006), assuming that the number of contracts, total funds transferred by the program and area occupied by family farms by state and region, would have a proportional relationship.

The results show that land tenure is unevenly across regions (North 20.74%, Northeast 35.35%, Southeast 15.94%, South 16.30% and Center-west 11.67%) as well as the resources allocated to fund the agricultural and livestock activities of this segment (North 3.4%, Northeast 8.1%, Southeast 22.6%; South 60% and Center-west 5.9%), so there is no existence of a proportionality relationship between the two study variables.

It can be assumed that the process of release of Pronaf-costing resources have no direct link with the occupied area percentage (hectares) per family farm establishments in the states and regions but with other variables not measured in the study. The authors who corroborate the study argue that this uneven behavior is fostered by the obstacles created in the access to the Program by farmers with lower income levels; higher level of organization of farmers in certain regions; pressures of agribusiness onto those integrated; existence of rural extension and technical assistance policies in some states.

This research has limitations due to time and analysis variables, since it defines 2000-2012 as the analysis period and utilizes only three variables to analyze the allocation of Pronaf-costing resources to the regions. Future research is suggested, taking into consideration a greater number of variables, as well as an enlargement of the temporal issue applied to the study.

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