




## Article

# Family Farming Cooperatives and Associations and the Institutional Market Created by the National School Feeding Program (PNAE) in Minas Gerais, Brazil

Isabela Renó Jorge Moreira <sup>1</sup>, Alair Ferreira de Freitas <sup>1,\*</sup>, Almiro Alves Júnior <sup>1</sup>, Alan Ferreira de Freitas <sup>2</sup>,  
Joyce Santana Bernardo <sup>2</sup> and Suany Machado da Silva <sup>1</sup>

<sup>1</sup> Department of Rural Economics, Federal University of Viçosa, Campus UFV, Viçosa 36570-900, MG, Brazil; isabela.moreira@ufv.br (I.R.J.M.); almiro.junior@ufv.br (A.A.J.)

<sup>2</sup> Department of Administration and Accounting, Federal University of Viçosa, Campus UFV, Viçosa 36570-900, MG, Brazil; alanf.freitas@ufv.br (A.F.d.F.)

\* Correspondence: alair.freitas@ufv.br; Tel.: +55-3136124342

**Abstract:** The objective of this work is to analyze the trajectory and role assumed by the collective organizations of family agriculture, Cooperatives and Associations, in the construction and supply of food for the institutional market built from the National School Feeding Program (PNAE) in the five most important municipalities in the state of Minas Gerais/Brazil. This approach is justified by the need to remedy theoretical gaps in the insertion of cooperatives, which serve as instruments to guarantee food and nutrition security and also as a crucial actor in the construction of food markets. For this, it is necessary to investigate how these organizations were constituted, how they are organized, which actors are involved, and what their role is in the implementation of the public food purchase policy. Methodologically, it is a multiple case study, with a qualitative approach and descriptive character. For data collection, semi-structured interviews were applied in the five most populous municipalities in Minas Gerais, based on two scripts aimed at representatives of family farming organizations and members of the Public Administration who work directly with the management of the PNAE. The research results corroborate the recommendation that the Brazilian State should support the collective organization of farmers and strengthen the promotion of associativism and cooperativism in family farming, providing instruments for the development of social and economic organizations as well as expanding and strengthening government food purchase programs, since they help boost social capital in the countryside and generate income for family farmers.

**Keywords:** cooperativism; associativism; PNAE



check for updates

**Citation:** Moreira, I.R.J.; Freitas, A.F.d.; Alves Júnior, A.; Freitas, A.F.d.; Bernardo, J.S.; Silva, S.M.d. Family Farming Cooperatives and Associations and the Institutional Market Created by the National School Feeding Program (PNAE) in Minas Gerais, Brazil. *Sustainability* **2023**, *15*, 5202. <https://doi.org/10.3390/su15065202>

Academic Editors: Inmaculada Buendía Martínez, Thuy Seran and Rafael Ziegler

Received: 7 November 2022

Revised: 24 February 2023

Accepted: 8 March 2023

Published: 15 March 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Brazil is an international reference in the construction of strategies to ensure food and nutritional security, and some of the most influential policies in this field are school meals and the simultaneous acquisition and donation of food to the state's social assistance network. The country has also innovated by prioritizing the institutional purchase of family farming food in some of these policies, which not only offers healthy food, but also promotes the productive inclusion and economic dynamism of family farmers, who make up 76.8% of the agricultural establishments in Brazil according to data from the Agricultural Census 2017–2018, conducted by the Brazilian Institute of Geography and Statistics (IBGE).

The main institutional landmark in this trajectory is the National School Feeding Program (PNAE) and the changes made since Law No. 11947, 16 June 2009. This law stipulates that at least 30% of the total financial resources transferred by the National Fund for Education Development (FNDE) for school feeding must be used for the purchase of food directly from family farms and rural family entrepreneurs or their collective organizations,

giving priority to agrarian reform settlements, traditional indigenous communities, and quilombolas communities.

Still within this process, FNDE Resolution No. 26/2013 set sales priority to formal collective organizations, meaning holders of the PRONAF Aptitude Declaration (DAP) (According to the Ministry of Agriculture of Brazil, DAP is the document used to identify and qualify the Rural Production Family Units and their associative forms organized into legal entities—Cooperatives and associations. Available at <https://www.gov.br/agricultura/pt-br/assuntos/agricultura-familiar/dap/formularios-manuais-e-legislacao>, accessed on 26 September 2021) in the legal modality, to the detriment of informal organizations and individual family farmers. According to Mossman et al. [1], this legal provision of PNAE encouraged the creation of cooperatives and associations in family farming. This incentive, according to specialized surveys [2–4], is based on the perception that formal collective organizations can facilitate the sales process by organizing production, management, articulation with actors, and even infrastructure, providing opportunities for marketing in larger volumes and with greater regularity.

The exponential increase in holders of DAP-Legal Entity (Legal DAP) in Brazil demonstrates the convergence between the creation of Law 11947/2009 and the formalization of family farming collective organizations. In 2009, there were 91 collective enterprises bearing Legal DAPs in the country, which covered 11,674 individuals [3]. According to the Data.gov platform, in 2019, the number of Legal DAPs, that is, formal family farming organizations, exceeded the mark of 6000, representing a growth of 6700% between 2009 and 2019.

Freitas [3] states that this growth is a result of the characteristics of the new generation of public policies for family farming, which focus on building markets and placing family farming organizations as protagonists, as Griza and Schneider [5] admitted. This corroborates the assumption that several formal organizations have been created to meet the demand for institutional food purchasing policies. However, according to Freitas, it is pertinent to question to what extent the organizations created for this purpose are able to overcome the mere formality of legal personality and face the challenges experienced by these organizations, such as planning and management, logistics, and marketing. At the same time, it is important to question whether these organizations, which were created to meet the demands of public policies, remain dependent on a single market and, sometimes, on the tutelage of mediating organizations that coordinate the implementation of public policies in municipalities, such as rural extension agencies or local governments.

Despite the importance of addressing this topic in the scientific field, it was found that there is a lack of studies focusing on cooperativism and associativism and their relationship with public policies for institutional food purchasing. Some of the works in the field [3,6,7] are case studies on the role of cooperatives in the local implementation of PAA and PNAE, particularly in small municipalities and/or municipalities with a predominantly agricultural economy.

Although there is scarce work that addresses the management of PNAE in large cities [8–10], there is even scarcer work that analyzes the trajectory and performance of cooperatives in food supply in these urban centers, large and medium-sized municipalities (They are considered medium-sized municipalities because they have more than 100,000 inhabitants, have local and regional economic significance, and serve as important centers to meet the needs of neighboring municipalities. On the other hand, large municipalities have populations exceeding 500 thousand inhabitants and are referenced in the access to services and structures that do not exist or are deficient in smaller municipalities (Stamm et al. 2013 [11])), which are considered by IBGE [12] as the metropolis and regional capital. One of the rare studies mapped is that of Costa, Amorim Junior, and Silva [13], which profiled family farming cooperatives located in the seven largest cities in the state of Minas Gerais, and analyzed the difficulties in accessing the PNAE. One of the critical points of analysis that is still a gap in the literature is about the trajectory of the cooperatives and associations; that is, their constitutive process, and how they derive implications for the

reality of the implementation of public food purchasing and the way organizations are inserted in this process.

Given the perceived gaps, and in an attempt to overcome them, this work is based on the following questions: What elements characterize the collective organizations that access public food purchases through the PNAE? How were these organizations formed and how were they transformed? Did access to the PNAE influence this trajectory? The objective of this paper, therefore, is to analyze the trajectory of the formation and characteristics of organizations that access institutional food markets in large municipalities that are major food demanders for PNAE supplies in the state of Minas Gerais, Brazil. We hope that this work will contribute to expanding knowledge about the organizations that access this program, giving them visibility as local players in the construction of institutional food procurement markets, and building reflections on their role and demands.

To succeed in this path, we studied cooperatives that supply food through PNAE to the largest municipalities in Minas Gerais. To facilitate the reflections undertaken here and the research results, this paper was organized into five sections in addition to this introduction. In the following section, important reflections are made about the cooperativism in family agriculture and collective organizations in the PNAE, and then the methodological procedures of the research are presented, clarifying the field work in large urban centers. The results are presented, taking into consideration the trajectory of the constitutions of the farmers' organizations and their operating characteristics. Finally, the conclusions of the work and bibliographic references used are presented.

## 2. Theoretical Reference

### 2.1. Cooperativism in Family Farming: Contextualization and Specificities

Cooperative societies emerge from the articulation and cooperation of individuals who have personal interests but share desires or needs in common and aim to achieve economic results [14]. According to Rodrigues [15], the cooperative is the space in which decisions are collective and the financial results are distributed according to the economic participation of each individual.

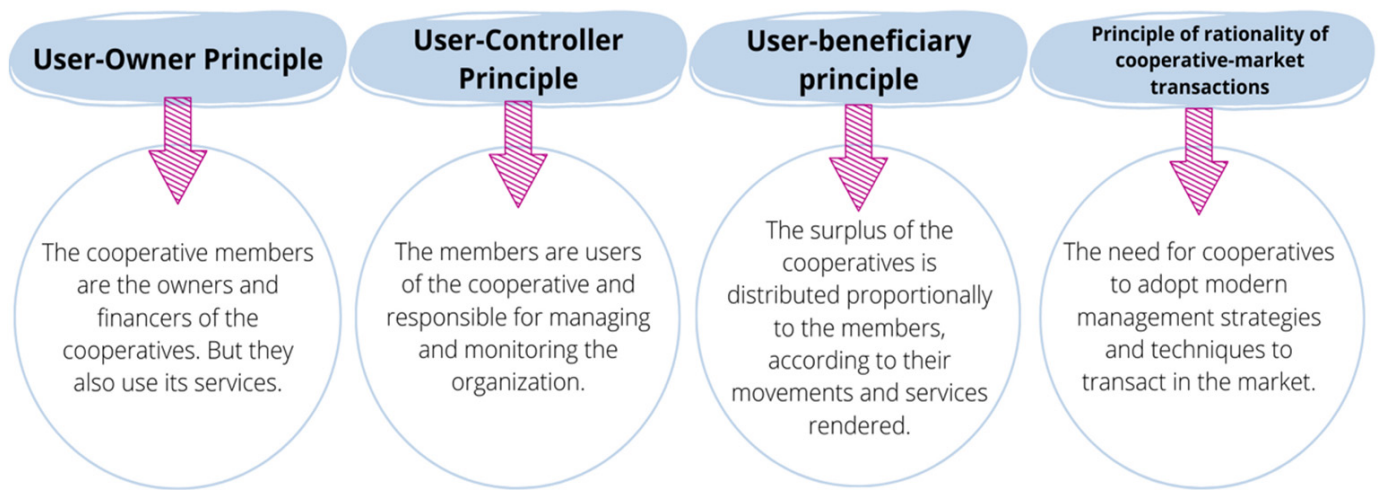
According to Pinho [16], the management form of the cooperative organization has lasted since its origins in the 19th century, marked by the decentralization of power and by the democratic management regime carried out by the cooperative members. Moreover, the economic, political, and social aspects are expressed by self-management, the decision-making in the deliberations, the transmission of power to the associated members, and the self-government of the active participation of the cooperative agent, a constituent part of the cooperative democracy.

According to Valadares [17], there is a classical interpretation of the concept of cooperative, being that they are properties financed, controlled, and benefited by the users themselves, and act as financial intermediaries in economic transactions. This idea also addresses the behavioral and cultural dichotomy of cooperatives, encompassing four characteristic axes of the relationships of cooperatives with their members and of the cooperative with the markets, which Valadares [17] classifies as basic principles of cooperatives, as presented in Figure 1.

Based on these definitions, Valadares [17] defines the theoretical model of economic relations between cooperatives, their members, and the market as based mainly on the fourth principle, the rationality of cooperative-market transactions. In this model, cooperatives are mediators, responsible for providing services to cooperative members, collecting their inputs, adding value, and marketing them. The response of the markets occurs through the payment for the goods or services rendered via the cooperative. Thus, the organization is responsible for fairly distributing the results of market operations among the members.

For Frantz [14] (p.51), the cooperative organization also needs to be recognized as a "social place" because, in its essence, it is an organization of people and an environment of learning, building power, and social capital (collective knowledge, socialization, behaviors, and values). From the social point of view, cooperatives are organizations capable of

contributing to generating an important social impact for society by promoting the inclusion of groups of individuals historically excluded by the market [18].



**Figure 1.** Basic principles of cooperatives. Source: Own elaboration, based on Valadares [17].

Dobrohoczki [18] states, in this sense, that cooperatives are a means of achieving local development, generating new jobs and income, and corroborating the preservation of community spirit. From the perspective of authors Tomazzoni and Schneider [19] and Silva and Nunes [20], cooperativism represents a way of overcoming difficulties in relation to agricultural production and marketing for many family farmers, and helps to ensure access to infrastructure, besides collaborating to improve income, assets, and the quality of life of families.

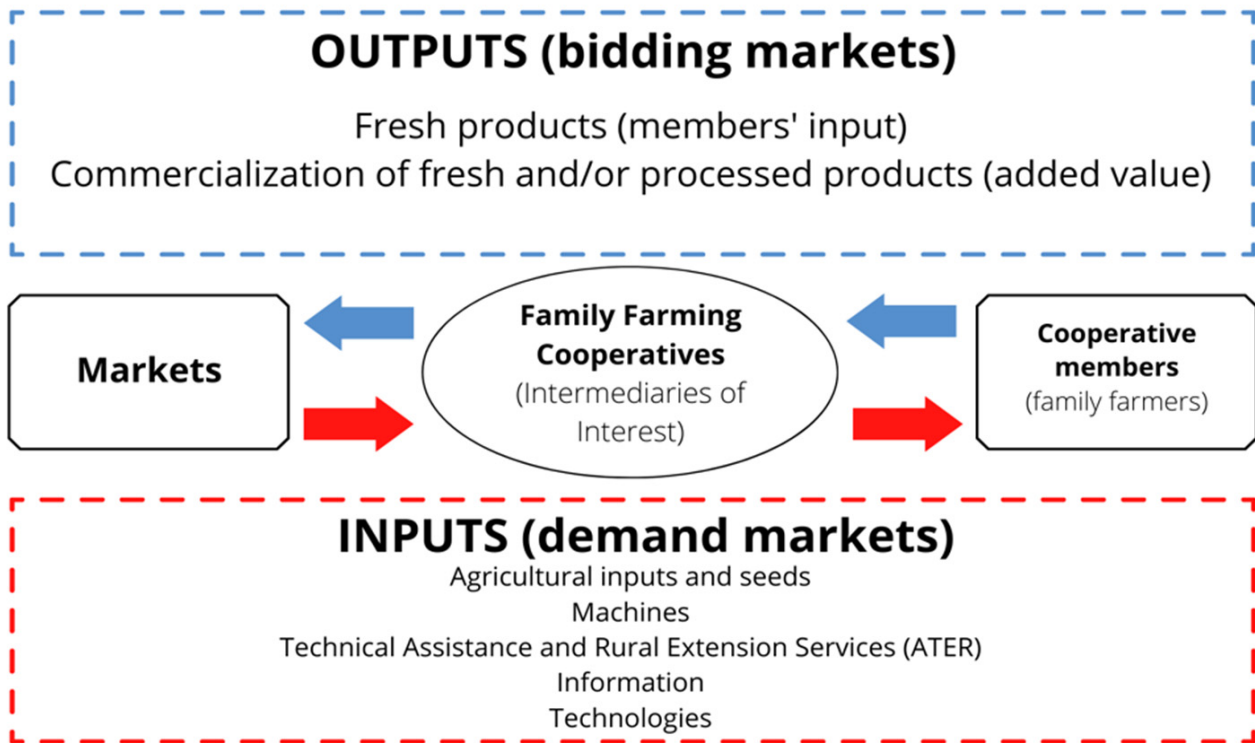
The study by Silva and Nunes [20] pointed out that the Brazilian agricultural establishments whose producers are included in cooperatives achieve higher percentages of access to credit, technical assistance, and rural extension services. Therefore, cooperatives can become important mechanisms to enable access to essential services in the rural environment.

Primarily, cooperatives are instruments of power in market economic relations. Specifically, in those of family farming, besides the instrumental and technical issues commonly experienced by all cooperatives, there is the need to pay attention to the political dimension since a significant part of family farming organizations is born from social demands. In this perspective, the lack of public power action in the rural environment was often filled by citizenship initiatives in the communities, association, and cooperation, which became practices that guaranteed benefits to the residents [14].

According to Chayanov [21], family farmers face difficulties in increasing their production due to their interdependence on mobilizing larger quantities of inputs, machinery, employees, animals, land, and financial resources. Chagwiza, Muradian, and Ruben [22] also pointed in this direction by discussing that in order to achieve high levels of vertical integration through collective organization, actors in the production chain are excluded and there is a concentration of several activities of the production system in a single enterprise, such as cooperatives.

In fact, for a considerable portion of family farmers, the experiences of collective organization are important in defending their interests and those of their communities. However, for many, it is the only way to sell their production. Part of the cooperatives and associations work on the supply of vegetables that are well accepted in the markets and, in some cases, benefit family farmers' products with the purpose of adding value and increasing the durability of food [23]. Thus, they become organizational devices that arise in response to the difficulties encountered on family farms, especially with regard to achieving a certain scale of agricultural production and low market power [24].

These organizations stand out in facilitating access to and the management of natural resources; access to input and output markets; consumption and marketing (inputs and outputs); and help in reaching information and knowledge [25]. In order to illustrate the discussions in this section, Figure 2 shows the role of family farming cooperatives as intermediaries of the relationships between cooperative members and markets, whether for the purchase or marketing of products and services from the rural milieu.



**Figure 2.** Economic relations of family farming cooperatives (outputs and inputs) (The arrows represent the flow of the relationship between the cooperative and the market and its members. The blue arrows represent the flow of outputs; the members deliver their products to their given cooperatives, and the cooperatives sell them in different markets. The red arrows represent the flow of acquisition of products, services, and information through the cooperatives that will be passed on to the members according to their needs). Source: Own elaboration, adapted from models by Schneider [26] and Valadares [17].

For Schneider [26], the main demands of family farmers are related to access to inputs, services, technologies, and information. In demand markets, cooperatives can acquire these inputs at scale (the red box in Figure 2) and pass them on to members, usually at more affordable prices. In supply markets (blue box in Figure 2), family farming cooperatives market the family farmers' products, either as fresh or processed, if the organizations have agribusinesses with the capacity to process, label, and package the products delivered by the cooperative members. The profit made in the markets is passed on to the members as leftovers. In both cases, the direct relationship with the market is done by the cooperative itself.

However, as Rios and Carvalho [27] point out, the collective organization of family farmers does not always occur through cooperatives. According to the authors, one of the major discussions regarding the social organization of family farmers stems from the dilemma between the formation of associations and cooperatives. In fact, the difference between cooperatives and associations is legal.

Brazilian cooperativism is governed by its own legislation, Law No 5.764 of 1971, which defines the National Cooperativism Policy and establishes the legal regime for cooperative societies. It also specifies that "people who agree to contribute goods or

services in exchange for the performance of an economic activity enter into a cooperative society contract". While associations are supported by the 1988 Federal Constitution art. 5, XVII and XVIII, which defines full "freedom of association for lawful purposes, being forbidden paramilitary ones" and the formation of associations "being forbidden state interference in its operation". Chapter II of the Civil Code of 2002, article 53, defines associations as "the union of people who organize themselves for non-economic purposes", under penalty of nullity if they do not fulfill their purposes.

Both organizational models have a non-profit purpose, the difference lying in the economic objective. While associations should be directed to philanthropic activities, of community and political claims, cooperatives arise to enable the certain economic activity of a group of people. Therefore, cooperatives are ideal collective organizations for commercialization. However, in a legislative reference to the Civil Code of 2002, the Federal Justice Council (CJF), understanding the multiple meanings of the word "economic", defines in enunciation no. 534 that associations can commercialize when necessary, as long as there is no profit purpose. Specifically, for PNAE, there is no specific formal organizational model for access, and it is possible for farmers to access this market via association or cooperative.

## 2.2. *The National School Meals Program (PNAE) and Family Farming Organizations*

The PNAE has become an institutional food market from which the state itself builds the demands for products, and guides and controls the entire purchase process. It is a strategy to strengthen local family farming by creating a new marketing channel that absorbs products that were previously intended, in general, for self-consumption, in informal markets, or distributed to intermediary agents.

The goal of PNAE is to provide food for students in basic education, from early childhood education to youth and adult education, in public schools in the country, serving approximately 43 million students in 2019 [28]. Since 1988, the federal government has made automatic transfers to the entities executing the school feeding program without the need for an agreement, making the process more agile. However, the management of PNAE became decentralized in 1994. This means that the federal government, through the FNDE, transfers financial resources to the states, municipalities, and Federal District, which are responsible for implementation and coordination at the municipal and state level [29].

For Triches and Grisa [30], Law 11947/2009 offered a new perspective and rhetoric to encourage Food and Nutrition security (SAN) and local development. One of the main legal advances was the incorporation of family farmers as beneficiaries of the program. Out of the total financial resources transferred by the FNDE under the PNAE, at least 30% must be used for the purchase of food from family farmers and/or their organizations, via DAP Physical (for individual farmers) or Legal DAP (for collective organizations of family farming).

The proposal is to provide, throughout the school year, meals that meet the nutritional needs of students in order to assist in their biopsychosocial development and school performance, encourage healthy eating habits, and promote food and nutrition education actions. On the other hand, family farmers and their cooperatives and associations, also beneficiaries, diversify production to meet the institutional market, respecting sociobiodiversity, increasing income, and improving the quality of life of their families. Furthermore, it has become a public policy to encourage the production and commercialization of healthy food and the consumption of healthy food.

Triches and Grisa [30] classify the PNAE and the purchase of food from family farms as a program that reconnects production and consumption and promotes food security. The authors also highlight other benefits of the program, such as: reducing the rural exodus; encouraging the production of diversified products—agroecological, organic, and benefited or minimally processed); guaranteeing the sale; and strengthening collective organizations.

Nevertheless, collective organizations also assume a strategic role in enabling family farming access to institutional markets, expressing the relationship of interdependence with

public policy [1,2,4,31]. Empirically, however, Santos, Campos, and Ferreira [2] realized that one of the main factors inhibiting participation in the PNAE of a cooperative in the state of Minas Gerais was related to its historical trajectory. According to the authors, the incentive to the constitution by external agents brought, as a consequence, the lack of information and knowledge of the cooperative members regarding the cooperative processes, factors that hindered the functioning and organizational development.

The literature provides clues so that research can also reveal the underlying aspects of the performance of family farming organizations in institutional markets, such as their socio-organizational trajectory. It is not only a matter of measuring their participation in the markets, but of unveiling the relevant aspects of their history and relationships that particularize the supply of food in public procurement programs.

### 3. Materials and Methods

This study has a qualitative and descriptive nature and, therefore, did not intend to measure the impact of public policy, but rather, the research subjects' perception of its influence on the trajectory of the collective organizations they are part of. It was necessary to immerse oneself in the empirical reality to understand the trajectory of the constitution of family farming cooperatives that access the PNAE in medium-size and large municipalities of Minas Gerais, Brazil. Thus, we chose to use the case study, which expands the variety of evidence, making it possible to analyze similar or contradictory results among the different cases under study [32].

The municipalities selected to compose this study are: Belo Horizonte, Governador Valadares, Juiz de Fora, Montes Claros, and Uberlândia, being hub cities of distinct mesoregions of the state of Minas Gerais. Located in different regions, these municipalities are considered regional capitals and reference urban centers in the interior of the state, except for Belo Horizonte, which is the state capital and one of the main metropolises in Brazil. In the northern region of Minas Gerais, Montes Claros is the reference for the supply of goods and services; in the region of the "Minas Triangle", west of the state, Uberlândia is known as a logistical hub of national scope and the center of important complexity for the economy in the region; and Juiz de Fora is considered the capital of the "Zona da Mata" and the reference for the supply of services to small municipalities in the region (IBGE, 2020 [12]). Table 1 below presents statistical data that characterizes the municipalities.

**Table 1.** Socioeconomic indicators of the municipalities.

Indicators	Belo Horizonte	Governador Valadares	Juiz de Fora	Montes Claros	Uberlândia
Number of population (2021) (Population estimate for 2021 according to the Brazilian Institute of Geography and Statistics (IBGE))	2,530,721	282,164	577,532	417,478	706,597
Gross Domestic Product (GDP) per capita (2017)	R\$ 35,245.02	R\$ 20,957.24	R\$ 28,355.07	R\$ 22,302.13	R\$ 50,548.78
Gross Value Added (GVA) (% represented by the agriculture and livestock sector) (2017)	0.003%	0.63%	0.24%	1.42%	1.92%
Number of agricultural establishments (2017)	32	1.117	564	2.945	1.704
Number of active Legal DAPs (2020)	1	7	1	15	5

Source: Own preparation based on IBGE [12]; MAPA [33].

In the north of Minas Gerais, Montes Claros (MG) exerts a significant attraction for the entire region, being the great reference in terms of the supply of goods and services. In the region of the Triângulo Mineiro, to the west, Uberlândia (MG) also presents a network with

important internal complexity, entering the state of Goiás and being a well-known logistics hub of national character. Another significant city is the population arrangement of Juiz de Fora/MG, the regional capital of the Zona da Mata Mineira [12] (p. 15).

In addition to the issues raised, it is worth noting that these municipalities are among the largest buyers of food through the PNAE in MG. The amount passed on annually by FNDE to the selected municipalities for the purchase of products for school meals ranged from R\$3.2 million to R\$27.2 million (Data from 2017 and 2018 available in Sigpc Public Access. It is worth noting that the amount passed on is calculated per school day for each student and varies according to the stage and modality of education. That is, municipalities with a higher number of students receive more resources from FNDE for school feeding [34]). It is also justified to study them, mainly because of the difficulty encountered by local governments in acquiring at least 30% of the budget dedicated to school feeding in products from family agriculture due to the absence or low proportion of rural producers in large urban centers (The participation of the agricultural sector in the Gross Value Added (GVA) of these municipalities is very low: 0.003% in Belo Horizonte, 0.21% in Juiz de Fora, 0.54% in Governador Valadares, 1.30% in Montes Claros, and 1.61% in Uberlândia (IBGE, 2020) [12]).

In a previous mapping of the research [34], we identified the number of cooperatives and family farming associations with active DAPs, i.e., able to access the PNAE, existing in each municipality: Belo Horizonte and Juiz de Fora had only one registered cooperative; Uberlândia had one association and four active cooperatives; and Governador Valadares had six associations and one cooperative. The municipality of Montes Claros stands out among the studied municipalities with regard to the number of active organizations with DAP, with nine associations and five cooperatives, totaling 14 organizations [33].

#### *Data Collection and Analysis*

Primary data were obtained through interviews, applied between August 2019 and February 2020, guided by semi-structured scripts, and secondary data were obtained through data made available by the FNDE Accountability Management System (SiGPC). Two interview scripts were prepared: one applied to public managers working in the sectors that implement the PNAE in each of the municipalities; and another applied to representatives of cooperatives that accessed this institutional market between 2015 and 2018.

As the focus of the research was to look at the cooperative organization and its participation in the process of implementing public policy, it was decided to identify key informants who have been protagonists in this theme and are willing to participate in the research. This is a strategy to ensure greater depth in the information collected and expand the number of cooperatives analyzed, considering the continental size of the state of Minas Gerais and the distance between the surveyed cities, which reaches 848 km in the case of Uberlândia and Governador Valadares; this is a challenge for data collection. In this sense, a representative was selected for each organization participating in the research, mobilizing subjects who understood the history and dynamics of cooperatives and the operation of the PNAE in the municipalities, avoiding redundancy and optimizing field research. The interview scripts were prepared under this guidance, seeking to extract from these informants, the highest level of detail to subsidize the research results.

Through a non-probabilistic sampling for accessibility, four interviews were conducted with government representatives and 12 interviews with representatives of collective organizations of family farming that access the PNAE in the municipalities studied. The interviews were carried out after the approval of the project by the Ethics Committee for Research with Human Beings of the Federal University of Viçosa (UFV), which took place in the first half of 2019 (CAAE 18796119.8.0000.5153). In Belo Horizonte, due to the unavailability of public managers, interviews were carried out only with representatives of organizations, and the perspective of public management on the implementation of the PNAE was extracted from informal conversations and institutional documents.



Therefore, 12 family farming organizations and four city halls participated in the research through interviews with a key representative, who provided qualified information. In all, seven women were interviewed, six representing family farming organizations and one representing the Public Administration; and nine men, six representing organizations and three public managers. The identification of respondents was given by codes, as shown in Tables 2 and 3, to ensure the anonymity of respondents.

**Table 2.** Coding of public managers.

Manager Coding	How the Manager Is Referred to in the Text	Municipality Where They Work
Manager 1	G1	Governador Valadares
Manager 2	G2	Juiz de Fora
Manager 3	G3	Montes Claros
Manager 4	G4	Uberlândia

**Table 3.** Coding of organizations and interviewees.

Coding of the Cooperative/ Association	Municipality Where the Organization Is Headquartered	Role Played by the Interviewee	Coding Interviewee
Cooperative 1—C1	Belo Horizonte/ Região Metropolitana	Employee	E1
Cooperative 2—C2	Belo Horizonte/ Região Metropolitana	Employee	E2
Cooperative 3—C3	Montes Claros	Farmer/Co-op	E3
Cooperative 4—C4	Montes Claros	Farmer/President	E4
Cooperative 5—C5	Montes Claros	Farmer/Employee	E5
Cooperative 6—C6	Uberlândia	Farmer/President	E6
Cooperative 7—C7	Uberlândia	Farmer/President	E7
Cooperative 8—C8	Uberlândia	Farmer/President	E8
Cooperative 9—C9	Juiz de Fora	Farmer/President	E9
Association 1—A1	Governador Valadares	Farmer/President	EA1
Association 2—A2	Governador Valadares	Farmer/President	EA2
Association 3—A3	Governador Valadares	Farmer/President	EA3

Source: Own elaboration.

From the literal transcription of the interviews, it was possible to group them for further analysis and organization of the content. We chose content analysis, which is composed of a “set of communication analysis techniques aimed at obtaining, through systematic and objective procedures to describe the content of messages, indicators that allow the inference of knowledge regarding the conditions of production and reception of these messages” [35] (p. 47).

The key analytical categories for the analysis of the interviews with representatives of the cooperatives and associations reflect information related to the organizational trajectory of the enterprises, and the incentives for their creation. In the case of the interviews with public managers, the analytical categories group information about the history of the program in the municipality and the relations with the economic organizations of family farming that supply the PNAE.

#### 4. Results

The analysis of the results was subdivided into two parts, which are: (i) the constitution path of family farming cooperatives and associations, in order to discuss the aspects related

to the creation of the organizations and suggest typologies of constitutive processes; and (ii) the profile of family farming economic organizations, highlighting factors related to their legal format, among other characteristics.

#### *4.1. Trajectory of the Constitution of Family Farming Organizations*

There are several motivations that lead to the establishment of collective economic organizations and the choice of a legal format that fits the objectives pursued by their members. For Sabourin [36] and Freitas [3], among the main factors that stimulate the creation of family farming collective organizations is the intervention and mobilization of external actors that operate in the rural environment; that is, the influence of an agent that is not part of the social and community framework of that organization, but considers its existence may result in a positive change in reality or enable some operation for such a change to happen.

With regard to the creation process of the 12 family farming economic organizations studied, one can see the significant participation of public sector institutions in assisting family farmers to organize and formalize their cooperative ventures. Among the institutions that have contributed as inducers for the creation of cooperatives and associations are the municipalities; the Technical Assistance and Rural Extension Company of Minas Gerais (EMATER-MG); the Higher Education Institutions (IES); and the Development Company of the São Francisco and Parnaíba Valleys (Codevasf).

One of EMATER-MG's attributions is to guide family farmers on access to public policies and programs, in addition to issuing DAPs, guiding and preparing projects, and training farmers in good productive practices (EMATER-MG, 2018), so this is an institution of significant importance for the constitution of collective organizations. However, it is clear that EMATER-MG's performance can vary between municipalities since the delivery of results depends on the team and local conditions (farmers who want to be helped, agreements with municipalities to finance the company's operational activities, among others) [37].

EMATER played a central role in the founding process of some of the organizations studied, having been cited as a "motivator" and "inducer" (E1; E5; EA2) or as the main "partner" (E2; E6; E7) in the creation of cooperatives and associations. The representatives of organizations C1, C2, A2, C5, C6, and C7 reported that the enterprises emerged due to their proximity with EMATER technicians, who, through dialogue, encouraged the creation of the organizations. It was found that, in some cases, EMATER technicians got to know the individuals and their productive experiences, signaling the possibility of improving the processes and marketing the production they produce, generating new opportunities, as well as promoting possibilities for public management to comply with the purchase of food through the PNAE, as established by Law No. 11947/2009.

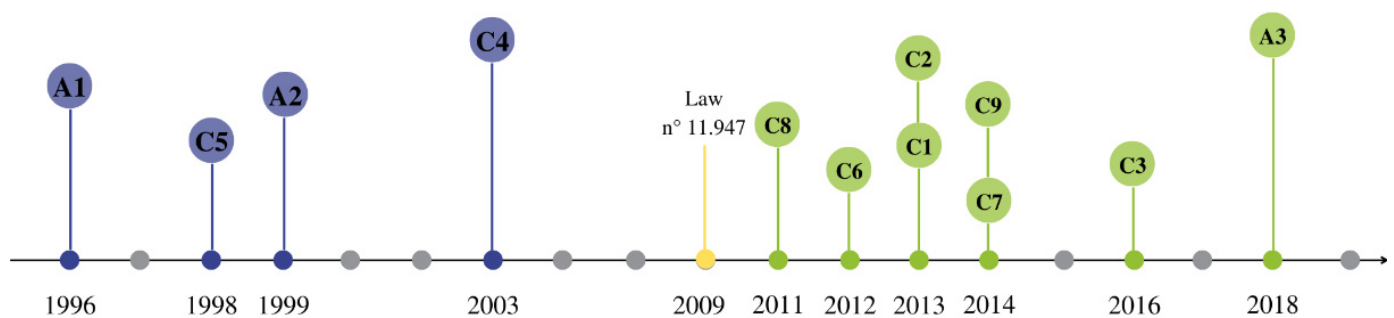
In the case of cooperative C7, EMATER and the city government were crucial to the formation of the organization since the farmers were afraid to start a new business. Moreover, according to the A1 association's farmer, "the association came about through EMATER, right? [...] EMATER said: "This doughnut can be the beginning of the work of you women here. If you want, we will continue". It was noted that, in some cases, the proposal to create the organization was an initiative of external agents, supported by the family farmers, who, in the expectation that this would expand their opportunities, assumed the commitment to create and formalize a collective organization.

In addition to EMATER, the interviewee from cooperative C6 points to the Incubation Center for Popular and Solidarity-Based Enterprises (Cieps)—an extension project of the Federal University of Uberlândia (UFU)—as the main partner and encourager of the constitution of the cooperative enterprise. The farmer of cooperative C4 also mentions the Incubator of Popular Enterprises of the State University of Montes Claros (Unimontes). The C4 Cooperative also had the support of a non-governmental organization (NGO) which, since the 1980s, has developed actions around sustainability, agroecology, and the rights of traditional peoples and communities. This NGO had already developed an agro-ecological

production program with family farmers in the region and recognized their potential to form an economic organization focused on the marketing of products from the cerrado. Farmer E3 highlights another organization, the Development Company of the Valleys of São Francisco and Parnaíba (CODEVASF), as an incentive for the creation and development of the cooperative.

Another important point is that the external motivations for setting up family farming organizations are directly related to the enactment of Law 11947/2009 that established the PNAE. The creation of associations and cooperatives aimed to facilitate access to this institutional market for the purchase of food for schools. In the municipality of Uberlândia, according to Manager 4, one of the main active cooperatives was created “(...) precisely to meet this niche, and to be able to make the 30% issue viable. That’s where it all started” (Interviewee G4, 2019).

To facilitate the visualization of the constitution of all organizations covered in this study, a timeline was created, as shown in Figure 3. Blue represents the organizations created before 2009 and red represents those created after 2009, taking as reference the year in which Law 11947/2009 was enacted.



**Figure 3.** Timeline of the constitution of cooperatives and associations.

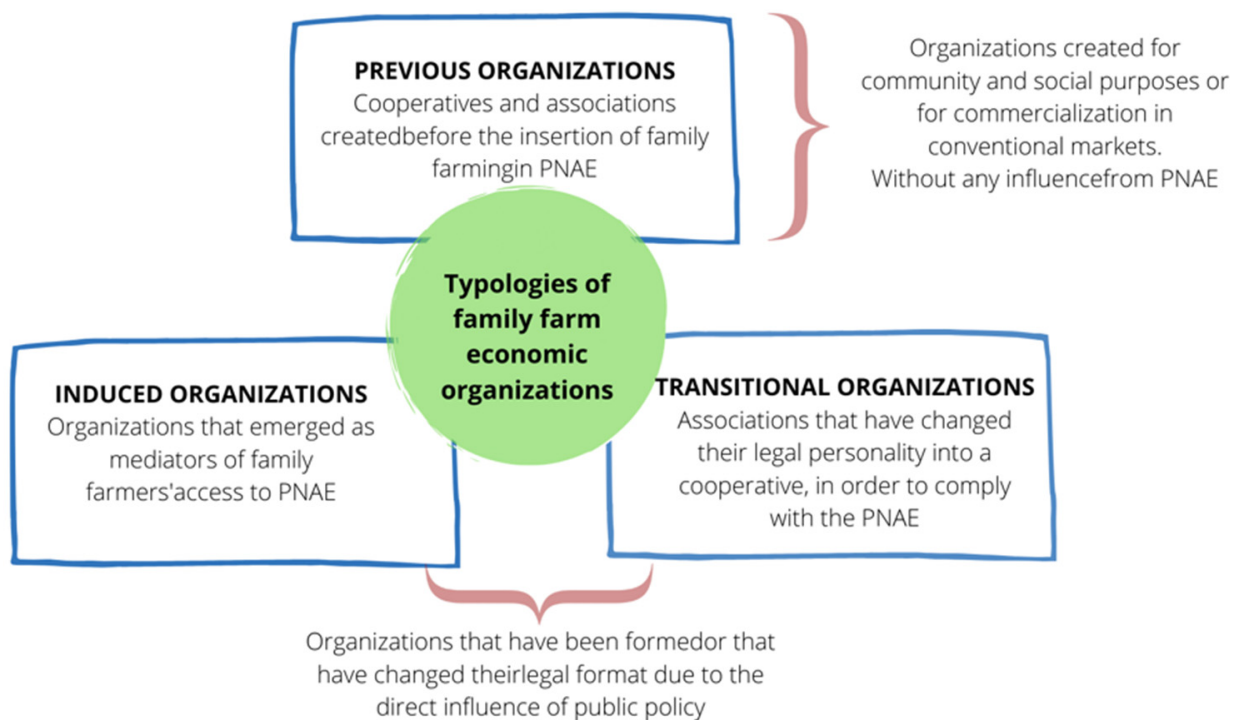
One can notice that eight of the 12 organizations studied were created after the law and had as a conditioning mechanism the fulfillment of the public school feeding policy, limiting their gross income to sales to the institutional market—that is, being dependent on it. Cooperative C1, for example, has been selling only to the PNAE since 2015. Interviewee E2 reports that the cooperative was created “with this sole function” to serve the public policy markets. E7 also states that the organization emerged amid discussions about the importance of setting up an agrarian reform cooperative to serve the PNAE and PAA (Although the interview reported access to the PAA at the beginning of the cooperative, it was mentioned that this market is no longer accessed by the organization due to funding cuts that affected the volumes purchased by the EExs. Therefore, access to the PAA by the cooperatives and associations studied is not deepened in this work, even if at some point they did access this institutional market).

On the other hand, four organizations were established before Law 11947/2009 and marketed their products on a smaller scale in local markets and fairs (Except for cooperative C4, which also accessed the PAA. However, due to the PAA funding cuts, this market was not reported as essential for the survival of the organization at the time of the interview). Even so, the associations and cooperatives formed prior to this law mobilized to start accessing the PNAE because it represented more security for the family that the food produced would be purchased and paid a fair price, compared to the prices paid by middlemen, in supply centers and supermarket chains. Among these four organizations, only one was initially set up as a cooperative, the C4 Cooperative, with a commercial bias, while the others aimed to form community associations with the purpose of representing the residents, either to raise funds for the communities or for social recognition of the group.

Noting the reasons why the 12 organizations were created confirms what Sabourin [36] has presented. For the author, the creation of family farmer organizations can refer to two types of needs. It can correspond to a modernization of the communities’ reciprocal

relations, which, in the case of this research, corresponds to the union of rural dwellers to claim for improvements or access markets on a small scale, which was previously inaccessible. Nevertheless, it can also emerge from the need to develop family farmers' market activities, without necessarily having a history of social mobilization.

Based on the delimitation of the periods of establishment of family farming cooperatives and associations and their relationship with the PNAE, three typologies are highlighted, which here didactically represent aspects that distinguish the process of creating the organizations studied: (i) the previous organizations, created and in operation before the enactment of Law No. 11. 947/2009; (ii) the induced organizations, which house the group of cooperatives and associations created as legal entities specifically to access the PNAE; and (iii) the transitional organizations, involving those that were created as associations but changed their legal personality to access the PNAE. To illustrate the discussion to be had about the typologies of the family farming economic organizations identified, Figure 4 is presented, dividing them between pre- and post-institution of the PNAE as a market directed to the purchase of family farming products.



**Figure 4.** Typology of family farming organizations based on their constitutive process.

In the first typology, previous organizations, there are organizations that predate Law 11947 of 2009, located in the municipalities of Montes Claros and Governador Valadares, and created with a social and community appeal to demand improvements in rural communities. Sabourin [36] also noted in his study that many family farming organizations are created out of the communities' need for legal representation, whether to obtain institutional support for community demands, legitimize peasant practices, or facilitate access to markets.

In this research, based on the statements of the interviewees representing the associations and cooperatives A1, A2, C4, and C5, all created between 1996 and 2003, it can be seen that the organizations located in the first typology emerged to give legitimacy to the group's claims and to be instruments of social and political representation. However, it is important to clarify that despite the representative and claiming character of the organizations, this did not exclude the possibility of access to markets—mainly through the cooperatives—as pointed out by E4 and E5.

Especially with regard to associations A1 and A2, it can be seen that they were formed as a way to ensure the representation of certain social groups, such as quilombolas, as well as

to give voice to the important role of women in the rural environment. Moreover, according to interviewee EA1, the A1 Association was created with the support of EMATER as a way to generate income and represent women in a rural community in Governador Valadares. There was only one organization in the community that, until then, was composed only of men.

Interviewee EA2, for example, links the creation of the A2 association to accessing basic services such as water and electricity, mentioning the claim for rights in an organized and collective way as the purpose of the constitution, since individually the community residents had no voice. Later on, after achieving essential rights, discussions started regarding the access to markets through the association. In this case, the process of building the association as a marketing tool was progressive and involved changing objectives, which does not mean that the organization lost its distinctive character.

The second typology, induced organizations, is represented by cooperatives and associations created after the enactment of specific PNAE legislation. These organizations were created with the purpose of acquiring legal personality to enable the access of family farmers to the program. As pointed out by interviewee G2, it was in 2009 that family farmers in the city of Juiz de Fora began to contact and mobilize to create a collective organization.

Freitas [3] argues that the growth in the number of formalized family farming collective organizations is the result of the incentives and demands of public policies that promote the sector's access to various markets. Our results allow us to confirm this perception, since it was necessary to mobilize local family farmers to organize themselves in order to meet this new market of government food purchases.

For example, in the public calls in Belo Horizonte and Governador Valadares, purchases can only be made through formal groups holding Legal DAPs, with regular documentation, based on Article 30 of Resolution CD/FNDE No. 26 of 2013. In Juiz de Fora, in addition to formal groups, informal groups can participate, while in Montes Claros and Uberlândia, individual suppliers and holders of Physic DAPs are also able to participate in public calls. However, in these cases, the prioritization criteria of Resolution CD/FNDE No. 26 are followed, which determines that in situations of a tie in the proposals, formal collective organizations are prioritized over informal organizations and individual farmers.

In this scenario, it can be seen that, in most of the cases reported (E1, E2, EA3, E3, E6, E7, E8, and E9), the driving factor for the formation of organizations was "serving the institutional markets" through direct support from external TARE institutions, municipal bodies, and other public entities (Development Company, University Extension Projects, among others). These institutions operate in such a way as to encourage the creation and operation of collective economic organizations because they understand that it facilitates approximation and dialogue with farmers and enables market access, since without a legal entity, there are concrete limitations to this (Meeting the parameters of institutional markets, the difficulty of articulating individual family farmers, high costs for the logistics of product distribution, and even regularly meeting the demands of municipalities are elements pointed out in studies such as Rozendo, Bastos, and Molina (2013) [38], Mossman et al. (2017) [1] as unfavorable to the access of individual family farmers to PNAE).

This process of encouraging the creation of family farming organizations can be beneficial from the point of view of opportunities and support for the establishment of collective enterprises aimed at organizing production and marketing. By analyzing Tables 4 and 5, it is possible to see the economic importance of access to the PNAE for family farming cooperatives and associations in the territories where they operate. Significant amounts of financial resources were passed on to family farmers who were members of these organizations when buying their products. As perceived in the field research, access to this institutional market, with guaranteed and regular demand for products, has contributed to increasing the income of farming families and thus expanding the quality of life in the countryside.

**Table 4.** Total transferred by FNDE to the 5 municipalities.

Year	Total Transfer of FNDE Resources	Resources Used to Purchase Products from Family Agriculture	% of Purchases from Family Farming
2015	R\$ 40,597,851.40	R\$ 10.979.643.62	27%
2016	R\$ 44,705,022.50	R\$ 6.281.640.36	14%
2017	R\$ 44,805,789.20	R\$ 6.061.141.09	14%
2018	R\$ 44,626,529.40	R\$ 7.066.961.01	16%

Source: SiGPC [34].

**Table 5.** Number of family farming enterprises that accessed Municipal PNAE in the year 2018.

Municipality	Number of Family Farming Enterprises	Number of Local Family Farming Enterprises	%	Total Resources of Products Purchased from Local Producers
Belo Horizonte	8	0	0%	-
Governador Valadares	8	6	75%	R\$ 1,241,184.71
Juiz de Fora	1	1	100%	R\$ 225,038.94
Montes Claros	6	5	83%	R\$ 280,517.96
Uberlândia	3	3	100%	R\$ 1,199,134.68

Although the objectives of this study do not permeate the analysis of the socio-economic impacts of the PNAE, a topic already addressed in other works by Cunha, Freitas, and Salgado [7], and Elias et al. [39], the research identified that the intervention of the cooperatives, through access to the program, has succeeded in strengthening the productive activities of its members. This generates a virtuous circle by fostering a short marketing circuit which, by stimulating local agricultural production, consequently increases the circulation of financial resources in the municipalities, and encourages productive diversification and the collective organization of farmers, whether in associations or cooperatives.

However, it can be harmful to consider that these cooperatives and associations can emerge from an immediate and instrumental process, without the proper mobilization and training of their members, organizing social and production relations based on cooperation and trust. This can result in important limitations for organizational development, particularly in relation to the technical managerial knowledge and skills required for the organization's daily operations. In one of the municipalities studied, for example, the interviewee, Manager 1, states that there was "(...) a scenario of unstructured associations in the legal issue, in the legal DAP issue, meeting minutes, and the statutes were outdated".

It was verified that many organizations initially opt to become associations due to the ease of organizing themselves in a new environment, which requires specific but simpler procedures. When already considered more developed, they seek new markets and/or the expansion of existing ones, reassess the most appropriate legal nature to meet their goals and objectives, or are induced by external agents—municipal public managers, Ater companies, among others—who report the restrictions of commercialization through associations, due to their non-economic purpose, and encourage their transformation into cooperatives.

The third group of organizations is made up of those that are integrated into the previous context, that is, those that went through a process of modifying their legal personality and are grouped in this work under the "transitional organizations" typology. This typology is made up of associations that have changed their organizational format into cooperatives in order to comply with the PNAE. Thus, they formed cooperatives based on a previous socio-political basis, either for fear of being punished (nullity, fines, lawsuits, being pending with the Internal Revenue Service, and other sanctions) or because they believed that an association was not the ideal organizational model for a more complex commercial performance. As reported by interviewee E9, in a discourse converging with other

interviewees, “association is forbidden to trade, cannot be for profit, and is subject to fines”. This conclusion, generally shared by external agents despite its normative connotation, is a discursive device that induces the transformation of associations into cooperatives.

Thus, family farming entities and farmers themselves are concerned about (i) possible punishments by the public authorities, despite conflicts between different regulations; (ii) the loss of the community and union character of associations when they become cooperatives; (iii) higher taxation for cooperatives; and (iv) the lack of knowledge about the specificities of each organizational format.

The comparative analysis of the possible legal entities for the organizations was crucial for cooperatives C1 and C2, along with their members, to opt from the beginning for the constitution of cooperatives because they analyzed that it would be the most appropriate legal format, as reported by the interviewees:

“We studied deeper and saw that it was not interesting to create an association, even because of some laws that may prohibit it at some point, and we wanted to work in a correct way, in a calm way” (Interviewee E1, 2020).

“They got together and studied whether it was more advantageous to be an association or a cooperative. What were the market purposes of the government’s public policies, which were the PNAE. Then, when they saw that the most certain method of legalization would be via cooperative, they went and founded the cooperative” (Interviewee E2, 2020).

The need to change the legal form of the organization was decisive in Cooperative 8, which was previously an association, but there was a need to market the products because “the producers knew how to produce; they had great honey; but they didn’t know how to market it.” Then the cooperative came for that, to improve, to put a label” (Interviewee E5, 2019).

This behavior was also perceived in Cooperative C6, which states the need for the existence of two distinct organizations: “the cooperative will stay with this real economic part and then the [association] would enter for action of the social projects, literally [...] it would stay only with this task of playing there mainly the agro-ecological project” (Interviewee E6, 2019). In this way, the evaluation of the agro-ecological project is pointed out as a social possibility that will be executed by the community association—and not by the cooperative—as a way to expand the market, even though its commercialization with PNAE is encouraged through Resolutions/CD/FNDE No. 38, of 16 July 2009, and No. 4, of 2 April 2015.

In addition to the three central typologies discussed above, it is necessary to point out another reality, namely, the preservation of the organizational model of associations that do not aim to become cooperatives. This is the case of Associations A1, A2, and A3, in which the municipal public managers themselves encouraged their creation due to the history of several insolvent or fraudulent cooperatives in the region. In this specific situation, the cooperative became a business model not to be reapplied for because, according to the interviewees, many cooperatives could not stay active in the market for a long period of time in the region, besides accumulating losses for the cooperative members due to the managerial and financial problems they faced.

In these cases, there is a need to preserve the associations due to their community and claim appeal. This legal format is seen as an ideal model to meet the members’ objectives of commercializing and, at the same time, developing activities that are beneficial and guarantee local development, according to the perception of EA1, EA2, EA3, and E5. In all these empirical examples, the collective economic organization emerges via community associations, except for Cooperative 8, which was created in 1998 as an association and went through a process of transition to a cooperative in 2020.

Associations A1, A2, and A3 continue trading in the same organizational format as when they were established. In the view of interviewees EA1, EA2, and EA3, the association is the best model of collective organization due to its socioeconomic purpose. According to Pelegrini, Shiki, and Shiki [40], one of the primary reasons why people in some communities

choose to form associations is that they believe this model is more flexible, efficient, less bureaucratic, pays fewer taxes, and provides higher levels of social participation.

#### *4.2. Characterization of the Cooperatives and Associations That Access the PNAE in the Studied Municipalities*

Table 6 presents characteristic aspects of the organizations, relating them to the performance of the cooperatives and associations in the PNAE in their respective municipalities, such as coverage, markets accessed, number of cooperative members, annual revenue from the Program in 2019, and main products marketed.

The annual sales figures of the cooperative and association studied present significant variation. While Cooperative 11 sold approximately R\$ 1.492 million to the PNAE in the municipality of Uberlândia, Association 4, with a lower annual sales volume, sold R\$ 16,217.17 to the PNAE of Governador Valadares. It is important to highlight that, although Cooperative 7 commercialized in 2019 the total of R\$ 80,402.28, this is the only cooperative studied that reported accessing the municipal PNAE through bidding processes, in the Electronic Auction modality, to commercialize processed products, specifically fruit pulp and rapadura on a larger scale.

With an emphasis on community-based organizations, only Cooperative 8 carried out a project to expand the number of members and the territorial coverage. The others, Association 3, Association 4, and Cooperative 8, kept the community character and were assigned to the public of a single community, with the number of members varying between 30 and 90. Some organizations, mainly cooperatives C1, C3, C4, C7, and C8, obtained an exponential increase in the number of cooperative members when compared to the period of constitution and the year 2019. The growth is pointed out by the interviewees as a reflection of the organizations' success in accessing the PNAE. By noticing that the organizations facilitated access to the PNAE and were guaranteeing jobs and income in their communities, other family farmers felt encouraged to join these cooperatives.

It was reported by the interviewees that the associated family farmers themselves publicized, in networks of close contacts, the benefits of participating in a cooperative or association, generating a cascading effect of the adherence of new members and expansion to other communities and municipalities. The reflection can be noted in the different spaces reached by the organizations, with four organizations (C1, C3, C4, and C8) operating in about 15 to 30 different municipalities in 2019, and three organizations (C2, C6, and C7) having cooperative members in two to ten different municipalities from the organization's headquarters. Meanwhile, five organizations (Associations A1, A2, A3, and Cooperatives C5 and C9) had farmers from a single rural community in their ranks.

Another benefit pointed out as attractive to new cooperative members, who look for easy access to markets in family agriculture economic organizations, is the investment in agro-industries for the processing of products. Of the organizations studied, only three do not process the cooperative members' products (Associations 2 and 3, and Cooperative 12), selling only fresh products. The Cooperatives C2, C3, and C8, on the other hand, outsource the processing in order to reduce costs associated with the structure of the agribusinesses and with permits and licenses. According to interviewees EA1, E4, E5 and E6, E7, their organizations invest in their own agribusinesses, which is an important step to add value to the food produced and commercialized.

As reported earlier, the processing of the products has gained visibility and has become a strategy for many cooperatives. The processed products are seen as a way to increase income and make the most of the products, since it is a segment that has given profit, and has demand and visibility. It is the issue that Wilkinson [41] presents as the valorization of the non-farm rural, in which the boom was post-1980s. For the interviewee from C2, the role of the cooperative is to supervise the quality of products, and add value and benefit the products of family farmers, as cooperatives are required to meet the health and quality requirements of the PNAE.



**Table 6.** Characterization of the organizations.

Organization	Number of Co-Op Members	Accessed Markets	Scope of the Organization	Product Processing	Main Products Commercialized at the Municipal PNAE	Annual Value of Sales to PNAE in Their Respective Municipalities
C1	230	PNAE	30 municipalities	product processing	Potato, yam, orange, mandarin orange, cassava, lemon, and tomato	R\$ 368,814.21 (Value refers to the year 2017, the last year of sale verified for consultation)
C2	47	PNAE	7 municipalities	outsources product processing	Beans	R\$ 443,930.00
A1	30	PNAE, bakery, markets	Communitarian	has agro-industry	Sweet biscuits and pastries	R\$ 472,903.36
A2	40	PNAE, PAA, markets	Communitarian	commercializes only <i>fresh</i> products	Carrot, cabbage, and leafy greens in general	R\$ 16,217.14
A3	45	PNAE	Communitarian	commercializes only <i>fresh</i> products	Broad-leaves in general	R\$ 106,749.20
C3	345	PNAE, supermarkets, pharmacies, natural product stores	16 municipalities	outsource the processing	Honey in sachets	R\$ 44,590.00
C4	265	PNAE, exhibitions, emporiums and companies	30 municipalities	has agro-industry	Fruit pulp	R\$ 80,402.28
C5	75	PNAE	Communitarian	has agro-industry	Strawberry, honey, and vegetables in general	R\$ 316,127.15
C6	46	PNAE, agro-ecological Fairs and exhibitions	4 municipalities	has agro-industry	Processed cassava and pumpkin, tomatoes, bananas, leafy greens, and vegetables in general	R\$ 389,004.04
C7	75	PNAE	2 municipalities	has agro-industry	Cassava flour, processed cassava, leafy vegetables	R\$ 265,354.84
C8	263	PNAE	20 municipalities	outsources product processing	Cassava flour, honey, vegetables, and fruits in general	R\$ 1,492,148.74
C9	32	PNAE and fairs	8 municipalities	product processing (Although the interviewee reported that the cooperative sells processed products to the PNAE, it was not made explicit whether the cooperative has an agro-industry or whether the processing is done by an outsourced company)	Honey in sachets	R\$ 225,038.94 (Value refers to the year 2018, the last year of sale verified for consultation)

Source: Research data.

In addition to the increase in the production of minimally processed and processed foods, there is acceptance and encouragement of the commercialization of organic and agro-ecological products in the PNAE in the municipalities of Belo Horizonte, Uberlândia, and Montes Claros. Cooperatives C5 and C6, for example, started to encourage farmers to produce in an agro-ecological way. In Cooperatives C1 and C7, there were reports of encouragement for organic production, with some members seeking to adapt to the new production processes.

C3 also monitors the farmers' production and already has the organic product seal, which for the interviewee from this cooperative, has been a competitive strategy in the PNAE, as she reports: "We have even won many [public notices] because one of the criteria for winning is to be organic and we have the seal" (Interviewee E3, 2020). This occurs because, according to Resolution/CD/F NDE No. 4 of 2 April 2015, suppliers of foodstuffs certified as organic or agro-ecological have advantages in the tie-breaking criteria of the sales projects (In addition to the tie-breaker criteria, Resolution/CD/F NDE No. 4 of 2 April 2015 also determines that in the impossibility of conducting price research for agro-ecological or organic products, EExs may add up to 30% (thirty percent) to the prices of these products in relation to the prices established for conventional products).

Environmental concerns are also associated with public health concerns, as evidenced by the importance seen by these organizations in marketing healthy and quality products. Collective organizations socialize such concerns and create institutional mechanisms to foster the agroecological or organic transition, even though they have little financial support, technical assistance from other external institutions, or public policies. Triches and Schneider [42] also noted that the quality of family farming products is associated with environmental and sustainable issues, often described as "no additives", "no pesticides", "organic", and "ecological," which attribute value to the products.

It is possible to identify a first group of more structured cooperatives, represented by Cooperatives C1, C3, C4, and C8, which have a larger number of members and an organizational structure with a larger number of employees, operating in different communities and municipalities. Only Cooperative 7 was created before the institutionalization of Law 11947 of 2009, being constituted in 2003; the others were created between 2011 and 2016. Although Cooperatives C3 and C4 access other markets, it is noted that in this group of cooperatives, there is a high dependence on the public policy of government procurement for organizational development, with the PNAE having about 70% to 100% of the annual gross revenue, which can compromise the survival of the organizations in periods of vacations, school stoppages, or reduction in the volume of resources intended for this market.

Franzoni and Silva [43] and Silva and Schultz [23] showed concern about the dependence of family farming organizations on institutional markets. Franzoni and Silva [43] believe that PNAE is crucial for the survival of organizations. However, dependence can be detrimental to the development and continuity of a cooperative or association. For Silva and Schultz [23], decreasing dependence on a single market can be challenging for family farming organizations due to limited human resource capacity and infrastructure that make it difficult to plan long-term commercial strategies.

Another point observed is that the group of more structured cooperatives—C1, C3, C4, and C8—delivers a greater volume of products to the PNAE and benefits products from the cooperative members. The representatives of these cooperatives affirm that the organizations have the capacity to increase the volume of production to meet the PNAE. This is because the sales volume of the products benefited or processed by these cooperatives is still low, despite the fact that there is investment in agribusinesses or partnerships with other companies to outsource the processing services. This shows that, in the studied municipalities, there is still little or no exploited potential for the acquisition of processed products coming from family agriculture.

The second group of cooperatives is medium-sized, with a membership that varies between 45 and 75 cooperative members, and is active in two to eight municipalities. These

are Cooperatives C2, C6, and C7, all created after the institutionalization of Law 11947/2009, two of them linked to the Landless Workers' Movement (MST).

An important characteristic of the cooperatives in this group is related to the commercialized products. One notices that among the main products in the municipal PNAE are processed foods. This is noted as a competition strategy of the cooperatives not only to meet the PNAE, but to also aim to access new highly competitive markets. To this end, they adopt innovation strategies, mainly strengthening the production of minimally processed foods and launching products with high chances of acceptability that meet sanitary and sustainable requirements, as reported by the interviewee from Cooperative C6.

The cooperative's main source of income is the production of vegetables and other agricultural products for the families. "So today we have agroecological baskets, generating income of around R\$ 800 per family. With school lunches in the PNAE, we have an average income of R\$ 2500 per family. So you considerably increase the family's situation through the PNAE." (Interviewee from E6, 2019).

On the other hand, Associations A1, A2 and A3 and the C5 Cooperative, most of which were formed before the institutionalization of Law 11947/2009, make up the group of organizations whose focus is local communities, with a number of members ranging from 30 to 75 members. With regard to sales volumes to PNAE, the levels of dependence on the institutional market are lower, as they have access to other markets such as supermarket chains, neighborhood markets, and open fairs. Even so, revenues are mostly linked to the implementation of contracts made for the PNAE.

Briefly, it is clear that the definition of the organizational model is the result of a series of decisions and stimuli that consider the environment in which they operate and the resources they access (financial, material, and human, among others). These aspects are important to discuss how contextual factors have influenced the establishment and development of family farming enterprises that serve the institutional market for the purchase of food for students in the public school network.

## 5. Conclusions

The research revealed the specificities of the cooperative organizations that access the PNAE, especially highlighting their constitution trajectory and the different actors that were involved in this process. It is possible to conclude that the influences of external entities were determinant for the constitution or modification of the legal personality of the family farmers' organizations. One hundred percent of the organizations studied were created to meet the PNAE, or modified some of their characteristics to access or expand participation in the institutional market, demonstrating a direct relationship between public policy and the formation of organizations in the municipalities of this study.

It should be conclusively pointed out that organizations induced and dependent on the institutional market may present vulnerabilities and difficulties in expanding their operations, and that overcoming these challenges is associated with the relationships established among farmers and between the organization's representatives and local governments and advisory entities. The nature of these relationships is a fundamental category for understanding the organizational development of family farming cooperatives and associations, as it can help access goods and resources needed to train people and structure the collective businesses.

The typologies didactically presented in this work demonstrate the distinction between constitutive processes found in the research and those that are associated with different profiles of family farming organizations. It is concluded that knowing the trajectories of organizations and identifying the nature of the relationships they establish throughout their history contributes to understanding their insertion into markets and the protagonism they assume. However, it must be emphasized that there is not a more or less positive trajectory that leads to dynamism and organizational growth. The results of the research allow us to consider that internal mobilization, accompanied by technical guidance for

management and the establishment of synergistic (rather than tutelary) partnerships, expands the potential for intervention by these organizations in public food purchases.

It is also concluded that organizations formed and functioning under the direct action of external entities, despite delivering measurable results, such as sales to the PNAE, can deepen unequal relations of power and guardianship, however well-intentioned they may be. These kinds of organizations, even with an independent legal nature and economic purpose, become more vulnerable to political maneuvering. This was not empirically identified by the research, but those conditions were registered and indicative of greater vulnerabilities and less organizational resilience.

Access to the PNAE represents, for the organizations studied and many others in Brazil, a mechanism for generating employment and income and a driver of productive inclusion for family farming. However, beyond the “creation” of this market and the support of external agents, it is necessary to expand the conditions for family farmers to mobilize, understand their needs and the demands of the market, and organize their production to supply it autonomously (and this does not mean “in isolation”). The mediation of this process, whether by a member of the local government or a rural extension entity, needs to take on a procedural and pedagogical character, breaking an immediate and tutored modus operandi, thus contributing to the process of selling food to the PNAE as an apprenticeship to access new markets and expand the economic protagonism of the collective enterprise.

The research supports the recommendation that the Brazilian State should support the collective organization of farmers and strengthen the promotion of associativism and cooperativism in family farming, providing instruments for the development of social and economic organizations as well as expanding and strengthening government food purchase programs, since they help boost social capital in the countryside and generate income for family farmers. However, the question is to what extent such stimuli from external entities harm or favor the development of the organizations. Starting from the assumption that it is not enough just to constitute legal entities to access a public policy, it is also necessary to offer support in order to guarantee the survival of cooperatives and associations, and this is a key point for the public agenda.

For future work, we suggest expanding the scope of the research to reach a larger number of organizations, interviewing representatives of cooperatives and associations that have not had the opportunity to access the institutional food market, and identifying the barriers to access for new organizations. This scope of actors also contributes to the verification of the impacts and challenges of public policies in the development of family farming cooperatives and associations that access the PNAE.

**Author Contributions:** Conceptualization, I.R.J.M. and A.F.d.F. (Alair Ferreira de Freitas); methodology, I.R.J.M. and A.F.d.F. (Alair Ferreira de Freitas); validation, I.R.J.M., A.F.d.F. (Alair Ferreira de Freitas), A.F.d.F. (Alan Ferreira de Freitas), J.S.B., A.A.J., and S.M.d.S.; formal analysis, I.R.J.M. and A.F.d.F. (Alair Ferreira de Freitas); investigation, I.R.J.M., A.F.d.F. (Alair Ferreira de Freitas), A.F.d.F. (Alan Ferreira de Freitas), J.S.B., A.A.J. and S.M.d.S.; resources, A.F.d.F. (Alair Ferreira de Freitas) and A.A.J.; data curation, J.S.B. and S.M.d.S.; writing—original draft preparation, I.R.J.M.; writing—review and editing, I.R.J.M., A.F.d.F. (Alair Ferreira de Freitas) and A.F.d.F. (Alan Ferreira de Freitas); visualization, I.R.J.M. and A.A.J.; supervision, I.R.J.M. and A.F.d.F. (Alair Ferreira de Freitas); project administration, A.F.d.F. (Alair Ferreira de Freitas) and A.A.J.; funding acquisition, A.F.d.F. (Alair Ferreira de Freitas), A.F.d.F. (Alan Ferreira de Freitas) and A.A.J. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), an entity linked to the Ministry of Science, Technology and Innovation to encourage research in Brazil, by call CNPq/Sescoop 07/20108, project number grant number 403097/2018-5.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Mossmann, M.P.; Teo, C.R.P.A.; Busato, M.A.; Triches, R.M. Interface between family farming and school feeding: Barriers and coping mechanisms from the perspective of different social actors in Southern Brazil. *Rev. Econ. E Sociol. Rural.* **2017**, *55*, 325–342. [CrossRef]
- Santos, L.F.; Campos, A.P.T.; Ferreira, M.A.M. Barreiras de desempenho em cooperativas da agricultura familiar e suas implicações para o acesso às políticas públicas. In *Encontro Brasileiro de Administração Pública; Anais: João Pessoa, Brazil, 2017.*
- Freitas, A.F. Dinâmicas Locais de Implementação do Programa Nacional de Alimentação Escolar. Ph.D. Thesis, Programa de Pós-Graduação em Extensão Rural, Universidade Federal de Viçosa, Viçosa, Brazil, 2017.
- Cruz, S.F.; de Paula Assis, T.R. Contribuições de três organizações para a comercialização da agricultura familiar no PNAE, no território sul litorâneo do Espírito Santo. *Interações* **2019**, *20*, 737–752. [CrossRef]
- Grisa, C.; Schneider, S. Três gerações de políticas públicas para agricultura familiar e interação entre Estado e Sociedade Civil no Brasil. *RESR* **2014**, *52* (Suppl. S1), 125–146.
- Naressi, A.J.; Cotrim, D. Formar ou não uma Cooperativa? O Caso dos Agricultores Familiares de São José do Inhacorá/RS. Comissão Editor. 2014. Available online: <https://silo.tips/download/formar-ou-nao-uma-cooperativa-o-caso-dos-agricultores-familiares-de-sao-jose-do> (accessed on 25 August 2021).
- da Cunha, W.A.; de Freitas, A.F.; dos Santos Figueiredo Salgado, R.J. Efeitos dos Programas governamentais de aquisição de alimentos para a agricultura familiar em Espera Feliz, MG. *Rev. Econ. E Sociol. Rural.* **2017**, *55*, 427–444. [CrossRef]
- Oliveira, T.R.P.R.D.; Sousa, H.C.; Silva, A.D.P.D. Agricultura familiar na alimentação escolar: Estudo de caso em dois municípios de Minas Gerais. *Nutr. Rev. Soc. Bras. Aliment. Nutr.* **2013**, 256–268. [CrossRef]
- Silva, D. Produzindo Prerrogativas de Cidadania: O Acesso da Agricultura Familiar à Política de Fornecimento de Produtos Para a Alimentação Escolar. Ph.D. Thesis, Universidade Federal do Rio Grande do Sul, Farroupilha, Brazil, 2015.
- Araujo, L.R.D.S.; Brito, A.N.M.D.; Rodrigues, M.T.P.; Mascarenhas, M.D.M.; Moreira-Araujo, R.S.D.R. Alimentação escolar e agricultura familiar: Análise de recursos empregados na compra de alimentos. *Cad. Saúde Pública* **2019**. [CrossRef]
- Stamm, C.; Staduto, J.A.R.; Lima, J.F.D.; Wadi, Y.M. A população urbana e a difusão das cidades de por-te médio no Brasil. *Interações (Campo Grande)* **2013**, *14*, 251–265. [CrossRef]
- IBGE (Instituto Brasileiro de Geografia e Estatística). *Regiões de Influência das Cidades*; IBGE: Rio de Janeiro, Brazil, 2020.
- Costa, B.A.L.; Amorim Junior, P.C.G.; Silva, M.G.D. As cooperativas de agricultura familiar e o mercado de compras governamentais em Minas Gerais. *Rev. Econ. E Sociol. Rural.* **2015**, *53*, 109–126. [CrossRef]
- Frantz, W. Associativismo, Cooperativismo e Economia Solidária. 2012. Available online: <http://bibliodigital.unijui.edu.br:8080/xmlui/bitstream/handle/123456789/963/Associativismo,%20cooperativismo%20e%20economia%20solid%C3%A1ria.pdf?sequence=1> (accessed on 10 August 2021).
- Rodrigues, R. Revendo princípios e valores. In *Autogestão, Cooperativismo e Associativismo*; ALEMGO: Belo Horizonte, Brazil, 1995; pp. 69–82.
- Pinho, D.B. *O Pensamento Cooperativo e o Cooperativismo Brasileiro*, 2nd ed.; CNPq: São Paulo, Brazil, 1982.
- Valadares, J.H. *FORMACOOOP—Módulo I-Educação Cooperativista*; SESCOOP-GO: Goiania, Brazil, 2016.
- Dobrohoczki, R. Cooperatives as Social Policy Means for Creating Social Cohesion in Communities. *J. Rural. Coop.* **2006**, *34*, 139–159. [CrossRef]
- Tomazzoni, G.C.; Schneider, S. A presença do cooperativismo na agricultura do Sul do Brasil: Uma breve caracterização a partir dos dados do censo agropecuário 2017. *DRd-Desenvolv. Reg. Em Debate* **2022**, *12*, 65–88. [CrossRef]
- Silva, R.M.A.D.; Nunes, E.M. Agricultura Familiar e Cooperativismo no Brasil: Uma Caracterização a Partir do Censo Agropecuário de 2017. *Rev. Econ. E Sociol. Rural.* **2022**. Available online: <https://www.scielo.br/j/resr/a/3CXmrG4vsSBBdDRkmHYLw4n/abstract/?lang=pt> (accessed on 25 June 2021).
- Chayanov, A.V. *A Teoria das Cooperativas Camponesas*; UFRGS: Porto Alegre, Brazil, 2017.
- Chagwiza, C.; Muradian, R.; Ruben, R. Cooperative membership and dairy performance among smallholders in Ethiopia. *Food Policy* **2016**, *59*, 165–173. [CrossRef]
- Silva, C.M.V.; Schultz, G. Acesso a mercados e gestão de cooperativas da agricultura familiar no Brasil. *Rev. Espac.* **2017**, *38*, 1–23.
- Valentinov, V. Why are cooperatives important in agriculture? An organizational economics perspective. *J. Inst. Econ.* **2007**, *3*, 55–69. [CrossRef]
- FAO. Cooperatives and Producer Organizations. 2020. Available online: <http://www.fao.org/parztnerships/cooperatives/en/> (accessed on 15 January 2020).
- Schneider, S. Mercados e agricultura familiar. In *Construção de Mercados e Agricultura Familiar: Desafios Para o Desenvolvimento Rural*; Marques, F., Conterato, M., Schneider, S., Eds.; Série Estudos Rurais; Editora da UFRGS: Porto Alegre, Brazil, 2016.
- Rios, G.; Carvalho, D. Associações de agricultores familiares como estruturas de ensaio pré-cooperativas. *ESAC Economia Solidária e Ação Cooperativa* **2007**, 1–139.
- Fundo Nacional de Desenvolvimento da Educação (FNDE). Sistema de Gestão de Prestação de Contas do Fundo Nacional de Desenvolvimento da Educação—SIGPC. Available online: <https://www.fnde.gov.br/sigpcadm/> (accessed on 5 February 2021).

29. Peixinho, A.M.L. A trajetória do Programa Nacional de Alimentação Escolar no período de 2003-2010: Relato do gestor nacional. *Ciência Saúde Coletiva* **2013**, *18*, 909–916. [CrossRef] [PubMed]
30. Triches, R.M.; Grisa, C. Entre mudanças e conservadorismos: Uma análise dos Programas de Aquisição de Alimentos (PAA e PNAE) a partir da retórica de intransigência. *Rev. NERA Pres. Prudente* **2015**, *18*, 10–27. [CrossRef]
31. Baggio, C.A.; Kulh, M.R. Determinants in value appropriation in smallholder farming innovations. *Ciência Rural*. **2018**, *48*. Available online: <http://www.scielo.br/pdf/cr/v48n3/1678-4596-cr-48-03-e20170291.pdf> (accessed on 20 December 2020). [CrossRef]
32. Yin, R.K. *Estudo de Caso: Planejamento e Métodos*, 3rd ed.; Bookman: Porto Alegre, Brazil, 2005.
33. MAPA. Ministério da Agricultura, Pecuária e Abastecimento. Extrato DAP Pessoa Jurídica. 2020. Available online: <http://smap14.mda.gov.br/extratodap/PesquisarDAP> (accessed on 30 December 2020).
34. SIGPC. Acesso Público. Available online: <https://www.fnade.gov.br/sigpcadm/sistema.pu?operation=localizar> (accessed on 7 December 2021).
35. Bardin, L. *Análise de Conteúdo*; Edições 70: São Paulo, Brazil, 2011.
36. Sabourin, E. Ação Coletiva e Organização dos Agricultores no Nordeste Semi-árido. In Congresso Brasileiro de Economia e Sociologia Rural, Foz do Iguacu. 1999. Available online: <https://www.alice.cnptia.embrapa.br/handle/doc/133075> (accessed on 15 July 2021).
37. EMATER. MINAS GERAIS. EMATER-MG Chega aos 70 Anos. 2018. Available online: [http://www.emater.mg.gov.br/portal.do/site-noticias/emater-mg-chega-aos-70anos/?flagweb=novosite\\_pagina\\_interna&id=22988#:~:text=O%20papel%20da%20Emater%20DMG,estabelecido%20pela%20da%20Lei%20n%C2%BA11](http://www.emater.mg.gov.br/portal.do/site-noticias/emater-mg-chega-aos-70anos/?flagweb=novosite_pagina_interna&id=22988#:~:text=O%20papel%20da%20Emater%20DMG,estabelecido%20pela%20da%20Lei%20n%C2%BA11) (accessed on 26 August 2020).
38. Rozendo, C.; Bastos, F.; Molina, W.D.S.L. Institutional challenges for the inclusion of family farming in the National School Feeding Program. *Revista Cronos* **2013**, *14*, 23–35.
39. Elias, L.D.P.; Belik, W.; Cunha, M.P.D.; Guilhoto, J.J.M. Impactos socioeconômicos do Programa Nacional de Alimentação Escolar na agricultura familiar de Santa Catarina. *Rev. Econ. E Sociol. Rural*. **2019**, *57*, 215–233. [CrossRef]
40. Pelegrini, D.F.; Shiki, S.D.F.N.; Shiki, S. Uma abordagem teórica sobre cooperativismo e associativismo no Brasil. *Extensio Rev. Eletrônica Extensão* **2015**, *12*, 70–85. [CrossRef]
41. Wilkinson, J. *O Estado, a Agricultura e a Pequena Produção*; Hucitec: São Paulo, Brazil, 2008.
42. Triches, R.M.; Schneider, S. Reconstruindo o “elo perdido”: A reconexão da produção e do consumo de alimentos através do Programa de Alimentação Escolar no município de Dois Irmãos (RS). *Segurança Aliment. E Nutr.* **2010**, *17*, 1–15. [CrossRef]
43. Franzoni, G.B.; da Silva, T.N. Inovação Social e Tecnologia Social: O caso da Cadeia Curta de Agricultores Familiares e a Alimentação Escolar em Porto Alegre/RS. *Desenvolv. Em Questão* **2016**, *14*, 353–386. [CrossRef]

**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.